

Appendix D
Radiochemistry Laboratory Results



Date of Issue: 05/23/2023 04:15:10

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 001

Date Collected: 01/26/2023 09:07:00 AM

Lab Sample ID: R2023000436

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.039	0.241 pCi/L	.043	05/10/2023 05:45 PM	ANDSCHMIDT	EPA 903.1
LCS recovery failed 20% criteria, was within 1 sigma range						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 001

Date Collected: 01/26/2023 09:07:00 AM

Lab Sample ID: R2023000436

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/23/2023 04:11:06

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 001

Date Collected: 01/26/2023 09:07:00 AM

Lab Sample ID: R2023000441

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.109	-0.201 pCi/L	.646	05/18/2023 05:38 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 001

Date Collected: 01/26/2023 09:07:00 AM

Lab Sample ID: R2023000441

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/23/2023 04:05:42

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 002

Date Collected: 01/26/2023 10:35:00 AM

Lab Sample ID: R2023000401

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.054	0.087 pCi/L	.039	05/10/2023 05:45 PM	ANDSCHMIDT	EPA 903.1
LCS recovery failed 20% criteria, was within 1 sigma rangebarium recovery failed low						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 002

Date Collected: 01/26/2023 10:35:00 AM

Lab Sample ID: R2023000401

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/23/2023 04:07:18

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 002

Date Collected: 01/26/2023 10:35:00 AM

Lab Sample ID: R2023000402

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.076	-0.216 pCi/L	.624	05/18/2023 05:38 PM	MABURKE	OTHER BROOKS AND BLANCHARD

MS and MSD % recovery passed, Dups failed. Barium carrier recovery failed low.

**Analytical Report For
Radiation Protection**

Sample ID: 5918 002

Date Collected: 01/26/2023 10:35:00 AM

Lab Sample ID: R2023000402

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/08/2023 08:43:28

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 003

Date Collected: 02/02/2023 10:24:00 AM

Lab Sample ID: R2023000399

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

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Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.059	0.022 pCi/L	.037	04/28/2023 05:24 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 003

Date Collected: 02/02/2023 10:24:00 AM

Lab Sample ID: R2023000399

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/08/2023 08:43:20

DEP Bureau of Laboratories - Harrisburg
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2575 Interstate Drive
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Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 003

Date Collected: 02/02/2023 10:24:00 AM

Lab Sample ID: R2023000400

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.939	-0.090 pCi/L	.552	05/17/2023 04:20 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 003

Date Collected: 02/02/2023 10:24:00 AM

Lab Sample ID: R2023000400

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 03/31/2023 04:07:52

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 004

Date Collected: 02/03/2023 10:43:00 AM

Lab Sample ID: R2023000352

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.048	0.034 pCi/L	.033	03/02/2023 05:25 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 004

Date Collected: 02/03/2023 10:43:00 AM

Lab Sample ID: R2023000352

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 04/06/2023 04:07:03

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 004

Date Collected: 02/03/2023 10:43:00 AM

Lab Sample ID: R2023000353

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.998	0.535 pCi/L	.631	03/16/2023 04:54 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 004

Date Collected: 02/03/2023 10:43:00 AM

Lab Sample ID: R2023000353

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 03/31/2023 04:07:52

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
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Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 005

Date Collected: 02/06/2023 09:00:00 AM

Lab Sample ID: R2023000354

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

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Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.04	0.271 pCi/L	.047	03/02/2023 05:25 PM	ANDSCHMIDT	EPA 903.1

Matrix spike recoveries low. Results and/or reporting limits may be biased low.

**Analytical Report For
Radiation Protection**

Sample ID: 5918 005

Date Collected: 02/06/2023 09:00:00 AM

Lab Sample ID: R2023000354

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 04/06/2023 04:07:06

DEP Bureau of Laboratories - Harrisburg
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2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 005

Date Collected: 02/06/2023 09:00:00 AM

Lab Sample ID: R2023000355

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

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Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.934	0.640 pCi/L	.598	03/16/2023 04:54 PM	MABURKE	OTHER BROOKS AND BLANCHARD

Sample used for MS and MSD. MS and MSD % recoveries Passed; dup recoveries failed.

**Analytical Report For
Radiation Protection**

Sample ID: 5918 005

Date Collected: 02/06/2023 09:00:00 AM

Lab Sample ID: R2023000355

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/09/2023 04:06:34

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 006

Date Collected: 02/06/2023 02:30:00 PM

Lab Sample ID: R2023000356

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

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Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.058	0.028 pCi/L	.036	04/25/2023 05:10 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 006

Date Collected: 02/06/2023 02:30:00 PM

Lab Sample ID: R2023000356

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/09/2023 04:06:36

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 006

Date Collected: 02/06/2023 02:30:00 PM

Lab Sample ID: R2023000357

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

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Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.19	-0.467 pCi/L	.673	05/04/2023 05:24 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 006

Date Collected: 02/06/2023 02:30:00 PM

Lab Sample ID: R2023000357

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/09/2023 04:06:38

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 007

Date Collected: 02/09/2023 09:30:00 AM

Lab Sample ID: R2023000375

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/09/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.055	0.145 pCi/L	.042	04/25/2023 05:10 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 007

