

PWSID: 1020029 Program Code: HC Type: B
System Name: Spring Lake Park
City: Spring Lake Park
Date Received: 07/12/22 11:21 Collector Name: Ken Prokott
Rep. Temp. (°C): 15.1 Collector ID: None

MDH Sample Number: 22G0493-01

Location ID: E01 Collect Date: 07/12/22 Field Residual Chlorine Result: None
Sampling Point: Terrace Park Treatment Plant Collect Time: 09:40 Field Fluoride Result: None
Matrix: Drinking Water Field pH Result: None
Field PO₄ Result: None

Results were produced by the Minnesota Department of Health, except where noted.

Radiochemical Parameters

Analyte	Result	Reporting Limit	Counting Uncertainty	Units	Batch	Prepared	Analyzed	Init.	Method	Qualifiers
Gross Alpha	3.5	3.0	2.1445	pCi/L	B2H1322	08/17/22 10:10	08/24/22 00:00	JJF	EPA 900.0	

MDH Sample Number: 22G0493-01RE1

Location ID: E01 Collect Date: 07/12/22 Field Residual Chlorine Result: None
Sampling Point: Terrace Park Treatment Plant Collect Time: 09:40 Field Fluoride Result: None
Matrix: Drinking Water Field pH Result: None
Field PO₄ Result: None

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Radiochemical Parameters

Analyte	Result	Reporting Limit	Counting Uncertainty	Units	Batch	Prepared	Analyzed	Init.	Method	Qualifiers
Radium-226	1.3	1.0	0.5473	pCi/L	B2I0665	08/24/22 12:44	09/14/22 19:21	SAP	EPA 903.0 Rev 1/ 904.0	
Radium-228	1.2	1.0	0.7501	pCi/L	B2I0665	08/24/22 12:44	09/13/22 18:49	SAP	EPA 903.0 Rev 1/ 904.0	

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Public Health Laboratory, Minnesota Department of Health

PWSID: 1020029

MDH Sample Number: 22G0493-02

Location ID: E05	Collect Date: 07/12/22	Field Residual Chlorine Result: None
Sampling Point: Arthur Street Treatment Plant	Collect Time: 10:40	Field Fluoride Result: None
	Matrix: Drinking Water	Field pH Result: None
		Field PO ₄ Result: None

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Radiochemical Parameters

Analyte	Result	Reporting Limit	Counting Uncertainty	Units	Batch	Prepared	Analyzed	Init.	Method	Qualifiers
Gross Alpha	<3.00	3.0	1.8848	pCi/L	B2H1322	08/17/22 10:10	08/24/22 00:00	JJF	EPA 900.0	
Radium-228	2.5	1.0	1.0632	pCi/L	B2H1477	08/24/22 12:44	08/30/22 18:38	SAP	EPA 903.0 Rev 1/ 904.0	

MDH Sample Number: 22G0493-02RE1

Location ID: E05	Collect Date: 07/12/22	Field Residual Chlorine Result: None
Sampling Point: Arthur Street Treatment Plant	Collect Time: 10:40	Field Fluoride Result: None
	Matrix: Drinking Water	Field pH Result: None
		Field PO ₄ Result: None

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Radiochemical Parameters

Analyte	Result	Reporting Limit	Counting Uncertainty	Units	Batch	Prepared	Analyzed	Init.	Method	Qualifiers
Radium-226	1.8	1.0	0.6568	pCi/L	B2I0848	08/24/22 12:44	09/22/22 20:01	SAP	EPA 903.0 Rev 1/ 904.0	QT

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PWSID: 1020029

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Batch B2H1322 - Radiochemistry Alpha/Beta Prep

Blank (B2H1322-BLK1)

Prepared: 08/17/22 10:10 Analyzed: 08/24/22 00:00

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Gross Alpha	<	3.0	pCi/L							JJF	

LCS (B2H1322-BS1)

Prepared: 08/17/22 10:10 Analyzed: 08/24/22 00:00

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Gross Alpha	10.9	3.0	pCi/L	13.92		78	70-130			JJF	

Duplicate (B2H1322-DUP1)

Source: 22F1653-01

Prepared: 08/17/22 10:10 Analyzed: 08/24/22 00:00

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Gross Alpha	3.6	3.0	pCi/L		7.2			67	20	JJF	W8

Matrix Spike (B2H1322-MS1)

Source: 22F1501-01

Prepared: 08/17/22 10:10 Analyzed: 08/24/22 00:00

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Gross Alpha	15.2	3.0	pCi/L	13.92	<	109	70-130			JJF	

Batch B2H1477 - Radiochemistry Ra-226 Ra-228 Prep

Blank (B2H1477-BLK1)

Prepared: 08/24/22 12:44 Analyzed: 08/30/22 18:38

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-228	<	1.0	pCi/L							SAP	

LCS (B2H1477-BS1)

