1. This report consists of the analytical results for seven soil samples received by Paragon on 05/19/04.

2. These samples were prepared according to Paragon Analytics procedures PA SOP721R10, PA SOP773R8, and PA SOP778R9.

3. The samples were analyzed for the presence of isotopic uranium according to Paragon Analytics procedure PA SOP714R8. The analyses were completed on 06/18/04.

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

5. 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.

6. Paragon Analytics follows the convention outlined in ANSI N42.23 for reporting significant digits in the TPU and MDC results. ANSI N42.23 states that the TPU result should be rounded to two significant digits and that the MDC result should be rounded to the same decimal place as the TPU result. In practice, this could result in an MDC result with a reported value of 0 for samples with significant activity, including the batch laboratory control sample.

7. Sample SDA064 (PA ID 0405169-13) was prepared at a greatly reduced aliquot (0.04-g versus 2.0-g standard aliquot) in a separate batch due to elevated activity detected in the prescreen results. Due to the reduced aliquot, the requested MDC of 0.1 pCi/g was not achieved, however the reported activity in the sample exceeds its
achieved MDC values. It is identified with "M3" flags on the final reports. Likewise, the associated method blank (AS040610-3MB) was prepared at an analogous reduced aliquot to this sample. It did not meet the requested MDC and was given an extended count of 1000 minutes in order to lower all associated MDC and uncertainty values. Data quality is considered unaffected and acceptable. The results are submitted in this report without qualification.

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

Skye Dobberstein
Radiochemistry Instrumentation

John Rother
Radiochemistry Final Data Review

6/25/10
Date
Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 8
Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405169
Client Name: New Horizons
Client Project ID: CSMRI 2135

Field ID: IC1066
Lab ID: 0405169-2

Sample Matrix: SOIL
Prep SOP: PAI 778 Rev 9
Prep Batch: AS040610-1
QC Batch ID: AS040610-1-2
Run ID: AS040610-1a
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: U51692

<table>
<thead>
<tr>
<th>CASNO</th>
<th>Target Nuclide</th>
<th>Result +/- 2 s TPU</th>
<th>MDC</th>
<th>Lab Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>1396-29-5</td>
<td>U-234</td>
<td>1.21 +/- 0.22</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>15117-98-1</td>
<td>U-235</td>
<td>0.056 +/- 0.030</td>
<td>0.022</td>
<td>LT</td>
</tr>
<tr>
<td>7440-61-1</td>
<td>U-238</td>
<td>1.33 +/- 0.24</td>
<td>0.02</td>
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Chemical Yield Summary

<table>
<thead>
<tr>
<th>Carrier/Tracer</th>
<th>Amount Added</th>
<th>Result</th>
<th>Units</th>
<th>Yield</th>
<th>Control Limits</th>
<th>Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-232</td>
<td>4.266</td>
<td>3.55</td>
<td>pCi/g</td>
<td>83.2</td>
<td>30 - 110 %</td>
<td></td>
</tr>
</tbody>
</table>

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:
TPO - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 706)
BDL - Below Detection Limit

Data Package ID: U0405169-1

Date Printed: Thursday, June 24, 2004
Paragon Analytics
LIMS Version: 5.030A
Isotopic Uranium by Alpha Spectroscopy

PAI 714 Rev 8
Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405169
Client Name: New Horizons
Client Project ID: CSMRI 2135

| Field ID: 1C1025 | Prep Basis: Dry Weight |
| Lab ID: 0405169-1 | Moisture(%): NA |
| Sample Matrix: SOIL | Final Aliquot: 2.02 g |
| Prep SOP: PAI 778 Rev 9 | Prep Batch: AS040610-1 |
| Date Collected: 04-May-04 | QC Batch ID: AS040610-1-2 |
| Date Prepared: 10-Jun-04 | Run ID: AS040610-1a |
| Date Analyzed: 18-Jun-04 | Count Time: 300 minutes |
| | Report Basis: Dry Weight |
| | File Name: U51694 |

