EXHIBIT O

*** PWSID = 3540044 | SYSTEM NAME = SHENANDOAH MUN WATER AUTHORITY *** 1
*** SystemType = COMMUNITY | DEP REGION - NORTHEAST ***
*** eFACTS SiteID= 588704 ***

Violation Information for Federal Fiscal Years 2016 through 2022

Contaminant ID	Sample Point ID	Violation ID	Violation Type	Sample Type	Violation Awareness Date	Compliance Value	Enforcement Action 1	Enforcement Action 2	Enforcement Action 3	Enforcement Action 4	Enforcement Action 5	Enforcement Action 6	Fiscal Year
TOTAL ALKALINITY	301	12263	FAILURE TO MONITOR OR REPORT FOR THE D/DBP CONTAMINANT SPECIFIED		1/21/2022	.	VIOLATION NOTICE	REPORTING ERROR	COMPLIANCE ACHIEVED				2022
CHLORINE		13867	R3	DISTRIBUTION	3/19/2021	.	VIOLATION NOTICE	REPORT RECEIVED LATE	COMPLIANCE ACHIEVED				2021
CHLORINE		30201	R3	DISTRIBUTION	9/22/2021	.	VIOLATION NOTICE	REPORT RECEIVED LATE	COMPLIANCE ACHIEVED				2021
CHLORINE		15173	R3	DISTRIBUTION	3/18/2020	.	VIOLATION NOTICE	REPORT RECEIVED LATE	COMPLIANCE ACHIEVED				2020
HALOACETIC ACIDS (FIVE)		21811	FAILURE TO MONITOR OR REPORT FOR THE D/DBP CONTAMINANT SPECIFIED		7/24/2018	.	VIOLATION NOTICE	REPORT RECEIVED LATE	COMPLIANCE ACHIEVED				2018
TRIHALOMETHANES		21812	FAILURE TO MONITOR OR REPORT FOR THE D/DBP CONTAMINANT SPECIFIED		7/24/2018	.	VIOLATION NOTICE	REPORT RECEIVED LATE	COMPLIANCE ACHIEVED				2018
HALOACETIC ACIDS (FIVE)		07074	FAILURE TO MONITOR OR REPORT FOR THE D/DBP CONTAMINANT SPECIFIED		1/19/2017	.	VIOLATION NOTICE	COMPLIANCE ACHIEVED	PUBLIC NOTICE ISSUED				2017
TRIHALOMETHANES		07075	FAILURE TO MONITOR OR REPORT FOR THE D/DBP CONTAMINANT SPECIFIED		1/19/2017	.	VIOLATION NOTICE	COMPLIANCE ACHIEVED	PUBLIC NOTICE ISSUED				2017
HALOACETIC ACIDS (FIVE)	705	28962	MCL EXCEEDANCE FROM AVG OF SAMPLES FOR THE CONTAMINANT SPECIFIED		7/22/2016	.	VIOLATION NOTICE	PUBLIC NOTICE REQ	PUBLIC NOTICE ISSUED	COMPLIANCE ACHIEVED			2016

::

Violation Details for Inspection ID: 3401425

Facility: SHENANDOAH BORO.FILTER PLANT (243782)

Program: WPC NPDES

Disclaimer: The dollar amounts listed below are for the entire related enforcement, and may encompass many sites/facilities. The *Total Amount Collected* may or may not be related to the *Penalty Amount Assessed*, depending on how your program or regional office records payments in eFACTS. For questions regarding payments or penalties, please contact your DEP Regional Office.

Violation ID	Date	Violation Description
963631	08/02/2022	NPDES - Failure to monitor pollutants as required by the NPDES permit
		Resolution:
		PA Code Legal Citation: 25 Pa. Code 92a.61(c) : PA Code Website
		Violation Type: Administrative
		Enforcement Type: No Enforcement Data

The 08/02/2022 violation was due to testing that was not complete. MABS is not completing this testing and no response was needed to DEP.

Total Alkalinity

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF SAFE DRINKING WATER

INORGANIC/ORGANIC CHEMICAL AND RADIOLOGICAL ANALYSIS

SDWA-4 CORRECTION

Reason for Correction:
CORRECT ENTRY POINT FROM 302 TO 301

White Areas: Enter the complete information with the correct information.

Shaded Areas: Enter the information which was reported incorrectly. Enter only the data which needs to be changed.

PWS Name: SHENANDOAH MUN AUTH
Address: 424 RAVEN RUN ROAD
SHENANDOAH PA 17976
Phone: 570-462-4918
PWS ID: 3540044

Reported PWS Name:
Address:
Phone:
PWS ID:

LAB. NAME: PURE-TEST
APPROVED BY: RANDY S HOOT
PHONE: 717-866-2234
DATE: 2/7/22

SAMPLE	LOCATION / ENTRY POINT ID	LOCATION / ENTRY POINT NAME	LOCATION 2 ID	LOCATION 2 NAME	DATE MMDDYY	SAMPLE TYPE	SAMPLE TIME	LAB ID	LAB SAMPLE ID
CORRECT DATA	301	FILTER PLANT RAW			101421	R	0800	38338	348098-05
SUBMITTED DATA	302								

ANALYSIS	CONTAM ID	CONTAMINANT NAME	METHOD	RESULT (Incl. decimal)	LLD	CE	DATE MMDDYY
CORRECT DATA	1927	TOTAL ALKALINITY	584	21.0			101521
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							

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BUREAU OF SAFE DRINKING WATER

INORGANIC/ORGANIC CHEMICAL AND RADIOLOGICAL ANALYSIS

SDWA-4 CORRECTION

Reason for Correction:

CORRECT ENTRY POINT FROM 302 TO 301

White Areas: Enter the complete information with the correct information.

Shaded Areas: Enter the information which was reported incorrectly. Enter only the data which needs to be changed.

PWS Name: SHENANDOAH MUN AUTH
Address: 424 RAUCH RUN ROAD
SHENANDOAH PA 17976
Phone: 570.462-4918
PWS ID: 3540044

Reported PWS Name:
Address:
Phone:
PWS ID:

LAB. NAME: PURE-TEST
APPROVED BY: RAMONA HOCH
PHONE: 717-866-2234
DATE: 2/7/22

SAMPLE	LOCATION / ENTRY POINT ID	LOCATION / ENTRY POINT NAME	LOCATION 2 ID	LOCATION 2 NAME	DATE MMDDYY	SAMPLE TYPE	SAMPLE TIME	LAB ID	LAB SAMPLE ID
CORRECT DATA	301	FILTER RAW RAW			111821	R	1040	38338	350539-04
SUBMITTED DATA	302								

ANALYSIS	CONTAM ID	CONTAMINANT NAME	METHOD	RESULT (Incl. decimal)	LLD	CE	DATE MMDDYY
CORRECT DATA	1927	TOTAL ALKALINITY	584	35.0			112421
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							

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BUREAU OF SAFE DRINKING WATER

INORGANIC/ORGANIC CHEMICAL AND RADIOLOGICAL ANALYSIS

SDWA-4 CORRECTION

Reason for Correction:

CORRECT ENTRY POINT FROM 302 TO 301

White Areas: Enter the complete information with the correct information.

Shaded Areas: Enter the information which was reported incorrectly. Enter only the data which needs to be changed.

PWS Name: SHENANDOAH MUN AUTH
Address: 424 RAUCH RUN RD
SHENANDOAH PA 17976
Phone: 570-462-4918
PWS ID: 3540044

Reported PWS Name:
Address:
Phone:
PWS ID:

LAB. NAME: PURE-TEST
APPROVED BY: RANDY HESS
PHONE: 717-866-2234
DATE: 2/8/22

SAMPLE	LOCATION / ENTRY POINT ID	LOCATION / ENTRY POINT NAME	LOCATION 2 ID	LOCATION 2 NAME	DATE MMDDYY	SAMPLE TYPE	SAMPLE TIME	LAB ID	LAB SAMPLE ID
CORRECT DATA	301	FILTER PLANT RAW			120921	R	0605	38338...	351701-06
SUBMITTED DATA	302								

ANALYSIS	CONTAM ID	CONTAMINANT NAME	METHOD	RESULT (Incl. decimal)	LLD	CE	DATE MMDDYY
CORRECT DATA	1927	TOTAL ALKALINITY	584	14.5			121021
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF SAFE DRINKING WATER

INORGANIC/ORGANIC CHEMICAL AND RADIOLOGICAL ANALYSIS

SDWA-4 CORRECTION

Reason for Correction:

CORRECT ENTRY POINT FROM 302 TO 301

White Areas: Enter the complete information with the correct information.

Shaded Areas: Enter the information which was reported incorrectly. Enter only the data which needs to be changed.