Date Collected: 02/09/2023 09:30:00 AM

Lab Sample ID: R2023000375

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/09/2023 04:02:10

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 007

Date Collected: 02/09/2023 09:30:00 AM

Lab Sample ID: R2023000377

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/09/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.21	0.057 pCi/L	.723	05/04/2023 05:24 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 007

Date Collected: 02/09/2023 09:30:00 AM

Lab Sample ID: R2023000377

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/21/2023 04:09:42

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 008

Date Collected: 02/09/2023 10:35:00 AM

Lab Sample ID: R2023000376

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/09/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.039	0.035 pCi/L	.027	04/28/2023 05:24 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 008

Date Collected: 02/09/2023 10:35:00 AM

Lab Sample ID: R2023000376

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/21/2023 04:09:43

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 008

Date Collected: 02/09/2023 10:35:00 AM

Lab Sample ID: R2023000378

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/09/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.339	0.165 pCi/L	.809	05/17/2023 07:40 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 008

Date Collected: 02/09/2023 10:35:00 AM

Lab Sample ID: R2023000378

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/21/2023 04:01:45

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 009

Date Collected: 02/10/2023 10:00:00 AM

Lab Sample ID: R2023000397

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/14/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.062	0.055 pCi/L	.041	04/28/2023 05:24 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 009

Date Collected: 02/10/2023 10:00:00 AM

Lab Sample ID: R2023000397

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/21/2023 04:01:46

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 009

Date Collected: 02/10/2023 10:00:00 AM

Lab Sample ID: R2023000398

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/14/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.097	-0.518 pCi/L	.614	05/17/2023 06:00 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 009

Date Collected: 02/10/2023 10:00:00 AM

Lab Sample ID: R2023000398

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/23/2023 04:11:06

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 010

Date Collected: 02/14/2023 09:25:00 AM

Lab Sample ID: R2023000437

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.061	0.302 pCi/L	.054	05/10/2023 05:45 PM	ANDSCHMIDT	EPA 903.1
LCS recovery failed 20% criteria, was within 1 sigma range						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 010

Date Collected: 02/14/2023 09:25:00 AM

Lab Sample ID: R2023000437

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/23/2023 04:12:54

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 010

Date Collected: 02/14/2023 09:25:00 AM

Lab Sample ID: R2023000442

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.081	0.715 pCi/L	.693	05/18/2023 05:38 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 010

Date Collected: 02/14/2023 09:25:00 AM

Lab Sample ID: R2023000442

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/04/2023 04:21:21

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 011

Date Collected: 02/14/2023 11:50:00 AM

Lab Sample ID: R2023000438

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.038	0.688 pCi/L	.059	03/28/2023 05:28 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 011

Date Collected: 02/14/2023 11:50:00 AM

Lab Sample ID: R2023000438

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 04/20/2023 04:24:21

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 011

Date Collected: 02/14/2023 11:50:00 AM

Lab Sample ID: R2023000443

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.307	0.030 pCi/L	.78	04/13/2023 06:24 PM	MABURKE	OTHER BROOKS AND BLANCHARD
RA228 Radium 228	1.307	0.030 pCi/L	.78	04/13/2023 06:24 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 011

Date Collected: 02/14/2023 11:50:00 AM

Lab Sample ID: R2023000443

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/13/2023 04:30:10

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 012

Date Collected: 02/14/2023 11:20:00 AM

Lab Sample ID: R2023000439

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.065	2.343 pCi/L	.12	05/18/2023 05:10 PM	ANDSCHMIDT	EPA 903.1
Matrix spike recovery failed low, Matrix spike dup recovery passed. DUP criteria pass.						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 012

Date Collected: 02/14/2023 11:20:00 AM

Lab Sample ID: R2023000439

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/08/2023 04:04:19

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 012

Date Collected: 02/14/2023 11:20:00 AM

Lab Sample ID: R2023000444

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.076	0.788 pCi/L	.695	06/05/2023 04:20 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 012

Date Collected: 02/14/2023 11:20:00 AM

Lab Sample ID: R2023000444

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/13/2023 04:30:04

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 013

Date Collected: 02/14/2023 10:15:00 AM

Lab Sample ID: R2023000440

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.064	0.092 pCi/L	.044	05/18/2023 05:10 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 013

Date Collected: 02/14/2023 10:15:00 AM

Lab Sample ID: R2023000440

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/08/2023 04:33:39

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 013

Date Collected: 02/14/2023 10:15:00 AM

Lab Sample ID: R2023000445

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/16/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.104	-0.418 pCi/L	.627	06/05/2023 04:20 PM	MABURKE	OTHER BROOKS AND BLANCHARD
RA228 Radium 228	1.104	-0.418 pCi/L	.627	06/05/2023 04:20 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 013

Date Collected: 02/14/2023 10:15:00 AM

Lab Sample ID: R2023000445

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/13/2023 04:08:26

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 014

Date Collected: 02/17/2023 10:25:00 AM

Lab Sample ID: R2023000446

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/21/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.041	8.308 pCi/L	.21	05/18/2023 05:10 PM	ANDSCHMIDT	EPA 903.1
Barium % recovery high-sample had solids remaining with Barium weight.						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 014

Date Collected: 02/17/2023 10:25:00 AM

Lab Sample ID: R2023000446

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/08/2023 04:07:46

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 014

Date Collected: 02/17/2023 10:25:00 AM

Lab Sample ID: R2023000447

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/21/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.094	29.221 pCi/L	1.782	06/05/2023 04:20 PM	MABURKE	OTHER BROOKS AND BLANCHARD

Barium % recovery high-sample had solids remaining with Barium weight.