### CASNO Target Nuclide Result +/- 2 s TPU MDC Lab Qualifier

<table>
<thead>
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<th>Target Nuclide</th>
<th>Result +/- 2 s TPU</th>
<th>MDC</th>
<th>Lab Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>13966-29-5</td>
<td>U-234</td>
<td>2.95 +/- 0.50</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>15117-96-1</td>
<td>U-235</td>
<td>0.191 +/- 0.062</td>
<td>0.010</td>
<td></td>
</tr>
<tr>
<td>7440-61-1</td>
<td>U-238</td>
<td>2.87 +/- 0.49</td>
<td>0.03</td>
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### Chemical Yield Summary

<table>
<thead>
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<th>Carrier/Tracer</th>
<th>Amount Added</th>
<th>Result</th>
<th>Units</th>
<th>Yield</th>
<th>Control Limits</th>
<th>Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-232</td>
<td>4.232</td>
<td>3.19</td>
<td>pCi/g</td>
<td>75.3</td>
<td>30 - 110 %</td>
<td></td>
</tr>
</tbody>
</table>

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, 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 Detectible Concentration (see PAI SOP 709)
BDL - Below Detection Limit

Data Package ID: U0405169-1

Date Printed: Thursday, June 24, 2004
Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 8
Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405169
Client Name: New Horizons
Client Project ID: CSMRI 2135

---

| Field ID: | IC1028 |
| Lab ID:   | 0405169-6 |

Sample Matrix: SOIL
Prep SOP: PAI 778 Rev 9
Date Collected: 04-May-04
Date Prepared: 10-Jun-04
Date Analyzed: 18-Jun-04

Prep Batch: AS040610-1
QCBatchID: AS040610-1-2
Run ID: AS040610-1a
Count Time: 300 minutes
Report Basis: Dry Weight

Final Aliquot: 2.02 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: UR51696

---

<table>
<thead>
<tr>
<th>CASNO</th>
<th>Target Nuclide</th>
<th>Result +/- 2 s TPU</th>
<th>MDC</th>
<th>Lab Qualifier</th>
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</thead>
<tbody>
<tr>
<td>13966-29-5</td>
<td>U-234</td>
<td>1.43 +/- 0.28</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>15117-96-1</td>
<td>U-235</td>
<td>0.060 +/- 0.031</td>
<td>0.019</td>
<td>LT</td>
</tr>
<tr>
<td>7440-61-1</td>
<td>U-238</td>
<td>1.42 +/- 0.26</td>
<td>0.02</td>
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Chemical Yield Summary

<table>
<thead>
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<th>Amount Added</th>
<th>Result</th>
<th>Units</th>
<th>Yield</th>
<th>Control Limits</th>
<th>Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-232</td>
<td>4.226</td>
<td>3.55</td>
<td>pCi/g</td>
<td>84.0</td>
<td>30 - 110 %</td>
<td></td>
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</table>

Comments:

Qualifiers/Flags:
U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is outside default limits.
Y2 - Chemical Yield is in control at 100-110%.
LT - Result is 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 705)
BDL - Below Detection Limit

Data Package ID: U0405169-1

Date Printed: Thursday, June 24, 2004
Paragon Analytics
LIMS Version: 5.036A
Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 8
Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405169
Client Name: New Horizons
Client Project ID: CSMRI 2135

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<td>H214</td>
<td>0405169-8</td>
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<th>Sample Matrix: SOIL.</th>
<th>Prep SOP: PAI 778 Rev 9</th>
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<tr>
<td>Prep Batch: AS040610-1</td>
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</tr>
<tr>
<td>QC Batch ID: AS040610-1-2</td>
<td></td>
</tr>
<tr>
<td>Run ID: AS040610-1a</td>
<td></td>
</tr>
<tr>
<td>Count Time: 300 minutes</td>
<td></td>
</tr>
<tr>
<td>Report Basis: Dry Weight</td>
<td></td>
</tr>
<tr>
<td>Final Aliquot: 2.06 g</td>
<td></td>
</tr>
<tr>
<td>Prep Basis: Dry Weight</td>
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<tr>
<td>Moisture(%): NA</td>
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<tr>
<td>Result Units: pCi/g</td>
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<tr>
<td>File Name: U51096</td>
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<table>
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<tr>
<th>CASNO</th>
<th>Target Nuclide</th>
<th>Result +/- 2 s TPU</th>
<th>MDC</th>
<th>Lab Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>13998-29-5</td>
<td>U-234</td>
<td>28.9 +/- 4.7</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>15117-96-1</td>
<td>U-235</td>
<td>1.26 +/- 0.26</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>7440-81-1</td>
<td>U-238</td>
<td>30.2 +/- 4.9</td>
<td>0</td>
<td></td>
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</tbody>
</table>