PWS Name: SHENANDOAH MUN AUTH
Address: 424 ROUGH RUN RD
SHENANDOAH PA 17976
Phone: 570-462-4918
PWS ID: 3540044

Reported PWS Name:
Address:
Phone:
PWS ID:

LAB. NAME: PURE-TEST
APPROVED BY: RANDALL C HECHT
PHONE: 717-866-2234
DATE: 2/8/22

SAMPLE	LOCATION / ENTRY POINT ID	LOCATION / ENTRY POINT NAME	LOCATION 2 ID	LOCATION 2 NAME	DATE MMDDYY	SAMPLE TYPE	SAMPLE TIME	LAB ID	LAB SAMPLE ID
CORRECT DATA	301	FILTER PLANT RAW			011322	R	0600	38338	354021-05
SUBMITTED DATA	302								

ANALYSIS	CONTAM ID	CONTAMINANT NAME	METHOD	RESULT (Incl. decimal)	LLD	CE	DATE MMDDYY
CORRECT DATA	1927	TOTAL ALKALINITY	584	6.0			011722
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							

348098

Pure Test #Error **PHL**

Temp (C): Initials:	THIS BLACK BOX LAB USE ONLY	
# of Containers: 4	Cl2 N/D / pH<2 / Turc1	
On Ice upon collection? Yes No	pH adj at lab (Date: ___ Time: ___ Tech: ___)	
	Pres: NaS2O3 / NaOH / H2SO4 / HNO3 / HCl	

$18 Pickup Fee by Pure Test
Shenandoah Municipal Authority
424 Raven Run Road
Shenandoah PA 17976

Customer No: 134111
Billing: 134111
Shenandoah Municipal Authority
County: Schuylkill

Account Balance: $0

PWSID: 3540044

9/15/21 - New client. We pick up samples weekly, Thursdays of each week. They collect samples Wednesdays. Remember to take containers in advance for the next week (or more) sampling.

Phone	Notes
570-462-4918	Plant Phone
570-233-5318	Dan Salvadore cell

Treatment:

-ASBESTOS due 1/1/20 through 12/31/22
-EP707 - BACP sample is to be taken each week, including week 5 if needed.
-EP705 & EP709 - HAA5/TTHM taken on the 13th of the second week in those months

Collection Time Location	QT	Analyte	Frequency	Last Test	Next Test	Start/End	Result (Lab Use Only) Analysis date
101 Filter Plant							Potable
	IS	Asbestos	Every 9 Years	01/01/2010	Now		
	IS	Radium - 226	Every 9 Years	10/12/2011	Now		
	IS	Radium - 228	Every 9 Years	10/12/2011	Now		
301 Plant							Potable
302 Plant Raw							Potable
	1	Alkalinity, Total	Monthly	08/12/2021	Now		
701 Shen Manor Nursing Home							Potable
	1	Bacteria-Total Coliform P	Monthly Week 1	08/02/2021	Now		
702 Mark's Plumbing Supply							Potable
	1	Bacteria-Total Coliform P	Monthly Week 1	08/02/2021	Now		
703 Mrs. T's							Potable
	1	Bacteria-Total Coliform P	Monthly Week 1	08/02/2021	Now		
704 Marko Radiator 10-14-21							Potable
10:10 Am 1.50 cl2	1	Bacteria-Total Coliform P	Monthly Week 2	08/09/2021	Now		0
705 Redners 10-14-21							Potable
10:30 Am 1.39	1	Bacteria-Total Coliform P	Monthly Week 2	08/09/2021	Now		0
706 Ridgeview Nursing Home 10-14-21							Potable
10:50 Am 1.26	1	Bacteria-Total Coliform P	Monthly Week 2	08/09/2021	Now		0
707 Water Treatment Plant 10-14-21							Potable
8:05 Am 1.84 cl2	1	Bacteria-Total Coliform P	Weekly	08/09/2021	Now		0
708 Lost Creek Post Office							Potable
	1	Bacteria-Total Coliform P	Monthly Week 3	08/16/2021	Now		
709 Powder Mill Road							Potable
710 Boyers							Potable
	1	Bacteria-Total Coliform P	Monthly Week 3	08/16/2021	Now		
711 507 W Coal Street							Potable
	1	Bacteria-Total Coliform P	Monthly Week 4	08/23/2021	Now		
712 Shenandoah Valley Elementary School							Potable
	1	Bacteria-Total Coliform P	Monthly Week 4	08/23/2021	Now		
WW Outfall 001							Non-potable
	1	Total Aluminum	Weekly	09/01/2021	Now		
	1	Total Iron	Weekly	09/01/2021	Now		
	1	Total Manganese	Weekly	09/01/2021	Now		
	1	Total Suspended Solids	Weekly	09/01/2021	Now		

1014211519190011 10152111 2115

101421165715

4°

Collected By: [signature] Date: 10-14-21

Complete these items if collected by non-Denmar personnel and delivered into Denmar custody
Received By: B Town Date: 10/14/21 Time: 1330 Store: ___

Mark temp & ice above

PURE TEST Calculation Date: 09/21/2021 Printed 09/21/2021 Last Sample: **PHL**

Temp (C): Initials:

# of Containers: 1

On Ice upon collection? Yes No

DNS BLACK BOX LAB USE ONLY

☐ Cl2 N/D ☐ pH<2 ☐ Turb<1

☐ pH adj at lab (Date:_____ Time:_____ Tech:___

Pres: ☐ NaS2O3 ☐ NaOH ☐ H2SO4 ☐ HNO3 ☐ HCl

SHIPPING

S13 Pickup Fee by Pure Test

Shenandoah Municipal Authority
424 Raven Run Road
Shenandoah PA 17976

Customer No: 134111
Billing: 134111
Shenandoah Municipal Authority
County: Schuylkill

Account Balance: $0

PWSID: 3540044

Treatment:

9/15/21 - New client. We pick up samples weekly, Thursdays of each week. They collect samples Wednesdays. Remember to take containers in advance for the next week (or more) sampling.

-ASBESTOS due 1/1/20 through 12/31/22.
-EP707 - BACP sample is to be taken each week, including week 5 if needed.
-EP705 & EP709 - HAA5/TTHM taken on the 13th of the second week in those months

Phone	Notes
570-462-4918	Plant Phone
570-233-5318	Dan Salvadore cell

Collection Time	Location	QT	Analyte	Frequency	Last Test	Next Test	Start/End	Result Lab Use Only/Analyst Init
001	lead/cooper site							Potable
002	lead/cooper site							Potable
003	lead/cooper site							Potable
004	lead/cooper site							Potable
005	lead/cooper site							Potable
006	lead/cooper site							Potable
007	lead/cooper site							Potable
008	lead/cooper site							Potable
009	lead/cooper site							Potable
010	lead/cooper site							Potable
011	lead/cooper site							Potable
012	lead/cooper site							Potable
013	lead/cooper site							Potable
014	lead/cooper site							Potable
015	lead/cooper site							Potable
016	lead/cooper site							Potable
017	lead/cooper site							Potable
018	lead/cooper site							Potable
019	lead/cooper site							Potable
020	lead/cooper site							Potable
101	Filter Plant							Potable
		IS	Asbestos	Every 9 Years	01/01/2010	Now		
		IS	Radium - 226	Every 9 Years	10/12/2011	Now		
		IS	Radium - 228	Every 9 Years	10/12/2011	Now		
301	Plant							Potable
302	Plant Raw 10-14-21		135911					Potable
8:00 AM		1	Alkalinity, Total	Monthly	08/12/2021	Now		
701	Shen Manor Nursing Home							Potable
		1	Bacteria-Total Coliform P	Monthly Week 1	08/02/2021	Now		
702	Mark's Plumbing Supply							Potable
		1	Bacteria-Total Coliform P	Monthly Week 1	08/02/2021	Now		
703	Mrs. T's							Potable
		1	Bacteria-Total Coliform P	Monthly Week 1	08/02/2021	Now		
704	Marks Radiator							Potable
		1	Bacteria-Total Coliform P	Monthly Week 2	08/09/2021	Now		
705	Redners							Potable
		1	Bacteria-Total Coliform P	Monthly Week 2	08/09/2021	Now		
706	Ridgeview Nursing Home 1014211518190011							Potable

Collected By: [signature] Date: 10-14-21

Complete these items if collected by non-Denmar personnel and delivered into Denmar custody

Received By: B Tonkin Date: 10/14/21 Time: 1330 Store:____

Mark temp & ice above

350539

PURE TEST LABORATORY

Calculation Date: 11/30/2021 Printed: 11/04/2021 15:36:54 PHL

Temp (C): Initials:

# of Containers: 4

On Ice upon collection? Yes No

THIS BLOCK BECKMAN USE ONLY

Cl2 N/D pH<2 Turb<1

pH adj at lab (Date:_____ Time:_____ Tech:___

Pres: Na2S2O3 NaOH H2SO4 HNO3 HCl

HIPPING

$18 Pickup Fee by Pure-Test

Shenandoah Municipal Authority
424 Raven Run Road
Shenandoah PA 17976

Customer No: 13411
Billing: 134111
Shenandoah Municipal Authority
County: Schuylkill

Account Balance: $148

PWSID: 3540044

Pickup or Dropin: Pickup
Type: DER-CPWS
Treatment:
Population: 0

9/15/21 - New client. They collect samples and We pick up samples weekly on Thursdays. At the main building, go in the middle, metal, door. In the room immediately to the left is a samll frig with the samples. Remember to take containers in advance for the next week (or more) sampling.

-ASBESTOS due 1/1/20 through 12/31/22. -EP707
- BACP sample is to be taken each week, including week 5 if needed.
-EP705 & EP709 - HAA5/TTHM taken on the 13th of the second week in those months.