**Analytical Report For
Radiation Protection**

Sample ID: 5918 014

Date Collected: 02/17/2023 10:25:00 AM

Lab Sample ID: R2023000447

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/04/2023 04:21:24

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 015

Date Collected: 02/22/2023 09:15:00 AM

Lab Sample ID: R2023000495

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/28/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.055	1.399 pCi/L	.088	03/31/2023 04:50 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 015

Date Collected: 02/22/2023 09:15:00 AM

Lab Sample ID: R2023000495

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/04/2023 04:43:03

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 015

Date Collected: 02/22/2023 09:15:00 AM

Lab Sample ID: R2023000498

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/28/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.908	3.878 pCi/L	.768	04/21/2023 04:08 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 015

Date Collected: 02/22/2023 09:15:00 AM

Lab Sample ID: R2023000498

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/29/2023 04:11:09

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 016

Date Collected: 02/22/2023 09:30:00 AM

Lab Sample ID: R2023000494

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/28/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.056	1.133 pCi/L	.08	05/31/2023 05:50 PM	ANDSCHMIDT	EPA 903.1
Barium carrier recover failed high. Sample had solids present						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 016

Date Collected: 02/22/2023 09:30:00 AM

Lab Sample ID: R2023000494

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/29/2023 04:08:06

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 016

Date Collected: 02/22/2023 09:30:00 AM

Lab Sample ID: R2023000497

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/28/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.095	0.575 pCi/L	.69	06/23/2023 04:43 PM	MABURKE	OTHER BROOKS AND BLANCHARD
Barium carrier recovery failed high-Sample had solids that did not dissolve throughout procedure-therefor they were counted with the bariumcarrier making barium carrier recovery fail high. All other QC passed.						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 016

Date Collected: 02/22/2023 09:30:00 AM

Lab Sample ID: R2023000497

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/04/2023 04:17:02

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P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 017

Date Collected: 02/23/2023 09:15:00 AM

Lab Sample ID: R2023000496

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/28/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.038	18.927 pCi/L	.298	03/31/2023 04:50 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 017

Date Collected: 02/23/2023 09:15:00 AM

Lab Sample ID: R2023000496

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/04/2023 04:43:03

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2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

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NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 017

Date Collected: 02/23/2023 09:15:00 AM

Lab Sample ID: R2023000499

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 02/28/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.93	17.891 pCi/L	1.315	04/21/2023 04:08 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 017

Date Collected: 02/23/2023 09:15:00 AM

Lab Sample ID: R2023000499

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/09/2023 04:07:39

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 018

Date Collected: 02/27/2023 01:20:00 PM

Lab Sample ID: R2023000542

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/02/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.048	19.246 pCi/L	.304	04/25/2023 05:10 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 018

Date Collected: 02/27/2023 01:20:00 PM

Lab Sample ID: R2023000542

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/09/2023 04:09:09

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 018

Date Collected: 02/27/2023 01:20:00 PM

Lab Sample ID: R2023000543

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/02/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.969	85.046 pCi/L	2.738	05/04/2023 03:44 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 018

Date Collected: 02/27/2023 01:20:00 PM

Lab Sample ID: R2023000543

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/29/2023 04:05:12

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 019

Date Collected: 02/28/2023 10:00:00 AM

Lab Sample ID: R2023000572

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/06/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.057	0.057 pCi/L	.038	05/31/2023 05:50 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 019

Date Collected: 02/28/2023 10:00:00 AM

Lab Sample ID: R2023000572

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/29/2023 04:03:40

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 019

Date Collected: 02/28/2023 10:00:00 AM

Lab Sample ID: R2023000575

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/06/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.084	-0.577 pCi/L	.601	06/23/2023 04:43 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 019

Date Collected: 02/28/2023 10:00:00 AM

Lab Sample ID: R2023000575

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/23/2023 04:14:44

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 020

Date Collected: 02/28/2023 11:45:00 AM

Lab Sample ID: R2023000573

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/06/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.055	0.163 pCi/L	.043	06/21/2023 05:40 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 020

Date Collected: 02/28/2023 11:45:00 AM

Lab Sample ID: R2023000573

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/23/2023 04:10:28

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 020

Date Collected: 02/28/2023 11:45:00 AM

Lab Sample ID: R2023000576

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/06/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.28	0.657 pCi/L	.805	07/13/2023 05:58 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 020