**Chemical Yield Summary**

<table>
<thead>
<tr>
<th>Carrier/Tracer</th>
<th>Amount Added</th>
<th>Result</th>
<th>Units</th>
<th>Yield</th>
<th>Control Limits</th>
<th>Flag</th>
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</thead>
<tbody>
<tr>
<td>U-232</td>
<td>4.149</td>
<td>2.23</td>
<td>pCi/g</td>
<td>53.7</td>
<td>30 - 110 %</td>
<td></td>
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</table>

**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.

M9 - 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)

BOL - Below Detection Limit

Data Package ID: U0405169-1

Date Printed: Thursday, June 24, 2004
Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 8

Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405169
Client Name: New Horizons
Client Project ID: CSMRI 2135

Sample Matrix: SOIL
Prep SOP: PAI 778 Rev 9
Prep Batch: AS040610-1
QCBatchID: AS040610-1-2
Run ID: AS040610-1a
Count Time: 300 minutes
Report Basis: Dry Weight
Final Aliquot: 1.03 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: US16910

<table>
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<tr>
<th>CASNO</th>
<th>Target Nuclide</th>
<th>Result +/- 2 s TPU</th>
<th>MDC</th>
<th>Lab Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>13966-29-5</td>
<td>U-234</td>
<td>45.8 +/- 7.4</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>15117-96-1</td>
<td>U-235</td>
<td>2.57 +/- 0.52</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>7440-61-1</td>
<td>U-235</td>
<td>55.2 +/- 8.9</td>
<td>0.1</td>
<td></td>
</tr>
</tbody>
</table>

Chemical Yield Summary

<table>
<thead>
<tr>
<th>Carrier/Tracer</th>
<th>Amount Added</th>
<th>Result</th>
<th>Units</th>
<th>Yield</th>
<th>Control Limits</th>
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</thead>
<tbody>
<tr>
<td>U-232</td>
<td>8.318</td>
<td>5.04</td>
<td>pCi/g</td>
<td>60.6</td>
<td>30 - 110 %</td>
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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)
BOL - Below Detection Limit

Data Package ID: U0405169-1
Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 8
Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405169
Client Name: New Horizons
ClientProject ID: CSMR! 2135

Sample Matrix: SOIL
Prep SOP: PAI 778 Rev 9
Prep Batch: AS040610-1
QCBatchID: AS040610-1-2
Run ID: AS040610-1a
Count Time: 300 minutes
Report Basis: Dry Weight

Final Aliquot: 0.588 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: US16912

<table>
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<th>Target Nuclide</th>
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<th>MDC</th>
<th>Lab Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>13966-29-5</td>
<td>U-234</td>
<td>44.2 +/- 7.0</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>15117-96-1</td>
<td>U-235</td>
<td>1.80 +/- 0.40</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>7440-61-1</td>
<td>U-238</td>
<td>43.8 +/- 6.9</td>
<td>0.1</td>
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</table>

Chemical Yield Summary

<table>
<thead>
<tr>
<th>Carrier/Tracer</th>
<th>Amount Added</th>
<th>Result</th>
<th>Units</th>
<th>Yield</th>
<th>Control Limits</th>
<th>Flag</th>
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<tbody>
<tr>
<td>U-232</td>
<td>14.50</td>
<td>11.7</td>
<td>pCi/g</td>
<td>80.9</td>
<td>30 - 110 %</td>
<td></td>
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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 723)
- MDC - Minimum Detectable Concentration (see PAI SOP 720)
- BDL - Below Detection Limit

Data Package ID: U0405169-1

Date Printed: Thursday, June 24, 2004
Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 8
Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405169
Client Name: New Horizons
Client Project ID: CSMRI 2135

Field ID: SDA008
Lab ID: 0405169-13

Sample Matrix: SOIL
Prep SOP: PAI 778 Rev 9
Date Collected: 13-May-04
Date Prepared: 10-Jun-04
Date Analyzed: 17-Jun-04

