TADD

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

RECEIVED NOV 2009

ENTERED

November 6, 2009

Mr. Dave Cobrain
NMED Hazardous Waste Bureau
2905 Rodeo Park Drive East, Bldg 1
Santa Fe NM 87505

Re:	ALS Workorder:	09-10-114
	Project Name:	Bayo Canyon WWTP
	Project Number:	None Submitted

Dear Mr. Cobrain:

One water and one solid sample were received from NMED Hazardous Waste Bureau on October 10, 2009. The samples were scheduled for the following analyses:

Metals	pages 1-22
Strontium-90	pages 1-15
Isotopic Uranium	pages 1-16
Gross Alpha/Beta	pages 1-12
Isotopic Plutonium	pages 1-16
Isotopic Americium	pages 1-17
Gamma Spectroscopy (solid)	pages 1-20
Gamma Spectroscopy (water)	pages 1-13

The results for these analyses are contained in the enclosed report. Please note that the PCB and Dioxin analyses were subcontracted out to Axys Analytical Services and will be sent to you upon completion.

Thank you for your confidence in ALS Laboratory Group. Should you have any questions, please call.

Sincerely,

ALS Laboratory Group
Lance Steere
Senior Project Manager

LRS/eh
Enclosure (s): Report and CD

ALS USA, Corp
Part of the **ALS Laboratory Group**
225 Commerce Drive Ft. Collins, Colorado 80524
Phone (970) 490-1511 Fax (970) 490-1522 www.alsenviro.com
A Campbell Brothers Limited Company

32200

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0910114
Client Name: NMED Hazardous Waste Bureau
Client Project Name: Bayo Canyon WWTP
Client Project Number:
Client PO Number: 60-667-55-01574

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
BC-WWTP-W1	0910114-1		WATER	07-Oct-09	14:50
BC-WWTP-51	0910114-2		SOLID	07-Oct-09	14:35

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

ALS Paragon

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Lab ID: 0910114
Date: 10/9/2009
Page: 1 of 1

Project Name/No.: Bayo Canyon WWTP
Sampler(s): D Comeau
Turnaround: Standard or (Due ( ))
Disposal: By Lab or Return to Client

REPORT TO: David Cobrain
PHONE: 505-476-6055
FAX: 505-476-6000
E-MAIL: dan.comeau@state.nm.us
COMPANY: NM Environment Dept
ADDRESS: 2905 Rodeo Park Dr. East Bldg 1
Santa Fe, NM 87505

Provide additional information as needed in comments section.

Circle Analytical Method Above: SW8015B GRO DRO; SW8260B; SW8260B SW8021B; SW8270C; SW8081A; SW8082; SW8151A; SW8330 SW8321 by LC/MS/MS; SW8260B SW8270D SW8081A SW8151A; SW6010B SW7470A; SW6010B 7470A/7471A E200.7 E245; SW6010B 7470A/7471A E200.7 E245; SW6020A E200.8; SW6020A E200.8; SW7196A Alkaline Digestion? Y / ; SW9056 E300.0 (specify in comments); TDS:E160.1 TSS:E160.2 Total:E160.3; SW9040B SW9045C E150.1; Lab # 314

Circle Analytical Method Above: Am / Cm / Pu / Th / U; E901.1 Lab # 321; SW9310 E900.0 Lab # 300; SW9315 E903.0; E903.1; SW9320 E904.0; D5811 Lab # 335; E906.0; SM7500Rn; Lab # 306; Lab # 305

Sample ID	Date	Time *	Lab ID	Matrix	No. of Containers	~~TPH~~	VOCs	BTEX (only)	~~SVOCs~~ Dioxins/Furans	OC Pesticides	PCBs by 1668A	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions	Solids:	pH	RCRA Metals/Hg	Iso Uranium	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Am 241	Iso Pu
BC-WWTP-W1	10/7/09	1450	1	W	7				1	1	1													1	1		1	1				1			1	1
BC-WWTP-S1	10/7/09	1435	2	NS	3				1		1													1	1		1	1				1			1	1

* Time Zone: EST CST MST PST Matrix Key: O = oil, S = soil, NS = non-soil solid, W = water, L = liquid, E = extract, F = filter

Comments:
Samples were collected 10/7/2009

Relinquished By: (1)
Signature: D A Comeau
Printed Name: Daniel Comeau
Date: 10/9/2009 Time: 1015
Company: NMED-HWB

Relinquished By: (2)
Signature
Printed Name
Date Time
Company

Received By: (1)
Signature: Lara J Orban
Printed Name: Lara J Orban
Date: 10/10/09 Time: 0955
Company: ALS

Received By: (2)
Signature
Printed Name
Date Time
Company

Originator: Retain a photocopy after transfer!

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: NMED Workorder No: 0910114

Project Manager: LRS Initials: DJO Date: 10/10/09

1. Does this project require any **special handling** in addition to standard Paragon procedures?			YES	(NO)
2. Are custody **seals** on **shipping containers** intact?	NONE		(YES)	NO
3. Are Custody seals on **sample containers** intact?	NONE		(YES)	NO
4. Is there a **COC (Chain-of-Custody) present** or other representative documents?			(YES)	NO
5. Are the **COC and bottle labels complete and legible**?			(YES)	NO
6. Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)			(YES)	NO
7 Were **airbills / shipping documents** present and/or removable?	DROP OFF		(YES)	NO
8. Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A		(YES)	NO
9. Are all aqueous **non-preserved samples pH 4-9**?	N/A		(YES)	NO
10. Is there **sufficient sample** for the requested analyses?			• (YES)	NO
11. Were all samples placed in the **proper containers** for the requested analyses?			(YES)	NO
12. Are all samples within **holding times** for the requested analyses?			(YES)	NO
13. Were all sample containers received **intact**? (not broken or leaking, etc.)			(YES)	NO
14. Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)		YES	NO
15. Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)		YES	NO
16. Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	N/A		(YES)	NO
17. Were the samples **shipped on ice**?			(YES)	NO
18. Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY		(YES)	NO

Cooler #:	1							
Temperature (°C):	5.6							
No. of custody seals on cooler:	1							
DOT Survey/ Acceptance Information — External µR/hr reading:	15							
DOT Survey/ Acceptance Information — Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

• Sample #2 : One 16 oz wm poly received for all RAD analysis. -UK
Sed is very watery.

The seven bottles for sample #1 were filled with green tinged water with suspended sediment and a layer of brown sediment on the bottoms.

If applicable, was the client contacted? (YES) / NO / NA Contact: Dan Oneam Date/Time: 10/13

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

0910114

FedEx Express US Airbill

FedEx Tracking Number 8681 5696 9089

Recipient's Copy

1 From

Date 1/9/2009

Sender's Name Rubb Gomez Phone 505-470-6043

Company NM Environment Dept.

Address 2905 Rodeo Park Dr. East Bldg 1 Dept./Floor/Suite/Room

City Santa Fe State NM ZIP 87505

2 Your Internal Billing Reference

3 To

Recipient's Name [illegible] Phone 800 343-1511

Company [illegible] Amy Offices / ALS Tech Group

Recipient's Address [illegible] Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP Codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Ft. Collins State CO ZIP 80524

8681 5696 9089

4a Express Package Service *Packages up to 150 lbs.*

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

* To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation:

** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

* Declared value limit $500.

6 Special Handling

Include FedEx address in Section 3.

- [x] **SATURDAY Delivery** — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] **HOLD Weekday** at FedEx Location — Not available for FedEx First Overnight.
- [ ] **HOLD Saturday** at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [x] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check
- [ ] Obtain Recip. Acct. No.

157

Total Packages	Total Weight	Total Declared Value†
1	30 #	$ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details.

Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

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ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Metals
Case Narrative

NMED Hazardous Waste Bureau
Bayo Canyon WWTP

Work Order Number: 0910114

1. This report consists of 1 water sample and 1 solid sample.

2. The samples were received cool and intact by ALS on 10/10/09.

3. The water sample had a pH less than 2 upon receipt.

4. The samples were prepared for analysis based on SW-846, 3rd Edition procedures.

   The water sample was decanted to avoid sediments.

   For analysis by Trace ICP, the water sample was digested following method 3005A and SOP 806 Rev. 13. The solid sample was digested following method 3050B and SOP 806 Rev. 13.

   For analysis by Cold Vapor AA (CVAA), the water sample was digested following method 7470A and SOP 812 Rev. 14. The solid sample was digested following method 7471A and SOP 812 Rev. 14.

5. The samples were analyzed following SW-846, 3rd Edition procedures.

   Analysis by Trace ICP followed method 6010B and SOP 834 Rev. 7.

   The relationship between intensity and concentration for each element is established using at least four standards, one of which is a blank solution.

   During sample analysis concentrations are computed by the software and the results are printed in mg/L. The instrument software does not provide a printout which gives both intensity and concentration. The validity of the calibration equation is tested by analyzing the following solutions: a blank, a low level check solution with concentrations near the reporting limit, an Initial Calibration Verification (ICV) standard from a 2nd source

standard solution with concentrations near the middle of the analytical range, a Continuing Calibration Verification (CCV) standard with concentrations at two times those in the ICV, and a readback of the highest calibration standard.

These solutions provide verification that the calibration equations are functioning properly throughout the analytical range of the instrument. During sample analysis dilutions are made for analytes found at concentrations above the highest calibration standard. No results are taken from extrapolations beyond the highest standard.

Water analysis by CVAA followed method 7470A and SOP 812 Rev. 14. Solid analysis by CVAA followed method 7471A and SOP 812 Rev. 14.

The relationship between intensity and concentration is determined daily, prior to sample analysis. At least five standards and a blank solution are analyzed to establish the calibration curve. The instrument software performs a linear regression to fit the calibration data to a curve of the form:

$$conc. = B * I + C$$

where: conc. = concentration

B = slope coefficient
I = intensity
C = intercept coefficient

A printout summarizing the calibration data supplies the calibration curve and correlation coefficient. During sample analysis both intensity and concentration values are printed. Dilutions are made for concentrations above the highest calibration standard. No results are taken from extrapolations above the highest standard.

6. All standards and solutions are NIST traceable and were used within their recommended shelf life.

7. The samples were prepared and analyzed within the established hold times.

All in house quality control procedures were followed, as described below.

8. General quality control procedures.

- A preparation (method) blank and laboratory control sample were digested and analyzed with the samples in each digestion batch. There were not more than 20 samples in each digestion batch.
- The preparation (method) blank associated with each digestion batch was below the reporting limit for the requested analytes.
- The laboratory control sample associated with each digestion batch was within the acceptance limits. This indicates complete digestions according to the method.

- All initial and continuing calibration blanks associated with each analytical batch were below the practical quantitation limits for the requested analytes.
- All initial and continuing calibration verifications associated with each analytical batch were within the acceptance criteria for the requested analytes. This indicates a valid calibration and stable instrument conditions.
- The interference check samples and high standard readbacks associated with Method 6010B were within acceptance criteria.

9. Matrix specific quality control procedures.

   Sample 0910114-2 was designated as the quality control sample for the mercury solid analysis. Per method requirements, matrix QC was performed for the remaining analyses. Since a sample from this order number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.

   Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

   - A matrix spike and matrix spike duplicate were digested and analyzed with the mercury solid batch. All acceptance criteria for accuracy were met with the following exceptions:

Analyte	Sample ID
Mercury	0910114-2MS & MSD

     The native sample result is flagged for matrix spike failure. The mercury laboratory control sample indicates that the digestion and analysis were in control.

   - A sample duplicate and matrix spike duplicate were digested and analyzed with the mercury solid batch. All acceptance criteria for precision were met with the following exceptions:

Analyte	Sample ID
Mercury	0910114-2MSD & -2D

     The native sample result is flagged for duplicate failure.

10. Sample 0910114-2 required a dilution to bring mercury into the analytical range of the instrument.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Emily Knodel
Inorganics Primary Data Reviewer

11-05-09
Date

Inorganics Final Data Reviewer

11/5/09
Date

Inorganic Data Reporting Qualifiers

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- Result qualifier -- A "B" is entered if the reported value was obtained from a reading that was less than the Practical Quantitation Limit but greater than or equal to the Instrument Detection Limit (IDL). If the analyte was analyzed for but not detected a "U" is entered.

- QC qualifier -- Specified entries and their meanings are as follows:

  E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

  M - Duplicate injection precision was not met.

  N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

  Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

  * - Duplicate analysis (relative percent difference) not within control limits.

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0910114
Client Name: NMED Hazardous Waste Bureau
Client Project Name: Bayo Canyon WWTP
Client Project Number:
Client PO Number: 60-667-55-01574

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
BC-WWTP-W1	0910114-1		WATER	07-Oct-09	14:50
BC-WWTP-51	0910114-2		SOLID	07-Oct-09	14:35

ALS Laboratory Group

ALS Paragon

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Lab ID: 0910114

Date: 10/9/2009

Page: 1 of 1

Project Name/No.: Buyo Canyon WWTP

Sampler(s): D Comeau

Turnaround: Standard or (Due)

Disposal: By Lab or Return to Client

REPORT TO: David Cobrain
PHONE: 505-476-6055
FAX: 505-476-6000
E-MAIL: dan.comeau@state.nm.us
COMPANY: NM Environment Dept
ADDRESS: 2905 Rodeo Park Dr. East
Bldg 1
Santa Fe, NM 87505

Provide additional information as needed in comments section.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	No. of Containers	~~4PH~~	VOCs	BTEX (only)	~~SVOCs~~ Dioxin/Furans	OC Pesticides	PCBs by 1668A	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions	Solids:	pH	PCB/Metals/Hg	Iso Uranium
BC-WWTP-W1	10/7/09	1450	1	W	7				1		1													1	1
BC-WWTP-S1	10/7/09	1435	2	NS	3				1		1													1	1

Circle Analytical Method Above

Sample ID	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Am 241	Iso Pu
BC-WWTP-W1		1	1				1			1	1
BC-WWTP-S1		1	1				1			1	1

Am / Cm / Pu / Th / U: Ln # 321; E900.0: Ln # 300; D5811: Ln # 335; Ln # 306; Ln # 305

* Time Zone: EST CST MST PST Matrix Key: O = oil, S = soil, NS = non-soil solid, W = water, L = liquid, E = extract, F = filter

Comments:

Samples were collected 10/7/2009

Originator: Retain a photocopy after transfer!

Relinquished By: (1)	Relinquished By: (2)
Signature: D Comeau	Signature:
Printed Name: DANIEL COMEAU	Printed Name:
Date: 10/9/2009 Time: 1015	Date: Time:
Company: NMED-HWB	Company:

Received By: (1)	Received By: (2)
Signature: Lara J Orban	Signature:
Printed Name: Lara J Orban	Printed Name:
Date: 10/10/09 Time: 0955	Date: Time:
Company: ALS	Company:

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: NMED Workorder No: 0910114

Project Manager: LRS Initials: DJO Date: 10/10/09

1. Does this project require any **special handling** in addition to standard Paragon procedures?			YES	(NO)
2. Are custody **seals** on **shipping containers** intact?	NONE		(YES)	NO
3. Are Custody seals on **sample containers** intact?	NONE		(YES)	NO
4. Is there a **COC (Chain-of-Custody) present** or other representative documents?			(YES)	NO
5. Are the **COC and bottle labels complete and legible**?			(YES)	NO
6. Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)			(YES)	NO
7. Were **airbills / shipping documents** present and/or removable?	DROP OFF		(YES)	NO
8. Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A		(YES)	NO
9. Are all aqueous **non-preserved samples pH 4-9**?	N/A		(YES)	NO
10. Is there **sufficient sample** for the requested analyses?			(YES)	NO
11. Were all samples placed in the **proper containers** for the requested analyses?			(YES)	NO
12. Are all samples within **holding times** for the requested analyses?			(YES)	NO
13. Were all sample containers received **intact**? (not broken or leaking, etc.)			(YES)	NO
14. Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)		YES	NO
15. Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)		YES	NO
16. Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	N/A		(YES)	NO
17. Were the samples **shipped on ice**?			(YES)	NO
18. Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY		(YES)	NO

Cooler #:	1							
Temperature (°C):	5.6							
No. of custody seals on cooler:	1							
DOT Survey/ Acceptance Information — External µR/hr reading:	15							
DOT Survey/ Acceptance Information — Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

• Sample #2: One 16 oz wm poly received for all RAD analysis. -CK
Sed is very watery.