Date Collected: 02/28/2023 11:45:00 AM

Lab Sample ID: R2023000576

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/23/2023 04:04:12

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 021

Date Collected: 03/07/2023 09:25:00 AM

Lab Sample ID: R2023000644

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/14/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.054	0.623 pCi/L	.062	06/21/2023 05:40 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 021

Date Collected: 03/07/2023 09:25:00 AM

Lab Sample ID: R2023000644

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/23/2023 04:08:12

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 021

Date Collected: 03/07/2023 09:25:00 AM

Lab Sample ID: R2023000645

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/14/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.264	0.148 pCi/L	.763	07/13/2023 05:58 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 021

Date Collected: 03/07/2023 09:25:00 AM

Lab Sample ID: R2023000645

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/23/2023 04:04:12

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 022

Date Collected: 04/20/2023 09:30:00 AM

Lab Sample ID: R2023000991

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/20/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.038	29.256 pCi/L	.357	06/21/2023 05:40 PM	ANDSCHMIDT	EPA 903.1
Barium carrier recovery failed high, 199.63%. Sample had large amountof solids presents.						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 022

Date Collected: 04/20/2023 09:30:00 AM

Lab Sample ID: R2023000991

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/23/2023 04:10:23

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 022

Date Collected: 04/20/2023 09:30:00 AM

Lab Sample ID: R2023000992

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/20/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.225	1.197 pCi/L	.811	07/13/2023 05:58 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 022

Date Collected: 04/20/2023 09:30:00 AM

Lab Sample ID: R2023000992

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 08/18/2023 04:21:48

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 023

Date Collected: 04/25/2023 08:30:00 AM

Lab Sample ID: R2023001023

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/25/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.041	26.636 pCi/L	.377	07/07/2023 04:46 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 023

Date Collected: 04/25/2023 08:30:00 AM

Lab Sample ID: R2023001023

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 08/18/2023 04:15:15

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P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 023

Date Collected: 04/25/2023 08:30:00 AM

Lab Sample ID: R2023001024

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/25/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.356	92.321 pCi/L	3.397	07/27/2023 08:24 PM	MABURKE	OTHER BROOKS AND BLANCHARD

MS/MSD % recovery high. Sample activity high. DUPs passed.

**Analytical Report For
Radiation Protection**

Sample ID: 5918 023

Date Collected: 04/25/2023 08:30:00 AM

Lab Sample ID: R2023001024

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 08/18/2023 04:07:43

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P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 024

Date Collected: 04/27/2023 10:45:00 AM

Lab Sample ID: R2023001044

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/28/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.051	0.033 pCi/L	.033	07/07/2023 04:46 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 024

Date Collected: 04/27/2023 10:45:00 AM

Lab Sample ID: R2023001044

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 08/18/2023 04:18:35

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P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 024

Date Collected: 04/27/2023 10:45:00 AM

Lab Sample ID: R2023001045

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/28/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.123	-0.072 pCi/L	.662	07/27/2023 06:44 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 024

Date Collected: 04/27/2023 10:45:00 AM

Lab Sample ID: R2023001045

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 08/18/2023 04:12:43

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 025

Date Collected: 04/27/2023 10:45:00 AM

Lab Sample ID: R2023001042

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/28/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.142	1.280 pCi/L	.766	07/27/2023 06:44 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 025

Date Collected: 04/27/2023 10:45:00 AM

Lab Sample ID: R2023001042

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 08/18/2023 04:12:44

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 025

Date Collected: 04/27/2023 10:45:00 AM

Lab Sample ID: R2023001043

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/28/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.053	1.592 pCi/L	.093	07/07/2023 04:46 PM	ANDSCHMIDT	EPA 903.1
Barium recovery failed high 193.136%.						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 025

Date Collected: 04/27/2023 10:45:00 AM

Lab Sample ID: R2023001043

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 08/18/2023 04:18:34

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 026

Date Collected: 04/28/2023 10:15:00 AM

Lab Sample ID: R2023001052

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 05/01/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.035	0.408 pCi/L	.048	07/07/2023 04:46 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 026

Date Collected: 04/28/2023 10:15:00 AM

Lab Sample ID: R2023001052

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 08/18/2023 04:01:45

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P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 026

Date Collected: 04/28/2023 10:15:00 AM

Lab Sample ID: R2023001053

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 05/01/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.153	-0.393 pCi/L	.658	07/27/2023 06:44 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 026

Date Collected: 04/28/2023 10:15:00 AM

Lab Sample ID: R2023001053

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 01/15/2026 07:02:12

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 027

Date Collected: 07/26/2023 10:00:00 AM

Lab Sample ID: R2023001829

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 07/27/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.047	0.048 pCi/L	.032	08/15/2023 06:01 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 027

Date Collected: 07/26/2023 10:00:00 AM

Lab Sample ID: R2023001829

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 01/15/2026 07:02:06

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 027

Date Collected: 07/26/2023 10:00:00 AM

Lab Sample ID: R2023001830

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 07/27/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.771	0.672 pCi/L	.506	08/21/2023 03:23 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 027