CASNO Target Nuclide Result +/- 2 s TPU MDC Lab Qualifier
13966-29-5 U-234 21.3 +/- 4.0 1.0 M3
15117-96-1 U-235 1.25 +/- 0.77 0.94 M3
7440-61-1 U-238 19.7 +/- 3.8 0.7 M3

Final Aliquot: 0.0406 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: U618913

Chemical Yield Summary

Carrier/Tracer Amount Added Result Units Yield Control Limits Flag
U-232 210.3 172 pCi/g 81.7 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 requested MDC.
M - The requested MDC was not met.

Abbreviations:
TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 703)
BDL - Below Detection Limit

Data Package ID: U0405169-1

Date Printed: Thursday, June 24, 2004
Paragon Analytics
LIMS Version: 5.036A
Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 8
Sample Duplicate Results

Lab Name: Paragon Analytics
Work Order Number: 0405169
Client Name: New Horizons
ClientProject ID: CSMR! 2136

| Field ID:  | IC1025 |
| Lab ID:    | 0405169-4DUP |

Sample Matrix: SOIL
Prep SOP: PAI 778 Rev 9
Date Collected: 04-May-04
Date Prepared: 10-Jun-04
Date Analyzed: 18-Jun-04
Prep Batch: AS040610-1
QCBatchID: AS040610-1-2
Run ID: AS040610-1a
Count Time: 390 minutes
Report Basis: Dry Weight
Final Aliquot: 2.04 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCl/g
File Name: U5164D

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<th>Result +/- 2 s TPU</th>
<th>MDC</th>
<th>Lab Qualifier</th>
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</thead>
<tbody>
<tr>
<td>13966-29-5</td>
<td>U-234</td>
<td>3.17 +/- 0.54</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>15117-96-1</td>
<td>U-235</td>
<td>0.178 +/- 0.059</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>7440-81-1</td>
<td>U-238</td>
<td>2.99 +/- 0.51</td>
<td>0.01</td>
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</table>

Chemical Yield Summary

<table>
<thead>
<tr>
<th>Carrier/Tracer</th>
<th>Amount Added</th>
<th>Result</th>
<th>Units</th>
<th>Yield</th>
<th>Control Limits</th>
<th>Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-232</td>
<td>4.160</td>
<td>3.18</td>
<td>pCl/g</td>
<td>76.0</td>
<td>30 - 110 %</td>
<td></td>
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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 the reported 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 706)
BCL - Below Detection Limit

Data Package ID: U0405169-1

Date Printed: Thursday, June 24, 2004
Paragon Analytics
LIMS Version: 5.036A
Isotopic Uranium By Alpha Spectroscopy
PAI 714 Rev 8
Sample Duplicate Results

Lab Name: Paragon Analytics
Work Order Number: 0405169
Client Name: New Horizons
ClientProject ID: CSMR12135

Field ID: SDA064
Lab ID: 0405169-13DUP

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<th>Result +/- 2s TPU</th>
<th>MDC</th>
<th>Lab Qualifier</th>
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<tbody>
<tr>
<td>13986-29-5</td>
<td>U-234</td>
<td>20.1 +/- 3.9</td>
<td>1.1</td>
<td>M3</td>
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<tr>
<td>15117-96-1</td>
<td>U-236</td>
<td>0.79 +/- 0.56</td>
<td>0.83</td>
<td>M3</td>
</tr>
<tr>
<td>7440-61-1</td>
<td>U-238</td>
<td>16.7 +/- 3.6</td>
<td>1.0</td>
<td>M3</td>
</tr>
</tbody>
</table>

Chemical Yield Summary

<table>
<thead>
<tr>
<th>Carrier/Tracer</th>
<th>Amount Added</th>
<th>Result</th>
<th>Units</th>
<th>Yield</th>
<th>Control Limits</th>
<th>Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-232</td>
<td>210.3</td>
<td>181</td>
<td>pCi/g</td>
<td>86.2</td>
<td>30 - 110 %</td>
<td></td>
</tr>
</tbody>
</table>

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 the reported 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: U0405169-1