The seven bottles for sample #1 were filled with green tinged water with suspended sediment and a layer of brown sediment on the bottoms.

If applicable, was the client contacted? (YES) / NO / NA Contact: Dan Oneam Date/Time: 10/13

Project Manager Signature / Date: 10/14/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

0910114

FedEx US Airbill Express

FedEx Tracking Number 8681 5696 9089

Recipient's Copy

1 From

Date 10/1/2009

Sender's Name [redacted] Phone 505-474-6043

Company NM Environment Dept.

Address 2905 Rodeo Park Dr. East Bldg 1 Dept./Floor/Suite/Room

City [redacted] State NM ZIP 87505

2 Your Internal Billing Reference

3 To

Recipient's Name [redacted] Phone 800-343-1511

Company Research Analytical / ALS Tech Group

Recipient's Address [redacted] Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP Codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Ft. Collins State CO ZIP 80524

8681 5696 9089

4a Express Package Service *Packages up to 150 lbs.*

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

* To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation: ____

** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

* Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [x] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [x] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Obtain Recip Acct. No. [ ]

[redacted] 157

Total Packages	Total Weight	Total Declared Value†
1	30 #	$ ____.00

†Our liability is limited to $100 unless you declare a higher value. See back for details.

Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

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fedex.com 1.800.GoFedEx 1.800.463.3339

Total Recoverable ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-W1
Lab ID: 0910114-1

Analysis ReqCode: 205

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 07-Oct-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: SW3005 Rev A

Prep Batch: IP091102-2
QCBatchID: IP091102-2-3
Run ID: IT091103-2A2
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	IDL	Result Qualifier	EPA Qualifier
7440-38-2	ARSENIC	1	0.03	0.01	0.0038		
7440-39-3	BARIUM	1	0.043	0.1	0.00016	B	
7440-43-9	CADMIUM	1	0.00052	0.005	0.00052	U	
7440-47-3	CHROMIUM	1	0.0029	0.01	0.00085	B	
7439-92-1	LEAD	1	0.0037	0.003	0.0011		
7782-49-2	SELENIUM	1	0.0022	0.005	0.0022	U	
7440-22-4	SILVER	1	0.0012	0.01	0.0012	U	

Data Package ID: *IT0910114-1*

Total ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2

Analysis ReqCode: 205

Sample Matrix: SOLID
% Moisture: 76.1
Date Collected: 07-Oct-09
Date Extracted: 14-Oct-09
Date Analyzed: 14-Oct-09
Prep Method: SW3050 Rev B

Prep Batch: IP091014-1
QCBatchID: IP091014-1-1
Run ID: IT091014-2A3
Cleanup: NONE
Basis: Dry Weight
File Name: 091014A.

Sample Aliquot: 1.042g
Final Volume: 100ml
Result Units: MG/KG
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	IDL	Result Qualifier	EPA Qualifier
7440-38-2	ARSENIC	1	8.7	4	1.3		
7440-39-3	BARIUM	1	270	40	0.061		
7440-43-9	CADMIUM	1	0.89	2	0.15	B	
7440-47-3	CHROMIUM	1	50	4	0.28		
7439-92-1	LEAD	1	350	1.2	0.72		
7782-49-2	SELENIUM	1	5.8	2	1.3		
7440-22-4	SILVER	1	7.3	4	0.42		

Data Package ID: *IT0910114-1*

Total MERCURY

Method SW7470

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: NMED Hazardous Waste Bureau
Client Project ID: Bayo Canyon WWTP
Work Order Number: 0910114
Reporting Basis: As Received

Final Volume: 20 g
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	IDL	Flag	Sample Aliquot
BC-WWTP-W1	0910114-1	10/7/2009	10/16/2009	10/16/2009	N/A	1	0.0000089	0.0002	0.0000089	U	20 g

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *HG0910114-1*

Total MERCURY

Method SW7471

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: NMED Hazardous Waste Bureau
Client Project ID: Bayo Canyon WWTP
Work Order Number: 0910114
Reporting Basis: Dry Weight

Final Volume: 100 g
Matrix: SOLID
Result Units: MG/KG

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	IDL	Flag	Sample Aliquot
BC-WWTP-51	0910114-2	10/7/2009	10/14/2009	10/15/2009	76.05	2	2.6	0.28	0.012	N*	0.602 g

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *HG0910114-1*

ICP Metals

Method SW6010B

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: F091017-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09

Prep Batch: IP091102-2
QCBatchID: IP091102-2-3
Run ID: IT091103-2A2
Cleanup: NONE
Basis: N/A
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	IDL	Result Qualifier	EPA Qualifier
7440-38-2	ARSENIC	1	0.0038	0.01	0.0038	U	
7440-39-3	BARIUM	1	-0.00045	0.1	0.00016	B	
7440-43-9	CADMIUM	1	0.00052	0.005	0.00052	U	
7440-47-3	CHROMIUM	1	0.00085	0.01	0.00085	U	
7439-92-1	LEAD	1	0.0011	0.003	0.0011	U	
7782-49-2	SELENIUM	1	0.0022	0.005	0.0022	U	
7440-22-4	SILVER	1	0.0012	0.01	0.0012	U	

Data Package ID: *IT0910114-1*

ICP Metals

Method SW6010B
Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: IP091014-1MB

Sample Matrix: SOIL
% Moisture: N/A
Date Collected: N/A
Date Extracted: 14-Oct-09
Date Analyzed: 14-Oct-09

Prep Batch: IP091014-1
QCBatchID: IP091014-1-1
Run ID: IT091014-2A3
Cleanup: NONE
Basis: N/A
File Name: 091014A.

Sample Aliquot: 1 g
Final Volume: 100 ml
Result Units: MG/KG
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	IDL	Result Qualifier	EPA Qualifier
7440-38-2	ARSENIC	1	0.34	1	0.34	U	
7440-39-3	BARIUM	1	0.046	10	0.015	B	
7440-43-9	CADMIUM	1	0.038	0.5	0.038	U	
7440-47-3	CHROMIUM	1	0.23	1	0.071	B	
7439-92-1	LEAD	1	0.18	0.3	0.18	U	
7782-49-2	SELENIUM	1	0.32	0.5	0.32	U	
7440-22-4	SILVER	1	0.1	1	0.1	U	

Data Package ID: *IT0910114-1*

ICP Metals

Method SW6010B

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: F091017-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 11/02/2009
Date Analyzed: 11/03/2009
Prep Method: SW3005A

Prep Batch: IP091102-2
QCBatchID: IP091102-2-3
Run ID: IT091103-2A2
Cleanup: NONE
Basis: N/A
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7440-38-2	ARSENIC	2	1.92	0.01		96	80 - 120%
7440-39-3	BARIUM	2	1.96	0.1		98	80 - 120%
7440-43-9	CADMIUM	0.05	0.0502	0.005		100	80 - 120%
7440-47-3	CHROMIUM	0.2	0.187	0.01		93	80 - 120%
7439-92-1	LEAD	0.5	0.48	0.003		96	80 - 120%
7782-49-2	SELENIUM	2	2	0.005		100	80 - 120%
7440-22-4	SILVER	0.1	0.096	0.01		96	80 - 120%

Data Package ID: *IT0910114-1*

ICP Metals

Method SW6010

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: IP091014-1LCS

Sample Matrix: SOIL
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/14/2009
Date Analyzed: 10/14/2009
Prep Method: SW3050B

Prep Batch: IP091014-1
QCBatchID: IP091014-1-1
Run ID: IT091014-2A3
Cleanup: NONE
Basis: N/A
File Name: 091014A.

Sample Aliquot: 1 g
Final Volume: 100 ml
Result Units: MG/KG
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7440-38-2	ARSENIC	200	187	1		93	80 - 120%
7440-39-3	BARIUM	200	189	10		94	80 - 120%
7440-43-9	CADMIUM	5	4.95	0.5		99	80 - 120%
7440-47-3	CHROMIUM	20	19.1	1		96	80 - 120%
7439-92-1	LEAD	50	47.8	0.3		96	80 - 120%
7782-49-2	SELENIUM	200	186	0.5		93	80 - 120%
7440-22-4	SILVER	10	9.37	1		94	80 - 120%

Data Package ID: *IT0910114-1*

Mercury

Method SW7470A

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: HG091016-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 16-Oct-09
Date Analyzed: 16-Oct-09

Prep Batch: HG091016-1
QCBatchID: HG091016-1-1
Run ID: HG091016-2A3
Cleanup: NONE
Basis: N/A
File Name: 09101602

Sample Aliquot: 20 g
Final Volume: 20 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	IDL	Result Qualifier	EPA Qualifier
7439-97-6	MERCURY	1	-0.0000092	0.0002	0.0000089	B	

Data Package ID: *HG0910114-1*

Mercury

Method SW7471A

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: HG091015-1MB

Sample Matrix: SOLID
% Moisture: N/A
Date Collected: N/A
Date Extracted: 14-Oct-09
Date Analyzed: 15-Oct-09

Prep Batch: HG091015-1
QCBatchID: HG091015-1-2
Run ID: HG091015-2A3
Cleanup: NONE
Basis: N/A
File Name: 09101500

Sample Aliquot: 0.6g
Final Volume: 100g
Result Units: MG/KG
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	IDL	Result Qualifier	EPA Qualifier
7439-97-6	MERCURY	1	0.0026	0.033	0.0015	B	

Data Package ID: *HG0910114-1*

Mercury

Method SW7470

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: HG091016-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/16/2009
Date Analyzed: 10/16/2009
Prep Method: METHOD

Prep Batch: HG091016-1
QCBatchID: HG091016-1-1
Run ID: HG091016-2A3
Cleanup: NONE
Basis: N/A
File Name: 09101602

Sample Aliquot: 20 g
Final Volume: 20 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7439-97-6	MERCURY	0.001	0.00103	0.0002		103	80 - 120%

Data Package ID: *HG0910114-1*

Mercury

Method SW7471A

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: HG091015-1LCS

Sample Matrix: SOLID
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/14/2009
Date Analyzed: 10/15/2009
Prep Method: METHOD

Prep Batch: HG091015-1
QCBatchID: HG091015-1-2
Run ID: HG091015-2A3
Cleanup: NONE
Basis: N/A
File Name: 09101500

Sample Aliquot: 0.6g
Final Volume: 100g
Result Units: MG/KG
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7439-97-6	MERCURY	0.167	0.17	0.0333		102	80 - 120%

Data Package ID: *HG0910114-1*

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Gamma Spectroscopy
Case Narrative

NMED Hazardous Waste Bureau
Bayo Canyon WWTP

Work Order Number: 0910114

1. This report consists of analytical results for one solid sample received by ALS on 10/10/2009.

2. This sample was prepared according to procedure SOP739R9.

3. The sample was analyzed for the presence of gamma emitting radionuclides according to procedure SOP713R10. The analysis was completed on 11/02/2009.

4. The analysis results for this sample are reported on a "Dry Weight" basis in units of pCi/gram.

5. Sample volume was insufficient to allow preparation of a duplicate. A duplicate analysis of sample 0910114-2 was performed in lieu of a prepared duplicate.

6. Duplicate analysis results above the DER warning limit of 1.42 have been flagged as "W" for Warning.

7. Activity concentrations above the calculated MDC are reported in some instances where minimum nuclide identification criteria are not met. Such tentative identifications result when the software attempts to calculate net activity concentrations for analytes where either one or both of the following criteria are not satisfied: the 'diagnostic' peak for a nuclide must be identified above the critical level, or the minimum library peak abundance must be attained. Nuclides not meeting these requirements have been flagged with a "TI" qualifier.

8. There are cases where the sample density is less than the associated calibration standard density. Cases that exceed the limit of +/- 15% of the density of the calibration standard are flagged with a 'G', denoting a significant density difference between the sample and calibration standard. Consequently, the results may be biased high for the flagged results in this workorder. If requested ALS can perform a transmission spike in order to estimate a magnitude of this bias. The results are reported without further qualification.

9. ALS has found there to be a significant low bias to ^{214}Pb and ^{214}Bi results when using a mixed nuclide gamma source for efficiency calibrations. The magnitude of this bias has been determined to be approximately 32% for ^{214}Bi, and 23% for ^{214}Pb. Therefore, any reported results for ^{214}Pb and ^{214}Bi are flagged with a "J" qualifier, indicating the activity values to be an estimated value. Results are reported without further qualification.

10. In cases where ^{109}Cd is identified at a level greater than the MDC, an "SI" flag is assigned denoting spectral interference. This interference occurs with the K_β x-rays of Pb, which occur at an energy of 87 keV.

11. The requested detection limit of 0.05 pCi/gram for ^{137}Cs was not met for samples 0910114-2, -2DUP, and the method blank. The samples were counted for the maximum count time of 1000 minutes. The results have been flagged with an "M" qualifier on the final reports. The results are submitted without further qualification.

12. There are cases where the magnitude of negative activity is greater than the 2σ TPU. Under typical conditions, where background data is normally distributed and analyzed by paired observations, this event is likely to occur at least 2.5% of the time. Review of the data does not indicate a problem with the instrument or reporting systems and results are reported without further qualification.

13. No further problems were encountered with either the client sample or the associated quality control samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Jean Anderson
Radiochemistry Primary Data Reviewer

11/5/09
Date

Radiochemistry Final Data Reviewer

11/05/09
Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0910114
Client Name: NMED Hazardous Waste Bureau
Client Project Name: Bayo Canyon WWTP
Client Project Number:
Client PO Number: 60-667-55-01574

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
BC-WWTP-W1	0910114-1		WATER	07-Oct-09	14:50
BC-WWTP-51	0910114-2		SOLID	07-Oct-09	14:35

ALS Laboratory Group

ALS Paragon

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Lab ID: 0910114

Date: 10/9/2009

Page: 1 of 1

Project Name/No.: Bayo Canyon WWTP

Sampler(s): D Comeau

Turnaround: Standard or (Due)

Disposal: By Lab or Return to Client

REPORT TO: David Cobrain
PHONE: 505-476-6055
FAX: 505-476-6000
E-MAIL: dan.comeau@state.nm.us
COMPANY: NM Environment Dept
ADDRESS: 2905 Rodeo Park Dr. East
Bldg 1
Santa Fe, NM 87505

Provide additional information as needed in comments section.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	No. of Containers	~~TPH~~	VOCs	BTEX (only)	~~SVOCs~~ Dioxins/Furans	OC Pesticides	PCBs by 1668A	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions	Solids:	pH	RCRA Metals/Hg	Iso Uranium	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Am 241	Iso Pu
BC-WWTP-W1	10/7/09	1950	1	W	7				1		1													1	1		1	1				1			1	1
BC-WWTP-S1	10/7/09	1935	2	NS	3				1		1													1	1		1	1				1			1	1

Circle Analytical Method Above

Am / Cm / Pu / Th / U: E901.1 Ln # 321; SW9310 Ln # 300; E900.0; SW9315 E903.0; E903.1; SW9320 E904.0; D5811 Ln # 335; E906.0; SM7500Rn; Ln # 306; Ln # 305

* Time Zone: EST CST MST PST Matrix Key: O = oil, S = soil, NS = non-soil solid, W = water, L = liquid, E = extract, F = filter

Comments:

Samples were collected 10/7/2009

Relinquished By (1)
Signature: D A Comeau
Printed Name: DANIEL COMEAU
Date: 10/9/2009 Time: 1015
Company: NMED-HWB

Relinquished By (2)
Signature
Printed Name
Date Time
Company

Received By (1)
Signature: Lara J Orban
Printed Name: Lara J Orban
Date: 10/10/09 Time: 0955
Company: ALS

Received By (2)
Signature
Printed Name
Date Time
Company

Originator: Retain a photocopy after transfer!

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: NMED Workorder No: 0910114

Project Manager: LRS Initials: KJO Date: 10/10/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals on shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	NONE	(YES)	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	NO
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	N/A	(YES)	NO
17	Were the samples **shipped on ice**?		(YES)	NO
18	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1
Temperature (°C):	5.6
No. of custody seals on cooler:	1
DOT Survey/ Acceptance Information — External µR/hr reading:	15
Background µR/hr reading:	13

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

• Sample #2: One 16 oz wm poly received for all RAD analysis. -UK
Sed is very watery.

The seven bottles for sample #1 were filled with green tinged water with suspended sediment and a layer of brown sediment on the bottoms.