Date Collected: 07/26/2023 10:00:00 AM

Lab Sample ID: R2023001830

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 01/15/2026 07:03:47

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 028

Date Collected: 07/26/2023 10:00:00 AM

Lab Sample ID: R2023001831

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 07/27/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.037	3.468 pCi/L	.141	08/15/2023 06:01 PM	ANDSCHMIDT	EPA 903.1
Barium carrier recovery failed high due to excess sediment from sample						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 028

Date Collected: 07/26/2023 10:00:00 AM

Lab Sample ID: R2023001831

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 01/15/2026 07:03:43

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 028

Date Collected: 07/26/2023 10:00:00 AM

Lab Sample ID: R2023001832

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 07/27/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.781	2.710 pCi/L	.629	08/21/2023 03:23 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 028

Date Collected: 07/26/2023 10:00:00 AM

Lab Sample ID: R2023001832

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 01/15/2026 07:04:35

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P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 029

Date Collected: 08/02/2023 11:00:00 AM

Lab Sample ID: R2023001907

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 08/03/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.037	4.616 pCi/L	.167	08/15/2023 06:01 PM	ANDSCHMIDT	EPA 903.1
Barium carrier recovery failed high due to excess sediment from sample						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 029

Date Collected: 08/02/2023 11:00:00 AM

Lab Sample ID: R2023001907

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 01/15/2026 07:04:40

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 029

Date Collected: 08/02/2023 11:00:00 AM

Lab Sample ID: R2023001908

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 08/03/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.782	2.461 pCi/L	.62	08/21/2023 03:23 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 029

Date Collected: 08/02/2023 11:00:00 AM

Lab Sample ID: R2023001908

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 01/15/2026 07:17:32

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Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Watershed Conservation

Sample ID: 5918 030

Date Collected: 08/11/2023 09:58:00 AM

Lab Sample ID: R2023001999

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 08/15/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Routine Sampling

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.034	3.792 pCi/L	.146	08/29/2023 05:00 PM	ANDSCHMIDT	EPA 903.1
Barium recovery high due to high sample solids content						

**Analytical Report For
Watershed Conservation**

Sample ID: 5918 030

Date Collected: 08/11/2023 09:58:00 AM

Lab Sample ID: R2023001999

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 01/15/2026 07:17:26

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Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Watershed Conservation

Sample ID: 5918 030

Date Collected: 08/11/2023 09:58:00 AM

Lab Sample ID: R2023002000

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 08/15/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Routine Sampling

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.04	-0.183 pCi/L	.605	09/20/2023 04:53 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Watershed Conservation**

Sample ID: 5918 030

Date Collected: 08/11/2023 09:58:00 AM

Lab Sample ID: R2023002000

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 01/15/2026 07:18:08

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2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Watershed Conservation

Sample ID: 5918 031

Date Collected: 08/10/2023 10:06:00 AM

Lab Sample ID: R2023002001

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 08/15/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Routine Sampling

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.04	3.446 pCi/L	.142	08/29/2023 05:00 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Watershed Conservation**

Sample ID: 5918 031

Date Collected: 08/10/2023 10:06:00 AM

Lab Sample ID: R2023002001

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 01/15/2026 07:18:03

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Watershed Conservation

Sample ID: 5918 031

Date Collected: 08/10/2023 10:06:00 AM

Lab Sample ID: R2023002002

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 08/15/2023

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Routine Sampling

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.09	0.226 pCi/L	.664	09/20/2023 04:53 PM	MABURKE	OTHER BROOKS AND BLANCHARD

DUPs failed high; all other QC PASSED; sample may be biased high.

**Analytical Report For
Watershed Conservation**

Sample ID: 5918 031

Date Collected: 08/10/2023 10:06:00 AM

Lab Sample ID: R2023002002

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/22/2024 04:08:09

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 100

Date Collected: 03/27/2024 09:25:00 AM

Lab Sample ID: R2024000786

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/27/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.039	23.210 pCi/L	.32	05/15/2024 06:00 PM	ANDSCHMIDT	EPA 903.1
Ba recovery failed high. sample had high solids content						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 100

Date Collected: 03/27/2024 09:25:00 AM

Lab Sample ID: R2024000786

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/15/2024 04:09:03

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 100

Date Collected: 03/27/2024 09:25:00 AM

Lab Sample ID: R2024000787

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/27/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.186	15.751 pCi/L	1.476	05/31/2024 04:55 PM	MABURKE	OTHER BROOKS AND BLANCHARD
% Barium recovery high-solids in with precipitate						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 100

Date Collected: 03/27/2024 09:25:00 AM

Lab Sample ID: R2024000787

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/25/2024 04:07:16

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 101

Date Collected: 03/21/2024 09:00:00 AM

Lab Sample ID: R2024000758

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/21/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.04	1.166 pCi/L	.08	04/24/2024 06:24 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 101

Date Collected: 03/21/2024 09:00:00 AM

Lab Sample ID: R2024000758

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/15/2024 04:05:59

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 101

Date Collected: 03/21/2024 09:00:00 AM

Lab Sample ID: R2024000759

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/21/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.9	0.631 pCi/L	.582	05/08/2024 04:16 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 101