Date Printed: Thursday, June 24, 2004
Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 8
Method Blank Results

Lab Name: Paragon Analytics
Work Order Number: 0405169
Client Name: New Horizons
ClientProject ID: CSMRI 2135

<table>
<thead>
<tr>
<th>CASNO</th>
<th>Target Nuclide</th>
<th>Result +/- 2 s TPU</th>
<th>MDC</th>
<th>Lab Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>13996-29-5</td>
<td>U-234</td>
<td>0.013 +/- 0.016</td>
<td>0.028</td>
<td>U</td>
</tr>
<tr>
<td>15117-96-1</td>
<td>U-235</td>
<td>-0.004 +/- 0.013</td>
<td>0.029</td>
<td>U</td>
</tr>
<tr>
<td>7440-61-1</td>
<td>U-238</td>
<td>0.017 +/- 0.017</td>
<td>0.028</td>
<td>U</td>
</tr>
</tbody>
</table>

Chemical Yield Summary

<table>
<thead>
<tr>
<th>Carrier/Tracer</th>
<th>Amount Added</th>
<th>Result</th>
<th>Units</th>
<th>Yield</th>
<th>Control Limits</th>
<th>Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-232</td>
<td>4.267</td>
<td>3.48</td>
<td>pCi/g</td>
<td>81.6</td>
<td>30 - 110 %</td>
<td></td>
</tr>
</tbody>
</table>

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 - 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: U0405169-1

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Paragon Analytics
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Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 8
Method Blank Results

Lab Name: Paragon Analytics
Work Order Number: 0405169
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Lab ID: AS040610-3MB
Sample Matrix: SOIL
Prep SOP: PAI 778 Rev 9
Prep Batch: AS040610-3
QCBatchID: AS040610-3-1
Run ID: AS040610-3a
Date Collected: 10-Jun-04
Date Prepared: 10-Jun-04
Date Analyzed: 17-Jun-04
Count Time: 1000 minutes
Final Aliquot: 0.0397 g
Result Units: pCi/g
File Name: U8103B

<table>
<thead>
<tr>
<th>CASNO</th>
<th>Target Nuclide</th>
<th>Result +/- 2 s TPU</th>
<th>MDC</th>
<th>Lab Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>13966-29-5</td>
<td>U-234</td>
<td>0.21 +/- 0.27</td>
<td>0.44</td>
<td>U,M</td>
</tr>
<tr>
<td>15117-95-1</td>
<td>U-235</td>
<td>0.05 +/- 0.24</td>
<td>0.36</td>
<td>U,M</td>
</tr>
<tr>
<td>7440-81-1</td>
<td>U-238</td>
<td>0.29 +/- 0.30</td>
<td>0.44</td>
<td>U,M</td>
</tr>
</tbody>
</table>

Chemical Yield Summary

<table>
<thead>
<tr>
<th>Carrier/Tracer</th>
<th>Amount Added</th>
<th>Result</th>
<th>Units</th>
<th>Yield</th>
<th>Control Limits</th>
<th>Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-232</td>
<td>214.8</td>
<td>191</td>
<td>pCi/g</td>
<td>88.9</td>
<td>30 - 110 %</td>
<td></td>
</tr>
</tbody>
</table>

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 of such 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 706)
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: U0405169-1

Date Printed: Thursday, June 24, 2004

Paragon Analytics
LIMS Version: 5.038A
# Isotopic Uranium By Alpha Spectroscopy

**PAI 714 Rev 8**

**Laboratory Control Sample(s)**

**Lab Name:** Paragon Analytics  
**Work Order Number:** 0405169  
**Client Name:** New Horizons  
**Client Project ID:** CSMRI 2135

---

**Sample Matrix:** SOIL  
**Prep SOP:** PAI 778 Rev 9  
**Date Collected:** 10-Jun-04  
**Date Prepared:** 10-Jun-04  
**Date Analyzed:** 18-Jun-04  
** Prep Batch:** AS040610-1  
**QC Batch ID:** AS040610-1-2  
**Run ID:** AS040610-1s  
**Count Time:** 300 minutes  
**Final Alloquit:** 2.00 g  
**Result Units:** pCi/g  
**File Name:** U6101L