If applicable, was the client contacted? (YES) / NO / NA Contact: Dan Oneam Date/Time: 10/13

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

0910114

FedEx US Airbill Express

FedEx Tracking Number 8681 5696 9089

Recipient's Copy

1 From

Date 10/9/2009

Sender's Name [redacted] Phone 505 1716-6043

Company NM Environment Dept.

Address 2905 Rodeo Park Dr. East Bldg 1

Dept./Floor/Suite/Room

City [redacted] State NM ZIP 87505

2 Your Internal Billing Reference

3 To

Recipient's Name [redacted] Phone 800 743-1511

Company [redacted] / ALS Tech Group

Recipient's Address [redacted]

We cannot deliver to P.O. boxes or P.O. ZIP Codes. Dept./Floor/Suite/Room

Address [redacted]

To request a package be held at a specific FedEx location, print FedEx address here.

City [redacted] State CO ZIP 80524

8681 5696 9089

4a Express Package Service — *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

* To most locations.

4b Express Freight Service — *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation:

** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

* Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [X] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg
- [ ] Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below. Obtain Recip Acct. No. [ ]

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Total Packages	Total Weight	Total Declared Value†
1	30 #	$ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details.

Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

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Gamma Spectroscopy Results

PAI 713 Rev 10

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: GS091014-4MB

Library: NMED_FANP.LIB

Sample Matrix: SOLID
Prep SOP: PAI 739 Rev 9
Date Collected: 14-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 31-Oct-09

Prep Batch: GS091014-4
QCBatchID: GS091014-4-1
Run ID: GS091014-4A
Count Time: 1000 minutes

Final Aliquot: 41.5 g
Result Units: pCi/g
File Name: 091297d09

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14331-83-0	Ac-228	0.18 +/- 0.18	0.36		U
14391-76-5	Ag-110m	-0.0039 +/- 0.036	0.062		U
14682-66-7	Al-26	-0.013 +/- 0.046	0.083		U
14596-10-2	Am-241	0.0046 +/- 0.032	0.054		U
13966-02-4	Be-7	0.026 +/- 0.23	0.39		U
14913-49-6	Bi-212	0.43 +/- 0.57	0.93		U
14733-03-0	Bi-214	0.014 +/- 0.14	0.24		U,J
14109-32-1	Cd-109	-0.15 +/- 0.33	0.56		U
13982-30-4	Ce-139	-0.0030 +/- 0.016	0.028		U
14762-78-8	Ce-144	-0.074 +/- 0.11	0.19		U
14093-03-9	Co-56	-0.017 +/- 0.068	0.12		U
13981-50-5	Co-57	0.0072 +/- 0.0078	0.013		U
13981-38-9	Co-58	-0.0019 +/- 0.038	0.065		U
10198-40-0	Co-60	-0.021 +/- 0.045	0.080		U
14392-02-0	Cr-51	-0.0072 +/- 0.21	0.35		U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
M - Requested MDC not met.
B - Analyte concentration greater than MDC.
B3 - Analyte concentration greater than MDC but less than Requested MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

Data Package ID: *GSS0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: GS091014-4MB
Library: NMED_FANP.LIB

Sample Matrix: SOLID
Prep SOP: PAI 739 Rev 9
Date Collected: 14-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 31-Oct-09

Prep Batch: GS091014-4
QCBatchID: GS091014-4-1
Run ID: GS091014-4A
Count Time: 1000 minutes

Final Aliquot: 41.5 g
Result Units: pCi/g
File Name: 091297d09

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13967-70-9	Cs-134	-0.0056 +/- 0.041	0.070		U
10045-97-3	Cs-137	-0.0044 +/- 0.040	0.068	0.05	U,M
14683-23-9	Eu-152	-0.23 +/- 0.22	0.40		U
15585-10-1	Eu-154	0.032 +/- 0.22	0.38		U
14391-16-3	Eu-155	-0.021 +/- 0.053	0.090		U
14596-12-4	Fe-59	-0.011 +/- 0.071	0.12		U
10043-66-0	I-131	-0.011 +/- 0.029	0.050		U
13966-00-2	K-40	0.24 +/- 1.1	1.8		U
13966-31-9	Mn-54	-0.00095 +/- 0.038	0.066		U
13966-32-0	Na-22	-0.012 +/- 0.039	0.070		U
14681-63-1	Nb-94	0.028 +/- 0.045	0.075		U
13967-76-5	Nb-95	0.014 +/- 0.036	0.061		U
15100-28-4	Pa-234m	1.2 +/- 6.9	12		U
15092-94-1	Pb-212	0.0096 +/- 0.080	0.13		U
15067-28-4	Pb-214	-0.0065 +/- 0.15	0.25		U,J

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
M - Requested MDC not met.
B - Analyte concentration greater than MDC.
B3 - Analyte concentration greater than MDC but less than Requested MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

Data Package ID: *GSS0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: GS091014-4MB
Library: NMED_FANP.LIB

Sample Matrix: SOLID
Prep SOP: PAI 739 Rev 9
Date Collected: 14-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 31-Oct-09

Prep Batch: GS091014-4
QCBatchID: GS091014-4-1
Run ID: GS091014-4A
Count Time: 1000 minutes

Final Aliquot: 41.5 g
Result Units: pCi/g
File Name: 091297d09

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13967-48-1	Ru-106	-0.17 +/- 0.36	0.61		U
14683-10-4	Sb-124	0.0028 +/- 0.041	0.069		U
14234-35-6	Sb-125	-0.0092 +/- 0.084	0.14		U
13967-63-0	Sc-46	0.0047 +/- 0.036	0.062		U
15623-47-9	Th-227	-0.013 +/- 0.14	0.24		U
15065-10-8	Th-234	-0.038 +/- 0.60	0.99		U
14913-50-9	Tl-208	0.044 +/- 0.039	0.064		U
15117-96-1	U-235	0.097 +/- 0.12	0.19		U
13982-39-3	Zn-65	0.090 +/- 0.091	0.15		U
13967-76-2	Sr-85	0.059 +/- 0.045	0.070		U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
M - Requested MDC not met.
B - Analyte concentration greater than MDC.
B3 - Analyte concentration greater than MDC but less than Requested MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

Data Package ID: *GSS0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: GS091014-4LCS

Library: ANALYTICAL

Sample Matrix: SOLID
Prep SOP: PAI 739 Rev 9
Date Collected: 14-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: GS091014-4
QCBatchID: GS091014-4-1
Run ID: GS091014-4A
Count Time: 30 minutes

Final Aliquot: 100 g
Result Units: pCi/g
File Name: 091306d09

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
14596-10-2	Am-241	1060 +/- 124	2.63	1030	103	85 - 115	P
10198-40-0	Co-60	474 +/- 55.6	1.41	464	102	85 - 115	P
10045-97-3	Cs-137	376 +/- 44.2	1.80	380	99.0	85 - 115	P,M3

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.

Data Package ID: *GSS0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2DUP

Library: NMED_FANP.LIB

Sample Matrix: SOLID
Prep SOP: PAI 739 Rev 9
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: GS091014-4
QCBatchID: GS091014-4-1
Run ID: GS091014-4A
Count Time: 1000 minutes
Report Basis: Dry Weight

Final Aliquot: 41.5 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 091321d09

CASNO	Analyte	Sample Result +/- 2s TPU	Duplicate Result +/- 2s TPU	DER	Control Limit	Lab Qualifiers
14331-83-0	Ac-228	0.85 +/- 0.23	0.73 +/- 0.19	0.42	2.13	G
14391-76-5	Ag-110m	-0.024 +/- 0.041	-0.017 +/- 0.041	0.12	2.13	U,G
14682-66-7	Al-26	-0.0041 +/- 0.047	0.011 +/- 0.049	0.22	2.13	U,G
14596-10-2	Am-241	-0.022 +/- 0.39	0.0063 +/- 0.037	0.07	2.13	U,G
13966-02-4	Be-7	0.20 +/- 0.36	0.14 +/- 0.36	0.11	2.13	U,G
14913-49-6	Bi-212	0.79 +/- 0.50	0.74 +/- 0.56	0.06	2.13	U,G
14733-03-0	Bi-214	0.61 +/- 0.20	0.69 +/- 0.17	0.30	2.13	G,J
14109-32-1	Cd-109	3.3 +/- 1.1	1.7 +/- 0.68	1.20	2.13	G,SI
13982-30-4	Ce-139	-0.017 +/- 0.026	-0.011 +/- 0.021	0.16	2.13	U,G
14762-78-8	Ce-144	0.14 +/- 0.18	0.010 +/- 0.13	0.60	2.13	U,G
14093-03-9	Co-56	0.096 +/- 0.093	0.11 +/- 0.10	0.07	2.13	U,G
13981-50-5	Co-57	0.0030 +/- 0.022	0.0037 +/- 0.016	0.03	2.13	U,G
13981-38-9	Co-58	0.034 +/- 0.045	-0.035 +/- 0.053	1.01	2.13	U,G
10198-40-0	Co-60	0.0098 +/- 0.047	0.018 +/- 0.049	0.12	2.13	U,G
14392-02-0	Cr-51	0.057 +/- 0.44	-0.22 +/- 0.44	0.44	2.13	U,G
13967-70-9	Cs-134	0.069 +/- 0.028	-0.015 +/- 0.043	1.63	2.13	U,W,G
10045-97-3	Cs-137	0.040 +/- 0.043	-0.011 +/- 0.043	0.84	2.13	U,M,G

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
DER - Duplicate Error Ratio (see PAI SOP 715)
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *GSS0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2DUP
Library: NMED_FANP.LIB

Sample Matrix: SOLID
Prep SOP: PAI 739 Rev 9
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: GS091014-4
QCBatchID: GS091014-4-1
Run ID: GS091014-4A
Count Time: 1000 minutes
Report Basis: Dry Weight

Final Aliquot: 41.5 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 091321d09

CASNO	Analyte	Sample Result +/- 2s TPU	Duplicate Result +/- 2s TPU	DER	Control Limit	Lab Qualifiers
14683-23-9	Eu-152	-0.013 +/- 0.22	-0.037 +/- 0.25	0.07	2.13	U,G
15585-10-1	Eu-154	-0.081 +/- 0.23	-0.064 +/- 0.33	0.04	2.13	U,G
14391-16-3	Eu-155	0.0013 +/- 0.11	0.10 +/- 0.088	0.71	2.13	U,G
14596-12-4	Fe-59	0.036 +/- 0.12	0.030 +/- 0.13	0.04	2.13	U,G
10043-66-0	I-131	0.013 +/- 0.27	-0.19 +/- 0.31	0.50	2.13	U,G
13966-00-2	K-40	13 +/- 2.0	12 +/- 1.9	0.19	2.13	G
13966-31-9	Mn-54	0.0097 +/- 0.044	0.0038 +/- 0.045	0.09	2.13	U,G
13966-32-0	Na-22	-0.0023 +/- 0.047	0.0025 +/- 0.048	0.07	2.13	U,G
14681-63-1	Nb-94	0.013 +/- 0.045	0.026 +/- 0.048	0.20	2.13	U,G
13967-76-5	Nb-95	0.0060 +/- 0.074	0.029 +/- 0.058	0.25	2.13	U,G
15100-28-4	Pa-234m	13 +/- 7.1	11 +/- 10	0.12	2.13	U,G
15092-94-1	Pb-212	0.77 +/- 0.15	0.82 +/- 0.14	0.22	2.13	G
15067-28-4	Pb-214	0.69 +/- 0.16	0.65 +/- 0.14	0.20	2.13	G,J
13967-48-1	Ru-106	0.26 +/- 0.38	-0.33 +/- 0.39	1.08	2.13	U,G
14683-10-4	Sb-124	-0.023 +/- 0.079	0.025 +/- 0.056	0.50	2.13	U,G
14234-35-6	Sb-125	0.033 +/- 0.088	0.00099 +/- 0.088	0.26	2.13	U,G
13967-63-0	Sc-46	0 +/- 0.046	0.0010 +/- 0.047	0.02	2.13	U,G

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
DER - Duplicate Error Ratio (see PAI SOP 715)
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *GSS0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2DUP

Library: NMED_FANP.LIB

Sample Matrix: SOLID
Prep SOP: PAI 739 Rev 9
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: GS091014-4
QCBatchID: GS091014-4-1
Run ID: GS091014-4A
Count Time: 1000 minutes
Report Basis: Dry Weight

Final Aliquot: 41.5 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 091321d09

CASNO	Analyte	Sample Result +/- 2s TPU	Duplicate Result +/- 2s TPU	DER	Control Limit	Lab Qualifiers
15623-47-9	Th-227	0.40 +/- 3.6	-0.097 +/- 0.21	0.14	2.13	U,G
15065-10-8	Th-234	5.0 +/- 1.5	2.6 +/- 0.61	1.49	2.13	W,G
14913-50-9	Tl-208	0.24 +/- 0.094	0.26 +/- 0.076	0.20	2.13	G
15117-96-1	U-235	0.14 +/- 0.21	0.15 +/- 0.19	0.03	2.13	U,G
13982-39-3	Zn-65	-0.11 +/- 0.14	-0.13 +/- 0.17	0.10	2.13	U,G
13967-76-2	Sr-85	0.069 +/- 0.061	0.074 +/- 0.060	0.05	2.13	U,G

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
G - Sample density differs by more than 15% of LCS density.

Abbreviations:
TPU - Total Propagated Uncertainty (see PAI SOP 743)
DER - Duplicate Error Ratio (see PAI SOP 715)
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *GSS0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2
Library: NMED_FANP.LIB
Analysis ReqCode: 321

Sample Matrix: SOLID
Prep SOP: PAI 739 Rev 9
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 31-Oct-09

Prep Batch: GS091014-4
QCBatchID: GS091014-4-1
Run ID: GS091014-4A
Count Time: 1000 minutes
Report Basis: Dry Weight

Final Aliquot: 41.5 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 091222d10

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14331-83-0	Ac-228	0.85 +/- 0.23	0.40		G,TI
14391-76-5	Ag-110m	-0.024 +/- 0.041	0.071		U,G
14682-66-7	Al-26	-0.0041 +/- 0.047	0.081		U,G
14596-10-2	Am-241	-0.022 +/- 0.39	0.66		U,G
13966-02-4	Be-7	0.20 +/- 0.36	0.60		U,G
14913-49-6	Bi-212	0.79 +/- 0.50	0.78		G
14733-03-0	Bi-214	0.61 +/- 0.20	0.31		G,J
14109-32-1	Cd-109	3.3 +/- 1.1	1.7		G,SI
13982-30-4	Ce-139	-0.017 +/- 0.026	0.045		U,G
14762-78-8	Ce-144	0.14 +/- 0.18	0.30		U,G
14093-03-9	Co-56	0.096 +/- 0.093	0.15		U,G
13981-50-5	Co-57	0.0030 +/- 0.022	0.038		U,G
13981-38-9	Co-58	0.034 +/- 0.045	0.074		U,G
10198-40-0	Co-60	0.0098 +/- 0.047	0.079		U,G
14392-02-0	Cr-51	0.057 +/- 0.44	0.73		U,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *GSS0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2

Library: NMED_FANP.LIB
Analysis ReqCode: 321

Sample Matrix: SOLID
Prep SOP: PAI 739 Rev 9
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 31-Oct-09

Prep Batch: GS091014-4
QCBatchID: GS091014-4-1
Run ID: GS091014-4A
Count Time: 1000 minutes
Report Basis: Dry Weight

Final Aliquot: 41.5 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 091222d10

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13967-70-9	Cs-134	0.069 +/- 0.028	0.061		G,TI
10045-97-3	Cs-137	0.040 +/- 0.043	0.071	0.05	U,M,G
14683-23-9	Eu-152	-0.013 +/- 0.22	0.38		U,G
15585-10-1	Eu-154	-0.081 +/- 0.23	0.40		U,G
14391-16-3	Eu-155	0.0013 +/- 0.11	0.18		U,G
14596-12-4	Fe-59	0.036 +/- 0.12	0.20		U,G
10043-66-0	I-131	0.013 +/- 0.27	0.45		U,G
13966-00-2	K-40	13 +/- 2.0	1.8		G
13966-31-9	Mn-54	0.0097 +/- 0.044	0.073		U,G
13966-32-0	Na-22	-0.0023 +/- 0.047	0.080		U,G
14681-63-1	Nb-94	0.013 +/- 0.045	0.075		U,G
13967-76-5	Nb-95	0.0060 +/- 0.074	0.12		U,G
15100-28-4	Pa-234m	13 +/- 7.1	11		G,TI
15092-94-1	Pb-212	0.77 +/- 0.15	0.18		G
15067-28-4	Pb-214	0.69 +/- 0.16	0.26		G,J