Date Collected: 03/21/2024 09:00:00 AM

Lab Sample ID: R2024000759

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/25/2024 04:06:08

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 102

Date Collected: 03/27/2024 09:30:00 AM

Lab Sample ID: R2024000784

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/27/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.042	0.459 pCi/L	.054	04/24/2024 06:24 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 102

Date Collected: 03/27/2024 09:30:00 AM

Lab Sample ID: R2024000784

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/15/2024 04:01:13

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P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 102

Date Collected: 03/27/2024 09:30:00 AM

Lab Sample ID: R2024000785

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/27/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.956	-0.827 pCi/L	.502	05/08/2024 04:16 PM	MABURKE	OTHER BROOKS AND BLANCHARD
Dups failed-RPD 67.51%						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 102

Date Collected: 03/27/2024 09:30:00 AM

Lab Sample ID: R2024000785

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/03/2024 04:08:50

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 103

Date Collected: 04/17/2024 11:00:00 AM

Lab Sample ID: R2024001005

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/18/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.035	0.175 pCi/L	.037	06/21/2024 04:20 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 103

Date Collected: 04/17/2024 11:00:00 AM

Lab Sample ID: R2024001005

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/02/2024 04:06:40

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 103

Date Collected: 04/17/2024 11:00:00 AM

Lab Sample ID: R2024001007

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/18/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.065	-0.024 pCi/L	.631	06/27/2024 06:12 PM	MABURKE	OTHER BROOKS AND BLANCHARD
All QC Passed except Dups-%RPD 29.32.						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 103

Date Collected: 04/17/2024 11:00:00 AM

Lab Sample ID: R2024001007

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/16/2024 04:14:18

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 104

Date Collected: 04/16/2024 02:30:00 PM

Lab Sample ID: R2024001006

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/18/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.035	0.180 pCi/L	.038	07/03/2024 06:41 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 104

Date Collected: 04/16/2024 02:30:00 PM

Lab Sample ID: R2024001006

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/16/2024 04:03:46

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 104

Date Collected: 04/16/2024 02:30:00 PM

Lab Sample ID: R2024001008

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/18/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.753	0.322 pCi/L	.472	07/11/2024 02:05 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 104

Date Collected: 04/16/2024 02:30:00 PM

Lab Sample ID: R2024001008

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/25/2024 04:07:11

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 105

Date Collected: 03/19/2024 10:00:00 AM

Lab Sample ID: R2024000743

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/20/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.039	0.496 pCi/L	.056	04/24/2024 06:24 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 105

Date Collected: 03/19/2024 10:00:00 AM

Lab Sample ID: R2024000743

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/15/2024 04:08:23

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 105

Date Collected: 03/19/2024 10:00:00 AM

Lab Sample ID: R2024000744

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/20/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.012	0.367 pCi/L	.627	05/08/2024 05:56 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 105

Date Collected: 03/19/2024 10:00:00 AM

Lab Sample ID: R2024000744

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/07/2024 04:04:46

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 106

Date Collected: 03/18/2024 09:00:00 AM

Lab Sample ID: R2024000705

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/18/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.035	0.449 pCi/L	.055	04/04/2024 04:55 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 106

Date Collected: 03/18/2024 09:00:00 AM

Lab Sample ID: R2024000705

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/10/2024 04:10:09

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 106

Date Collected: 03/18/2024 09:00:00 AM

Lab Sample ID: R2024000706

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/18/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.177	1.505 pCi/L	.805	04/25/2024 05:55 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 106

Date Collected: 03/18/2024 09:00:00 AM

Lab Sample ID: R2024000706

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/07/2024 04:08:56

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 107

Date Collected: 03/18/2024 10:00:00 AM

Lab Sample ID: R2024000707

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/18/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.038	0.426 pCi/L	.051	04/04/2024 04:55 PM	ANDSCHMIDT	EPA 903.1
Barium Carrier Recovery failed high due to high solids content of sample						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 107

Date Collected: 03/18/2024 10:00:00 AM

Lab Sample ID: R2024000707

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/10/2024 04:17:35

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 107

Date Collected: 03/18/2024 10:00:00 AM

Lab Sample ID: R2024000708

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/18/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.15	0.319 pCi/L	.706	04/25/2024 05:55 PM	MABURKE	OTHER BROOKS AND BLANCHARD
Ba recovery failed high(excess solids from sample)						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 107

Date Collected: 03/18/2024 10:00:00 AM

Lab Sample ID: R2024000708

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/22/2024 04:06:51

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 108

Date Collected: 03/28/2024 08:00:00 AM

Lab Sample ID: R2024000818

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/29/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.05	0.590 pCi/L	.062	05/15/2024 06:00 PM	ANDSCHMIDT	EPA 903.1
Ba recovery failed high. sample had high solids content						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 108

Date Collected: 03/28/2024 08:00:00 AM

Lab Sample ID: R2024000818

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/15/2024 04:11:02

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 108

Date Collected: 03/28/2024 08:00:00 AM

Lab Sample ID: R2024000819

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/29/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.923	0.340 pCi/L	.574	05/31/2024 03:15 PM	MABURKE	OTHER BROOKS AND BLANCHARD
% Barium recovery high-solids in with precipitate						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 108