Phone	Notes
570-462-4918	Plant Phone
570-233-5318	Bill Grutza Cell

Collection Time	Location	QT	Analyte	Frequency	Last Test	Next Test	Result Lab Use Only Analysis date
101	Filter Plant						Potabler
301	Plant						Potabler
		IS	Total Organic Carbon	Quarterly	08/12/2021	Now	
✓ (302)	Plant Raw 11/18/21						Potabler
10:40am		1	Alkalinity, Total	Monthly 14140	08/12/2021	Now	
		IS	Total Organic Carbon	Quarterly	08/12/2021	Now	
701	Shen Manor Nursing Home						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 1	10/07/2021	Now	
702	Mark's Plumbing Supply						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 1	10/07/2021	Now	
703	Mrs. T's						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 1	10/07/2021	Now	
704	Marks Radiator						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 2	10/14/2021	Now	
705	Redners						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 2	10/14/2021	Now	
		IS	Haloacetic Acids	Months 2, 5, 8, 11	08/12/2021	Now	
		IS	Total Trihalomethanes	Months 2, 5, 8, 11	08/12/2021	Now	
706	Ridgeview Nursing Home						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 2	10/14/2021	Now	
✓ (707)	Water Treatment Plant 11/18/21						Potabler
10:40am Cl2 1.80		1	Bacteria-Total Coliform P	Weekly	10/28/2021	Now	
✓ (708)	Lost Creek Post Office 11/18/21						Potabler
11:00 AM Cl2 1.42		1	Bacteria-Total Coliform P	Monthly Week 3	10/21/2021	Now	
709	Powder Mill Road						Potabler
		IS	Haloacetic Acids	Months 2, 5, 8, 11	08/12/2021	Now	
		IS	Total Trihalomethanes	Months 2, 5, 8, 11	08/12/2021	Now	
✓ (710)	Boyers 11/18/21						Potabler
11:20 AM Cl2 1.36		1	Bacteria-Total Coliform P	Monthly Week 3	10/21/2021	Now	
711	902 W Coal Street						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 4	10/28/2021	Now	
712	Shenandoah Valley Elementary School						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 4	10/28/2021	Now	

1118211618190011

1119211125O1

1118211700O1

Collected By: Bill Date: 11-18-21

PERRIDGE 4°

Complete these items if collected by non-Denmar personnel and delivered into Denmar custody
Received By: B Tomkins Date: 11/18/21 Time: 1245 Store:

Mark temp & ice above

351701

PURE TEST LABORATORY

Calculation Date: 11/30/2021 Printed: 11/04/2021 15:36:54 **PHL**

Temp (C)	Initials
# of Containers: 6	
On Ice upon collection? ☐ Yes ☐ No	

THIS BLOCK FOR LAB USE ONLY
☒ Cl2 N/D ☐ pH<2 ☐ Tur<1
☐ pH adj at lab (Date:____ Time:____ Tech:__
Pres: ☐ NaS2O3 ☐ NaOH ☐ H2SO4 ☐ HNO3 ☐ HCl

Ship To: S18 Pickup Fee by Pure-Test
Shenandoah Municipal Authority
424 Raven Run Road
Shenandoah PA 17976

Customer No: 13411
Billing: 134111
Shenandoah Municipal Authority
County: Schuylkill

Account Balance: $148

PWSID: 3540044

Pickup or Dropin: Pickup
Type: DER-CPWS
Treatment:
Population: 0

9/15/21 - New client. They collect samples and We pick up samples weekly on Thursdays. At the main building, go in the middle, metal, door. In the room immediately to the left is a samll frig with the samples. Remember to take containers in advance for the next week (or more) sampling

-ASBESTOS due 1/1/20 through 12/31/22. -EP707
- BACP sample is to be taken each week, including week 5 if needed.
-EP705 & EP709 - HAA5/TTHM taken on the 13th of the second week in those months

Phone	Notes
570-462-4918	Plant Phone
570-233-5318	Bill Grutza Cell

Collection Time	Location	QT	Analyte	Frequency	Last Test	Next Test	Result (Lab Use Only) Analyst Date
101	Filter Plant						Potabler
(301)	Plant 12-9-21						Potabler
6:10 Am		IS	Total Organic Carbon –	Quarterly /	08/12/2021	Now	
(302)	Plant Raw 12-9-21	–					Potabler
6:10 Am		1	Alkalinity, Total 14427	Monthly	08/12/2021	Now	
6:05 Am		IS	Total Organic Carbon –	Quarterly /	08/12/2021	Now	
701	Shen Manor Nursing Home						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 1	10/07/2021	Now	
702	Mark's Plumbing Supply						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 1	10/07/2021	Now	
703	Mrs. Ts						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 1	10/07/2021	Now	
(704)	Marks Radiator 12-9-21		–				Potabler
10 Am	Cl2 1.99	1	Bacteria-Total Coliform P	Monthly Week 2	10/14/2021	Now	0
(705)	Redners 12-9-21		–				Potabler
10:25 Am	Cl2 1.37	1	Bacteria-Total Coliform P	Monthly Week 2	10/14/2021	Now	0
		IS	Haloacetic Acids	Months 2 5 8 11	08/12/2021	Now	
		IS	Total Trihalomethanes	Months 2 5 8 11	08/12/2021	Now	
(706)	Ridgeview Nursing Home 12-9-21		–				Potabler
10:50 AM	Cl2 1.29	1	Bacteria-Total Coliform P	Monthly Week 2	10/14/2021	Now	0
(707)	Water Treatment Plant 12-9-21		–				Potabler
6:15Am	Cl2 1.90	1	Bacteria-Total Coliform P	Weekly	10/28/2021	Now	0
708	Lost Creek Post Office						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 3	10/21/2021	Now	
709	Powder Mill Road						Potabler
		IS	Haloacetic Acids	Months 2 5 8 11	08/12/2021	Now	
		IS	Total Trihalomethanes	Months 2 5 8 11	08/12/2021	Now	
710	Boyers						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 3	10/21/2021	Now	
711	902 W Coal Street						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 4	10/28/2021	Now	
712	Shenandoah Valley Elementary School						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 4	10/28/2021	Now	

12092115221900011

12092116060 3 12102111081 5

4° Bottles

Collected By: B. Lee Grutza Date: 12-9-21

Complete these items if collected by non-Denmar personnel and delivered into Denmar custody
Received By: B TONKIN Date: 12/9/21 Time: 1400 Store:

Mark temp & ice above

354021

Pure Test Laboratory — Calculation Date: 11/03/2021 — Printed: 11/03/2021 15:43:57 — **PHL**

Temp (C):	Initials:
# of Containers: 5	
On Ice upon collection? ☐ Yes ☐ No	

THIS BLACK BOX LAB USE ONLY: ☑ Cl2 N/D ☐ pH<2 ☐ Tur<1 ☐ pH adj at lab (Date:____ Time:____ Tech:____) Pres: ☑ NaS2O3 ☐ NaOH ☐ H2SO4 ☐ HNO3 ☐ HCl

$18 Pickup Fee by Pure-Test
Shenandoah Municipal Authority
424 Raven Run Road
Shenandoah PA 17976

Customer No: 13411
Billing: 134111
Shenandoah Municipal Authority
County: Schuylkill

Account Balance: $148

PWSID: 3540044

9/15/21 - New client. They collect samples and We pick up samples weekly on Thursdays. At the main building, go in the middle, metal, door. In the room immediately to the left is a samll frig with the samples. Remember to take containers in advance for the next week (or more) sampling.

Phone	Notes
570-462-4918	Plant Phone
570-233-5318	Bill Grutza Cell

Pickup or DropIn: Pickup
Type: DER-CPWS
Treatment:
Population: 0

-ASBESTOS due 1/1/20 through 12/31/22. -EP707
- BACP sample is to be taken each week, including week 5 if needed.
-EP705 & EP709 - HAA5/TTHM taken on the 13th of the second week in those months.

Collection Time	Location 1-13-22	QT	Analyte	Frequency	Last Test	Next Test	Result (Lab Use Only) Analysis date
	101 Filter Plant						Potabler
	301 Plant						Potabler
		IS	Total Organic Carbon	Quarterly	08/12/2021	Now	
✓	(302) Plant Raw 1-13-22						Potabler
6:00 AM		1	(Alkalinity, Total) 14952	Monthly	08/12/2021	Now	
		IS	Total Organic Carbon	Quarterly	08/12/2021	Now	
	701 Shen Manor Nursing Home						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 1	10/07/2021	Now	
	702 Mark's Plumbing Supply						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 1	10/07/2021	Now	
	703 Mrs. T's						Potabler
		1	Bacteria-Total Coliform P	Monthly Week 1	10/07/2021	Now	
✓	(704) Marko Radiator 1-13-22 - 10:15 AM 1.50 CL2						Potabler
✓	(705) Redners 1-13-22						Potabler
11:05 AM Cl2-1.30		IS	Haloacetic Acids	Months 2, 5, 8, 11	08/12/2021	Now	
		IS	Total Trihalomethanes	Months 2, 5, 8, 11 0X4	08/12/2021	Now	
✓	(706) Ridgeview Nursing Home 1-13-22 1130 AM CL2						Potabler
✓	(707) Water Treatment Plant 1-13-22						Potabler
6:00 AM CL2		1	Bacteria-Total Coliform P	Weekly	10/28/2021	Now	
	708 Lost Creek Post Office						Potabler
	709 Powder Mill Road						Potabler
		IS	Haloacetic Acids	Months 2, 5, 8, 11	08/12/2021	Now	
		IS	Total Trihalomethanes	Months 2, 5, 8, 11	08/12/2021	Now	
	710 Hoyers						Potabler
	711 502 W Coal Street						Potabler
	712 Shenandoah Valley Elementary School						Potabler

0 113 221350 19 0011

0114 2210 4415

0113 2210 2415

BEFF-1062 40

Collected By: [signature] Date: 1/13/22

Complete these items if collected by non-Denmar personnel and delivered into Denmar custody
Received By: BTONK Date: 1/13/22 Time: 1400 Store: ____

Mark temp & ice above

Bill Grutza

From: Bill Grutza <bgrutza@mabswater.com>
Sent: Wednesday, February 16, 2022 8:02 AM
To: 'Stermer, Megan'
Subject: RE: 3540044 Shenandoah Violation Correction Needed

Thanks Megan. They said they would take care of it.
Puretest is a great Lab.
Bill Grutza

From: Stermer, Megan <mstermer@pa.gov>
Sent: Monday, February 14, 2022 8:53 AM
To: Bill Grutza <bgrutza@mabswater.com>
Cc: randy@puretest.com
Subject: FW: 3540044 Shenandoah Violation Correction Needed

Hi Bill,

Puretest took care of the corrections so TOC (2920) & Alkalinity (1927) are all reported under treatment plan 301 now instead of abandoned treatment plant 302 for **2021** so I can close Violation 12263.