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *GSS0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2

Library: NMED_FANP.LIB
Analysis ReqCode: 321

Sample Matrix: SOLID
Prep SOP: PAI 739 Rev 9
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 31-Oct-09

Prep Batch: GS091014-4
QCBatchID: GS091014-4-1
Run ID: GS091014-4A
Count Time: 1000 minutes
Report Basis: Dry Weight

Final Aliquot: 41.5 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 091222d10

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13967-48-1	Ru-106	0.26 +/- 0.38	0.63		U,G
14683-10-4	Sb-124	-0.023 +/- 0.079	0.13		U,G
14234-35-6	Sb-125	0.033 +/- 0.088	0.16		U,G
13967-63-0	Sc-46	0 +/- 0.046	0.078		U,G
15623-47-9	Th-227	0.40 +/- 3.6	5.9		U,G
15065-10-8	Th-234	5.0 +/- 1.5	2.2		G,TI
14913-50-9	Tl-208	0.24 +/- 0.094	0.15		G
15117-96-1	U-235	0.14 +/- 0.21	0.34		U,G
13982-39-3	Zn-65	-0.11 +/- 0.14	0.24		U,G
13967-76-2	Sr-85	0.069 +/- 0.061	0.097		U,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *GSS0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2DUP
Library: NMED_FANP.LIB

Sample Matrix: SOLID
Prep SOP: PAI 739 Rev 9
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: GS091014-4
QCBatchID: GS091014-4-1
Run ID: GS091014-4A
Count Time: 1000 minutes
Report Basis: Dry Weight

Final Aliquot: 41.5 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 091321d09

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14331-83-0	Ac-228	0.73 +/- 0.19	0.31		G
14391-76-5	Ag-110m	-0.017 +/- 0.041	0.071		U,G
14682-66-7	Al-26	0.011 +/- 0.049	0.084		U,G
14596-10-2	Am-241	0.0063 +/- 0.037	0.062		U,G
13966-02-4	Be-7	0.14 +/- 0.36	0.60		U,G
14913-49-6	Bi-212	0.74 +/- 0.56	0.89		U,G
14733-03-0	Bi-214	0.69 +/- 0.17	0.25		G,J
14109-32-1	Cd-109	1.7 +/- 0.68	1.0		G,SI
13982-30-4	Ce-139	-0.011 +/- 0.021	0.035		U,G
14762-78-8	Ce-144	0.010 +/- 0.13	0.22		U,G
14093-03-9	Co-56	0.11 +/- 0.10	0.16		U,G
13981-50-5	Co-57	0.0037 +/- 0.016	0.027		U,G
13981-38-9	Co-58	-0.035 +/- 0.053	0.092		U,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13

SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
G - Sample density differs by more than 15% of LCS density.

Abbreviations:
TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

Data Package ID: *GSS0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2DUP
Library: NMED_FANP.LIB

Sample Matrix: SOLID
Prep SOP: PAI 739 Rev 9
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: GS091014-4
QCBatchID: GS091014-4-1
Run ID: GS091014-4A
Count Time: 1000 minutes
Report Basis: Dry Weight

Final Aliquot: 41.5 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 091321d09

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
10198-40-0	Co-60	0.018 +/- 0.049	0.083		U,G
14392-02-0	Cr-51	-0.22 +/- 0.44	0.75		U,G
13967-70-9	Cs-134	-0.015 +/- 0.043	0.073		U,W,G
10045-97-3	Cs-137	-0.011 +/- 0.043	0.074	0.05	U,M,G
14683-23-9	Eu-152	-0.037 +/- 0.25	0.43		U,G
15585-10-1	Eu-154	-0.064 +/- 0.33	0.58		U,G
14391-16-3	Eu-155	0.10 +/- 0.088	0.14		U,G
14596-12-4	Fe-59	0.030 +/- 0.13	0.21		U,G
10043-66-0	I-131	-0.19 +/- 0.31	0.54		U,G
13966-00-2	K-40	12 +/- 1.9	1.8		G
13966-31-9	Mn-54	0.0038 +/- 0.045	0.076		U,G
13966-32-0	Na-22	0.0025 +/- 0.048	0.082		U,G
14681-63-1	Nb-94	0.026 +/- 0.048	0.079		U,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13

SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
G - Sample density differs by more than 15% of LCS density.

Abbreviations:
TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

Data Package ID: *GSS0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2DUP

Library: NMED_FANP.LIB

Sample Matrix: SOLID
Prep SOP: PAI 739 Rev 9
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: GS091014-4
QCBatchID: GS091014-4-1
Run ID: GS091014-4A
Count Time: 1000 minutes
Report Basis: Dry Weight

Final Aliquot: 41.5 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 091321d09

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13967-76-5	Nb-95	0.029 +/- 0.058	0.096		U,G
15100-28-4	Pa-234m	11 +/- 10	16		U,G
15092-94-1	Pb-212	0.82 +/- 0.14	0.15		G
15067-28-4	Pb-214	0.65 +/- 0.14	0.25		G,J
13967-48-1	Ru-106	-0.33 +/- 0.39	0.68		U,G
14683-10-4	Sb-124	0.025 +/- 0.056	0.094		U,G
14234-35-6	Sb-125	0.00099 +/- 0.088	0.16		U,G
13967-63-0	Sc-46	0.0010 +/- 0.047	0.081		U,G
15623-47-9	Th-227	-0.097 +/- 0.21	0.36		U,G
15065-10-8	Th-234	2.6 +/- 0.61	1.0		W,G
14913-50-9	Tl-208	0.26 +/- 0.076	0.12		G
15117-96-1	U-235	0.15 +/- 0.19	0.32		U,G
13982-39-3	Zn-65	-0.13 +/- 0.17	0.29		U,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
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W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13

SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
G - Sample density differs by more than 15% of LCS density.

Abbreviations:
TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

Data Package ID: *GSS0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2DUP
Library: NMED_FANP.LIB

Sample Matrix: SOLID
Prep SOP: PAI 739 Rev 9
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: GS091014-4
QCBatchID: GS091014-4-1
Run ID: GS091014-4A
Count Time: 1000 minutes
Report Basis: Dry Weight

Final Aliquot: 41.5 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 091321d09

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13967-76-2	Sr-85	0.074 +/- 0.060	0.094		U,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13

SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
G - Sample density differs by more than 15% of LCS density.

Abbreviations:
TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

Data Package ID: *GSS0910114-1*

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Gamma Spectroscopy
Case Narrative

NMED Hazardous Waste Bureau
Bayo Canyon WWTP

Work Order Number: 0910114

1. This report consists of analytical results for one water sample received by ALS on 10/10/09.

2. This sample was prepared according to procedure SOP739R9.

3. The sample was analyzed for the presence of gamma emitting radionuclides according to procedure SOP713R10. The analysis was completed on 10/28/09.

4. The analysis results for this sample are reported in units of pCi/L. The water sample was decanted, but not filtered prior to analysis.

5. Activity concentrations above the calculated MDC are reported in some instances where minimum nuclide identification criteria are not met. Such tentative identifications result when the software attempts to calculate net activity concentrations for analytes where either one or both of the following criteria are not satisfied: the 'diagnostic' peak for a nuclide must be identified above the critical level, or the minimum library peak abundance must be attained. Nuclides not meeting these requirements have been flagged with a "TI" qualifier.

6. ALS has found there to be a significant low bias to ^{214}Pb and ^{214}Bi results when using a mixed nuclide gamma source for efficiency calibrations. The magnitude of this bias has been determined to be approximately 32% for ^{214}Bi, and 23% for ^{214}Pb. Therefore, any reported results for ^{214}Pb and ^{214}Bi are flagged with a "J" qualifier, indicating the activity values to be an estimated value. Results are reported without further qualification.

7. No further problems were encountered with either the client sample or the associated quality control samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Linda Arend
Radiochemistry Primary Data Reviewer

11/05/09
Date

Radiochemistry Final Data Reviewer

11/05/09
Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0910114
Client Name: NMED Hazardous Waste Bureau
Client Project Name: Bayo Canyon WWTP
Client Project Number:
Client PO Number: 60-667-55-01574

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
BC-WWTP-W1	0910114-1		WATER	07-Oct-09	14:50
BC-WWTP-51	0910114-2		SOLID	07-Oct-09	14:35

ALS Laboratory Group

ALS Paragon

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Lab ID: 0910114

Date: 10/9/2009 | Page: 1 of 1

Project Name/No.: Buyo Canyon WWTP | Sampler(s): D Comeau | Turnaround: Standard or (Due) | Disposal: By Lab or Return to Client

REPORT TO: David Cobrain
PHONE: 505-476-6055
FAX: 505-476-6000
E-MAIL: dan.comeau@state.nm.us
COMPANY: NM Environment Dept
ADDRESS: 2905 Rodeo Park Dr East Bldg 1, Santa Fe, NM 87505

Provide additional information as needed in comments section.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	No. of Containers	~~TPH~~	VOCs	BTEX (only)	~~SVOCs~~ Dioxins/Furans	OC Pesticides	PCBs by 1668A	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions	Solids:	pH	RCRA Metals/Hg	Iso Uranium
BC-WWTP-W1	10/7/09	1950	1	W	7				1	1	1													1	1
BC-WWTP-S1	10/7/09	1935	2	NS	3				1		1													1	1

Circle Analytical Method Above

Sample ID	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Am 241	Iso Pu
BC-WWTP-W1		1	1				1			1	1
BC-WWTP-S1		1	1				1			1	1

Am / Cm / Pu / Th / U: E901.1 Ln # 321; SW9310 E900.0 Ln # 300; SW9315 E903.0; E903.1; SW9320 E904.0; D5811 Ln # 335; E906.0; SM7500Rn; Ln # 306; Ln # 305

* Time Zone: EST CST MST PST Matrix Key: O = oil, S = soil, NS = non-soil solid, W = water, L = liquid, E = extract, F = filter

Comments:
Samples were collected 10/7/2009

Originator: Retain a photocopy after transfer!

Relinquished By (1)	Relinquished By (2)
Signature: D A Comeau	Signature:
Printed Name: DANIEL COMEAU	Printed Name:
Date: 10/9/2009 Time: 1015	Date: Time:
Company: NMED-HWB	Company:

Received By (1)	Received By (2)
Signature: Lara J Orban	Signature:
Printed Name: Lara J Orban	Printed Name:
Date: 10/16/09 Time: 0955	Date: Time:
Company: ALS	Company:

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: NMED Workorder No: 0910114

Project Manager: LRS Initials: DJO Date: 10/10/09

1. Does this project require any **special handling** in addition to standard Paragon procedures?			YES	(NO)
2. Are custody **seals on shipping containers** intact?	NONE		(YES)	NO
3. Are Custody seals on **sample containers** intact?	NONE		(YES)	NO
4. Is there a **COC (Chain-of-Custody) present** or other representative documents?			(YES)	NO
5. Are the **COC and bottle labels complete and legible**?			(YES)	NO
6. Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)			(YES)	NO
7. Were **airbills / shipping documents** present and/or removable?	DROP OFF		(YES)	NO
8. Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A		(YES)	NO
9. Are all aqueous **non-preserved samples pH 4-9**?	N/A		(YES)	NO
10. Is there **sufficient sample** for the requested analyses?			(YES)	NO
11. Were all samples placed in the **proper containers** for the requested analyses?			(YES)	NO
12. Are all samples within **holding times** for the requested analyses?			(YES)	NO
13. Were all sample containers received **intact**? (not broken or leaking, etc.)			(YES)	NO
14. Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)		YES	NO
15. Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)		YES	NO
16. Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	N/A		(YES)	NO
17. Were the samples **shipped on ice**?			(YES)	NO
18. Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY		(YES)	NO

Cooler #: 1

Temperature (°C): 5.6

No. of custody seals on cooler: 1

DOT Survey/ Acceptance Information

External µR/hr reading: 15

Background µR/hr reading: 13

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

• Sample #2: One 16 oz wm poly received for all RAD analysis. -UK
Sed is very watery.

The seven bottles for sample #1 were filled with green tinged water with suspended sediment and a layer of brown sediment on the bottoms.

If applicable, was the client contacted? (YES) / NO / NA Contact: Dan Cornelius Date/Time: 10/13

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

0910114

FedEx US Airbill Express

FedEx Tracking Number 8681 5696 9089

Recipient's Copy

1 From

Date 10/9/2009

Sender's Name Rubio Phone 505-476-6043

Company NM Environment Dept.

Address 2905 Rodeo Park Dr. East Bldg 1 Dept./Floor/Suite/Room

City Santa Fe State NM ZIP 87505

2 Your Internal Billing Reference

3 To

Recipient's Name [illegible] Phone 800 343-1511

Company [illegible] / ALS Lab Group

Recipient's Address 225 Commerce Drive Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP Codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Ft. Collins State CO ZIP 80524

8681 5696 9089

4a Express Package Service *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rates not available. Minimum charge: One-pound rate.

*To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

*Call for Confirmation:

**To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

*Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [X] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Obtain Recip. Acct. No. [ ]

Total Packages	Total Weight	Total Declared Value†
1	30 #	$ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details.

Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

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Gamma Spectroscopy Results

PAI 713 Rev 10

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: GS091020-1EMB
Library: NMED_FANP.LIB

Sample Matrix: WATER
Prep SOP: PAI 739 Rev 9
Date Collected: 21-Oct-09
Date Prepared: 21-Oct-09
Date Analyzed: 25-Oct-09

Prep Batch: GS091020-1
QCBatchID: GS091020-1-4
Run ID: GS091020-1A
Count Time: 1000 minutes

Final Aliquot: 982 ml
Result Units: pCi/l
File Name: 091232d09C

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14331-83-0	Ac-228	17 +/- 12	19		U
14391-76-5	Ag-110m	-0.16 +/- 2.6	4.5		U
14682-66-7	Al-26	-0.74 +/- 3.9	6.8		U
14596-10-2	Am-241	-2.1 +/- 5.8	9.7		U
13966-02-4	Be-7	2.3 +/- 19	32		U
14913-49-6	Bi-212	25 +/- 42	69		U
14733-03-0	Bi-214	11 +/- 6.2	9.5		J,TI
14109-32-1	Cd-109	-16 +/- 27	45		U
13982-30-4	Ce-139	-0.77 +/- 1.4	2.4		U
14762-78-8	Ce-144	-4.1 +/- 9.5	16		U
14093-03-9	Co-56	0.97 +/- 5.0	8.6		U
13981-50-5	Co-57	0.59 +/- 0.66	1.1		U
13981-38-9	Co-58	-0.67 +/- 2.9	5.0		U
10198-40-0	Co-60	-1.0 +/- 3.5	6.1		U
14392-02-0	Cr-51	1.7 +/- 17	29		U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
M - Requested MDC not met.
B - Analyte concentration greater than MDC.
B3 - Analyte concentration greater than MDC but less than Requested MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

Data Package ID: *GSW0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: GS091020-1EMB
Library: NMED_FANP.LIB

Sample Matrix: WATER
Prep SOP: PAI 739 Rev 9
Date Collected: 21-Oct-09
Date Prepared: 21-Oct-09
Date Analyzed: 25-Oct-09

Prep Batch: GS091020-1
QCBatchID: GS091020-1-4
Run ID: GS091020-1A
Count Time: 1000 minutes

Final Aliquot: 982 ml
Result Units: pCi/l
File Name: 091232d09C

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13967-70-9	Cs-134	1.2 +/- 2.8	4.7		U
10045-97-3	Cs-137	-0.44 +/- 2.9	5.0	5	U
14683-23-9	Eu-152	-2.1 +/- 16	28		U
15585-10-1	Eu-154	-23 +/- 17	31		U
14391-16-3	Eu-155	1.5 +/- 4.6	7.6		U
14596-12-4	Fe-59	-5.2 +/- 8.3	15		U
10043-66-0	I-131	-0.26 +/- 2.4	4.1		U
13966-00-2	K-40	12 +/- 79	130		U
13966-31-9	Mn-54	0.80 +/- 2.8	4.7		U
13966-32-0	Na-22	0.39 +/- 3.3	5.6		U
14681-63-1	Nb-94	0.63 +/- 3.1	5.2		U
13967-76-5	Nb-95	1.5 +/- 2.7	4.5		U
15100-28-4	Pa-234m	200 +/- 510	850		U
15092-94-1	Pb-212	-0.20 +/- 7.2	12		U
15067-28-4	Pb-214	4.6 +/- 5.4	8.9		U,J

