Paragon Analytics
Radiochemistry Case Narrative
Isotopic Thorium

New Horizons
CSMRI / 2135
PA WO 0405063

1. This report consists of the analytical results for six soil samples received by Paragon on 05/06/04.

2. These samples were prepared according to Paragon Analytics procedures PA SOP773R8, PA SOP777R7, and PA SOP721R10.

3. The samples were analyzed for the presence of isotopic thorium according to Paragon Analytics procedure PA SOP714R8. The analyses were completed on 06/02/04.

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

5. Samples HSDA and H256S (PA IDs 0405025-3 and -11) did not meet the requested MDC of 0.1 pCi/g for Th-228 and Th-230, however the reported activities exceed the achieved MDC values. These samples are flagged with an “M3” flag on the final reports.

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

Skye Dobberstein
Radiochemistry Instrumentation

[Signature]
6/11/04
Date

Joel Pekoz
Radiochemistry Final Data Review

[Signature]
6/11/04
Date

PARAGON ANALYTICS
Isotopic Thorium By Alpha Spectroscopy
PAI 714 Rev 8
Method Blank Results

Lab Name: Paragon Analytics
Work Order Number: 0405063
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Sample Matrix: SOIL
Prep SOP: PAI 777 Rev 7
Date Collected: 18-May-04
Date Prepared: 18-May-04
Date Analyzed: 02-Jun-04

Prep Batch: AS040518-3
QCBatchID: AS040518-3-1
Run ID: AS040518-3a
Count Time: 300 minutes
Final Aliquot: 2.00 g
Result Units: pCi/g
File Name: T5183B

<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>14274-82-9</td>
<td>Th-228</td>
<td>0.026 +/- 0.031</td>
<td>0.059</td>
<td>U</td>
</tr>
<tr>
<td>14269-83-7</td>
<td>Th-230</td>
<td>0.029 +/- 0.039</td>
<td>0.077</td>
<td>U</td>
</tr>
<tr>
<td>7440-29-1</td>
<td>Th-232</td>
<td>0.028 +/- 0.022</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>Th-229</td>
<td>2.252</td>
<td>1.54</td>
<td>pCi/g</td>
<td>68.6</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.

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

Data Package ID: TH0405063-1

Date Printed: Friday, June 11, 2004
Isotopic Thorium By Alpha Spectroscopy

PAI 714 Rev 8

Laboratory Control Sample(s)

Lab Name: Paragon Analytics
Work Order Number: 0405063
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Lab ID: AS040518-3LCS
Sample Matrix: SOIL
Prep SOP: PAI 777 Rev 7
Date Collected: 18-May-04
Date Prepared: 18-May-04
Date Analyzed: 02-Jun-04
Prep Batch: AS040518-3
QCBatchID: AS040518-3-1
Run ID: AS040518-3a
Count Time: 300 minutes
Final Aliquot: 2.00 g
Result Units: pCi/g
File Name: T5183L

<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>
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<tbody>
<tr>
<td>14269-63-7</td>
<td>Th-230</td>
<td>2.43 +/- 0.45</td>
<td>0.08</td>
<td>2.30</td>
<td>106</td>
<td>85 - 121</td>
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Chemical Yield Summary

<table>
<thead>
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<th>Yield</th>
<th>Control Limits</th>
<th>Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Th-229</td>
<td>2.252</td>
<td>1.43</td>
<td>pCi/g</td>
<td>63.7</td>
<td>30 - 110 %</td>
<td></td>
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</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 100-110%. 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.
MG - The requested MDC was not met, but the reported 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: TH0405063-1

Date Printed: Friday, June 11, 2004
Paragon Analytics
LIMS Version: 5.030A
Isotopic Thorium By Alpha Spectroscopy

PAI 714 Rev 8
Duplicate Sample Results (DER)

Lab Name: Paragon Analytics
Work Order Number: 0405063
Client Name: New Horizons
ClientProject ID: CSMR/ 2135