Date Collected: 03/28/2024 08:00:00 AM

Lab Sample ID: R2024000819

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/25/2024 04:04:14

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 109

Date Collected: 03/26/2024 09:25:00 AM

Lab Sample ID: R2024000782

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/27/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.046	2.345 pCi/L	.113	04/24/2024 06:24 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 109

Date Collected: 03/26/2024 09:25:00 AM

Lab Sample ID: R2024000782

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/15/2024 04:05:05

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 109

Date Collected: 03/26/2024 09:25:00 AM

Lab Sample ID: R2024000783

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/27/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.937	5.594 pCi/L	.864	05/08/2024 04:16 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 109

Date Collected: 03/26/2024 09:25:00 AM

Lab Sample ID: R2024000783

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/07/2024 04:07:42

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P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 110

Date Collected: 03/14/2024 09:10:00 AM

Lab Sample ID: R2024000666

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/14/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.042	3.810 pCi/L	.149	04/04/2024 04:55 PM	ANDSCHMIDT	EPA 903.1
Barium Carrier Recovery failed high due to high solids content of sample						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 110

Date Collected: 03/14/2024 09:10:00 AM

Lab Sample ID: R2024000666

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 05/10/2024 04:07:51

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Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 110

Date Collected: 03/14/2024 09:10:00 AM

Lab Sample ID: R2024000667

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 03/14/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.107	0.739 pCi/L	.713	04/25/2024 05:55 PM	MABURKE	OTHER BROOKS AND BLANCHARD
%MSD failed/Dups failed/RPD%219.59. Ba recovery failed high(solids inprecipitate)						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 110

Date Collected: 03/14/2024 09:10:00 AM

Lab Sample ID: R2024000667

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/22/2024 04:05:42

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P.O. Box 1467
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Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 111

Date Collected: 04/08/2024 10:00:00 AM

Lab Sample ID: R2024000932

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/10/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.038	0.594 pCi/L	.06	05/16/2024 04:34 PM	ANDSCHMIDT	EPA 903.1
Ba recovery failed high. sample had high solids content						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 111

Date Collected: 04/08/2024 10:00:00 AM

Lab Sample ID: R2024000932

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/15/2024 04:03:34

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Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 111

Date Collected: 04/08/2024 10:00:00 AM

Lab Sample ID: R2024000933

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/10/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.121	0.159 pCi/L	.678	06/12/2024 06:13 PM	MABURKE	OTHER BROOKS AND BLANCHARD
BARIUM % RECOVERY HIGH-solids in precipitate						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 111

Date Collected: 04/08/2024 10:00:00 AM

Lab Sample ID: R2024000933

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/22/2024 04:02:47

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Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 112

Date Collected: 04/08/2024 10:00:00 AM

Lab Sample ID: R2024000914

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/09/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.04	0.056 pCi/L	.03	05/16/2024 04:34 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 112

Date Collected: 04/08/2024 10:00:00 AM

Lab Sample ID: R2024000914

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/15/2024 04:15:16

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Contact Phone Number: (717) 346-7200

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NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 112

Date Collected: 04/08/2024 10:00:00 AM

Lab Sample ID: R2024000916

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/09/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.928	0.010 pCi/L	.553	06/12/2024 04:33 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 112

Date Collected: 04/08/2024 10:00:00 AM

Lab Sample ID: R2024000916

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/22/2024 04:02:45

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P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 113

Date Collected: 04/08/2024 09:00:00 AM

Lab Sample ID: R2024000915

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/09/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.039	0.060 pCi/L	.029	05/16/2024 04:34 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 113

Date Collected: 04/08/2024 09:00:00 AM

Lab Sample ID: R2024000915

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/15/2024 04:15:16

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P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 113

Date Collected: 04/08/2024 09:00:00 AM

Lab Sample ID: R2024000917

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/09/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.89	0.236 pCi/L	.547	06/12/2024 04:33 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 113

Date Collected: 04/08/2024 09:00:00 AM

Lab Sample ID: R2024000917

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/03/2024 04:12:33

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 114

Date Collected: 04/09/2024 09:00:00 AM

Lab Sample ID: R2024000934

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/10/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.029	0.999 pCi/L	.072	06/21/2024 03:27 PM	ANDSCHMIDT	EPA 903.1
Barium Carrier recovery failed high, due to high solids content						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 114

Date Collected: 04/09/2024 09:00:00 AM

Lab Sample ID: R2024000934

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/02/2024 04:01:46

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 114

Date Collected: 04/09/2024 09:00:00 AM

Lab Sample ID: R2024000935

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/10/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.214	1.104 pCi/L	.802	06/27/2024 07:52 PM	MABURKE	OTHER BROOKS AND BLANCHARD
Barium % recovery failed high; solids in precipitate.						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 114

Date Collected: 04/09/2024 09:00:00 AM

Lab Sample ID: R2024000935

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/22/2024 04:06:51

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P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 115

Date Collected: 04/02/2024 11:30:00 AM

Lab Sample ID: R2024000853

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/04/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.057	0.318 pCi/L	.05	05/15/2024 06:00 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 115