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
M - Requested MDC not met.
B - Analyte concentration greater than MDC.
B3 - Analyte concentration greater than MDC but less than Requested MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

Data Package ID: *GSW0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: GS091020-1EMB

Library: NMED_FANP.LIB

Sample Matrix: WATER
Prep SOP: PAI 739 Rev 9
Date Collected: 21-Oct-09
Date Prepared: 21-Oct-09
Date Analyzed: 25-Oct-09

Prep Batch: GS091020-1
QCBatchID: GS091020-1-4
Run ID: GS091020-1A
Count Time: 1000 minutes

Final Aliquot: 982 ml
Result Units: pCi/l
File Name: 091232d09C

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13967-48-1	Ru-106	16 +/- 26	43		U
14683-10-4	Sb-124	-0.25 +/- 2.8	4.7		U
14234-35-6	Sb-125	2.2 +/- 6.2	12		U
13967-63-0	Sc-46	0.41 +/- 2.6	4.5		U
15623-47-9	Th-227	3.3 +/- 12	20		U
15065-10-8	Th-234	-24 +/- 48	80		U
14913-50-9	Tl-208	4.0 +/- 3.0	4.7		U
15117-96-1	U-235	6.4 +/- 17	37		U
13982-39-3	Zn-65	6.6 +/- 6.8	11		U
13967-76-2	Sr-85	5.1 +/- 3.1	4.6		TI

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
M - Requested MDC not met.
B - Analyte concentration greater than MDC.
B3 - Analyte concentration greater than MDC but less than Requested MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

Data Package ID: *GSW0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: GS091020-1LCS

Library: ANALYTICAL

Sample Matrix: WATER
Prep SOP: PAI 739 Rev 9
Date Collected: 21-Oct-09
Date Prepared: 21-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: GS091020-1
QCBatchID: GS091020-1-4
Run ID: GS091020-1A
Count Time: 30 minutes

Final Aliquot: 1000 ml
Result Units: pCi/l
File Name: 091773d02

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
14596-10-2	Am-241	97000 +/- 11500	1830	102000	95.5	85 - 115	P
10198-40-0	Co-60	50800 +/- 5970	215	51500	98.7	85 - 115	P
10045-97-3	Cs-137	38800 +/- 4560	271	37300	104	85 - 115	P,M3

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.

Data Package ID: *GSW0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-W1
Lab ID: 0910114-1

Library: NMED_FANP.LIB
Analysis ReqCode: 321

Sample Matrix: WATER
Prep SOP: PAI 739 Rev 9
Date Collected: 07-Oct-09
Date Prepared: 21-Oct-09
Date Analyzed: 25-Oct-09

Prep Batch: GS091020-1
QCBatchID: GS091020-1-4
Run ID: GS091020-1A
Count Time: 1000 minutes
Report Basis: Unfiltered

Final Aliquot: 1000 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: 091591d08

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14331-83-0	Ac-228	9.2 +/- 12	27		U
14391-76-5	Ag-110m	1.9 +/- 2.6	4.2		U
14682-66-7	Al-26	-0.29 +/- 3.0	5.2		U
14596-10-2	Am-241	4.6 +/- 3.6	5.8		U
13966-02-4	Be-7	1.7 +/- 23	39		U
14913-49-6	Bi-212	35 +/- 37	61		U
14733-03-0	Bi-214	4.6 +/- 5.1	8.4		U,J
14109-32-1	Cd-109	1.4 +/- 31	51		U
13982-30-4	Ce-139	-0.41 +/- 1.7	2.9		U
14762-78-8	Ce-144	6.8 +/- 11	18		U
14093-03-9	Co-56	1.2 +/- 4.7	8.0		U
13981-50-5	Co-57	-0.17 +/- 1.5	2.5		U
13981-38-9	Co-58	-0.82 +/- 2.8	4.8		U
10198-40-0	Co-60	-0.72 +/- 3.0	5.2		U
14392-02-0	Cr-51	7.4 +/- 26	43		U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *GSW0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-W1
Lab ID: 0910114-1

Library: NMED_FANP.LIB
Analysis ReqCode: 321

Sample Matrix: WATER
Prep SOP: PAI 739 Rev 9
Date Collected: 07-Oct-09
Date Prepared: 21-Oct-09
Date Analyzed: 25-Oct-09

Prep Batch: GS091020-1
QCBatchID: GS091020-1-4
Run ID: GS091020-1A
Count Time: 1000 minutes
Report Basis: Unfiltered

Final Aliquot: 1000 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: 091591d08

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13967-70-9	Cs-134	-2.2 +/- 2.5	4.3		U
10045-97-3	Cs-137	0.24 +/- 2.7	4.5	5	U
14683-23-9	Eu-152	4.1 +/- 13	22		U
15585-10-1	Eu-154	-11 +/- 14	25		U
14391-16-3	Eu-155	-1.8 +/- 5.7	9.6		U
14596-12-4	Fe-59	12 +/- 7.2	11		TI
10043-66-0	I-131	-3.6 +/- 10	17		U
13966-00-2	K-40	19 +/- 67	110		U
13966-31-9	Mn-54	-2.2 +/- 2.6	4.5		U
13966-32-0	Na-22	-0.22 +/- 2.8	4.8		U
14681-63-1	Nb-94	-0.088 +/- 2.6	4.4		U
13967-76-5	Nb-95	-1.8 +/- 2.7	4.7		U
15100-28-4	Pa-234m	530 +/- 470	750		U
15092-94-1	Pb-212	-2.2 +/- 7.4	12		U
15067-28-4	Pb-214	-3.7 +/- 11	18		U,J

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *GSW0910114-1*

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-W1
Lab ID: 0910114-1

Library: NMED_FANP.LIB
Analysis ReqCode: 321

Sample Matrix: WATER
Prep SOP: PAI 739 Rev 9
Date Collected: 07-Oct-09
Date Prepared: 21-Oct-09
Date Analyzed: 25-Oct-09

Prep Batch: GS091020-1
QCBatchID: GS091020-1-4
Run ID: GS091020-1A
Count Time: 1000 minutes
Report Basis: Unfiltered

Final Aliquot: 1000 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: 091591d08

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13967-48-1	Ru-106	12 +/- 22	37		U
14683-10-4	Sb-124	2.0 +/- 3.0	4.9		U
14234-35-6	Sb-125	2.5 +/- 5.7	10		U
13967-63-0	Sc-46	2.2 +/- 3.0	4.9		U
15623-47-9	Th-227	7.5 +/- 12	20		U
15065-10-8	Th-234	12 +/- 55	91		U
14913-50-9	Tl-208	-0.49 +/- 5.0	8.4		U
15117-96-1	U-235	22 +/- 20	41		U
13982-39-3	Zn-65	1.5 +/- 6.2	10		U
13967-76-2	Sr-85	6.3 +/- 4.1	6.3		TI

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *GSW0910114-1*

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Isotopic Uranium
Case Narrative

NMED Hazardous Waste Bureau
Bayo Canyon WWTP

Work Order Number: 0910114

1. This report consists of the analytical results for one solid sample and one water sample received by ALS on 10/10/2009.

2. This solid sample was prepared according to procedures SOP336R0, SOP773R10, and SOP778R13. The water sample was prepared according to procedures SOP776R11 and SOP778R13. The solid sample was muffled for four hours at 600° Celsius.

3. The samples were analyzed for the presence of isotopic uranium according to procedure SOP714R11. The analyses were completed on 10/29/2009.

4. The isotopic analysis results for the solid sample are reported on a 'Dry Weight' basis in units of pCi/gram.

5. The analysis results for the water sample are reported in units of pCi/L. Per project manager's instructions, the water sample was decanted, not filtered prior to analysis.

6. Due to insufficient sample volume, a laboratory control sample duplicate (LCSD) was prepared in lieu of a prep batch duplicate for batch AS091023-1.

7. This analytical method quantifies U-235 alpha activity in a specific region of interest corresponding to emission energies between those of U-234 and U-238. A potential limitation of this method is that measurable amounts of U-234 in the sample may cause a small amount of characteristic activity in the U-235 region of interest due to poorly resolved alpha activity at the boundary between the two regions. To minimize the potential for a high bias in the U-235 analytical results, the U-235 region of interest has been narrowed and limited to a lower energy region. An 85.1% abundance correction has been made to the final U-235 results.

8. No anomalous situations were encountered during the preparation or analysis of these samples. All quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Jean Anderson
Radiochemistry Primary Data Reviewer

11/5/09
Date

Erin Finsley
Radiochemistry Final Data Reviewer

11/5/09
Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0910114
Client Name: NMED Hazardous Waste Bureau
Client Project Name: Bayo Canyon WWTP
Client Project Number:
Client PO Number: 60-667-55-01574

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
BC-WWTP-W1	0910114-1		WATER	07-Oct-09	14:50
BC-WWTP-51	0910114-2		SOLID	07-Oct-09	14:35

ALS Laboratory Group

ALS Paragon

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Lab ID: 0910114

Date: 10/9/2009 Page: 1 of 1

Project Name/No.: Bayo Canyon WWTP Sampler(s): D Comeau Turnaround: Standard or (Due) Disposal: By Lab or Return to Client

REPORT TO: David Cobrain
PHONE: 505-476-6055
FAX: 505-476-6000
E-MAIL: dan.comeau@state.nm.us
COMPANY: NM Environment Dept
ADDRESS: 2905 Rodeo Park Dr. East
Bldg 1
Santa Fe, NM 87505

Provide additional information as needed in comments section.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	No. of Containers	~~TPH~~	VOCs	BTEX (only)	~~SVOCs~~ Dioxins/Furans	OC Pesticides	PCBs by 1668A	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions	Solids:	pH	PCRA Metals (w/Hg)	Iso Uranium	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Am 241	Iso Pu
BC-WWTP-W1	10/7/09	1450	1	W	7				1	1	1													1	1		1	1				1			1	1
BC-WWTP-S1	10/7/09	1435	2	NS	3				1		1													1	1		1	1				1			1	1

* Time Zone: EST CST MST PST Matrix Key: O = oil, S = soil, NS = non-soil solid, W = water, L = liquid, E = extract, F = filter

Comments:

Samples were collected 10/7/2009

Relinquished By: (1)
Signature: D A Comeau
Printed Name: DANIEL COMEAU
Date: 10/9/2009 Time: 1015
Company: NMED-HWB

Relinquished By: (2)
Signature
Printed Name
Date Time
Company

Received By: (1)
Signature: Lara J Orban
Printed Name: Lara J Orban
Date: 10/10/09 Time: 0955
Company: ALS

Received By: (2)
Signature
Printed Name
Date Time
Company

Originator: Retain a photocopy after transfer!

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: NMED Workorder No: 0910114

Project Manager: LRS Initials: KJO Date: 10/10/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	NONE	(YES)	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7.	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	NO
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		• (YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble:** ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	N/A	(YES)	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1							
Temperature (°C):	5.6							
No. of custody seals on cooler:	1							
DOT Survey/ Acceptance Information — External µR/hr reading:	15							
DOT Survey/ Acceptance Information — Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

• Sample #2: One 16 oz wm poly received for all RAD analysis. -CK
Sed is very watery.

The seven bottles for sample #1 were filled with green tinged water with suspended sediment and a layer of brown sediment on the bottoms.

If applicable, was the client contacted? (YES) / NO / NA Contact: Dan Oneam Date/Time: 10/13

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

0910114

FedEx US Airbill Express

FedEx Tracking Number 8681 5696 9089

Recipient's Copy

1 From

Date 10/9/2007

Sender's Name Rubel Gomez Phone 505-474-6043

Company NM Environment Dept.

Address 2905 Rodeo Park Dr. East Bldg 1 Dept./Floor/Suite/Room

City [illegible] State NM ZIP 87505

2 Your Internal Billing Reference

3 To

Recipient's Name [illegible] Phone 800 343-1511

Company [illegible] / ALS Lab Group

Recipient's Address [illegible] Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP Codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City [illegible] State CO ZIP 80524

8681 5696 9089

4a Express Package Service *Packages up to 150 lbs.*

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

* To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation:

** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

* Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [x] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [x] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check
- [ ] Obtain Recip Acct. No.

Total Packages	Total Weight	Total Declared Value†
1	30 #	$ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details.

Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

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Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091014-5MB

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 14-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5A
Count Time: 180 minutes

Final Aliquot: 2.00 g
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13966-29-5	U-234	0.029 +/- 0.029	0.039	0.1	U
15117-96-1	U-235	-0.0014 +/- 0.026	0.035	0.1	U
7440-61-1	U-238	-0.0012 +/- 0.023	0.030	0.1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
U-232	4.400	2.98	pCi/g	67.6	30 - 110 %	

Comments:

Qualifiers/Flags:
U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:
TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

M - Requested MDC not met.
B - Analyte concentration greater than MDC.
B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *UR0910114-1*

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091023-1MB

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 23-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1B
Count Time: 180 minutes

Final Aliquot: 1700 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13966-29-5	U-234	0.0081 +/- 0.022	0.042	0.2	U
15117-96-1	U-235	-0.0040 +/- 0.026	0.046	0.2	U
7440-61-1	U-238	0.014 +/- 0.023	0.042	0.2	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
U-232	5.176	3.86	pCi/l	74.5	30 - 110 %	

Comments:

Qualifiers/Flags:
U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:
TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

M - Requested MDC not met.
B - Analyte concentration greater than MDC.
B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *UR0910114-1*

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091014-5LCS

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 14-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5A
Count Time: 180 minutes

Final Aliquot: 2.00 g
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13966-29-5	U-234	4.28 +/- 0.766	0.0297	4.34	98.7	82 - 122	P
7440-61-1	U-238	4.58 +/- 0.814	0.0147	4.50	102	82 - 122	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
U-232	4.400	3.56	pCi/g	80.9	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *UR0910114-1*

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091023-1LCS

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 23-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1B
Count Time: 180 minutes

Final Aliquot: 1700 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13966-29-5	U-234	5.38 +/- 0.957	0.0448	5.11	105	82 - 122	P
7440-61-1	U-238	5.26 +/- 0.936	0.0419	5.30	99.1	82 - 122	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
U-232	5.176	3.90	pCi/l	75.3	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *UR0910114-1*

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091023-1LCSD

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 23-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1B
Count Time: 180 minutes

Final Aliquot: 1700 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13966-29-5	U-234	5.08 +/- 0.908	0.0453	5.11	99.5	82 - 122	P
7440-61-1	U-238	5.10 +/- 0.912	0.0453	5.30	96.2	82 - 122	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
U-232	5.176	3.90	pCi/l	75.4	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *UR0910114-1*

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2DUP

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 24-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5A
Count Time: 180 minutes

Final Aliquot: 2.00 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Analyte	Sample Result +/- 2s TPU	Duplicate Result +/- 2s TPU	DER	Control Limit	Lab Qualifiers
13966-29-5	U-234	3.3 +/- 0.64	2.9 +/- 0.60	0.50	2.13	
15117-96-1	U-235	0.14 +/- 0.071	0.15 +/- 0.088	0.15	2.13	
7440-61-1	U-238	2.1 +/- 0.43	2.1 +/- 0.46	0.02	2.13	

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
DER - Duplicate Error Ratio (see PAI SOP 715)
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *UR0910114-1*

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID:
Lab ID: AS091023-1LCSD

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 23-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1B
Count Time: 180 minutes

Final Aliquot: 1700 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Analyte	Sample Result +/- 2s TPU	Duplicate Result +/- 2s TPU	DER	Control Limit	Lab Qualifiers
13966-29-5	U-234	5.4 +/- 0.96	5.1 +/- 0.91	0.23	2.13	P
7440-61-1	U-238	5.3 +/- 0.94	5.1 +/- 0.91	0.12	2.13	P

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
DER - Duplicate Error Ratio (see PAI SOP 715)
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *UR0910114-1*

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-W1
Lab ID: 0910114-1

Analysis ReqCode: 314

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 07-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1B
Count Time: 180 minutes
Report Basis: Unfiltered

Final Aliquot: 1700 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13966-29-5	U-234	0.62 +/- 0.16	0.027	0.2	
15117-96-1	U-235	0 +/- 0.024	0.018	0.2	U
7440-61-1	U-238	0.42 +/- 0.12	0.032	0.2	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
U-232	5.176	4.21	pCi/l	81.4	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *UR0910114-1*

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2

Analysis ReqCode: 314

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5A
Count Time: 180 minutes
Report Basis: Dry Weight

Final Aliquot: 2.00 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13966-29-5	U-234	3.3 +/- 0.64	0.053	0.1	
15117-96-1	U-235	0.14 +/- 0.071	0.052	0.1	
7440-61-1	U-238	2.1 +/- 0.43	0.064	0.1	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
U-232	4.399	2.74	pCi/g	62.3	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *UR0910114-1*

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2DUP

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 24-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5A
Count Time: 180 minutes
Report Basis: Dry Weight

Final Aliquot: 2.00 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13966-29-5	U-234	2.9 +/- 0.60	0.065	0.1	
15117-96-1	U-235	0.15 +/- 0.088	0.072	0.1	
7440-61-1	U-238	2.1 +/- 0.46	0.072	0.1	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
U-232	4.400	2.08	pCi/g	47.3	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

W - DER is greater than Warning Limit of 1.42

D - DER is greater than Control Limit of 2.13

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *UR0910114-1*

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Isotopic Plutonium
Case Narrative

NMED Hazardous Waste Bureau
Bayo Canyon WWTP

Work Order Number: 0910114

1. This report consists of analytical results for one water sample and one solid sample received by ALS on 10/10/09.

2. These samples were prepared according to procedures SOP336R0, SOP773R10, SOP778R13, SOP776R11, and SOP777R9. The soil sample was muffled at least four hours at 600° C.

