Paragon Analytics
Radiochemistry Case Narrative
Lead-210 by Liquid Scintillation

New Horizons
CSMRI / 2135
Paragon WO 0405025

1. This report consists of the analytical results for seven soil samples received by Paragon on 5/4/04.

2. These samples were prepared according to Paragon Analytics procedure SOP726R3 with modifications as described in QASS 270522.

3. These samples were analyzed for the presence of Lead-210 according to Paragon Analytics procedure SOP704R6. The analyses were completed on 6/17/04.

4. The analysis results for these samples are reported on a "dry weight" basis in units of pCi/gram.

5. The requested MDC of 0.6 pCi/g was not met for some samples in this work order. The reported activity for these samples is greater than the achieved MDC. These samples are identified with a "M3" flag on the final reports.

6. ICP chemical recoveries for some samples in this work order were below the lower control limit of 40%. Matrix interference and incomplete sample dissolution are believed to be the cause of the low recoveries. The ICP recoveries were rerun after more complete sample dissolution. The chemical recoveries from the second run will be used in calculations. Please refer to QASS 278621 and NCR 5706.

7. 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, Paragon Analytics certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Leah Balko — 6/18/04
Leah Balko, Radiochemistry Instrument Technician — Date

Radiochemistry Final Data Review — 6-18-04
Radiochemistry Final Data Review — Date

Paragon Analytics, Inc.

QUALITY ASSURANCE SUMMARY SHEET

PAI W.O. # / BATCH For ALL
TEST Pb
METHOD
SOP/REV (PREP) 726 R3
SOP/REV (ANAL)

270522

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.

04/15/04

SOP 726 R3 HAS BEEN MODIFIED IN THE FOLLOWING MANNER:

1. AFTER STEP 6.3.8, ADD 10 mL 8N HNO_3 TO EACH SAMPLE.
2. DRY THE SAMPLES ON THE STEAMBATH UNTIL THERE IS LESS THAN 0.5 mL OF SAMPLE LEFT IN THE CUP.
3. USING A TRANSFER PIPET, TRANSFER THE SAMPLE TO A PLASTIC LIQUID SCINTILLATION VIAL, RINSING THE CUP WITH 2- 2.5 mL RINSES OF 8N HNO_3 AND ADDING THE RINSES TO THE VIAL.
4. PLACE THE VIAL IN A NEW, LABELED 100 mL PLASTIC CUP AND DRY THE VIALS ON THE STEAMBATH.
5. ADD 0.25 mL 16 N HNO_3 TO EACH VIAL, MAKING SURE ALL OF THE SAMPLE DISSOLVES BEFORE CONTINUING.
6. ADD 4.85 mL DI H_2O TO EACH VIAL.
7. USING A CALIBRATED PIPETTE, REMOVE 0.1 mL FROM EACH VIAL AND PLACE IT INTO A LABELED PLASTIC TEST TUBE.
8. TO THE ALIQUOT FROM STEP 7, ADD 9.9 OR 10 mL ICP DILUTING SOLUTION TO EACH TUBE, COVER THE TUBE WITH PARAFILM, AND SUBMIT THE INITIAL AND FINAL ICP ALIQUOTS TO THE METALS LAB FOR COUNTING.
9. LABEL THE CAP FOR EACH VIAL, DO NOT WRITE ON THE VIAL.
10. ADD 15 mL UG-LLT COCKTAIL TO EACH VIAL, SHAKE THE VIALS, WIPE THEM WITH A KIMWIPE WETTED WITH METHANOL, AND SUBMIT THE VIALS TO THE INSTRUMENT LAB FOR COUNTING.

04/15/04 (steps 5 and 6)

04/15/04 (step 5)

04/15/04

TECHNICIAN/ANALYST _____ DATE 04/15/04

DEPARTMENT MANAGER _____ DATE 4/15/04

FORM 302r5.FRM (04/30/01)

NCR # 005706

CONTROLLED
NON-CONFORMANCE REPORT

Paragon Analytics

Initiated by Q. Fuda Date 5/28/04 Method/Procedure ^{210}Pb

Reason: X Non-Conformance Work Orders Affected 0404241, 0404284, 0405025

___ Client Inquiry (REDISTRIBUTION 6/17/04 BIS)

___ Other _____ Clients New Horizons

SECTION I TYPE OF EVENT (circle as appropriate)

X 1. LCS / Surrogate / IS / Tracer or Chemical Yield Criteria Not Met

___ 2. Calibration Criteria Not Met (ICAL, ICV, CCV)

___ 3. Method Requirements Not Met (HTV, MB, ____)

___ 4. Deviation from LQAP / SOP (i.e., PAI criteria not met)

___ 5. Client Criteria Not Met (MDC, DER, _____)

___ 6. Equipment Failure or Laboratory Incident / Error

___ 7. Other _____

Explanation: CHEMICAL RECOVERY FOR SAMPLES 0404241-3,-5,-7,-12; 0404284-1,-1DUP,; 0405025-2,-6 WERE BELOW THE LCL OF 40% AT ~~24.55, 24.87, 23.68, 26.81, 35.11, 28.45, 36.37, & 30.50%~~, RESPECTIVELY. 24.79, 25.12, 23.92, 27.08, 35.46, 28.74, 36.74, & 30.80% * SEE BACK FOR UPDATED INFORMATION 6/18/04 *