Compliance hasn't run on 2022 data and it appears the correction was submitted by puretest and "EP PADWIS folks" wait until January compliance runs to correct data.

Everything should be okay as long as its reported under 301 moving forward. Any questions let me know.

Public Water Supply Sample Analysis Data 07:37 Monday, February 14, 2022
All Detailed Results
PWSID = 3540044 Contaminant/Group = 1927 Sample Type = Sample Period = 01/01/2021 -

PWSID	ENTRY POINT ID	Sample Date	Contam ID	Analysis Result	MCLVAL	Signif Digit	Sample Time	Sample Type	Lab ID	Analy. Method	Analysis Date	Sample Received Date
3540044	301	01/13/2021	1927	4		0	7:47:00	R	54184	584	01/15/2021	01/29/2021
		03/10/2021	1927	7		0	14:00:00	R	03457	584	03/19/2021	04/06/2021
		04/07/2021	1927	6		0	8:10:00	R	03457	584	04/13/2021	05/05/2021
		05/12/2021	1927	7		0	13:05:00	R	03457	584	05/18/2021	06/04/2021
		06/09/2021	1927	0		0	12:00:00	R	03457	584	06/21/2021	07/08/2021
		07/07/2021	1927	6.5		0	12:00:00	R	03457	584	07/14/2021	08/06/2021
		08/12/2021	1927	6.4		0	9:00:00	R	03457	584	08/17/2021	09/02/2021
		09/09/2021	1927	6		0	8:00:00	R	03457	584	09/18/2021	10/04/2021
		10/14/2021	1927	21		0	8:00:00	R	38338	584	10/15/2021	10/25/2021
		11/18/2021	1927	35		0	10:40:00	D	38338	584	11/24/2021	11/29/2021
		12/09/2021	1927	14.5		0	6:05:00	R	38338	584	12/10/2021	12/20/2021
	302	01/13/2022	1927	6		0	6:00:00	R	38338	584	01/17/2022	01/24/2022

Public Water Supply Sample Analysis Data 07:37 Monday, February 14, 2022
All Detailed Results
PWSID = 3540044 Contaminant/Group = 2920 Sample Type = Sample Period = 01/01/2021 -

PWSID	ENTRY POINT ID	Contam ID	Sample Date	Analysis Result	MCLVAL	Signif Digit	Sample Time	Sample Type	Lab ID	Analy. Method	Analysis Date	Sample Received Date
3540044	301	2920	01/13/2021	1.16		0	9:00:00	P	03457	580	01/30/2021	02/03/2021
				2.19			9:00:00	R	03457	580	01/30/2021	02/03/2021
			02/11/2021	1.19		0	9:00:00	P	03457	580	02/19/2021	03/03/2021
				2.11			9:00:00	R	03457	580	02/19/2021	03/03/2021
			03/10/2021	1.16		0	14:00:00	P	03457	580	03/21/2021	04/06/2021
				2.03			14:00:00	R	03457	580	03/21/2021	04/06/2021
			04/07/2021	1.01		0	8:15:00	P	03457	580	04/12/2021	05/05/2021
				1.72			8:10:00	R	03457	580	04/12/2021	05/05/2021
			05/12/2021	1.08		0	13:05:00	P	03457	580	05/21/2021	06/04/2021
				1.63			13:05:00	R	03457	580	05/21/2021	06/04/2021
			06/09/2021	1.1		0	12:00:00	P	03457	580	06/26/2021	07/05/2021
				1.63			12:00:00	R	03457	580	06/26/2021	07/05/2021
			07/07/2021	1.21		0	12:00:00	P	03457	580	07/20/2021	08/06/2021
				1.72			12:00:00	R	03457	580	07/10/2021	08/06/2021
			08/12/2021	1.22		0	9:05:00	P	03457	580	08/19/2021	09/02/2021
				1.53			9:00:00	R	03457	580	08/19/2021	09/02/2021
			09/09/2021	1.23		0	8:00:00	P	32382	581	10/01/2021	10/07/2021
				1.64			8:00:00	R	32382	581	10/01/2021	10/07/2021
			12/09/2021	1.8		0	6:10:00	P	06003	581	12/21/2021	12/23/2021
				2.8			6:05:00	R	06003	581	12/21/2021	12/23/2021

Megan Stermer | Safe Drinking Water Specialist

Department of Environmental Protection| Bureau of Safe Drinking Water
Pottsville District Office
5 West Laurel Blvd | Pottsville, PA 17901
Phone: 570.621.3120| Fax: 570.621.3430
www.dep.pa.gov

DEP Pottsville District Main Office Number: 570.621.3118
24-hour Emergency Response number for NERO: 1-570-826-2511

From: Stermer, Megan <mstermer@pa.gov>
Sent: Wednesday, January 26, 2022 3:52 PM
To: Bill Grutza <bgrutza@mabswater.com>
Cc: Hissner, David <dahissner@pa.gov>
Subject: 3540044 Shenandoah Violation Correction Needed

Hi Bill,

Shenandoah showed up for a violation. Alkalinity (1927) & TOC (2920) were reported under an abandoned treatment plant ID (302) instead of 301.

A correction should be done for the **3 Alkalinity samples and 1 TOC sample** to get that taken care of. Please send corrections to ra-padwis@pa.gov Job Aid for corrections is attached if you haven't done one in a while.

Please let me know if you have questions,
Megan

```
3540044   C    SHENANDOAH MUN WATER AUTHORITY 301 10/01/21  1927   DDBP                    27  12263                    P
```

- TOC/Alkalinity: failure to monitor or report *at least 90%* of all required samples in a month or quarter **or** failure to monitor alkalinity on same day as source TOC. *Applies only to systems with conventional filtration.*
- These are Tier 3 violations requiring Tier 3 PN.

PWSID	ENTRY POINT ID	Contam ID	Sample Date	Analysis Result	MCLVAL	Signif Digit	Sample Time	Sample Type	Lab ID	Analy. Method	Analysis Date	Sample Received Date
3540044	301	1927	01/13/2021	4		0	7:47:00	R	54184	584	01/15/2021	01/29/2021
			03/10/2021	7		0	14:00:00	R	03457	584	03/19/2021	04/06/2021
			04/07/2021	6		0	8:10:00	R	03457	584	04/13/2021	05/05/2021
			05/12/2021	7		0	13:05:00	R	03457	584	05/18/2021	06/04/2021
			06/09/2021	0		0	12:00:00	R	03457	584	06/21/2021	07/08/2021
			07/07/2021	6.5		0	12:00:00	R	03457	584	07/14/2021	08/06/2021
			08/12/2021	6.4		0	9:00:00	R	03457	584	08/17/2021	09/02/2021
			09/09/2021	6		0	8:00:00	R	03457	584	09/18/2021	10/04/2021
	302	1927	10/14/2021	21		0	8:00:00	R	38338	584	10/15/2021	10/25/2021
			11/18/2021	35		0	10:40:00	D	38338	584	11/24/2021	11/29/2021
			12/09/2021	14.5		0	6:05:00	R	38338	584	12/10/2021	12/20/2021

PWSID	ENTRY POINT ID	Sample Date	Contam ID	Analysis Result	MCLVAL	Signif Digit	Sample Time	Sample Type	Lab ID	Analy. Method	Analysis Date	Sample Received Date
3540044	301	01/13/2021	2920	1.16		0	9:00:00	P	03457	580	01/30/2021	02/03/2021
				2.19			9:00:00	R	03457	580	01/30/2021	02/03/2021
		02/11/2021	2920	1.19		0	9:00:00	P	03457	580	02/19/2021	03/03/2021
				2.11			9:00:00	R	03457	580	02/19/2021	03/03/2021
		03/10/2021	2920	1.16		0	14:00:00	P	03457	580	03/21/2021	04/06/2021
				2.03			14:00:00	R	03457	580	03/21/2021	04/06/2021
		04/07/2021	2920	1.01		0	8:15:00	P	03457	580	04/12/2021	05/05/2021
				1.72			8:10:00	R	03457	580	04/12/2021	05/05/2021
		05/12/2021	2920	1.08		0	13:05:00	P	03457	580	05/21/2021	06/04/2021
				1.63			13:05:00	R	03457	580	05/21/2021	06/04/2021
		06/09/2021	2920	1.1		0	12:00:00	P	03457	580	06/26/2021	07/05/2021
				1.63			12:00:00	R	03457	580	06/26/2021	07/05/2021
		07/07/2021	2920	1.21		0	12:00:00	P	03457	580	07/20/2021	08/06/2021
				1.72			12:00:00	R	03457	580	07/10/2021	08/06/2021
		08/12/2021	2920	1.22		0	9:05:00	P	03457	580	08/19/2021	09/02/2021
				1.53			9:00:00	R	03457	580	08/19/2021	09/02/2021
		09/09/2021	2920	1.23		0	8:00:00	P	32382	581	10/01/2021	10/07/2021
				1.64			8:00:00	R	32382	581	10/01/2021	10/07/2021
		12/09/2021	2920	1.8		0	6:10:00	P	06003	581	12/21/2021	12/23/2021
	302	12/09/2021	2920	2.8		0	6:05:00	R	06003	581	12/21/2021	12/23/2021