3. The samples were analyzed for the presence of isotopic plutonium according to procedure SOP714R11. The analyses were completed on 10/29/09.

4. The isotopic analysis results for the solid sample are reported on a 'dry weight' basis in units of pCi/gram. The analysis results for the water sample are reported in units of pCi/L. The water sample was decanted, but not filtered prior to analysis.

5. Pu-240 is indistinguishable from Pu-239. In this report, any plutonium in this region of interest will be reported as Pu-239/240.

6. Due to insufficient sample volume, a laboratory control sample duplicate (LCSD) was prepared in lieu of a prep batch duplicate for batch AS091023-1.

7. The duplicate error ratio (DER) for sample 0910114-2 and its duplicate was elevated above our warning limit of 1.42 at 1.92 for Pu-239/240, as identified with a "W" qualifier on the final reports. DER is defined as:

$$DER = \frac{|S - D|}{2 * \sqrt{\sigma_S^2 + \sigma_D^2}}$$

Where: S = sample result, D = duplicate result, σ_s = 1 sigma uncertainty of sample result, and σ_D = 1 sigma uncertainty of the duplicate result. Results are acceptable according to SOP715R15.

8. No further anomalous situations were encountered during the preparation or analysis of these samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Linda Arend
Radiochemistry Primary Data Reviewer

11/05/09
Date

Erin Finsley
Radiochemistry Final Data Reviewer

11/5/09
Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0910114
Client Name: NMED Hazardous Waste Bureau
Client Project Name: Bayo Canyon WWTP
Client Project Number:
Client PO Number: 60-667-55-01574

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
BC-WWTP-W1	0910114-1		WATER	07-Oct-09	14:50
BC-WWTP-51	0910114-2		SOLID	07-Oct-09	14:35

ALS Laboratory Group

ALS Paragon

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Lab ID: 0910114

Date: 10/9/2009

Page: 1 of 1

Project Name/No.: Bayo Canyon WWTP

Sampler(s): D Comeau

Turnaround: Standard or (Due)

Disposal: By Lab or Return to Client

REPORT TO: David Cobrain
PHONE: 505-476-6055
FAX: 505-476-6000
E-MAIL: dan.comeau@state.nm.us
COMPANY: NM Environment Dept
ADDRESS: 2905 Rodeo Park Dr East
Bldg 1
Santa Fe, NM 87505

Provide additional information as needed in comments section.

Circle Analytical Method Above: SW8015B GRO DRO; SW8260B; SW8260B SW8021B; SW8270C; SW8081A; SW8082; SW8151A; SW8330 SW8321 by LC/MS/MS; SW8260B SW8270D SW8081A SW8151; SW6010B SW7470A; SW6010B 7470A/7471A E200.7 E245.1; SW6010B 7470A/7471A E200.7 E245.1; SW6020A E200.8; SW6020A E200.8; SW7196A Alkaline Digestion? Y / ; SW9056 E300.0 (specify in comments); TDS:E160.1 TSS:E160.2 Total:E160.3; SW9040B SW9045C E150.1; Hg Ln# 314

Circle Analytical Method Above: Am / Cm / Pu / Th / U; E901.1 Ln# 321; SW9310 E900.0 Ln#300; SW9315 E903.0; E902.1; SW9320 E904.0; D5811 Ln# 335; E906.0; SW7500Rn; Ln# 306; Ln# 305

Sample ID	Date	Time *	Lab ID	Matrix	No. of Containers	~~4PHP~~	VOCs	BTEX (only)	~~SVOCs~~ Naphthalene/Fluorene	OC Pesticides	PCBs by 1668A	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions	Solids:	pH	RCRA Metals/Hg	Iso Uranium	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Am 241	Iso Pu
BC-WWTP-W1	10/7/09	1450	1	W	7				1	~~3~~	1													1	1		1	1				1			1	1
BC-WWTP-S1	10/7/09	1435	2	NS	3				1		1													1	1		1	1				1			1	1

* Time Zone: EST CST MST PST Matrix Key: O = oil, S = soil, NS = non-soil solid, W = water, L = liquid, E = extract, F = filter

Comments:
Samples were collected 10/7/2009

Originator: Retain a photocopy after transfer!

Relinquished By: (1)
Signature: D A Comeau
Printed Name: DANIEL COMEAU
Date: 10/9/2009 Time: 1015
Company: NMED-HWB

Relinquished By: (2)
Signature
Printed Name
Date Time
Company

Received By: (1)
Signature: Lara J Orban
Printed Name: Lara J Orban
Date: 10/10/09 Time: 0955
Company: ALS

Received By: (2)
Signature
Printed Name
Date Time
Company

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: NMED Workorder No: 0910114

Project Manager: LRS Initials: DJO Date: 10/10/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	NONE	(YES)	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7.	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	NO
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble:** ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	N/A	(YES)	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1							
Temperature (°C):	5.6							
No. of custody seals on cooler:	1							
DOT Survey/ Acceptance Information: External µR/hr reading:	15							
DOT Survey/ Acceptance Information: Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

• Sample #2: One 16 oz wm poly received for all RAD analysis. -UK
Sed is very watery.

The seven bottles for sample #1 were filled with green tinged water with suspended sediment and a layer of brown sediment on the bottoms.

If applicable, was the client contacted? (YES) / NO / NA Contact: Dan Oneam Date/Time: 10/13

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

0910114

FedEx US Airbill Express

FedEx Tracking Number 8681 5696 9089

[redacted] Recipient's Copy

1 From

Date 10/9/2009

Sender's Name Rubio Gomez Phone 505-417-6043

Company NM Environment Dept.

Address 2905 Rodeo Park Dr. East Bldg 1 Dept./Floor/Suite/Room

City [illegible] State NM ZIP 87505

2 Your Internal Billing Reference

3 To

Recipient's Name [illegible] Phone 800-274-1511

Company [illegible] / ALS Tech Group

Recipient's Address [illegible] Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP Codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City [illegible] State CO ZIP 80524

8681 5696 9089

4a Express Package Service *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

* To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation:

** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

* Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [X] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

[ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Obtain Recip. Acct. No. [ ]

Total Packages	Total Weight	Total Declared Value†
1	30 #	$ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details.

Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

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Isotopic Plutonium By Alpha Spectroscopy

PAI 714 Rev 11

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091014-5MB

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 14-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5B
Count Time: 1000 minutes

Final Aliquot: 2.00 g
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13981-16-3	Pu-238	-0.0036 +/- 0.0063	0.016	0.03	U
10-12-8	Pu-239/240	0.0036 +/- 0.0059	0.0088	0.03	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Pu-242	2.167	1.31	pCi/g	60.3	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *PU0910114-1*

Isotopic Plutonium By Alpha Spectroscopy

PAI 714 Rev 11

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091023-1MB

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 23-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1A
Count Time: 720 minutes

Final Aliquot: 1700 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13981-16-3	Pu-238	0.00042 +/- 0.0064	0.010	0.03	U
10-12-8	Pu-239/240	0.00084 +/- 0.0064	0.012	0.03	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Pu-242	2.612	2.02	pCi/l	77.4	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *PU0910114-1*

Isotopic Plutonium By Alpha Spectroscopy

PAI 714 Rev 11

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091014-5LCS

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 14-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5B
Count Time: 1000 minutes

Final Aliquot: 2.00 g
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
10-12-8	Pu-239/240	2.22 +/- 0.354	0.0126	2.25	98.5	82 - 118	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Pu-242	2.167	1.72	pCi/g	79.4	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *PU0910114-1*

Isotopic Plutonium By Alpha Spectroscopy

PAI 714 Rev 11

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091023-1LCS

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 23-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1A
Count Time: 720 minutes

Final Aliquot: 1700 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
10-12-8	Pu-239/240	2.55 +/- 0.424	0.0172	2.65	96.4	82 - 118	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Pu-242	2.612	1.74	pCi/l	66.7	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *PU0910114-1*

Isotopic Plutonium By Alpha Spectroscopy

PAI 714 Rev 11

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091023-1LCSD

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 23-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1A
Count Time: 720 minutes

Final Aliquot: 1700 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
10-12-8	Pu-239/240	2.57 +/- 0.424	0.0111	2.65	97.0	82 - 118	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Pu-242	2.612	1.84	pCi/l	70.4	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *PU0910114-1*

Isotopic Plutonium By Alpha Spectroscopy

PAI 714 Rev 11

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2DUP

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5B
Count Time: 1000 minutes

Final Aliquot: 2.00 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Analyte	Sample Result +/- 2s TPU	Duplicate Result +/- 2s TPU	DER	Control Limit	Lab Qualifiers
13981-16-3	Pu-238	-0.0024 +/- 0.0060	0.0074 +/- 0.0062	1.15	2.13	LT
10-12-8	Pu-239/240	0.043 +/- 0.017	0.11 +/- 0.028	1.92	2.13	W

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
DER - Duplicate Error Ratio (see PAI SOP 715)
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *PU0910114-1*

Isotopic Plutonium By Alpha Spectroscopy

PAI 714 Rev 11

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID:
Lab ID: AS091023-1LCSD

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 23-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1A
Count Time: 720 minutes

Final Aliquot: 1700 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Analyte	Sample Result +/- 2s TPU	Duplicate Result +/- 2s TPU	DER	Control Limit	Lab Qualifiers
10-12-8	Pu-239/240	2.6 +/- 0.42	2.6 +/- 0.42	0.03	2.13	P

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
DER - Duplicate Error Ratio (see PAI SOP 715)
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *PU0910114-1*

Isotopic Plutonium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-W1
Lab ID: 0910114-1

Analysis ReqCode: 305

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 07-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1A
Count Time: 720 minutes
Report Basis: Unfiltered

Final Aliquot: 1700 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13981-16-3	Pu-238	-0.0026 +/- 0.0076	0.015	0.03	U
10-12-8	Pu-239/240	0.023 +/- 0.013	0.0048	0.03	LT

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Pu-242	2.612	1.69	pCi/l	64.8	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PU0910114-1*

Isotopic Plutonium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2

Analysis ReqCode: 305

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5B
Count Time: 1000 minutes
Report Basis: Dry Weight

Final Aliquot: 2.00 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13981-16-3	Pu-238	-0.0024 +/- 0.0060	0.013	0.03	U
10-12-8	Pu-239/240	0.043 +/- 0.017	0.011	0.03	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Pu-242	2.167	1.27	pCi/g	58.4	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PU0910114-1*

Isotopic Plutonium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2DUP

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5B
Count Time: 1000 minutes
Report Basis: Dry Weight

Final Aliquot: 2.00 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13981-16-3	Pu-238	0.0074 +/- 0.0062	0.0034	0.03	LT
10-12-8	Pu-239/240	0.11 +/- 0.028	0.0034	0.03	W

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Pu-242	2.167	1.28	pCi/g	59.3	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

W - DER is greater than Warning Limit of 1.42

D - DER is greater than Control Limit of 2.13

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PU0910114-1*

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Gross Alpha/Beta
Case Narrative

NMED Hazardous Waste Bureau
Bayo Canyon WWTP

Work Order Number: 0910114

1. This report consists of the analytical results for one water sample and one soil sample received by ALS on 10/10/09.

2. These samples were prepared according to SOP702R19 and SOP336R0.

3. The samples were analyzed for gross alpha and beta activity by gas flow proportional counting according to SOP724R10. The analyses were completed on 10/23/09. Gross alpha results are referenced to ^{241}Am. Gross beta results are referenced to ^{90}Sr/Y.

4. The analysis results for the water sample are reported in units of pCi/L. The water sample was decanted, but not filtered prior to analysis. The analysis results for the soil sample are reported on a 'dry weight' basis in units of pCi/gram.

5. This soil sample was flamed, as prescribed in EPA Methods 900.0 and 9310 for samples that demonstrate hygroscopicity. This could reduce the beta activity if the sample contained ^{137}Cs, or other beta emitters, that may be volatile under the conditions associated with flaming.

6. No anomalous situations were encountered during the preparation or analysis of these samples. All quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Linda Arend — 11/02/09
Radiochemistry Primary Data Reviewer — Date

Radiochemistry Final Data Reviewer — 11/02/09
Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0910114
Client Name: NMED Hazardous Waste Bureau
Client Project Name: Bayo Canyon WWTP
Client Project Number:
Client PO Number: 60-667-55-01574

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
BC-WWTP-W1	0910114-1		WATER	07-Oct-09	14:50
BC-WWTP-51	0910114-2		SOLID	07-Oct-09	14:35

ALS Laboratory Group

ALS Paragon

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Lab ID	0910114
Date	10/9/2009
Page	1 of 1

Project Name/No.: Buyo Canyon WWTP | Sampler(s): D Comeau | Turnaround: Standard or (Due) | Disposal: By Lab or Return to Client

REPORT TO:	David Cobrain
PHONE:	505-476-6055
FAX:	505-476-6000
E-MAIL:	dan.comeau@state.nm.us
COMPANY:	NM Environment Dept
ADDRESS:	2905 Rodeo Park Dr East Bldg 1 Santa Fe NM 87505

Provide additional information as needed in comments section.

Circle Analytical Method Above: SW8015B DRO GRO; SW8260B; SW8021B; SW8270C; SW8081A; SW8062; SW8151A; SW8330 SW8321 by LC/MS/MS; SW8260B SW8270D SW8081A SW8151; SW6010B SW7470A; SW6010B 7470A/7471A E200.7 E245; SW6010B 7470A/7471A E200.7 E245; SW6020A E200.8; SW6020A E200.8; SW7196A Alkaline Digestion? Y / ; SW9056 E300.0 (specify in comments); TDS:E160.1 TSS:E160.2 Total:E160.3; SW9040B SW9045C E150.1; Hg Lab # 314

Circle Analytical Method Above: Am / Cm / Pu / Th / U; E901.1 Lab # 321; SW9310 E900.0 Lab # 300; SW9315 E903.0; E903.1; SW9320 E904.0; D5811 Lab # 335; E906.0; SW7500Rn; Lab # 306; Lab # 305

Sample ID	Date	Time *	Lab ID	Matrix	No. of Containers	~~4PHP~~	VOCs	BTEX (only)	~~SVOCs~~ Dioxins/Furans	OC Pesticides	PCBs by 1668A	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions	Solids:	pH	RCRA Metals/Hg	Iso Uranium	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Am 241	Iso Pu
BC-WWTP-W1	10/7/09	1950	1	W	7				1		1													1	1		1	1				1			1	1
BC-WWTP-S1	10/7/09	1935	2	NS	3				1		1													1	1		1	1				1			1	1

* Time Zone: EST CST MST PST Matrix Key: O = oil, S = soil, NS = non-soil solid, W = water, L = liquid, E = extract, F = filter

Comments:

Samples were collected 10/7/2009

Originator: Retain a photocopy after transfer!

