

May 10, 2016

File: 0063.03881.8

Mr. Brian Finos
Manager of Facilities
Charter Development Company
3850 Broadmoor SE, Suite 201
Grand Rapids, Michigan 49512

Re: Environmental Assessment – Drinking Water Quality Report
Legacy Charter Academy
4900 East Hildale Street, Detroit, Michigan

Dear Mr. Finos:

Rose & Westra, Inc. (R&W) is pleased to present this drinking water quality report with results from the recent sampling and testing for the Legacy Charter Academy located at 4900 East Hildale Street, Detroit, Michigan (the Building). This work was requested due a concern about possible lead contaminates being present in the drinking water supplied to the Building. The water piping system to the Building and the water within the system are maintained by City of Detroit Water Department.

In summary, none of the tests conducted identified any contaminants exceeding the maximum contaminant levels (MCLs) or the Secondary MCLs allowed by the U. S. Environmental Protection Agency (U.S. EPA) for residential drinking water consumption.

Background

The Building is a multi-story structure constructed in several phases with the original Building constructed in 1927 and 1931. Renovations and additions were completed in 2010 using new building materials. The City of Detroit Water Department maintains the water distribution system and provides the water within the piping system to the Building.

Drinking Water Sampling

On April 21, 2016, R&W staff collected water samples from 10 water fixtures in the Building. The fixtures sampled consist of a drinking water fountain station (DFS) located next to Classroom 116 [DFS-116], DFS next to Classroom 126 [DFS-126], DFS in the Gymnasium (Room 136) [DFS-136], DFS next to Classroom 211 [DFS-211], sink tap in the food prep room (Room 135) [FP-135], sink tap in the Teacher's Lounge (Room 106) [TL-106], sink tap in Kindergarten Classroom 113 [KS-113], sink tap in Kindergarten Classroom 116 [KS-116], sink tap in Classroom 204 [SK-204], and sink tap in Staff Restroom (Room 217) [SR-217]. The locations have been illustrated on Figures 1, 2, and 3 (Attachment 1). The sampling

method used for the drinking water sample collection is known as first draw sampling, with a second sample collected from each location following a flush of the fixture. The first draw method required R&W staff to access the sampling location and flush the fixture to be sampled for a 30-minute period. Flushing the sampling locations was completed at 10:15 pm on April 20, 2016. Once the 30-minute flushing period was completed, R&W allowed each sample location to rest for a minimum of 6 hours. Each sample location was taped off to prevent use. The first draw water sample collection began at 6:08 am on April 21, 2016; thereby allowing for a nearly 8-hour rest period. Once the first draw sample was collected from the sample locations, the fixtures remained on for a 5-minute flush before the flushed sample was collected.

The first draw sample from each sample location has been identified in the sample name. The first draw samples are identified as DFS-116-FD, DFS-126-FD, DFS-136-FD, DFS-211-FD, FP-135-FD, TL-106-FD, KS-113-FD, KS-116-FD, SK-204-FD, and SR-217-FD. These water sample locations have been illustrated on Figures 1, 2, and 3, Attachment 1.

The flushed sample from each sample location has also been identified in the sample name. The flushed samples are identified as DFS-116-FL, DFS-126-FL, DFS-136-FL, DFS-211-FL, FP-135-FL, TL-106-FL, KS-113-FL, KS-116-FL, SK-204-FL, and SR-217-FL. These water sample locations have also been illustrated on Figures 1, 2, and 3, Attachment 1.

Analytical Testing

Water samples collected by R&W on April 21, 2016 were placed in clean 250-ml sample containers (supplied by the lab), labeled, cooled, and stored for transportation. The samples were handled and transported to Prein & Newhof Environmental Laboratory, Inc. (Prein & Newhof Laboratory; Grand Rapids, Michigan) under chain-of-custody records using U.S. EPA and Michigan Department of Environmental Quality (MDEQ) recommended methods. The water samples were tested for several heavy metals (copper, iron, and lead). A copy of the laboratory report has been included in Attachment 2. The Prein & Newhof Laboratory has MDEQ Drinking Water Certification for testing water samples.

Evaluation of Testing Results

All of the lead results were reported as below the method detection limit (MDL) of <0.003 mg/L. These reported results are also below the MCL of 0.015 mg/L.