Prepared: 08/24/22 12:44 Analyzed: 08/30/22 18:38

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-228	4.4	1.0	pCi/L	4.07		109	80-120			SAP	

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Batch B2H1477 - Radiochemistry Ra-226 Ra-228 Prep

LCS (B2H1477-BS2) Prepared: 08/24/22 12:44 Analyzed: 08/31/22 19:01

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-228	<	1.0	pCi/L				80-120			SAP	

Duplicate (B2H1477-DUP1) Prepared: 08/24/22 12:44 Analyzed: 08/30/22 18:38

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-228	<	1.0	pCi/L		<				20	SAP	

Matrix Spike (B2H1477-MS1) Prepared: 08/24/22 12:44 Analyzed: 08/30/22 18:38

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-228	7.3	1.0	pCi/L	8.15	2.0	65	70-130			SAP	M2

Matrix Spike (B2H1477-MS2) Prepared: 08/24/22 12:44 Analyzed: 08/31/22 19:01

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-228	<	1.0	pCi/L		1.6		70-130			SAP	

Batch B2I0665 - Radiochemistry Ra-226 Ra-228 Prep

Blank (B2I0665-BLK1) Prepared: 09/06/22 13:56 Analyzed: 09/14/22 19:21

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-226	<	1.0	pCi/L							SAP	
Radium-228	<	1.0	pCi/L							SAP	

LCS (B2I0665-BS1) Prepared: 09/06/22 13:56 Analyzed: 09/13/22 18:49

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-226	<	1.0	pCi/L				90-110			SAP	
Radium-228	3.3	1.0	pCi/L	4.05		81	80-120			SAP	

FINAL REPORT

Report ID: 09262022142142

Generated: 9/26/2022 2:21:30PM

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Batch B210665 - Radiochemistry Ra-226 Ra-228 Prep

LCS (B210665-BS2)

Prepared: 09/06/22 13:56 Analyzed: 09/14/22 19:21

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-226	5.1	1.0	pCi/L	4.66		109	90-110			SAP	
Radium-228	<	1.0	pCi/L				80-120			SAP	

Duplicate (B210665-DUP1)

Source: 22G0230-01

Prepared: 09/06/22 13:56 Analyzed: 09/14/22 19:21

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-226	0.5	1.0	pCi/L		<			14	20	SAP	
Radium-228	1.2	1.0	pCi/L		1.0			20	20	SAP	QT

Matrix Spike (B210665-MS1)

Source: 22G0295-01

Prepared: 09/06/22 13:56 Analyzed: 09/13/22 18:49

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-226	<	1.0	pCi/L		<		80-120			SAP	
Radium-228	7.2	1.0	pCi/L	8.11	<	83	70-130			SAP	

Matrix Spike (B210665-MS2)

Source: 22G0218-01

Prepared: 09/06/22 13:56 Analyzed: 09/14/22 19:21

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-226	8.2	1.0	pCi/L	9.33	<	83	80-120			SAP	
Radium-228	<	1.0	pCi/L		<		70-130			SAP	

Batch B210848 - Radiochemistry Ra-226 Ra-228 Prep

Blank (B210848-BLK1)

Prepared: 09/13/22 11:28 Analyzed: 09/22/22 20:01

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-226	<	1.0	pCi/L							SAP	

LCS (B210848-BS2)

Prepared: 09/13/22 11:28 Analyzed: 09/22/22 20:01

FINAL REPORT

Report ID: 09262022142142

Generated: 9/26/2022 2:21:30PM

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PWSID: 1020029

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Batch B2I0848 - Radiochemistry Ra-226 Ra-228 Prep

LCS (B2I0848-BS2)

Prepared: 09/13/22 11:28 Analyzed: 09/22/22 20:01

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-226	4.3	1.0	pCi/L	4.66		93	90-110			SAP	

Duplicate (B2I0848-DUP1)

Source: 22G0493-02RE1

Prepared: 09/13/22 11:28 Analyzed: 09/22/22 20:01

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-226	2.9	1.0	pCi/L		1.8			44	20	SAP	QT

Matrix Spike (B2I0848-MS2)

Source: 22G0497-01RE1

Prepared: 09/13/22 11:28 Analyzed: 09/22/22 20:01

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Radium-226	11.1	1.0	pCi/L	9.33	1.2	106	80-120			SAP	

Data Qualifiers and Definitions

- M2 Matrix spike and/or matrix spike duplicate recovery was low; the associated laboratory control sample and/or laboratory control sample duplicate recovery was acceptable.
- QT RPD between sample duplicates not within acceptance limits. Analyte concentration within range for RER comparison and RER within acceptance limits.
- W8 Sample/sample duplicate relative percent difference exceeded the laboratory acceptance limit.

Work Order Comments

Collector is Ken Prokott per N. Kadrlik. -CTS 7/12/22

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