Relinquished By: (1)	Relinquished By: (2)
Signature: D A Comeau	Signature:
Printed Name: DANIEL COMEAU	Printed Name:
Date: 10/9/2009 Time: 1015	Date: Time:
Company: NMED-HWB	Company:

Received By: (1)	Received By: (2)
Signature: Lara J Orban	Signature:
Printed Name: Lara J Orban	Printed Name:
Date: 10/10/09 Time: 0955	Date: Time:
Company: ALS	Company:

4

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: NMED Workorder No: 0910114

Project Manager: LRS Initials: DJO Date: 10/10/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals on shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	NONE	(YES)	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7.	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	NO
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		• (YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14.	Are all samples requiring **no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon)** headspace free? **Size of bubble:** ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	N/A	(YES)	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1							
Temperature (°C):	5.6							
No. of custody seals on cooler:	1							
DOT Survey/ Acceptance Information: External µR/hr reading:	15							
DOT Survey/ Acceptance Information: Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

• Sample #2: One 16 oz wm poly received for all RAD analysis. -DK
Sed is very watery.

The seven bottles for sample #1 were filled with green tinged water with suspended sediment and a layer of brown sediment on the bottoms.

If applicable, was the client contacted? (YES) / NO / NA Contact: Dan Oneam Date/Time: 10/13

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 299225002 01-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

0910114

FedEx US Airbill Express

FedEx Tracking Number 8681 5696 9089

[redacted] Recipient's Copy

1 From

Date 10/9/2007

Sender's Name Rubb Phone 505-474-6043

Company NM Environment Dept.

Address 2905 Rodeo Park Dr. East Bldg 1 Dept./Floor/Suite/Room

City [illegible] State NM ZIP 87505

2 Your Internal Billing Reference

3 To

Recipient's Name [illegible] Phone 800 243-1511

Company [illegible] / ALS Tech Group

Recipient's Address [illegible] Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP Codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City [illegible] State CO ZIP 80524

8681 5696 9089

4a Express Package Service — *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

*To most locations.

4b Express Freight Service — *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

*Call for Confirmation; **To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

*Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [X] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Obtain Recip Acct. No. [ ]

[redacted] 157

Total Packages	Total Weight	Total Declared Value†
1	30 #	$ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details.

Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

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Gross Alpha/Beta Analysis by GFPC

PAI 724 Rev 10

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AB091020-1MB

Sample Matrix: WATER
Prep SOP: PAI 702 Rev 19
Date Collected: 20-Oct-09
Date Prepared: 20-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: AB091020-1
QCBatchID: AB091020-1-3
Run ID: AB091020-1A
Count Time: 1000 minutes

Final Aliquot: 200 ml
Result Units: pCi/l
File Name: ABB1023F

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
12587-46-1	GROSS ALPHA	-0.067 +/- 0.29	0.51	3	U
12587-47-2	GROSS BETA	-0.26 +/- 0.60	1.0	4	U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *AB0910114-1*

Gross Alpha/Beta Analysis by GFPC

PAI 724 Rev 10

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AB091020-3MB

Sample Matrix: SOLID
Prep SOP: PAI 702 Rev 19
Date Collected: 20-Oct-09
Date Prepared: 20-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: AB091020-3
QCBatchID: AB091020-3-4
Run ID: AB091020-3A
Count Time: 120 minutes

Final Aliquot: 2.01 g
Result Units: pCi/g
File Name: ABB1022B

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
12587-46-1	GROSS ALPHA	-0.041 +/- 0.052	0.17	3	U
12587-47-2	GROSS BETA	0.069 +/- 0.14	0.30	4	U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *AB0910114-1*

Gross Alpha/Beta Analysis by GFPC

PAI 724 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AB091020-1LCS

Sample Matrix: WATER
Prep SOP: PAI 702 Rev 19
Date Collected: 20-Oct-09
Date Prepared: 20-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: AB091020-1
QCBatchID: AB091020-1-3
Run ID: AB091020-1A
Count Time: 120 minutes

Final Aliquot: 200 ml
Result Units: pCi/l
File Name: ABB1023E

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
12587-46-1	GROSS ALPHA	220 +/- 36.2	2.24	226	97.0	70 - 130	P
12587-47-2	GROSS BETA	221 +/- 36.0	5.69	215	103	70 - 130	P,M3

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *AB0910114-1*

Gross Alpha/Beta Analysis by GFPC

PAI 724 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AB091020-3LCS

Sample Matrix: SOLID
Prep SOP: PAI 702 Rev 19
Date Collected: 20-Oct-09
Date Prepared: 20-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: AB091020-3
QCBatchID: AB091020-3-4
Run ID: AB091020-3A
Count Time: 30 minutes

Final Aliquot: 2.01 g
Result Units: pCi/g
File Name: ABB1022D

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
12587-46-1	GROSS ALPHA	12.6 +/- 2.43	0.465	15.0	83.8	70 - 130	P
12587-47-2	GROSS BETA	14.1 +/- 2.50	0.905	14.3	98.9	70 - 130	P

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *AB0910114-1*

Gross Alpha/Beta Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-W1
Lab ID: 0910114-1

Analysis ReqCode: 300

Sample Matrix: WATER
Prep SOP: PAI 702 Rev 19
Date Collected: 07-Oct-09
Date Prepared: 20-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: AB091020-1
QCBatchID: AB091020-1-3
Run ID: AB091020-1A
Count Time: 400 minutes
Report Basis: Unfiltered

Final Aliquot: 130 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: ABB1022E

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
12587-46-1	GROSS ALPHA	1.2 +/- 0.85	1.4	3	U
12587-47-2	GROSS BETA	27 +/- 4.7	2.3	4	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *AB0910114-1*

Gross Alpha/Beta Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2

Analysis ReqCode: 300

Sample Matrix: SOLID
Prep SOP: PAI 702 Rev 19
Date Collected: 07-Oct-09
Date Prepared: 20-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: AB091020-3
QCBatchID: AB091020-3-4
Run ID: AB091020-3A
Count Time: 120 minutes
Report Basis: Dry Weight

Final Aliquot: 0.200 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: ABB1022B

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
12587-46-1	GROSS ALPHA	3.8 +/- 1.6	1.9	3	
12587-47-2	GROSS BETA	4.4 +/- 1.7	3.0	4	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *AB0910114-1*

Mercury

Method SW7471A

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
LabID: 0910114-2MS

Sample Matrix: SOLID
%Moisture: 76.1
Date Collected: 07-Oct-09
Date Extracted: 14-Oct-09
Date Analyzed: 15-Oct-09
Prep Method: METHOD

Prep Batch: HG091015-1
QCBatchID: HG091015-1-2
Run ID: HG091015-2A3
Cleanup: NONE
Basis: Dry Weight

Sample Aliquot: 0.605g
Final Volume: 100g
Result Units: MG/KG
File Name: 09101500

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7439-97-6	MERCURY	2.6		2.75	N	0.276	1.38	14	80 - 120%

Field ID: BC-WWTP-51
LabID: 0910114-2MSD

Sample Matrix: SOLID
%Moisture: 76.1
Date Collected: 07-Oct-09
Date Extracted: 14-Oct-09
Date Analyzed: 15-Oct-09
Prep Method: METHOD

Prep Batch: HG091015-1
QCBatchID: HG091015-1-2
Run ID: HG091015-2A3
Cleanup: NONE
Basis: Dry Weight

Sample Aliquot: 0.603g
Final Volume: 100g
Result Units: MG/KG
File Name: 09101500

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7439-97-6	MERCURY	5.8	N*	1.39	235	0.277	20	71

Data Package ID: *HG0910114-1*

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Isotopic Americium
Case Narrative

NMED Hazardous Waste Bureau
Bayo Canyon WWTP

Work Order Number: 0910114

1. This report consists of the analytical results for one solid sample and one water sample received by ALS on 10/10/2009.

2. The solid sample was prepared according to procedures SOP336R0, SOP773R10, SOP778R13, and SOP751R2. The water sample was prepared according to procedures SOP776R11, SOP778R12, and SOP751R2. Modifications were made to the method as described on QASS #378640. The solid sample was muffled for four hours at 600° Celsius.

3. The samples were analyzed for the presence of ^{241}Am according to procedure SOP714R11. The analyses were completed on 10/30/2009.

4. The isotopic analysis results for the solid sample are reported on a 'Dry Weight' basis in units of pCi/gram.

5. The analysis results for the water sample are reported in units of pCi/L. Per project manager's instructions, the water sample was decanted, not filtered prior to analysis.

6. Due to insufficient sample volume, a laboratory control sample duplicate (LCSD) was prepared in lieu of a prep batch duplicate for batch AS091023-1.

7. No anomalous situations were encountered during the preparation or analysis of these samples. All quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Joan Anderson
Radiochemistry Primary Data Reviewer

11/5/09
Date

Erin Fusley
Radiochemistry Final Data Reviewer

11/5/09
Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0910114
Client Name: NMED Hazardous Waste Bureau
Client Project Name: Bayo Canyon WWTP
Client Project Number:
Client PO Number: 60-667-55-01574

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
BC-WWTP-W1	0910114-1		WATER	07-Oct-09	14:50
BC-WWTP-51	0910114-2		SOLID	07-Oct-09	14:35

ALS Laboratory Group

ALS Paragon

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Lab ID: 0910114

Date: 10/9/2009

Page: 1 of 1

Project Name/No.: Buyo Canyon WWTP

Sampler(s): D Comeau

Turnaround: Standard or (Due)

Disposal: By Lab or Return to Client

REPORT TO: David Cobrain
PHONE: 505-476-6055
FAX: 505-476-6000
E-MAIL: dan.comeau@state.nm.us
COMPANY: NM Environment Dept
ADDRESS: 2905 Rodeo Park Dr East
Bldg 1
Santa Fe, NM 87505

Provide additional information as needed in comments section.

Circle Analytical Method Above: SW8015B DRO; SW8015B GRO; SW8260B; SW8260B SW8021B; SW8270C; SW8081A; SW8082; SW8151A; SW8330 SW8321 by LC/MS/MS; SW8260B SW8270D SW8081A SW8015; SW6010B SW7470A; SW6010B 7470A/7471A E200.7 E245; SW6010B 7470A/7471A E200.7 E245; SW6020A E200.8; SW6020A E200.8; SW7196A Alkaline Digestion? Y / ; SW9056 E300.0 (specify in comments); TDS:E160.1 TSS:E160.2 Total:E160.3; SW9040B SW9045C E150.1; Ln# 314

Circle Analytical Method Above: Am / Cm / Pu / Th / U; E901.1 Ln# 321; SW9310 E900.0 Ln# 300; SW9315 E903.0; E903.1; SW9320 E904.0; D5811 Ln# 335; E906.0; SM7500Rn; Ln# 306; Ln# 305

Sample ID	Date	Time *	Lab ID	Matrix	No. of Containers	~~TPH~~	VOCs	BTEX (only)	~~SVOCs~~ Diox/Furans	OC Pesticides	PCBs by 1668A	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions	Solids:	pH	RCRA Metals/Hg	Iso Uranium	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Am 241	Iso Pu
BC-WWTP-W1	10/7/09	1450	1	W	7				1	~~3~~	1													1	1		1	1				1			1	1
BC-WWTP-S1	10/7/09	1435	2	NS	3				1		1													1	1		1	1				1			1	1

* Time Zone: EST CST MST PST Matrix Key: O = oil, S = soil, NS = non-soil solid, W = water, L = liquid, E = extract, F = filter

Comments:

Samples were collected 10/7/2009

Originator: Retain a photocopy after transfer!

Relinquished By (1)
Signature: D A Comeau
Printed Name: DANIEL COMEAU
Date: 10/9/2009 Time: 1015
Company: NMED-HWB

Relinquished By (2)
Signature
Printed Name
Date Time
Company

Received By (1)
Signature: Lara J Orban
Printed Name: Lara J Orban
Date: 10/10/09 Time: 0955
Company: ALS

Received By (2)
Signature
Printed Name
Date Time
Company

4

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: NMED Workorder No: 0910114

Project Manager: LRS Initials: KJO Date: 10/10/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	NONE	(YES)	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	NO
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble:** ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	N/A	(YES)	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1
Temperature (°C):	5.6
No. of custody seals on cooler:	1
DOT Survey/ Acceptance Information — External µR/hr reading:	15
DOT Survey/ Acceptance Information — Background µR/hr reading:	13

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

• Sample #2: One 16 oz wm poly received for all RAD analysis. -UK
Sed is very watery.

The seven bottles for sample #1 were filled with green tinged water with suspended sediment and a layer of brown sediment on the bottoms.

If applicable, was the client contacted? (YES) / NO / NA Contact: Dan Oneam Date/Time: 10/13

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

0910114

FedEx Express US Airbill

FedEx Tracking Number 8681 5696 9089

Recipient's Copy

1 From

Date 10/1/2009 [redacted]

Sender's Name Rubb Gomez Phone 505-476-6043

Company NM Law Enforcement Dept.

Address 2905 Rodeo Park Dr. East Bldg 1

Dept./Floor/Suite/Room

City [illegible] State NM ZIP 87505

2 Your Internal Billing Reference

3 To

Recipient's Name [illegible] Phone 800 243-1511

Company Lynch Auto Auction / ALS Lab Group

Recipient's Address [illegible]

We cannot deliver to P.O. boxes or P.O. ZIP Codes. Dept./Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City [illegible] State CO ZIP 80524

8681 5696 9089

4a Express Package Service *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

* To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation:

** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

* Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [X] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Obtain Recip. Acct. No. [ ]

[redacted] 15+ [redacted]

Total Packages	Total Weight	Total Declared Value†
1	30 #	$ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details.

Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

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Isotopic Americium By Alpha Spectroscopy

PAI 714 Rev 11

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091014-5MB

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 14-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5C
Count Time: 300 minutes

Final Aliquot: 2.00 g
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14596-10-2	Am-241	0.0022 +/- 0.020	0.034	0.05	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Am-243	2.279	1.05	pCi/g	45.9	30 - 110 %	

Comments:

Qualifiers/Flags:
U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:
TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

M - Requested MDC not met.
B - Analyte concentration greater than MDC.
B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *AM0910114-1*

Isotopic Americium By Alpha Spectroscopy

PAI 714 Rev 11

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091023-1MB

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 23-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1C
Count Time: 600 minutes

Final Aliquot: 1700 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14596-10-2	Am-241	0.0018 +/- 0.0074	0.0049	0.05	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Am-243	2.682	2.13	pCi/l	79.6	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *AM0910114-1*

Isotopic Americium By Alpha Spectroscopy

PAI 714 Rev 11

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091014-5LCS

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 14-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5C
Count Time: 300 minutes

Final Aliquot: 2.00 g
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
14596-10-2	Am-241	2.32 +/- 0.433	0.0195	2.23	104	79 - 118	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Am-243	2.279	1.52	pCi/g	66.5	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *AM0910114-1*

Isotopic Americium By Alpha Spectroscopy

PAI 714 Rev 11

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091023-1LCS

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 23-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1C
Count Time: 600 minutes

Final Aliquot: 1700 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
14596-10-2	Am-241	2.72 +/- 0.448	0.0138	2.62	104	79 - 118	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Am-243	2.682	2.20	pCi/l	81.9	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *AM0910114-1*

Isotopic Americium By Alpha Spectroscopy

PAI 714 Rev 11

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: AS091023-1LCSD

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 23-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1C
Count Time: 600 minutes

Final Aliquot: 1700 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
14596-10-2	Am-241	2.61 +/- 0.442	0.0172	2.62	99.5	79 - 118	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Am-243	2.682	1.73	pCi/l	64.3	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *AM0910114-1*

Isotopic Americium By Alpha Spectroscopy

PAI 714 Rev 11

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2DUP

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5C
Count Time: 300 minutes

Final Aliquot: 2.00 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Analyte	Sample Result +/- 2s TPU	Duplicate Result +/- 2s TPU	DER	Control Limit	Lab Qualifiers
14596-10-2	Am-241	0.0063 +/- 0.012	-0.00092 +/- 0.017	0.36	2.13	U

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
DER - Duplicate Error Ratio (see PAI SOP 715)
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *AM0910114-1*

Isotopic Americium By Alpha Spectroscopy

PAI 714 Rev 11

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID:
Lab ID: AS091023-1LCSD

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 23-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1C
Count Time: 600 minutes