Trace copper levels were reported in most water samples collected. The reported copper concentrations ranged from <0.010 mg/l to 0.235 mg/L; however, all reported concentrations are well below the MCL of 1.300 mg/L.

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Trace iron levels were reported in most water samples collected. The reported iron concentrations ranged from <0.006 mg/L to 0.037 mg/L. The Secondary MCL for iron has been established at 0.300 mg/L for taste and color. All reported sample results were below the Secondary MCL for iron.

Conclusions

Based on the water sampling and chemical analyses conducted, none of the tests conducted identified any contaminants that exceeded the MCLs or Secondary MCLs allowed by the U. S. EPA for residential drinking water consumption.

If you have any questions regarding the information or data presented in this letter, please feel free to contact our staff.

Sincerely,

ROSE & WESTRA, INC.



William J. Bosze, P.E.

wjb/jac

Attachments:

- Attachment 1: Figure 1 – First Floor Plan – Sample Locations – April 21, 2016
- Figure 2 – Second Floor Plan – Sample Locations – April 21, 2016
- Figure 3 – Third Floor Plan – Sample Locations – April 21, 2016

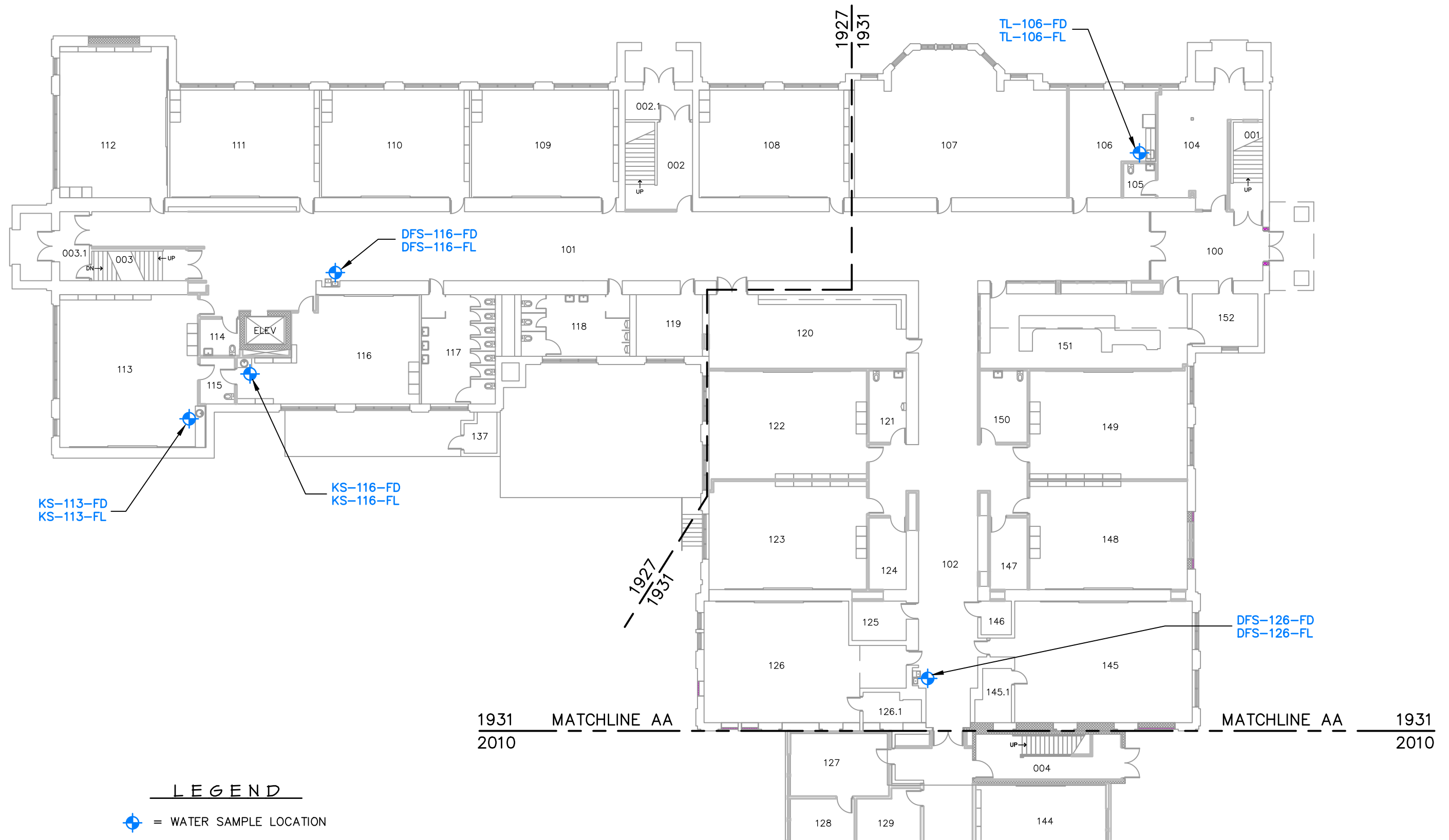
Attachment 2: Prein & Newhof Laboratory Report