Actions to Prevent Recurrence (Retrain, etc.): POSSIBLE MATRIX INTERFERENCE

SECTION II NOTIFICATION

Client Contacted? (Y) / N) Name: S. Coffin Date: 5/28/04 Time: 1400 Voice Mail

SECTION III CORRECTIVE ACTIONS

___ 1. Submit for Re-Prep. or Clean-up

___ 2. Re-analyze

___ 3. Resubmit Data (hc, edd, narrative)

X 4. Document in Narrative

___ 5. Other _____

Approved by: RG DPM _____ PM 5/28/04

SECTION IV REQUEST FOR REWORK

Initial Batch ID: _____ Date: _____

Reworked Batch ID: _____ Date: _____

Outcome: _____ 5/28/04

Approved by: _____

Matrix Effect or Elevated / Sample Activity Suspected? (circle applicable)

SECTION V DISPOSITION (Use as is) Repair Reject

SECTION VI COMMENTS Increase count time as possible to attempt to keep MDC near 0.6 pCi/g.

SECTION VII APPROVAL SIGNATURES

Project Manager (PM) _____ Date 5/28/04

Department Manager (DPM) _____ Date 5/28/04 (Verification of Disposition)

QA Manager _____ Date 6/2/04

SECTION VIII DISTRIBUTION LMP PM RG Dept. Manager KDC Lab Director ___ Rpt.Group or ✓ Rad

DCB

FORM 313r14.doc (3/8/04)

C00003

6/18/04

* FINAL ICP ALIQUOTS WERE REWORKED FOR ALL SAMPLES IN BATCH. (SEE @ASS 278621) THIS CHANGES YIELD DATA NOTED ON 5/28/04. NEW CHEMICAL YIELD DATA FOR SAMPLES IN THIS NCR ARE:

SAMPLE ID	PREVIOUS % YIELD	NEW % YIELD	PASS/FAIL?
~~0404284-1~~ @6/18/04 - ~~1DUP~~			
0404241-3	24.79	26.89	F
↓ -5	25.12	29.55	F
-7	23.92	28.82	F
-12	27.08	33.34	F
0404284-1	35.46	38.85	F
↓ -1DUP	28.74	31.96	F
0405025-2	36.74	51.22	P
↓ -6	30.80	40.70	P

Paragon Analytics

QUALITY ASSURANCE SUMMARY SHEET

278621

PAI W.O. # / BATCH 04C4241 / 04C4784 / 04C5225 / PB040513-1

TEST ^{210}PB

METHOD

SOP/REV (PREP) 726R3

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.

6/18/04

CHEMICAL YIELDS FOR SAMPLES IN BATCH 040513-1 WERE SUSPECTED TO BE LOW DUE TO AN INCOMPLETE SAMPLE DISSOLUTION WHEN TAKING THE FINAL ICP ALIQUOT. AFTER SAMPLES WERE COUNTED, THEY WERE RETURNED TO THE PREP LAB AND A NEW FINAL ICP ALIQUOT WAS TAKEN. 0.1 mL WAS REMOVED FROM EACH VIAL CONTAINING THE SAMPLE IN UGLLT COCKTAIL (20 mL TOTAL VOLUME). THE ICP TUBES WERE BROUGHT UP TO A FINAL VOLUME OF 10.1 mL WITH ICP DILUTING SOLUTION AND TAKEN TO METALS FOR ANALYSIS. THE ICP BENCHSHEET REFLECTS THE NEW ICP DATA AND WAS VERIFIED BY A MANUAL CALCULATION. THE FINAL ALIQUOT VOLUME WAS ENTERED MANUALLY INTO THE BENCHSHEET SINCE THE ICP CALCULATION INCORRECTLY CHANGED THE FINAL ALIQUOT. DATA IS SUBMITTED WITHOUT FURTHER QUALIFICATION.

6/18/04 (left)

6/18/04 (right)

6/18/04

6/18/04

TECHNICIAN/ANALYST _____ DATE 6/18/04

DEPARTMENT MANAGER _____ DATE 6/18/04

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 6

Method Blank Results

Lab Name: Paragon Analytics
Work Order Number: 0405025
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Lab ID: PB040513-1MB

Sample Matrix: SOIL
Prep SOP: PAI 726 Rev 3
Date Collected: 13-May-04
Date Prepared: 13-May-04
Date Analyzed: 17-Jun-04

Prep Batch: PB040513-1
QCBatchID: PB040513-1-1
Run ID: pb040513-1a
Count Time: 355.4 minutes

Final Aliquot: 2.03 g
Result Units: pCi/g
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Lab Qualifier
14255-04-0	Pb-210	-0.08 +/- 0.25	0.42	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	1059	565.9	ug	53.5	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: *PB2100405025-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 6

Laboratory Control Sample(s)

Lab Name: Paragon Analytics
Work Order Number: 0405025
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Lab ID: PB040513-1LCS