Final Aliquot: 1700 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Analyte	Sample Result +/- 2s TPU	Duplicate Result +/- 2s TPU	DER	Control Limit	Lab Qualifiers
14596-10-2	Am-241	2.7 +/- 0.45	2.6 +/- 0.44	0.17	2.13	P

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
DER - Duplicate Error Ratio (see PAI SOP 715)
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *AM0910114-1*

Isotopic Americium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-W1
Lab ID: 0910114-1

Analysis ReqCode: 306

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 07-Oct-09
Date Prepared: 23-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: AS091023-1
QCBatchID: AS091023-1-1
Run ID: AS091023-1C
Count Time: 600 minutes
Report Basis: Unfiltered

Final Aliquot: 1700 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14596-10-2	Am-241	0.019 +/- 0.014	0.015	0.05	LT

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Am-243	2.682	1.93	pCi/l	71.8	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *AM0910114-1*

Isotopic Americium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2

Analysis ReqCode: 306

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5C
Count Time: 300 minutes
Report Basis: Dry Weight

Final Aliquot: 2.00 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14596-10-2	Am-241	0.0063 +/- 0.012	0.0086	0.05	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Am-243	2.279	1.74	pCi/g	76.4	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *AM0910114-1*

Isotopic Americium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2DUP

Sample Matrix: SOLID
Prep SOP: PAI 778 Rev 13
Date Collected: 07-Oct-09
Date Prepared: 14-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: AS091014-5
QCBatchID: AS091014-5-1
Run ID: AS091014-5C
Count Time: 300 minutes
Report Basis: Dry Weight

Final Aliquot: 2.00 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14596-10-2	Am-241	-0.00092 +/- 0.017	0.036	0.05	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Am-243	2.279	1.27	pCi/g	55.6	30 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

W - DER is greater than Warning Limit of 1.42

D - DER is greater than Control Limit of 2.13

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *AM0910114-1*

ALS Laboratory Group - Fort Collins

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH Generic
TEST Am-241
METHOD Prep
SOP/REV (PREP) 751/2
SOP/REV (ANAL)

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

TE 9/14/09

TE 9/14/09 After performing a trial on both water and soil matrices for Am-241 analysis, it was determined that the TRU column 0.5N HNO_3 and 9N HCl rinses and the Am eluent collection into glass vials were unnecessary per SOP 751/2. Therefore, the two rinses were omitted from the Am-241 TRU column procedure. The Am eluent was collected into 220mL plastic cups and dried on the steambath instead of collecting into the glass vials and drying on the hotblock. TE 9/14/09

TE 9/14/09

TE 9/14/09

TECHNICIAN/ANALYST T Elbert DATE 9/14/09

DEPARTMENT MANAGER Jeffry Z DATE 9/14/09

378640 FORM 302r6.doc (4/22/04)

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Strontium-90

Case Narrative

NMED Hazardous Waste Bureau

Bayo Canyon WWTP

Work Order Number: 0910114

1. This report consists of the analytical results for one water sample and one solid sample received by ALS on 10/10/09.

2. These samples were prepared according to procedures SOP707R10 and SOP336R0, with procedure modifications outlined in QASS 374620 for batch SR091021-1.

3. These samples were analyzed for the presence of ^{90}Sr according to procedure SOP724R10. The analyses were completed on 10/30/09.

4. Total radio-strontium is reported as ^{90}Sr. The presence of other radioisotopes of strontium may cause positive bias in the measured strontium concentration.

5. The analysis results for the solid sample are reported on a 'dry weight' basis in units of pCi/gram. The analysis results for the water sample are reported in units of pCi/L. The water sample was decanted, but not filtered prior to analysis.

6. Sample volume was insufficient to allow preparation of a duplicate. A laboratory control sample duplicate (LCSD) was prepared in lieu of a client sample duplicate for batch SR091026-2.

7. The ICP-AES measurement of strontium concentrations prior to chemical separation for method blank SR091026-2MB and laboratory control sample SR091026-2LCS showed concentrations less than the amount known to have been added to the samples in the form of strontium carrier. To avoid a low bias in the final analytical results the known concentration of the carrier was used in chemical yield calculations in lieu of the pre-separation measurement.

8. No further anomalous situations were encountered during the preparation and analysis of these samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Linda Arend — 11/05/09
Radiochemistry Primary Data Reviewer — Date

Radiochemistry Final Data Reviewer — 11/05/09
Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0910114
Client Name: NMED Hazardous Waste Bureau
Client Project Name: Bayo Canyon WWTP
Client Project Number:
Client PO Number: 60-667-55-01574

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
BC-WWTP-W1	0910114-1		WATER	07-Oct-09	14:50
BC-WWTP-51	0910114-2		SOLID	07-Oct-09	14:35

ALS Laboratory Group

ALS Paragon

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Lab ID: 0910114

Date: 10/9/2009 Page: 1 of 1

Project Name/No.: Buyo Canyon WWTP Sampler(s): D Comeau Turnaround: Standard or (Due) Disposal: By Lab or Return to Client

REPORT TO: David Cobrain
PHONE: 505-476-6055
FAX: 505-476-6000
E-MAIL: dan.comeau@state.nm.us
COMPANY: NM Environment Dept
ADDRESS: 2905 Rodeo Park Dr East
Bldg 1
Santa Fe, NM 87505

Provide additional information as needed in comments section.

Circle Analytical Method Above: SW8015B DRO; GRO; SW8260B; SW8260B; SW8021B; SW8270C; SW8081A; SW8082; SW8151A; SW8330 SW8321 by LC/MS/MS; SW8260B SW8270D SW8081A SW8151; SW6010B SW7470A; SW6010B 7470A/7471A E200.7 E245.1; SW6010B 7470A/7471A E200.7 E245.1; SW6020A E200.8; SW6020A E200.8; SW7196A Alkaline Digestion? Y / ; SW9056 E300.0 (specify in comments); TDS:E160.1 TSS:E160.2 Total:E160.3; SW9040B SW9045C E150.1; Lab # 314

Circle Analytical Method Above: Am / Cm / Pu / Th / U; E901.1 Ln # 321; SW9310 E900.0 Ln # 300; SW9315 E903.0; E903.1; SW9320 E904.0; D5811 Ln # 335; E906.0; SIM7500Rn; Ln # 306; Ln # 305

Sample ID	Date	Time *	Lab ID	Matrix	No. of Containers	~~4PHTs~~	VOCs	BTEX (only)	~~SVOCs~~ Diphenylamine	OC Pesticides	PCBs by 1668A	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions	Solids:	pH	RCRA Metals (Ag) Hg	Iso Uranium	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Am 241	Iso Pu
BC-WWTP-W1	10/7/09	1450	1	W	7				1		1													1	1		1	1				1			1	1
BC-WWTP-S1	10/7/09	1435	2	NS	3				1		1													1	1		1	1				1			1	1

* Time Zone: EST CST MST PST Matrix Key: O = oil, S = soil, NS = non-soil solid, W = water, L = liquid, E = extract, F = filter

Comments:
Samples were collected 10/7/2009

Relinquished By (1)
Signature: D A Comeau
Printed Name: DANIEL COMEAU
Date: 10/9/2009 Time: 1015
Company: NMED-HWB

Relinquished By (2)
Signature
Printed Name
Date Time
Company

Received By (1)
Signature: Lara J Orban
Printed Name: Lara J Orban
Date: 10/10/09 Time: 0955
Company: ALS

Received By (2)
Signature
Printed Name
Date Time
Company

4

Originator: Retain a photocopy after transfer!

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: NMED Workorder No: 0910114

Project Manager: LRS Initials: KJO Date: 10/10/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	NONE	(YES)	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7.	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	NO
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	N/A	(YES)	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1
Temperature (°C):	5.6
No. of custody seals on cooler:	1
DOT Survey/ Acceptance Information — External µR/hr reading:	15
Background µR/hr reading:	13

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

• Sample #2: One 16 oz wm poly received for all RAD analysis. -UK
Sed is very watery.

The seven bottles for sample #1 were filled with green tinged water with suspended sediment and a layer of brown sediment on the bottoms.

If applicable, was the client contacted? (YES) / NO / NA Contact: Dan Oneam Date/Time: 10/13

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

0910114

FedEx US Airbill Express

FedEx Tracking Number 8681 5696 9089

Recipient's Copy

1 From

Date 10/9/2009

Sender's Name Rubb Phone 505-474-6043

Company NM Environment Dept.

Address 2905 Rodeo Park Dr. East Bldg 1

Dept./Floor/Suite/Room

City Santa Fe State NM ZIP 87505

2 Your Internal Billing Reference

3 To

Recipient's Name [illegible] Phone 800 343-1511

Company [illegible] / ALS Lab Group

Recipient's Address [illegible]

We cannot deliver to P.O. boxes or P.O. ZIP Codes. Dept./Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City [illegible] State CO ZIP 80524

8681 5696 9089

4a Express Package Service *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

*To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation:

**To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

*Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [X] **SATURDAY Delivery** — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] **HOLD Weekday at FedEx Location** — Not available for FedEx First Overnight.
- [ ] **HOLD Saturday at FedEx Location** — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Obtain Recip Acct. No

Total Packages	Total Weight	Total Declared Value†
1	30 lb	$ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details.

Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

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Strontium-90 Analysis by GFPC

PAI 724 Rev 10

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: SR091021-1MB

Sample Matrix: SOLID
Prep SOP: PAI 707 Rev 10
Date Collected: 21-Oct-09
Date Prepared: 21-Oct-09
Date Analyzed: 26-Oct-09

Prep Batch: SR091021-1
QCBatchID: SR091021-1-2
Run ID: SR091021-1A
Count Time: 60 minutes

Final Aliquot: 2.01 g
Result Units: pCi/g
File Name: SRC1026

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
10098-97-2	Sr-90	0.0068 +/- 0.12	0.28	0.5	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
STRONTIUM	926.5	914	ug	98.6	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *SR0910114-1*

Strontium-90 Analysis by GFPC

PAI 724 Rev 10

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: SR091026-2MB

Sample Matrix: WATER
Prep SOP: PAI 707 Rev 10
Date Collected: 26-Oct-09
Date Prepared: 26-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: SR091026-2
QCBatchID: SR091026-2-2
Run ID: SR091026-2A
Count Time: 90 minutes

Final Aliquot: 985 ml
Result Units: pCi/l
File Name: SRC1030

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
10098-97-2	Sr-90	0.048 +/- 0.30	0.68	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
STRONTIUM	935.4	854	ug	91.3	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *SR0910114-1*

Strontium-90 Analysis by GFPC

PAI 724 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: SR091021-1LCS

Sample Matrix: SOLID
Prep SOP: PAI 707 Rev 10
Date Collected: 21-Oct-09
Date Prepared: 21-Oct-09
Date Analyzed: 26-Oct-09

Prep Batch: SR091021-1
QCBatchID: SR091021-1-2
Run ID: SR091021-1A
Count Time: 60 minutes

Final Aliquot: 2.01 g
Result Units: pCi/g
File Name: SRC1026

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
10098-97-2	Sr-90	5.54 +/- 1.36	0.304	5.27	105	75 - 125	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
STRONTIUM	942.8	896	ug	95.0	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *SR0910114-1*

Strontium-90 Analysis by GFPC

PAI 724 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: SR091026-2LCS

Sample Matrix: WATER
Prep SOP: PAI 707 Rev 10
Date Collected: 26-Oct-09
Date Prepared: 26-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: SR091026-2
QCBatchID: SR091026-2-2
Run ID: SR091026-2A
Count Time: 90 minutes

Final Aliquot: 985 ml
Result Units: pCi/l
File Name: SRC1030

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
10098-97-2	Sr-90	9.86 +/- 2.43	0.670	10.8	91.6	75 - 125	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
STRONTIUM	949.3	853	ug	89.9	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *SR0910114-1*

Strontium-90 Analysis by GFPC

PAI 724 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Lab ID: SR091026-2LCSD

Sample Matrix: WATER
Prep SOP: PAI 707 Rev 10
Date Collected: 26-Oct-09
Date Prepared: 26-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: SR091026-2
QCBatchID: SR091026-2-2
Run ID: SR091026-2A
Count Time: 90 minutes

Final Aliquot: 985 ml
Result Units: pCi/l
File Name: SRC1030

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
10098-97-2	Sr-90	10.3 +/- 2.53	0.665	10.8	95.6	75 - 125	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
STRONTIUM	935.4	862	ug	92.2	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *SR0910114-1*

Strontium-90 Analysis by GFPC

PAI 724 Rev 10

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID:
Lab ID: SR091026-2LCSD

Sample Matrix: WATER
Prep SOP: PAI 707 Rev 10
Date Collected: 26-Oct-09
Date Prepared: 26-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: SR091026-2
QCBatchID: SR091026-2-2
Run ID: SR091026-2A
Count Time: 90 minutes

Final Aliquot: 985 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: SRC1030

CASNO	Analyte	Sample Result +/- 2s TPU	Duplicate Result +/- 2s TPU	DER	Control Limit	Lab Qualifiers
10098-97-2	Sr-90	9.9 +/- 2.4	10 +/- 2.5	0.12	2.13	P

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
DER - Duplicate Error Ratio (see PAI SOP 715)
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *SR0910114-1*

Strontium-90 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-W1
Lab ID: 0910114-1

Analysis ReqCode: 336

Sample Matrix: WATER
Prep SOP: PAI 707 Rev 10
Date Collected: 07-Oct-09
Date Prepared: 26-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: SR091026-2
QCBatchID: SR091026-2-2
Run ID: SR091026-2A
Count Time: 90 minutes
Report Basis: Unfiltered

Final Aliquot: 887 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: SRC1030

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
10098-97-2	Sr-90	0.047 +/- 0.29	0.68	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
STRONTIUM	1110	1050	ug	94.4	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *SR0910114-1*

Strontium-90 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910114
Client Name: NMED Hazardous Waste Bureau
ClientProject ID: Bayo Canyon WWTP

Field ID: BC-WWTP-51
Lab ID: 0910114-2

Analysis ReqCode: 336

Sample Matrix: SOLID
Prep SOP: PAI 707 Rev 10
Date Collected: 07-Oct-09
Date Prepared: 21-Oct-09
Date Analyzed: 26-Oct-09

Prep Batch: SR091021-1
QCBatchID: SR091021-1-2
Run ID: SR091021-1A
Count Time: 60 minutes
Report Basis: Dry Weight

Final Aliquot: 2.04 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: SRC1026

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
10098-97-2	Sr-90	0.45 +/- 0.22	0.35	0.5	LT

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
STRONTIUM	1175	918	ug	78.2	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *SR0910114-1*

ALS Laboratory Group - Fort Collins

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH Generic ^{90}Sr

TEST ^{90}Sr

METHOD Prep

SOP/REV (PREP) 707 R10

SOP/REV (ANAL)

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

PJW 5/10/09

Due to matrix interference in these samples, the following procedure was performed:

STRONTIUM PROCEDURE MODIFICATION TO REMOVE INTERFERING ALPHA ACTIVITY

The following changes may be utilized at the technician's discretion for samples believed to have elevated actinides, especially Pu.

- Follow SOP 707 R10 through step 8.2.14. (if the matrix is soil) or 8.3.9 (if the matrix is water) and evaporate samples to dryness on the steam bath.
- Dissolve the salts in 5 mL of 3N instead of 8N nitric acid. Ensure the entire sample residue is in solution.
- Remove samples from the steam bath and allow to cool.
- While samples are cooling, prepare an ascorbic acid solution with a concentration of 200mg / mL. **Ascorbic acid solution must be made fresh daily.**
- Add 1 mL of the ascorbic acid solution to each sample. Swirl gently.
- Load samples onto the Sr column that has been preconditioned with 2 mL of 3N nitric acid.
- Rinse the cup as stated in sections 8.5.3-8.5.5 substituting 3N nitric for 8N nitric each time.
- At step 8.5.6 add 5 mL of a 3N nitric acid- **0.1M** oxalic acid rinse (instead of 0.05M oxalic acid.)
- Follow this rinse with 5 mL 3N nitric acid at step 8.5.7 and continue with the remainder of the SOP as written.

PJW 5/10/09

PJW 5/10/09

PJW 5/10/09

TECHNICIAN/ANALYST [signature] DATE 5/10/09

DEPARTMENT MANAGER [signature] DATE 5/10/09

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