Sent via Email Only

ATTACHMENT 1

FIGURES 1, 2, AND 3

DRINKING WATER SAMPLE LOCATIONS – APRIL 21, 2016



FIRST FLOOR PLAN (NORTHERN HALF) - SAMPLE LOCATIONS 4/21/16



CREATED BY: KJB

APPROVED BY: WJB

DATE: 4/25/16

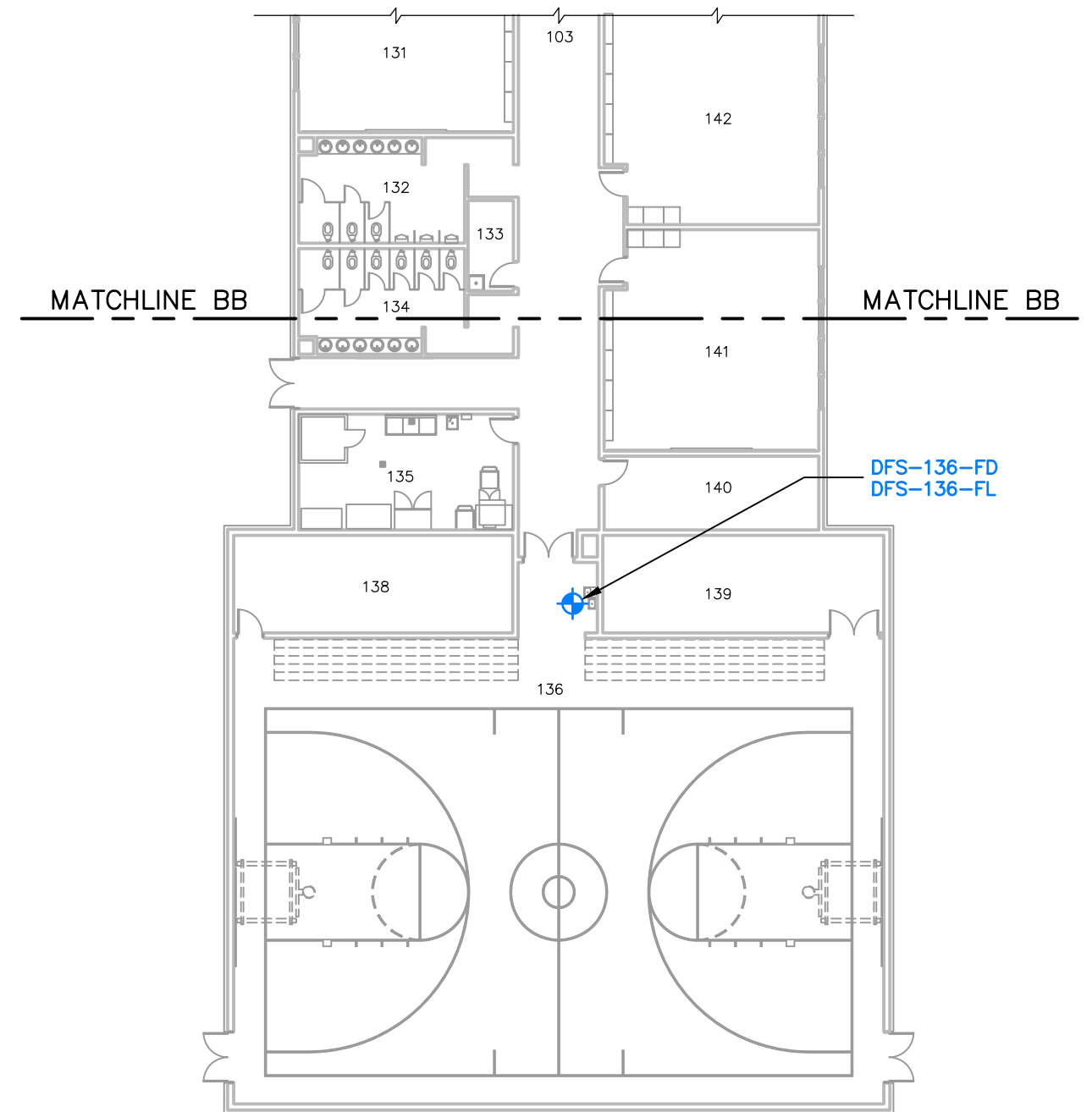
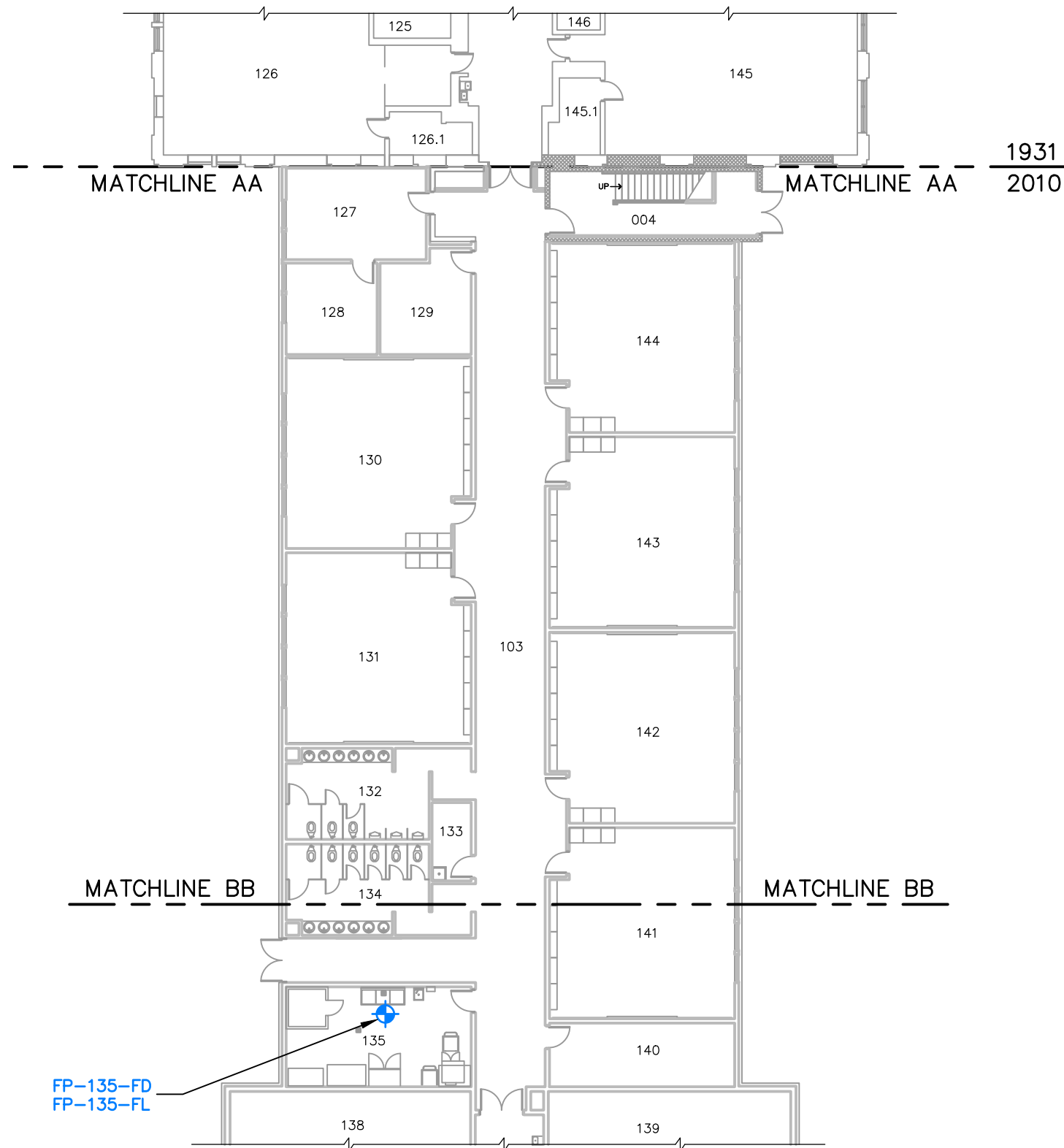
FILE NAME: 038818_LEGACY_DWT