Public Water Supply Sample Analysis Data 07:37 Monday, February 14, 2022
All Detailed Results
PWSID = 3540044 Contaminant/Group = 2920 Sample Type = Sample Period = 01/01/2021 -

PWSID	ENTRY POINT ID	Contam ID	Sample Date	Analysis Result	MCLVAL	Signif Digit	Sample Time	Sample Type	Lab ID	Analy. Method	Analysis Date	Sample Received Date
3540044	301	2920	01/13/2021	1.16		0	9:00:00	P	03457	580	01/30/2021	02/03/2021
				2.19			9:00:00	R	03457	580	01/30/2021	02/03/2021
			02/11/2021	1.19		0	9:00:00	P	03457	580	02/19/2021	03/03/2021
				2.11			9:00:00	R	03457	580	02/19/2021	03/03/2021
			03/10/2021	1.16		0	14:00:00	P	03457	580	03/21/2021	04/06/2021
				2.03			14:00:00	R	03457	580	03/21/2021	04/06/2021
			04/07/2021	1.01		0	8:15:00	P	03457	580	04/12/2021	05/05/2021
				1.72			8:10:00	R	03457	580	04/12/2021	05/05/2021
			05/12/2021	1.08		0	13:05:00	P	03457	580	05/21/2021	06/04/2021
				1.63			13:05:00	R	03457	580	05/21/2021	06/04/2021
			06/09/2021	1.1		0	12:00:00	P	03457	580	06/26/2021	07/05/2021
				1.63			12:00:00	R	03457	580	06/26/2021	07/05/2021
			07/07/2021	1.21		0	12:00:00	P	03457	580	07/20/2021	08/06/2021
				1.72			12:00:00	R	03457	580	07/10/2021	08/06/2021
			08/12/2021	1.22		0	9:05:00	P	03457	580	08/19/2021	09/02/2021
				1.53			9:00:00	R	03457	580	08/19/2021	09/02/2021
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				1.64			8:00:00	R	32382	581	10/01/2021	10/07/2021
			12/09/2021	1.8		0	6:10:00	P	06003	581	12/21/2021	12/23/2021
				2.8			6:05:00	R	06003	581	12/21/2021	12/23/2021

PWSID	TP ID	SYSTEM NAME	PLANT NAME	PLANT AVAIL- ABILITY	FILTRATION TYPE
3540044	301	SHENANDOAH MUN WATER AUTHORIT	FILTER PLANT	PERMANENT	CONVENTIONAL
3540044	302	SHENANDOAH MUN WATER AUTHORIT	RAVEN RUN #2	ABANDONED	NO FILTRATION
3540044	303	SHENANDOAH MUN WATER AUTHORIT	RAVEN RUN #3	ABANDONED	NO FILTRATION

Megan Stermer | Safe Drinking Water Specialist
Department of Environmental Protection| Bureau of Safe Drinking Water
Pottsville District Office
5 West Laurel Blvd | Pottsville, PA 17901
Phone: 570.621.3120| Fax: 570.621.3430
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DEP Pottsville District Main Office Number: 570.621.3118
24-hour Emergency Response number for NERO: 1-570-826-2511

3900-FM-BSDW0144 Rev. 9/2019

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF SAFE DRINKING WATER

INORGANIC/ORGANIC CHEMICAL AND RADIOLOGICAL ANALYSIS

SDWA-4 CORRECTION

Reason for Correction:
CORRECT ENTRY POINT FROM 302 TO 301 & SAMPLE TYPE FROM "D" TO "R"

White Areas: Enter the complete information with the correct information.

Shaded Areas: Enter the information which was reported incorrectly. Enter only the data which needs to be changed.

PWS Name: SHENANDOAH MUN AUTH
Address: 424 ROUCH RUN ROAD
SHENANDOAH PA 17976
Phone: 570.462-4918
PWS ID: 3540044

Reported PWS Name:
Address:
Phone:
PWS ID:

LAB. NAME: PURE TEST
APPROVED BY: RHONA C HOAH
PHONE: 717-866-2234
DATE: 2/7/22

SAMPLE	LOCATION / ENTRY POINT ID	LOCATION / ENTRY POINT NAME	LOCATION 2 ID	LOCATION 2 NAME	DATE MMDDYY	SAMPLE TYPE	SAMPLE TIME	LAB ID	LAB SAMPLE ID
CORRECT DATA	301	FILTER RAW			111821	R	1040	38338	350539-04
SUBMITTED DATA	302					D			

ANALYSIS	CONTAM ID	CONTAMINANT NAME	METHOD	RESULT (Incl. decimal)	LLD	CE	DATE MMDDYY
CORRECT DATA	1927	TOTAL ALKALINITY	584	35.0			112421
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							
CORRECT DATA							
SUBMITTED DATA							

350539

Pure Test Laboratory

Calculation Date: 11/30/2021 Printed: 11/04/2021 15:36:54 **PHL**

Temp (C) Initials

\# of Containers 4

On Ice upon collection? Yes No

Cl2 N/D pH<2 Tur<1

pH adj at lab (Date ___ Time ___ Tech ___

Pres: NaS2O3 NaOH H2SO4 HNO3 HCl

$18 Pickup Fee by Pure-Test

Shenandoah Municipal Authority
424 Raven Run Road
Shenandoah PA 17976

Customer No: 13411
Billing: 134111
Shenandoah Municipal Authority
County: Schuylkill

Account Balance: $148

PWSID: 3540044

Pickup or Dropin: Pickup
Type: DER-CPWS
Treatment:
Population: 0

9/15/21 - New client. They collect samples and We pick up samples weekly on Thursdays. At the main building, go in the middle, metal, door. In the room immediately to the left is a samll frig with the samples. Remember to take containers in advance for the next week (or more) sampling.

-ASBESTOS due 1/1/20 through 12/31/22 -EP707
- BACP sample is to be taken each week, including week 5 if needed.
-EP705 & EP709 - HAA5/TTHM taken on the 13th of the second week in those months

Phone	Notes
570-462-4918	Plant Phone
570-233-5318	Bill Grutza Cell

Collection Time / Location	QT	Analyte	Frequency	Last Test	Next Test	Result (Lab Use Only) / Analysis date
101 Filter Plant						Potabler
301 Plant						Potabler
	1S	Total Organic Carbon	Quarterly	03/12/2021	Now	
301, ✓ 302 Plant Raw 11/18/21						Potabler
Rert 3/14/22 10:40am	1	Alkalinity, Total	Monthly 14140	03/12/2021	Now	
	1S	Total Organic Carbon	Quarterly	03/12/2021	Now	
701 Shen Manor Nursing Home						Potabler
	1	Bacteria-Total Coliform P	Monthly Week 1	10/07/2021	Now	
702 Mark's Plumbing Supply						Potabler
	1	Bacteria-Total Coliform P	Monthly Week 1	10/07/2021	Now	
703 Mrs. T's						Potabler
	1	Bacteria-Total Coliform P	Monthly Week 1	10/07/2021	Now	
704 Marko Radiator						Potabler
	1	Bacteria-Total Coliform P	Monthly Week 2	10/14/2021	Now	
705 Redners						Potabler
	1	Bacteria-Total Coliform P	Monthly Week 2	10/14/2021	Now	
	1S	Haloacetic Acids	Months 2, 5, 8, 11	08/12/2021	Now	
	1S	Total Trihalomethanes	Months 2, 5, 8, 11	08/12/2021	Now	
706 Ridgeview Nursing Home						Potabler
	1	Bacteria-Total Coliform P	Monthly Week 2	10/14/2021	Now	
✓ 707 Water Treatment Plant 11/18/21						Potabler
10:40am Cl2 1.80	1	Bacteria-Total Coliform P	Weekly	10/28/2021	Now	
✓ 708 Lost Creek Post Office 11/18/21						Potabler
11:00 AM Cl2 1.42	1	Bacteria-Total Coliform P	Monthly Week 3	10/21/2021	Now	
709 Powder Mill Road						Potabler
	1S	Haloacetic Acids	Months 2, 5, 8, 11	08/12/2021	Now	
	1S	Total Trihalomethanes	Months 2, 5, 8, 11	08/12/2021	Now	
✓ 710 Boyers 11/18/21						Potabler
11:20 AM Cl2 1.36	1	Bacteria-Total Coliform P	Monthly Week 3	10/21/2021	Now	
711 902 W Coal Street						Potabler
	1	Bacteria-Total Coliform P	Monthly Week 4	10/28/2021	Now	
712 Shenandoah Valley Elementary School						Potabler
	1	Bacteria-Total Coliform P	Monthly Week 4	10/28/2021	Now	

111821161819 0011

111921112501

111821170001

Collected By: [signature] Date: 11-18-21

Complete these items if collected by non-Denmar personnel and delivered into Denmar custody. Mark time & ice above