Date Collected: 04/02/2024 11:30:00 AM

Lab Sample ID: R2024000853

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/15/2024 04:05:23

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2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 115

Date Collected: 04/02/2024 11:30:00 AM

Lab Sample ID: R2024000856

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/04/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.98	1.034 pCi/L	.657	05/31/2024 03:15 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 115

Date Collected: 04/02/2024 11:30:00 AM

Lab Sample ID: R2024000856

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/03/2024 04:02:00

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Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 116

Date Collected: 04/08/2024 12:30:00 PM

Lab Sample ID: R2024000936

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/10/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.03	1.230 pCi/L	.079	06/21/2024 04:20 PM	ANDSCHMIDT	EPA 903.1

**Analytical Report For
Radiation Protection**

Sample ID: 5918 116

Date Collected: 04/08/2024 12:30:00 PM

Lab Sample ID: R2024000936

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/02/2024 04:08:28

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 116

Date Collected: 04/08/2024 12:30:00 PM

Lab Sample ID: R2024000937

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/10/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.049	1.038 pCi/L	.693	06/27/2024 06:12 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 116

Date Collected: 04/08/2024 12:30:00 PM

Lab Sample ID: R2024000937

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/22/2024 04:04:44

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P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 117

Date Collected: 04/02/2024 10:15:00 AM

Lab Sample ID: R2024000854

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/04/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.036	1.792 pCi/L	.095	05/15/2024 06:00 PM	ANDSCHMIDT	EPA 903.1
Matrix spike failed low. matrix spike dup passed. sample passed dup criteria						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 117

Date Collected: 04/02/2024 10:15:00 AM

Lab Sample ID: R2024000854

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/15/2024 04:03:26

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 117

Date Collected: 04/02/2024 10:15:00 AM

Lab Sample ID: R2024000857

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/04/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.961	0.661 pCi/L	.616	05/31/2024 03:15 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 117

Date Collected: 04/02/2024 10:15:00 AM

Lab Sample ID: R2024000857

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/22/2024 04:02:47

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 118

Date Collected: 04/02/2024 01:45:00 PM

Lab Sample ID: R2024000855

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/04/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.044	1.465 pCi/L	.092	05/16/2024 04:34 PM	ANDSCHMIDT	EPA 903.1
Matrix spike passed. matrix spike dup failed low. sample failed dup criteria						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 118

Date Collected: 04/02/2024 01:45:00 PM

Lab Sample ID: R2024000855

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 06/15/2024 04:12:59

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P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 118

Date Collected: 04/02/2024 01:45:00 PM

Lab Sample ID: R2024000858

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/04/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	.947	0.603 pCi/L	.607	06/12/2024 04:33 PM	MABURKE	OTHER BROOKS AND BLANCHARD

**Analytical Report For
Radiation Protection**

Sample ID: 5918 118

Date Collected: 04/02/2024 01:45:00 PM

Lab Sample ID: R2024000858

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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U - Indicates analysis was performed for the test but it was not detected. The sample quantitation limit is reported.

J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/03/2024 04:07:28

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 119

Date Collected: 04/08/2024 11:30:00 AM

Lab Sample ID: R2024000938

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/10/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R226

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA226 Radium 226	.039	1.552 pCi/L	.093	06/21/2024 04:20 PM	ANDSCHMIDT	EPA 903.1
Barium Carrier recovery failed high, due to high solids content						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 119

Date Collected: 04/08/2024 11:30:00 AM

Lab Sample ID: R2024000938

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Jennifer Fesler, Technical Director, Bureau of Laboratories



Date of Issue: 07/02/2024 04:06:37

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Radiation Protection

Sample ID: 5918 119

Date Collected: 04/08/2024 11:30:00 AM

Lab Sample ID: R2024000939

Status: Completed

Name of Sample Collector: Bryan Werner

Date Received: 04/10/2024

County: NOT INDICATED

State:

Municipality: NOT INDICATED

Location: NOT INDICATED

Reason: Project

Project: NOT INDICATED

Suite: R228

Matrix: Water

Stream Condition:

A sample value is an observed reading of a sample's radioactivity on a given date and time.

The Minimum Detectable Activity (MDA) is the minimum sample value that can be detected with 95% confidence.

The Counting Error (CE) is a factor that when added to and subtracted from a sample value, defines a range that will with 95% confidence encompass the actual sample value.

Test Codes/CAS# - Description	95% MDA	Sample Value	95% CE	Analyzed	Approved By	Test Method
RA228 Radium 228	1.006	0.362 pCi/L	.625	06/27/2024 06:12 PM	MABURKE	OTHER BROOKS AND BLANCHARD
Barium % recovery failed high; solids in precipitate.						

**Analytical Report For
Radiation Protection**

Sample ID: 5918 119

Date Collected: 04/08/2024 11:30:00 AM

Lab Sample ID: R2024000939

Status: Completed

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2016 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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J - Indicates an estimated value, reported between Reporting Limit (RL) and Minimum Detection Limit (MDL).

Jennifer Fesler, Technical Director, Bureau of Laboratories