NATIONAL HERITAGE ACADEMIES
LEGACY CHARTER ACADEMY
4900 EAST HILDALE, DETROIT, MICHIGAN
DRINKING WATER TESTING

PROJECT NO.
0063.03881.8

1

FIGURE NO.



LEGEND

 = WATER SAMPLE LOCATION

SCALE: 1" = 20'

0' 20'



ROSE & WESTRA, INC.
ENVIRONMENTAL CONSULTANTS
Grand Rapids, Michigan

CREATED BY: KJB APPROVED BY: WJB DATE: 4/25/16 FILE NAME: 038818_LEGACY_DWT

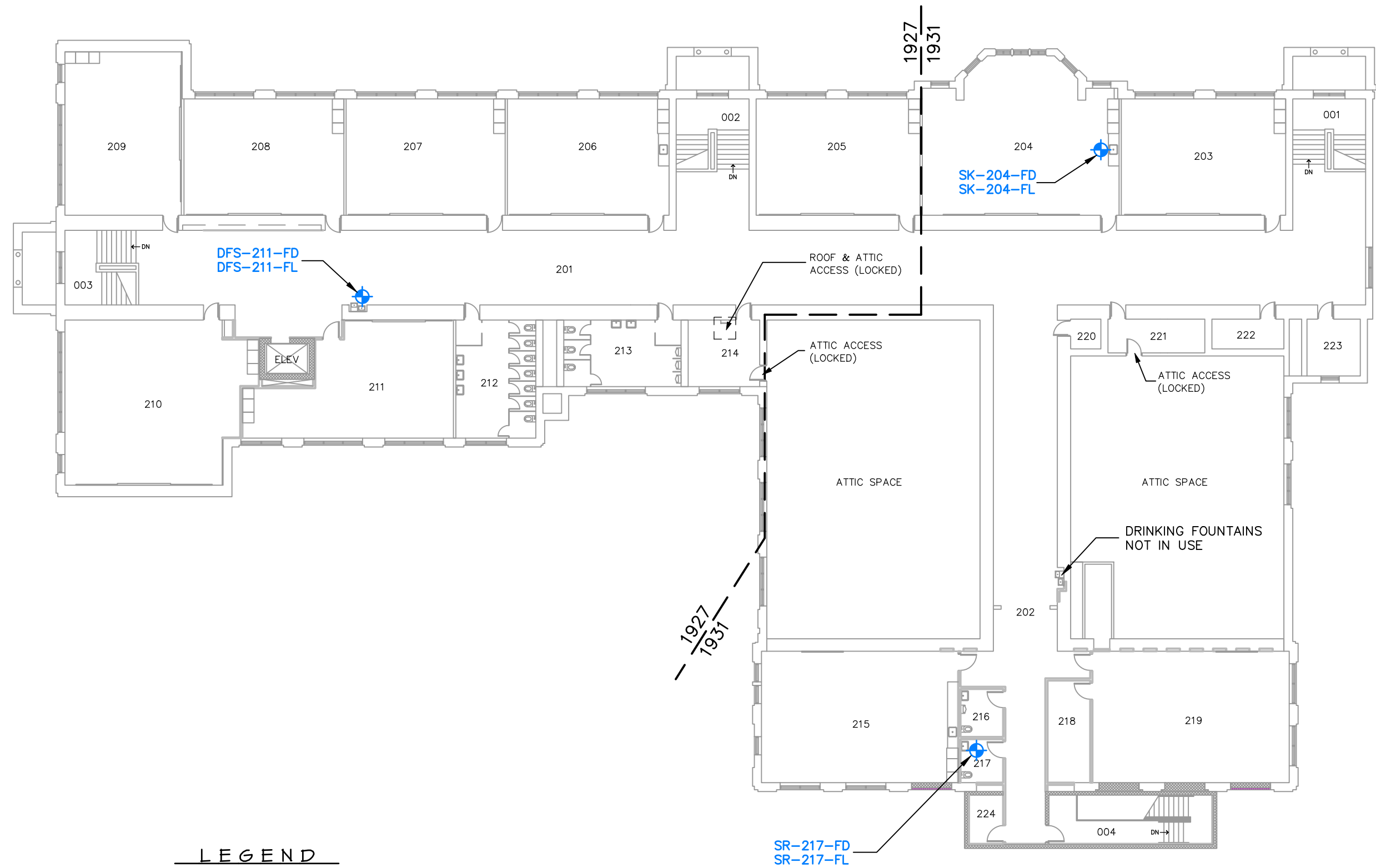
NATIONAL HERITAGE ACADEMIES
LEGACY CHARTER ACADEMY
4900 EAST HILDALE, DETROIT, MICHIGAN
DRINKING WATER TESTING