Received By: B [signature] Date: 11/18/21 Time: 1245 Store: ___ REFRIDGE 4°

From: McLaughlin, Megan
Sent: Wednesday, March 24, 2021 10:26 AM
To: Dan Salvadore (dsalvadore@mabswater.com)
Subject: 3540044 Shenandoah February 2020 Violation Generated

Morning Dan,

A violation generated for Shenandoah for February 2020 and it looks like a chlorine residual was not reported @ 706 (2/10/2021- bacteria sample reported but no distribution chlorine reported with it). Please report as soon as possible and just let me know if that's what happened. Thanks, Megan

Sample Date	ENTRY POINT ID	PWSID	Contam ID	Analysis Result	MCLVAL	Signif Digit	Sample Time	Sample Type	Lab ID	Analy. Method	Analysis Date	Re
02/03/2021	701	3540044	1013	1.8		0	10:00:00	D	03156	301	02/03/2021	03/0
	702	3540044	1013	1.82		0	10:30:00	D	03156	301	02/03/2021	03/0
	703	3540044	1013	1.75		0	10:50:00	D	03156	301	02/03/2021	03/0
	707	3540044	1013	2.12		0	8:30:00	D	03156	301	02/03/2021	03/0
02/10/2021	704	3540044	1013	1.79		0	10:00:00	D	03156	301	02/10/2021	03/0
	705	3540044	1013	1.6		0	10:35:00	D	03156	301	02/10/2021	03/0
	707	3540044	1013	1.94		0	8:30:00	D	03156	301	02/10/2021	03/0
02/18/2021	707	3540044	1013	1.9		0	7:00:00	D	03156	301	02/18/2021	03/0
	708	3540044	1013	1.65		0	10:00:00	D	03156	301	02/18/2021	03/0
	710	3540044	1013	1.6		0	10:30:00	D	03156	301	02/18/2021	03/0
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	707	3540044	1013	2.12		0	8:30:00	D	03156	301	02/03/2021	03/0
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24-hour Emergency Response number for NERO: 1-570-826-2511

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Sent: Thursday, March 25, 2021 6:45:38 AM
To: McLaughlin, Megan <memclaughl@pa.gov>
Subject: [External] RE: 3540044 Shenandoah February 2020 Violation Generated

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Doesn't seem to be on my End.

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DEP Pottsville District Main Office Number: 570.621.3118
24-hour Emergency Response number for NERO: 1-570-826-2511

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To: Dan Salvadore
Cc: Mike Fabian (petl@verizon.net); Hissner, David
Subject: RE: 3540044 Shenandoah February 2020 Violation Generated

Hi Dan,

Chlorine

From: McLaughlin, Megan
Sent: Wednesday, March 24, 2021 10:26 AM
To: Dan Salvadore (dsalvadore@mabswater.com)
Subject: 3540044 Shenandoah February 2020 Violation Generated

Morning Dan,

A violation generated for Shenandoah for February 2020 and it looks like a chlorine residual was not reported @ 706 (2/10/2021- bacteria sample reported but no distribution chlorine reported with it). Please report as soon as possible and just let me know if that's what happened. Thanks, Megan

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Hi Dan,

Trihalomethanes

and

Haloacetic Acids

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM DISCHARGE REQUIREMENTS FOR INDUSTRIAL WASTEWATER FACILITIES

NPDES PERMIT NO: PA0062758

In compliance with the provisions of the Clean Water Act, 33 U.S.C. Section 1251 *et seq.* ("the Act") and Pennsylvania's Clean Streams Law, as amended, 35 P.S. Section 691.1 *et seq.*,

Shenandoah Borough Municipal Authority Schuylkill County
PO Box 110 Route 4032
Shenandoah, PA 17976-0110

is authorized to discharge from a facility known as **Shenandoah Water Treatment Plant (WTP)**, located in **West Mahanoy Township, Schuylkill County**, to **Lost Creek (CWF)** in Watershed(s) **6-B** in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts A, B and C hereof.

THIS PERMIT SHALL BECOME EFFECTIVE ON SEPTEMBER 1, 2021

THIS PERMIT SHALL EXPIRE AT MIDNIGHT ON AUGUST 31, 2026

The authority granted by this permit is subject to the following further qualifications:

1. If there is a conflict between the application, its supporting documents and/or amendments and the terms and conditions of this permit, the terms and conditions shall apply.

2. Failure to comply with the terms, conditions or effluent limitations of this permit is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. (40 CFR 122.41(a))

3. A complete application for renewal of this permit, or notice of intent to cease discharging by the expiration date, must be submitted to DEP at least 180 days prior to the above expiration date (unless permission has been granted by DEP for submission at a later date), using the appropriate NPDES permit application form. (40 CFR 122.41(b), 122.21(d)(2))

   In the event that a timely and complete application for renewal has been submitted and DEP is unable, through no fault of the permittee, to reissue the permit before the above expiration date, the terms and conditions of this permit, including submission of the Discharge Monitoring Reports (DMRs), will be automatically continued and will remain fully effective and enforceable against the discharger until DEP takes final action on the pending permit application. (25 Pa. Code §§ 92a.7 (b), (c))

4. This NPDES permit does not constitute authorization to construct or make modifications to wastewater treatment facilities necessary to meet the terms and conditions of this permit.

DATE PERMIT ISSUED August 20, 2021

ISSUED BY *B R Patel*

Bharat Patel, P.E.
Environmental Program Manager
Northeast Regional Office

3900-FM-BSDWXXXX XX/2013

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF SAFE DRINKING WATER

OPERATIONAL EVALUATION LEVEL (OEL) EXCEEDANCE NOTIFICATION FORM

I. General Information

PWS Name: Shenandoah Water Treatment Plant	**PWSID #:** 3540044
Contact Name: Daniel Salvadore	**Phone #:** 570-462-4918

II. OEL Exceedance Information*

Water Systems on quarterly monitoring must calculate the OEL for each location each quarter as follows:

$$OEL = \frac{[(\text{result from } 2^{nd} \text{ previous quarter}) + (\text{result from previous quarter}) + 2(\text{current quarter result})]}{4}$$

An OEL exceedance occurs if either the TTHM OEL value is > 0.080 ***or*** the HAA5 OEL value is > 0.060.

DEP Sample Location ID# (3-digit # starting with "7")	705	DEP Sample Location ID# (3-digit # starting with "7")	
Sample Location Name	Redners	Sample Location Name	
Sample Date (most recent quarterly sample)	08/11/16	Sample Date (most recent quarterly sample)	
Sample Received Date (date result received from lab)	9/15/16	Sample Received Date (date result received from lab)	
Monitoring Period (Qtr)	4th	Monitoring Period (Qtr)	
TTHM: Calculated OEL Value	.0425	TTHM: Calculated OEL Value	
OEL Calculation: [(..0338) + (.0354) + 2(.0559)] / 4		OEL Calculation: [( ) + ( ) + 2( )] / 4	
HAA5: Calculated OEL Value	.0608	HAA5: Calculated OEL Value	.0704
OEL Calculation: [(.0398) + (0..0514) + 2(0760)] / 4		OEL Calculation:	

*Please use page 2 of this form to report additional OEL exceedances, if more than 2 locations exceeded the OEL during the quarter.

III. OEL Report Information

Are you requesting a limited scope evaluation? no

IV. Verification

Responsible Official's Name (printed): Daniel Salvadore	
Responsible Official's Signature:	**Date:** 10/11/16

NOTES:

- The completed form must be submitted to DEP by the 10th of the month following the quarter in which the OEL exceedance occurs. For example, if an OEL exceedance occurs in the October 1 to December 31 quarter, this completed form must be received by DEP no later than January 10th.
- The completed form is to be addressed to: PA DEP – Safe Drinking Water, at the address from the list on pages 3-4 of the appropriate district office having jurisdiction over the water company. For counties marked with an asterisk (*), address to the appropriate County Health Department (CHD), which is an agent of DEP for the Safe Drinking Water Program.

Operational Evaluation Reporting Form

I. GENERAL INFORMATION

A. Facility Information

Facility Name: SHENANDOAH WATER PLANT PWSID: 3540044

Facility Address: 424 RAVEN RUN RD

City: Shenandoah State: PA Zip: 17976

B. Report Prepared by:

(Print): ~~Daniel~~ J Salvadore Date prepared: 10/11/16

(Signature):

Contact Telephone Number: 5704624918

II. MONITORING RESULTS

A. Provide the Compliance Monitoring Site(s) where the OEL was Exceeded.

705 Redmens MARKET

Note: The site name or number should correspond to a site in your Stage 2 DBPR compliance monitoring plan.

B. Monitoring Results for the Site(s) Identified in II.A (include duplicate pages if there was more than one exceedance)

1. Check TTHM or HAA5 to indicate which result caused the OEL exceedance. ☐ TTHM ☐ HAA5

2. Enter your results for TTHM or HAA5 (whichever you checked above).

	Quarter			Operational Evaluation Value
	Results from Two Quarters Ago	Prior Quarter's Results	Current Quarter	
	A	B	C	D = (A+B+(2*C))/4
Date sample was collected	2/10/16	5/11/16	8/10/16	
TTHM (mg/L)				
HAA5 (mg/L)	.0398	.0514	.076	.0608 = (.0398+.0514+(2*.076))/4

Note: *The operational evaluation value is calculated by summing the two previous quarters of TTHM or HAA5 values plus twice the current quarter value, divided by four. If the value exceeds 0.080 mg/L for TTHM or 0.060 mg/L for HAA5, an OEL exceedance has occurred.*

C. Has an OEL exceedance occurred at this location in the past?	☑ Yes	☐ No
If NO, proceed to item D. If YES, when did exceedance occur?		
Was the cause determined for the previous exceedance(s)?	☑ Yes	☐ No
Are the previous evaluations/determinations applicable to the current OEL exceedance?	☑ Yes	☐ No

III. OPERATIONAL EVALUATION FINDINGS

A. Did the State allow you to limit the scope of the operational evaluation? ☐ Yes ☒ No

If NO, proceed to item B. If YES, attach written correspondence from the State.