---

<table>
<thead>
<tr>
<th>CASNO</th>
<th>Target Nuclide</th>
<th>Results +/- 2s TPU</th>
<th>MDC</th>
<th>Spike Added</th>
<th>% Rec</th>
<th>Control Limits</th>
<th>Lab Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>13966-29-5</td>
<td>U-234</td>
<td>4.44 +/- 0.73</td>
<td>0.04</td>
<td>4.34</td>
<td>102</td>
<td>82 - 122</td>
<td>P</td>
</tr>
<tr>
<td>7440-61-1</td>
<td>U-238</td>
<td>4.83 +/- 0.79</td>
<td>0.03</td>
<td>4.50</td>
<td>107</td>
<td>82 - 122</td>
<td>P</td>
</tr>
</tbody>
</table>

## Chemical Yield Summary

<table>
<thead>
<tr>
<th>Carrier/Tracer</th>
<th>Amount Added</th>
<th>Result</th>
<th>Units</th>
<th>Yield</th>
<th>Control Limits</th>
<th>Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-232</td>
<td>4.257</td>
<td>3.38</td>
<td>pCi/g</td>
<td>79.4</td>
<td>30 - 110 %</td>
<td></td>
</tr>
</tbody>
</table>

---

**Comments:**

**Qualifier/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.  
MB - The requested MDC was not met, but the reported activity is greater than the reported MDC.

**Abbreviations:**

TPU - Total Propagated Uncertainty (see PAI SOP 748)  
MDC - Minimum Detectable Concentration (see PAI SOP 706)

**Data Package ID:** U0405169-1

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**Date Printed:** Thursday, June 24, 2004  
**Paragon Analytics**  
**LIMS Version:** 5.036A  
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Isotopic Uranium By Alpha Spectroscopy
PAI 714 Rev 8
Laboratory Control Sample(s)

Lab Name: Paragon Analytics
Work Order Number: 0405169
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Sample Matrix: SOIL
Prep SOP: PAI 778 Rev 9
Date Collected: 10-Jun-04
Date Prepared: 10-Jun-04
Date Analyzed: 16-Jun-04

Prep Batch: AS040610-3
QCBatchID: AS040610-3-1
Run ID: AS040610-3a
Count Time: 300 minutes
Final Allquot: 0.0397 g
Result Units: pCl/g
File Name: U6103L

<table>
<thead>
<tr>
<th>CASINO</th>
<th>Target Nuclide</th>
<th>Results +/- 2s TPU</th>
<th>MDC</th>
<th>Spike Added</th>
<th>% Rec</th>
<th>Control Limits</th>
<th>Lab Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>13966-59-5</td>
<td>U-234</td>
<td>217 +/- 35</td>
<td>2</td>
<td>219</td>
<td>96.1</td>
<td>82 - 122</td>
<td>P,M3</td>
</tr>
<tr>
<td>7440-61-1</td>
<td>U-238</td>
<td>221 +/- 36</td>
<td>1</td>
<td>227</td>
<td>97.2</td>
<td>82 - 122</td>
<td>P,M3</td>
</tr>
</tbody>
</table>

Chemical Yield Summary

<table>
<thead>
<tr>
<th>Carrier/Tracer</th>
<th>Amount Added</th>
<th>Result</th>
<th>Units</th>
<th>Yield</th>
<th>Control Limits</th>
<th>Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-232</td>
<td>215.2</td>
<td>182</td>
<td>pCl/g</td>
<td>64.7</td>
<td>30 - 110 %</td>
<td></td>
</tr>
</tbody>
</table>

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% - 105%. 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.
MS - The requested MDC was not met, but the transported activity is greater than the reported MDC.