PROJECT NO.
0063.03881.8

2

FIGURE NO.

FIRST FLOOR PLAN (SOUTHERN HALF) - SAMPLE LOCATIONS 4/21/16



LEGEND

= WATER SAMPLE LOCATION

SCALE: 1" = 20'

0' 20'



SECOND FLOOR PLAN - SAMPLE LOCATIONS 4/21/16

ROSE & WESTRA, INC.
ENVIRONMENTAL CONSULTANTS
Grand Rapids, Michigan

NATIONAL HERITAGE ACADEMIES
LEGACY CHARTER ACADEMY
4900 EAST HILDALE, DETROIT, MICHIGAN
DRINKING WATER TESTING

PROJECT NO.
0063.03881.8

3

FIGURE NO.

CREATED BY: KJB APPROVED BY: WJB DATE: 4/25/16 FILE NAME: 038818_LEGACY_DWT

ATTACHMENT 2

PREIN & NEWHOF LABORATORY REPORT

Customer Name: Rose & Westra, Inc.
4328 3 Mile Rd NW
Grand Rapids, MI 49544

Contact Name: Rose & Westra, Inc.
4328 3 Mile Rd NW
Grand Rapids, MI 49544

Project: 0063.03881.8

Project No: 2160001

Lab Order: 1604697

Matrix: DRINKING WATER
Sampled By: W. Bosze

Lab ID: 1604697-001A
Client Sample ID: TL-106-FD

Collection Date: 4/21/2016 6:29 am
Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.028	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	0.007	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-002A
Client Sample ID: TL-106-FL

Collection Date: 4/21/2016 6:34 am
Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	< 0.010	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	0.008	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-003A
Client Sample ID: DFS-126-FD

Collection Date: 4/21/2016 6:30 am
Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	< 0.010	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	< 0.006	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-004A
Client Sample ID: DFS-126-FL

Collection Date: 4/21/2016 6:35 am
Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	< 0.010	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	0.008	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-005A
Client Sample ID: DFS-116-FD

Collection Date: 4/21/2016 6:38 am
Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	< 0.010	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	< 0.006	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Project: 0063.03881.8

Project No: 2160001

Lab Order: 1604697

Matrix: DRINKING WATER

Sampled By: W. Bosze

Lab ID: 1604697-006A
Client Sample ID: DFS-116-FL

Collection Date: 4/21/2016 6:43 am
Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	< 0.010	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	0.008	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-007A
Client Sample ID: KS-116-FD

Collection Date: 4/21/2016 6:39 am
Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.024	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	< 0.006	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-008A
Client Sample ID: KS-116-FL

Collection Date: 4/21/2016 6:44 am
Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.019	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	0.007	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-009A
Client Sample ID: KS-113-FD

Collection Date: 4/21/2016 6:40 am
Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.021	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	< 0.006	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-010A
Client Sample ID: KS-113-FL

Collection Date: 4/21/2016 6:45 am
Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.010	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	0.037	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-011A
Client Sample ID: FP-135-FD

Collection Date: 4/21/2016 6:08 am
Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.038	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	0.012	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Prein&Newhof