B. Did **the distribution system** cause or contribute to your OEL exceedance(s)? ☐ Yes ☒ No ☐ Possibly

If NO, proceed to item C. If YES or POSSIBLY, explain (attach additional pages if necessary):

C. Did the **treatment** system cause or contribute to your OEL exceedance(s)? ☐ Yes ☐ No ☒ Possibly

If NO, proceed to item D. If YES or POSSIBLY, explain (attach additional pages if necessary):

Possibly, However Results are Getting Better. Due to KMNO4 treatment

D. Did **source water quality** cause or contribute to your OEL exceedance(s)? ☐ Yes ☐ No ☒ Possibly

If NO, proceed to item E. If YES or POSSIBLY, explain (attach additional pages if necessary):

When Normal operations are returned To, we will see. Our Normal Feed Point may Return Better Sample

E. Attach all supporting operational or other data that support the determination of the cause(s) of your OEL exceedance(s).

F. If you are unable to determine the cause(s) of the OEL exceedance(s), list the steps that you can use to better identify the cause(s) in the future (attach additional pages if necessary):

* We have since Treated with KMNO4 And results have been Better

G. List steps that could be considered to minimize future OEL exceedances (attach additional pages if necessary)

Return to Reservoir #2 + Continue the use KMNO4.

H. Total **Number of Pages** Submitted, Including Attachments and Checklists: 13

Source Water Evaluation Checklist

☐ **NO DATA AVAILABLE**

System Name: Shenandoah Water Authority

Checklist Completed by: Dan Saunders Date: 10/12/16

A. Do you have source water temperature data? ☑ Yes ☐ No

If NO, proceed to item B. If YES, was the source water temperature high? ☐ Yes ☐ No

If NO, proceed to item B. If YES, answer the following questions for the time period prior to the OEL exceedance.

Yes	No	
☐	☑	Was the raw water storage time longer than usual?
☑	☐	Did you place another water source on-line?
☐	☑	Were river/reservoir flow rates lower than usual? If yes, indicate the location of lower flow rates and the anticipated impact on the OEL exceedance.
☐	☑	Did point or non-point sources in the watershed contribute to the OEL exceedance?

B. Do you have data that characterizes organic matter in your source water (e.g., TOC, DOC, SUVA, color, THM formation potential)? ☒ Yes ☐ No

If NO, proceed to item C. If YES, were these values higher than normal? ☐ Yes ☐ No

If NO, proceed to item C. If YES, answer the following questions for the time period prior to the OEL exceedance.

Yes	No	
☒	☐	Did heavy rainfall or snowmelt occur in the watershed?
☒	☐	Did you place another water source on-line?
☒	☐	Did lake or reservoir turnover occur?
☐	☒	Did point or non-point sources in the watershed contribute to the OEL exceedance?
☐	☒	Did an algal bloom occur in the source water?
☐	☒	If algal blooms were present, were appropriate algae control measures employed (e.g. addition of copper sulfate)?
☐	☒	Did a taste and odor incident occur?

C. Do you have source water bromide data? ☐ Yes ☒ No

If NO, proceed to item D. If YES, were the bromide levels higher or lower than normal? ☐ Yes ☐ No

If NO, proceed to item D. If YES, answer the following questions for the time period prior to the OEL exceedance.

Yes	No	
☐	☐	Has saltwater intrusion occurred?
☐	☐	Are you experiencing a long-term drought?
☐	☐	Did heavy rainfall or snowmelt occur in the watershed?
☐	☐	Did you place another water source on-line?
☐	☐	Are you aware of any industrial spills in the watershed?

Source Water Evaluation Checklist

D. Do you have source water turbidity or particle count data? ☒ Yes ☐ No

If NO, proceed to item E. If YES, were the turbidity values or particle counts higher than normal? ☐ Yes ☐ No

If NO, proceed to item E. If YES, answer the following questions for the time period prior to the OEL exceedance.

Yes	No	
☒	☐	Did lake or reservoir turnover occur?
☐	☒	Did heavy rainfall or snowmelt occur in the watershed?
☐	☒	Did logging, fires, or landslides occur in the watershed?
☒	☐	Were river/reservoir flow rates higher than normal?

E. Do you have source water pH or alkalinity data? ☒ Yes ☐ No

If NO, proceed to item F. If YES, was the pH or alkalinity different from normal values? ☐ Yes ☐ No

If NO, proceed to item F. If YES, answer the following questions for the time period prior to the OEL exceedance.

Yes	No	
☐	☒	Was there an algal bloom in the source water?
☐	☒	If algal blooms were present, were algae control measures employed?
☐	☒	Did heavy rainfall or snowmelt occur in the watershed?
☐	☒	Has the PWS experienced diurnal pH changes in source water?

F. Conclusion

Did source water quality factors contribute to your OEL exceedance? ☐ Yes ☐ No ☒ Possibly

If YES or POSSIBLY, explain below.

Feeding from #3 Reservoir has changed our Normal operation. The Raw water has less settle Time and Percolation Time before it is drawn into our WTP

Treatment Process Evaluation Checklist

☐ **NO DATA AVAILABLE**

Facility Name: Shenandoah WATER PLANT

Checklist Completed by: Dan Salunek Date: 10/12/16

A. Review finished water data for the time period prior to the OEL exceedance(s) and compare to historical finished water data using the following questions:

Were DBP precursors (TOC, DOC, SUVA, bromide, etc.) higher than normal?	☐ Yes	☒ No
Was finished water pH higher or lower than normal?	☐ Yes	☒ No
Was the finished water temperature higher than normal?	☐ Yes	☒ No
Was finished water turbidity higher than normal?	☐ Yes	☒ No
Was the disinfectant concentration leaving the plant(s) higher than normal?	☐ Yes	☒ No
Were finished water TTHM/HAA5 levels higher than normal?	☐ Yes	☒ No
Were operational and water quality data available to the system operator for effective decision making?	☒ Yes	☐ No

B. Does the treatment process include predisinfection? ☒ Yes ☐ No

If NO, proceed to item C. If YES, answer the following questions for the period in which an OEL exceedance occurred:

Yes	No	
☐	☒	Was disinfected raw water stored for an unusually long time?
☐	☒	Were treatment plant flows lower than normal?
☒	☐	Were treatment plant flows equally distributed among different trains?
☐	☒	Were water temperatures high or warmer than usual?
☐	☒	Were chlorine feed rates outside the normal range?
☒	☐	Was a disinfectant residual present in the treatment train following predisinfection?
☒	☐	Were online instruments utilized for process control?
☐	☒	Did you switch to free chlorine as the oxidant?
☒	☐	Was there a recent change (or addition) of pre-oxidant?
☐	☒	Did you change the location of the predisinfection application?

C. Does your treatment process include presedimentation? ☐ Yes ☒ No

If NO, proceed to item D. If YES, answer the following questions for the period in which an OEL exceedance occurred:

Yes	No	
☐	☐	Were flows low?
☐	☐	Were flows high?
☐	☐	Were online instruments utilized for process control?
☐	☐	Was sludge removed from the presedimentation basin?
☐	☐	Was sludge allowed to accumulate for an excessively long time?
☐	☐	Do you add a coagulant to your presedimentation basin?
☐	☐	Was there a problem with the coagulant feed?

Treatment Process Evaluation Checklist

D. Does your treatment process include coagulation and/or flocculation? ☒ Yes ☐ No

If NO, proceed to item E. If YES, answer the following questions for the period in which an OEL exceedance occurred:

Yes	No	
☐	☒	Were there any feed pump failures or were feed pumps operating at improper feed rates?
☐	☒	Were chemical feed systems controlled by flow pacing?
☐	☒	Were there changes in coagulation practices or the feed point?
☐	☒	Did you change the type or manufacturer of the coagulant?
☐	☒	Do you suspect that the coagulant in use at the time of the OEL exceedance did not meet industry standards?
☐	☒	Did the pH or alkalinity change at the point of coagulant addition?
☐	☒	Were there broken or plugged mixers?
☐	☒	Were flow rates above the design rate or was there short-circuiting?

E. Does your treatment process include sedimentation or clarification? ☒ Yes ☐ No

If NO, proceed to item F. If YES, answer the following questions for the period in which an OEL exceedance occurred:

Yes	No	
☐	☒	Were there changes in plant flow rate that may have resulted in a decrease in settling time or carry-over of process solids?
☐	☒	Were settled water turbidities higher than normal?
☐	☒	Was there any disruption in the sludge blanket that may have resulted in carryover to the point of disinfection?
☐	☒	Was there any maintenance in the basin that may have stirred sludge from the bottom of the basin and caused it to carry over to the point of disinfectant addition?
☐	☒	Was sludge allowed to accumulate for an excessively long time or was there a malfunction in the sludge removal equipment?