Sample Matrix: SOIL
Prep SOP: PAI 726 Rev 3
Date Collected: 13-May-04
Date Prepared: 13-May-04
Date Analyzed: 17-Jun-04

Prep Batch: PB040513-1
QCBatchID: PB040513-1-1
Run ID: pb040513-1a
Count Time: 59.2 minutes

Final Aliquot: 2.07 g
Result Units: pCi/g
File Name: Manual Entry

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
14255-04-0	Pb-210	8.4 +/- 2.2	0.8	6.79	124	70 - 130	P,M3

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	1051	784.2	ug	74.6	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: *PB2100405025-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 6

Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405025
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Field ID: IC1001
Lab ID: 0405025-2

Sample Matrix: SOIL
Prep SOP: PAI 726 Rev 3
Date Collected: 29-Apr-04
Date Prepared: 13-May-04
Date Analyzed: 15-Jun-04

Prep Batch: PB040513-1
QCBatchID: PB040513-1-1
Run ID: pb040513-1a
Count Time: 355.4 minutes
Report Basis: Dry Weight

Final Aliquot: 2.17 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Lab Qualifier
14255-04-0	Pb-210	3.48 +/- 0.89	0.41	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	1358	695.5	ug	51.2	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: *PB2100405025-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 6

Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405025
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Field ID: IC1002
Lab ID: 0405025-4

Sample Matrix: SOIL
Prep SOP: PAI 726 Rev 3
Date Collected: 29-Apr-04
Date Prepared: 13-May-04
Date Analyzed: 15-Jun-04

Prep Batch: PB040513-1
QCBatchID: PB040513-1-1
Run ID: pb040513-1a
Count Time: 355.4 minutes
Report Basis: Dry Weight

Final Aliquot: 2.06 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Lab Qualifier
14255-04-0	Pb-210	3.32 +/- 0.86	0.44	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	1325	889.0	ug	67.1	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: *PB2100405025-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 6

Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405025
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Field ID: IC1003
Lab ID: 0405025-6

Sample Matrix: SOIL
Prep SOP: PAI 726 Rev 3
Date Collected: 29-Apr-04
Date Prepared: 13-May-04
Date Analyzed: 15-Jun-04

Prep Batch: PB040513-1
QCBatchID: PB040513-1-1
Run ID: pb040513-1a
Count Time: 355.4 minutes
Report Basis: Dry Weight

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

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Lab Qualifier
14255-04-0	Pb-210	3.8 +/- 1.0	0.7	M3

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	1327	540.0	ug	40.7	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: *PB2100405025-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 6

Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405025
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Field ID: KC1004
Lab ID: 0405025-8

Sample Matrix: SOIL
Prep SOP: PAI 726 Rev 3
Date Collected: 29-Apr-04
Date Prepared: 13-May-04
Date Analyzed: 16-Jun-04

Prep Batch: PB040513-1
QCBatchID: PB040513-1-1
Run ID: pb040513-1a
Count Time: 355.4 minutes
Report Basis: Dry Weight

Final Aliquot: 1.96 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Lab Qualifier
14255-04-0	Pb-210	4.0 +/- 1.0	0.5	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	1303	973.7	ug	74.7	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: *PB2100405025-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 6

Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405025
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Field ID: IC1005
Lab ID: 0405025-10

Sample Matrix: SOIL
Prep SOP: PAI 726 Rev 3
Date Collected: 03-May-04
Date Prepared: 13-May-04
Date Analyzed: 16-Jun-04

Prep Batch: PB040513-1
QCBatchID: PB040513-1-1
Run ID: pb040513-1a
Count Time: 355.4 minutes
Report Basis: Dry Weight

Final Aliquot: 1.96 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Lab Qualifier
14255-04-0	Pb-210	11.3 +/- 2.8	0.5	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	1551	853.0	ug	55.0	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: *PB2100405025-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 6

Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405025
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Field ID: IC1006
Lab ID: 0405025-12

Sample Matrix: SOIL
Prep SOP: PAI 726 Rev 3
Date Collected: 03-May-04
Date Prepared: 13-May-04
Date Analyzed: 16-Jun-04

Prep Batch: PB040513-1
QCBatchID: PB040513-1-1
Run ID: pb040513-1a
Count Time: 355.4 minutes
Report Basis: Dry Weight

Final Aliquot: 1.99 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Lab Qualifier
14255-04-0	Pb-210	2.73 +/- 0.73	0.43	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	1318	826.4	ug	62.7	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: *PB2100405025-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 6

Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405025
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Field ID: IC1007
Lab ID: 0405025-14

Sample Matrix: SOIL
Prep SOP: PAI 726 Rev 3
Date Collected: 03-May-04
Date Prepared: 13-May-04
Date Analyzed: 16-Jun-04

Prep Batch: PB040513-1
QCBatchID: PB040513-1-1
Run ID: pb040513-1a
Count Time: 355.4 minutes
Report Basis: Dry Weight

Final Aliquot: 1.96 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Lab Qualifier
14255-04-0	Pb-210	5.7 +/- 1.4	0.6	M3

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	1495	711.2	ug	47.6	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.

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: *PB2100405025-1*