Project: 0063.03881.8

Project No: 2160001

Lab Order: 1604697

Matrix: DRINKING WATER

Sampled By: W. Bosze

Lab ID: 1604697-012A

Collection Date: 4/21/2016 6:13 am

Client Sample ID: FP-135-FL

Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.035	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	0.013	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-013A

Collection Date: 4/21/2016 6:09 am

Client Sample ID: DFS-136-FD

Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.024	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	0.011	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-014A

Collection Date: 4/21/2016 6:14 am

Client Sample ID: DFS-136-FL

Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.018	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	< 0.006	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-015A

Collection Date: 4/21/2016 6:18 am

Client Sample ID: DFS-211-FD

Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.064	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	< 0.006	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-016A

Collection Date: 4/21/2016 6:23 am

Client Sample ID: DFS-211-FL

Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.014	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	0.010	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-017A

Collection Date: 4/21/2016 6:20 am

Client Sample ID: SK-204-FD

Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.235	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	0.006	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Prein&Newhof

Project: 0063.03881.8

Project No: 2160001

Lab Order: 1604697

Matrix: DRINKING WATER

Sampled By: W. Bosze

Lab ID: 1604697-018A

Collection Date: 4/21/2016 6:25 am

Client Sample ID: SK-204-FL

Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.102	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	0.009	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-019A

Collection Date: 4/21/2016 6:21 am

Client Sample ID: SR-217-FD

Received Date: 4/22/2016 9:40 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.041	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	0.009	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Lab ID: 1604697-020A

Collection Date: 4/21/2016 6:26 am

Client Sample ID: SR-217-FL

Received Date: 4/22/2016 9:40 am

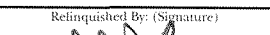


Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	< 0.010	mg/L	0.010	1.3	SB	4/27/2016	EPA 200.7
Iron	0.010	mg/L	0.006		SB	4/27/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/25/2016	SM3113B

Prein&Newhof

Sampling Personnel: William Bosze

Wjbo53e@rosewestra.com

Air	A
Drinking Water	D
Groundwater	W
Soil	S
Sludge	L
Oil	O
Other	X

Relinquished By: (Signature) 	Date 4/22/16	Time 9:40	Received By: (Signature)	Date	Time	Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Date	Time
Relinquished By: (Signature) 	Date	Time	Received By: (Signature)	Date	Time	Method of Shipment:			Bill of Lading:		
Received for Laboratory By: 	Date 4/24/16	Time 0945	Data Package Relinquished By:	Date	Time	Data Received By:	Date	Time	No. 31360		

WJBosze@rosewestva.com

Air	A
Drinking Water	D
Groundwater	W
Soil	S
Sludge	L
Oil	O
Other	X

CHAIN OF CUSTODY

Lab Use		Sample Information			MATRIX	Preservative						Analysis Requested																	
Lab Sample ID #	Date	Time	Sample Description and Location (e.g. MW-1)	None		H2SO4	HNO3	HCl	NaOH	Other	Lead	Copper	Zinc																
4697-11	4/21/16	6:08a	FP-135-FD	D	X						X	X	X																
72	4/21/16	6:13a	FP-135-FL	D	X						X	X	X																
73	4/21/16	6:09a	DFS-136-FD	D	X						X	X	X																
74	4/21/16	6:14a	DFS-136-FL	D	X						X	X	X																
75	4/21/16	6:18a	DFS-211-FD	D	X						X	X	X																
76	4/21/16	6:23a	DFS-211-FL	D	X						X	X	X																
77	4/21/16	6:20a	SK-204-FD	D	X						X	X	X																
78	4/21/16	6:25a	SK-204-FL	D	X						X	X	X																
79	4/21/16	6:21a	SR-217-FD	D	X						X	X	X																
80	4/21/16	6:26a	SR-217-FL	D	X						X	X	X																
Comments:																													

Relinquished By: (Signature) <i>[Signature]</i>	Date 4/22/16	Time 9:40	Received By: (Signature)	Date	Time	Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Date	Time	Method of Shipment:			Bill of Lading:		
Received for Laboratory By: <i>K2</i>	Date 4/22/16	Time 0940	Data Package Relinquished By:	Date	Time	Data Received By:	Date	Time	No. 31361		