F. Does your treatment process include filtration? ☒ Yes ☐ No

If NO, proceed to item G. If YES, answer the following questions for the period in which an OEL exceedance occurred:

Yes	No	
☐	☒	Was there an increase in individual or combined filter effluent turbidity or particle counts?
☐	☒	Was there an increase in turbidity or particle loading onto the filters?
☐	☒	Was there an increase in flow onto the filters or malfunction of the rate of flow controllers?
☐	☒	Were any filters taken off-line for an extended period of time that caused the other filters to operate near maximum design capacity and creating the conditions for possible breakthrough?
☐	☒	Were any filters operated beyond their normal filter run time?
☐	☒	Were there any unusual spikes in individual filter effluent turbidity (which may indicate particulate or colloidal TOC breakthrough) in the days leading to the excursion?
☐	☒	Were all filters run in a filter-to-waste mode during initial filter ripening?
☐	☒	If GAC filters are used, is it possible the adsorptive capacity of the GAC bed was reached before reactivation occurred (leave blank if not applicable)?
☐	☒	If biological filtration is used, were there any process upsets that may have resulted in the breakthrough of TOC (leave blank if not applicable)?

G. Does your treatment process include primary disinfection by injecting chlorine prior to a clearwell? ☒ Yes ☐ No

If NO, proceed to item H. If YES, answer the following questions for the period in which an OEL exceedance occurred:

Yes	No	
☐	☒	Was there a sudden increase in the amount of chlorine fed or an increase in the chlorine residual?
☐	☒	Was there an increase in clearwell holding time?
☐	☒	Was the plant shut down or were plant flows low?
☐	☒	Was there an increase in clearwell water temperature?
☐	☒	Did you switch to free chlorine recently as the primary disinfectant?
☐	☒	Was the inactivation of *Giardia* and/or viruses exceptionally high?
☐	☒	Was there a change in the mixing strategy (i.e. mixers not used, adjustment of tank level)?

H. Does your plant recycle spent filter backwash or other streams? ☐ Yes ☒ No

If NO, proceed to item I. If YES, answer the following questions for the period in which an OEL exceedance occurred:

Yes	No	
☐	☐	Did a change in the recycle stream quality contribute to increased DBP precursor loading that was not addressed by treatment plant processes?
☐	☐	Did a recycle event result in flows in excess of typical or design flows?

I. Do you inject a disinfectant after your clearwell to maintain a distribution system residual? ☐ Yes ☒ No

If NO, proceed to item J. If YES, answer the following questions for the period in which an OEL exceedance occurred:

Yes	No	
☐	☐	Was there a sudden increase in the amount of chlorine fed?
☐	☐	Was there a switch from chloramines to free chlorine for a burnout period?
☐	☐	If using chloramines, was the chlorine to ammonia ratio in the proper range?
☐	☐	Was there a problem with either chlorine or ammonia mixing?

J. Did concern about complying with a rule other than Stage 2 DBPR, such as the Lead and Copper rule, the LT2ESWTR, or any other rule constrain your options to reduce the DBP levels at this site? For example, are you limited by other treatment targets/requirements in your ability to control precursors in coagulation/flocculation? ☐ Yes ☒ No

If NO, proceed to item K. If YES, explain below and consult EPA's *Simultaneous Compliance Guidance Manual* for alternative compliance approaches.

K. Conclusion

Did treatment factors and/or variations in the plant performance contribute to the OEL exceedance(s)? ☐ Yes ☐ No ☒ Possibly

If YES or POSSIBLY, explain below.

Dosing $KMnO_4$ will continue, during High TOC Months

Distribution System Evaluation Checklist

System Name: Shenandoah WATER PLANT

Checklist Completed by: Dan Salvador Date: 10-12-16

A. Do you have disinfectant residual or temperature data for the monitoring location where you experienced the OEL exceedance? ☒ Yes ☐ No

If NO, proceed to item B. If YES, answer the following questions for the period in which an OEL exceedance occurred:

Yes	No	
☐	☒	Was the water temperature higher than normal for that time of the year at that location?
☐	☒	Was the disinfectant residual lower than normal for that time of the year at that location?
☐	☒	Was the disinfectant residual higher than normal for that time of the year at that location?

B. Do you have maintenance records available for the time period just prior to the OEL exceedance? ☒ Yes ☐ No

If NO, proceed to item C. If YES, answer the following questions:

Yes	No	
☐	☒	Did any line breaks or replacements occur in the vicinity of the exceedance?
☐	☒	Were any storage tanks or reservoirs taken off-line and cleaned?
☐	☒	Did flushing or other hydraulic disturbances (e.g., fires) occur in the vicinity of the exceedance?
☐	☒	Were any valves operated in the vicinity of the OEL exceedances?

C. If your system is metered, do you have access to historical records showing water use at individual service connections? ☒ Yes ☐ No

If NO, proceed to item D. If YES, was overall water use in your system unusually low, indicating higher than normal water age? ☐ Yes ☐ No

D. Do you have high-volume customers in your system (e.g., an industrial processing plant)? ☒ Yes ☐ No

If NO, proceed to item E. If YES, was there a change in water use by a high-volume customer? ☐ Yes ☐ No

E. Is there a finished water storage facility hydraulically upstream from the monitoring location where you experienced the OEL exceedance? ☒ Yes ☐ No

If NO, proceed to item F. If YES, review storage facility operations and water quality data to answer the following questions for the period in which the OEL exceedance occurred:

Yes	No	
☒	☐	Was a disinfectant residual detected in the stored water or at the tank outlet?
☐	☒	Do you know of any mixing problems with the tank or reservoir?
☐	☒	Does the facility operate in "last in-first out" mode?
☐	☒	Was the tank or reservoir drawn down more than usual prior to OEL exceedance, indicating a possible discharge of stagnant water?
☐	☒	Was there a change in water level fluctuations that would have resulted in increased water age within the tank or reservoir?

F. Does your system practice booster chlorination? ☐ Yes ☒ No

If NO, proceed to item G. If YES, was there an increase in booster chlorination feed rates? ☐ Yes ☐ No

G. Did you have customer complaints in the vicinity of the OEL exceedance? ☐ Yes ☒ No

If NO, proceed to item H. If YES, explain.

H. Did concern about complying with a rule other than Stage 2 DBPR, such as the Lead and Copper rule, the TCR, or any other rule constrain your options to reduce the DBP levels at this site? For example, are you limited by the need to maintain a detectable disinfectant residual in your ability to control DBP levels in the distribution system? ☐ Yes ☒ No

If NO, proceed to item I. If YES, explain below and consult EPA's *Simultaneous Compliance Guidance Manual* for alternative compliance approaches.

I. Conclusion

Did the distribution system cause or contribute to the OEL exceedance(s)? ☐ Yes ☒ No ☐ Possibly

If NO, proceed to evaluations of treatment systems and source water. If YES or POSSIBLY, explain below.

TTHM and HAA5 Sample Collection and Handling Checklist

Facility Name: Shenandoah Water Authority

Checklist Completed by: Date: 10/12/16

Yes	No	
☒	☐	Did you obtain appropriate sample collection vials provided from the laboratory?
☒	☐	Did the sample vials contain the proper preservative and dechlorinating agents?
☒	☐	Was each vial labeled using waterproof labels and indelible ink?
☒	☐	Did each vial contain the following information on the label?
☒	☐	Unique sample ID
☒	☐	System name
☒	☐	Sample location
☒	☐	Sample date and time
☒	☐	Analysis required, if not already on label
☒	☐	Did you remove the aerator from the tap if there was one present?
☒	☐	Did you open the water tap and allow the system to flush until the water temperature had stabilized (usually about 3-5 minutes)?
☒	☐	Did you adjust the flow so that no air bubbles were visually detected in the flowing stream?
☒	☐	Did you slowly fill the sample vial almost to the top without overflowing?
☒	☐	Were you careful not to rinse out any of the preservative/dechlorinating agent during this process?
☒	☐	After the bottle was filled, did you invert it three or four times to mix the sample with the preservative and dechlorinating agents?
☐	☐	If you collected a TTHM sample that requires acidification, did you:
☐	☐	Let the sample set for about 1 minute, allowing the dechlorinating chemical to take effect?
☐	☐	Carefully open the vial and adjust the pH of the TTHM sample to < 2 by adding approximately 4 drops of hydrochloric acid for every 40 mL of sample (amount of acid needed will depend on buffering capacity of sample)?
☐	☐	Recap the vial, and invert three or four times?

TTHM and HAA5 Sample Collection and Handling Checklist

Yes	No	
☒	☐	Did you invert the vial and tap it to check for air bubbles?
☐	☒	If bubbles were detected, did you carefully open the vial and add more sample water using the cap to achieve a headspace-free sample? *Note that air bubbles would more likely lead to a lower level of THMs or HAAs.*
☒	☐	Did you immediately cool the samples to 4°C by placing them in a cooler with frozen refrigerant packs or ice, or in a refrigerator? Samples should be maintained at this temperature during shipping to the laboratory.
☒	☐	Did you complete the Sample Chain of Custody provided by the laboratory and include it with the sample shipment?
☐	☒	Was the sample holding time of 14 days exceeded?
☐	☒	Was the extract holding time exceeded? *EPA Method 551.1: 14 days at a temperature less than -10°C* *EPA Method 552.1: 48 hours at 4°C or less* *EPA Method 552.2: 7 days at 4°C or 14 days at a temperature less than -10°C* *EPA Method 552.3: 21 days for MTBE extraction solvent at -10°C or less* *OR 28 days for TAME extraction solvent at -10°C or less* *Standard Method 6251 B: 21 days at -11°C*
☐	☒	Did the laboratory invalidate the sample?

Notes/Comments