Field ID: H107-117
Lab ID: 0405063-2DUP

Sample Matrix: SOIL
Prep SOP: PAI 777 Rev 7
Date Collected: 28-Apr-04
Date Prepared: 18-May-04
Date Analyzed: 02-Jun-04
Prep Batch: AS040518-3
QCBatchID: AS040518-3-1
Run ID: AS040518-3a
Count Time: 300 minutes
Report Basis: Dry Weight
Final Alquot: 2.04 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: TS0632D

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<th>Duplicate Result +/- 2 s TPU</th>
<th>DER</th>
<th>Control Limit</th>
<th>Lab Qualifiers</th>
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</thead>
<tbody>
<tr>
<td>14274-82-9</td>
<td>Th-228</td>
<td>2.18 +/- 0.42</td>
<td>2.22 +/- 0.42</td>
<td>0.06</td>
<td>2.13</td>
<td></td>
</tr>
<tr>
<td>14269-63-7</td>
<td>Th-230</td>
<td>3.19 +/- 0.59</td>
<td>3.39 +/- 0.62</td>
<td>0.24</td>
<td>2.13</td>
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<tr>
<td>7440-28-1</td>
<td>Th-232</td>
<td>2.23 +/- 0.42</td>
<td>2.17 +/- 0.41</td>
<td>0.10</td>
<td>2.13</td>
<td></td>
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</tbody>
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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.
MG - 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.

Data Package ID: TH0405063-1

Date Printed: Friday, June 11, 2004
Paragon Analytics
LIMS Version: 5.030A
Isotopic Thorium By Alpha Spectroscopy

PAI 714 Rev 8
Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405063
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Sample Matrix: SOIL
Prep SOP: PAI 777 Rev 7
Date Collected: 28-Apr-04
Date Prepared: 18-May-04
Date Analyzed: 02-Jun-04
Prep Batch: AS040518-3
QCBatchID: AS040518-3-1
Run ID: AS040518-3a
Count Time: 300 minutes
Report Basis: Dry Weight
Final Aliquot: 2.07 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: T50632

<table>
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<th>CASNO</th>
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<tr>
<td>14274-82-9</td>
<td>Th-228</td>
<td>2.18 +/- 0.42</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>14269-63-7</td>
<td>Th-230</td>
<td>3.19 +/- 0.59</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>7440-29-1</td>
<td>Th-232</td>
<td>2.23 +/- 0.42</td>
<td>0.04</td>
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Chemical Yield Summary

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<thead>
<tr>
<th>Carrier/Tracer</th>
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<th>Yield</th>
<th>Control Limits</th>
<th>Flag</th>
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</thead>
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<tr>
<td>Th-229</td>
<td>2.174</td>
<td>1.32</td>
<td>pCi/g</td>
<td>60.8</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)
BDL - Below Detection Limit

Data Package ID: TH0405063-1

Date Printed: Friday, June 11, 2004

Paragon Analytics
LIMS Version: 5.030A
Isotopic Thorium By Alpha Spectroscopy

PAI 714 Rev 8
Sample Duplicate Results

Lab Name: Paragon Analytics
Work Order Number: 0405063
Client Name: New Horizons
ClientProject ID: CSMRI 2135

Field ID: H107-117
Lab ID: 0405063-2DUP

Sample Matrix: SOIL
Prep SOP: PAI 777 Rev 7
Date Collected: 28-Apr-04
Date Prepared: 18-May-04
Date Analyzed: 02-Jun-04
Prep Batch: AS040518-3
QCBatchID: AS040518-3-1
Run ID: AS040518-3a
Count Time: 300 minutes
Report Basis: Dry Weight
Final Aliquot: 2.04 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: T50632D