Abbreviations:

TPI - Total Propagated Uncertainty (see PAI SOP 745)
MDC - Minimum Detectable Concentration (see PAI SOP 706)

Data Package ID: UO405169-1

Date Printed: Thursday, June 24, 2004
## Isotopic Uranium By Alpha Spectroscopy

**PAI 714 Rev 8**  
**Duplicate Sample Results (DER)**

**Lab Name:** Paragon Analytics  
**Work Order Number:** 0405169  
**Client Name:** New Horizons  
**Client Project ID:** CSMRI 2135

<table>
<thead>
<tr>
<th>CASNO</th>
<th>Analyte</th>
<th>Sample Result +/- 2 s TPU</th>
<th>Duplicate Result +/- 2 s TPU</th>
<th>DER</th>
<th>Control Limit</th>
<th>Lab Qualifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>13966-23-5</td>
<td>U-234</td>
<td>2.95 +/- 0.50</td>
<td>3.17 +/- 0.54</td>
<td>0.30</td>
<td>2.13</td>
<td></td>
</tr>
<tr>
<td>15117-96-1</td>
<td>U-235</td>
<td>0.191 +/- 0.052</td>
<td>0.176 +/- 0.059</td>
<td>0.18</td>
<td>2.13</td>
<td></td>
</tr>
<tr>
<td>7440-81-1</td>
<td>U-238</td>
<td>2.87 +/- 0.49</td>
<td>2.99 +/- 0.51</td>
<td>0.17</td>
<td>2.13</td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**
- Duplicate Qualifiers/Flags:
  - U - Result is lower than the sample specific MDC.
  - Y1 - Chemical Yield is within control at 100-112%.
  - 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 lower than Requested 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, Metal Spike Recovery within control limits.
  - N - Metal Spike Recovery outside control limits

**Final Alquot:** 2.04 g  
**Prep Basis:** Dry Weight  
**Moisture (%):** NA  
**Result Units:** pCi/g  
**File Name:** U51641D

**Duplicate Qualifiers/Flags:**
- TPU - Total Propagated Uncertainty (see PAI SOP 743)
- DER - Duplicate Error Ratio
- BDL - Below Detection Limit
- NR - Not Reported

**Data Package ID:** U0405169-1

**Date Printed:** Thursday, June 24, 2004

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**Paragon Analytics**  
**LIMS Version:** 5.036A  
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# Isotopic Uranium By Alpha Spectroscopy

### PAI 714 Rev 8

**Duplicate Sample Results (DER)**

**Lab Name:** Paragon Analytics  
**Work Order Number:** 0405169  
**Client Name:** New Horizons  
**Client Project ID:** CSMRI 2135

| Field ID: | SDA064  
| Lab ID: | 0405169-13DUP |
| Sample Matrix: | SCIL  
| Prep SOP: | PAI 778 Rev 9  
| Date Collected: | 13-May-04  
| Date Prepared: | 10-Jun-04  
| Date Analyzed: | 17-Jun-04  
| Prep Batch: | AS040610-3  
| QCBatchID: | AS040610-3-1  
| Run ID: | AS040610-3a  
| Count Time: | 600 minutes  
| Report Basis: | Dry Weight  
| Final Allot: | 0.0406 g  
| Prep Basis: | Dry Weight  
| Moisture(%): | NA  
| Result Units: | pCi/g  
| File Name: | US16913D |

<table>
<thead>
<tr>
<th>CASNO</th>
<th>Analyte</th>
<th>Sample Result +/- 2 s TPU</th>
<th>Duplicate Result +/- 2 s TPU</th>
<th>DER</th>
<th>Control Limit</th>
<th>Lab Qualifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>13966-29-5</td>
<td>U-234</td>
<td>21.3 +/- 4.0</td>
<td>20.1 +/- 3.9</td>
<td>0.21</td>
<td>2.13</td>
<td>M3</td>
</tr>
<tr>
<td>15117-86-1</td>
<td>U-235</td>
<td>1.25 +/- 0.77</td>
<td>0.79 +/- 0.58</td>
<td>0.49</td>
<td>2.13</td>
<td>M3</td>
</tr>
<tr>
<td>7440-61-1</td>
<td>U-238</td>
<td>19.7 +/- 3.8</td>
<td>18.7 +/- 3.6</td>
<td>0.19</td>
<td>2.13</td>
<td>M3</td>
</tr>
</tbody>
</table>

**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.  
- **MS** - 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 749)  
- **DER** - Duplicate Error Ratio  
- **BOL** - Below Detection Limit  
- **NR** - Not Reported

**Data Package ID:** U0405169-1

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**Date Printed:** Thursday, June 24, 2004  
**Paragon Analytics**  
**LIMS Version:** 5.036A  
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