<table>
<thead>
<tr>
<th>CASNO</th>
<th>Target Nuclide</th>
<th>Result +/- 2 s TPU</th>
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<th>Lab Qualifier</th>
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<tbody>
<tr>
<td>14274-82-9</td>
<td>Th-228</td>
<td>2.22 +/- 0.42</td>
<td>0.07</td>
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</tr>
<tr>
<td>14269-83-7</td>
<td>Th-230</td>
<td>3.39 +/- 0.62</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>7440-29-1</td>
<td>Th-232</td>
<td>2.17 +/- 0.41</td>
<td>0.02</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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</thead>
<tbody>
<tr>
<td>Th-229</td>
<td>2.206</td>
<td>1.35</td>
<td>pCi/g</td>
<td>61.3</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.
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
0  - 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: TH0405063-1

Date Printed: Friday, June 11, 2004
Paragon Analytics
LIMS Version: 5.030A
Page 1 of 1
Isotopic Thorium By Alpha Spectroscopy
PAI 714 Rev 8
Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405063
Client Name: New Horizons
Client Project ID: CSMRI 2135

Field ID: H5DA
Lab ID: 0405063-3

Sample Matrix: SOIL
Prep SOP: PAI 777 Rev 7
Date Collected: 30-Apr-04
Date Prepared: 18-May-04
Date Analyzed: 02-Jun-04
Prep Batch: AS040518-3
QCBatchID: AS040518-3-1
Run ID: AS040518-3a
Count Time: 300 minutes
Report Basis: Dry Weight
Final Aliquot: 1.10 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: T50633

<table>
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<th>MDC</th>
<th>Lab Qualifier</th>
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</thead>
<tbody>
<tr>
<td>14274-82-9</td>
<td>Th-228</td>
<td>4.95 +/- 0.90</td>
<td>0.13</td>
<td>M3</td>
</tr>
<tr>
<td>14289-63-7</td>
<td>Th-230</td>
<td>1.96 +/- 0.40</td>
<td>0.14</td>
<td>M3</td>
</tr>
<tr>
<td>7440-29-1</td>
<td>Th-232</td>
<td>4.88 +/- 0.85</td>
<td>0.05</td>
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Chemical Yield Summary

<table>
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<th>Result</th>
<th>Units</th>
<th>Yield</th>
<th>Control Limits</th>
<th>Flag</th>
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<tbody>
<tr>
<td>Th-229</td>
<td>4.102</td>
<td>2.96</td>
<td>pCi/g</td>
<td>72.1</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 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

Data Package ID: TH0405063-1
Isotopic Thorium By Alpha Spectroscopy

PAI 714 Rev 8
Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405083
Client Name: New Horizons
Client Project ID: CSMRI 2135

Field ID: IC1014
Lab ID: 0405063-5

Sample Matrix: SOIL
Prep SOP: PAI 777 Rev 7
Date Collected: 04-May-04
Date Prepared: 18-May-04
Date Analyzed: 02-Jun-04
Prep Batch: AS040518-3
QC Batch ID: AS040518-3-1
Run ID: AS040518-3a
Count Time: 300 minutes
Report Basis: Dry Weight
Final Aliquot: 2.11 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCl/g
File Name: T50635

<table>
<thead>
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<th>MDC</th>
<th>Lab Qualifier</th>
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<tbody>
<tr>
<td>14274-82-9</td>
<td>Th-228</td>
<td>1.52 +/- 0.30</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>14269-63-7</td>
<td>Th-230</td>
<td>0.98 +/- 0.21</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>7440-29-1</td>
<td>Th-232</td>
<td>1.32 +/- 0.27</td>
<td>0.02</td>
<td></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>Th-229</td>
<td>2.136</td>
<td>1.43</td>
<td>pCl/g</td>
<td>67.1</td>
<td>30 - 110 %</td>
<td></td>
</tr>
</tbody>
</table>

Comments:

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

Data Package ID: TH0405063-1

Date Printed: Friday, June 11, 2004

Paragon Analytics
LIMS Version: 5.030A
Isotopic Thorium By Alpha Spectroscopy

PAI 714 Rev 8
Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405063
Client Name: New Horizons
Client Project ID: CSMRI 2135

| Field ID: | IG1017 |
| Lab ID: | 0405063-7 |

Sample Matrix: SOIL
Prep SOP: PAI 777 Rev 7
Prep Batch: AS040518-3
QCBatchID: AS040518-3-1
Run ID: AS040518-3a
Count Time: 300 minutes
Report Basis: Dry Weight
Final Aliquot: 2.03 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: T50637

<table>
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<th>Target Nuclide</th>
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<th>MDC</th>
<th>Lab Qualifier</th>
</tr>
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<tbody>
<tr>
<td>14274-82-9</td>
<td>Th-228</td>
<td>2.13 +/- 0.40</td>
<td>0.06</td>
<td></td>
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<tr>
<td>14269-53-7</td>
<td>Th-230</td>
<td>5.25 +/- 0.93</td>
<td>0.08</td>
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<tr>
<td>7440-29-1</td>
<td>Th-232</td>
<td>2.01 +/- 0.38</td>
<td>0.01</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>
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<tr>
<td>Th-229</td>
<td>2.220</td>
<td>1.47</td>
<td>pCi/g</td>
<td>66.4</td>
<td>30 - 110 %</td>
<td></td>
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</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:
- TPU - Total Propagated Uncertainty (see PAI SOP 743)
- MDC - Minimum Detectable Concentration (see PAI SOP 709)
- BDL - Below Detection Limit

Data Package ID: TH0405063-1
## Isotopic Thorium By Alpha Spectroscopy

**PAI 714 Rev 8**  
**Sample Results**

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<th>Field ID</th>
<th>Lab ID</th>
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<th>Prep Batch: AS040518-3</th>
<th>QC Batch ID: AS040518-3-1</th>
<th>Run ID: AS040518-3a</th>
<th>Count Time: 300 minutes</th>
<th>Report Basis: Dry Weight</th>
<th>Final Aliquot: 2.02 g</th>
<th>Prep Basis: Dry Weight</th>
<th>Moisture(%): NA</th>
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### CASNO

<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>14274-82-9</td>
<td>Th-228</td>
<td>1.68 +/- 0.32</td>
<td>0.09</td>
<td></td>
</tr>
<tr>
<td>14269-63-7</td>
<td>Th-230</td>
<td>23.3 +/- 3.9</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>7440-29-1</td>
<td>Th-232</td>
<td>1.79 +/- 0.34</td>
<td>0.03</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>
<th>Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Th-228</td>
<td>2.225</td>
<td>1.45</td>
<td>pCi/g</td>
<td>65.1</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.
  - **M0** - The requested MDC was 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:** TH0405063-1

**Date Printed:** Friday, June 11, 2004

**Paragon Analytics**  
**LIMS Version:** 5.030A
Isotopic Thorium By Alpha Spectroscopy

PAI 714 Rev 8

Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0405063
Client Name: New Horizons
Client Project ID: CSMR/ 2135

Field ID: H256S
Lab ID: 0405063-11

Sample Matrix: SOIL
Prep SOP: PAI 777 Rev 7
Date Collected: 04-May-04
Date Prepared: 16-May-04
Date Analyzed: 02-Jun-04

Prep Batch: AS040516-3
QC Batch ID: AS040516-3-1
Run ID: AS040516-3a
Count Time: 300 minutes
Report Basis: Dry Weight

Final Aliquot: 1.08 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: T506311

<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>14274-82-9</td>
<td>Th-228</td>
<td>1.45 +/- 0.31</td>
<td>0.12</td>
<td>M3</td>
</tr>
<tr>
<td>14269-63-7</td>
<td>Th-230</td>
<td>24.1 +/- 4.1</td>
<td>0.1</td>
<td>M3</td>
</tr>
<tr>
<td>7440-29-1</td>
<td>Th-232</td>
<td>1.63 +/- 0.34</td>
<td>0.05</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>
<th>Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Th-229</td>
<td>4.259</td>
<td>2.90</td>
<td>pCi/g</td>
<td>68.0</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:
TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

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