UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

JUL 1 2 2013

CERTIFIED MAIL-RETURN RECEIPT REQUESTED
Article Number: 7005 3110 0000 5954 9179

Dilip Patel, Acting General Superintendent - Water
Trenton Water Works
Department of Public Works
P.O. Box 528
Trenton, NJ 08604-0528

Dear Mr. Patel:

On May 3 – 13, 2013, the United States Environmental Protection Agency (EPA) and the New Jersey Department of Environmental Protection (NJDEP) conducted a sanitary survey at the Trenton Water Works public water system (PWS). The purpose of a sanitary survey is to evaluate and document the capabilities of a water system's sources, treatment, storage, distribution network, operation and maintenance, and overall management to continually provide safe drinking water and to identify any deficiencies that may adversely impact a public water system's ability to provide a safe, reliable water supply.

Enclosed is a summary of observations and findings which include significant deficiencies and violations that were identified during the sanitary survey. Within forty five (45) days from the receipt of this letter, please submit to EPA and NJDEP the information requested.

All information shall be mailed to:

Rai Belonzi, Chief
Bureau of Water Compliance and Enforcement - Central
New Jersey Department of Environmental Protection
Mail Code 44-03
Trenton, NJ 08625-0420

and

Nicole Foley Kraft, Chief
Groundwater Compliance Section
US Environmental Protection Agency, Region 2
290 Broadway, 20th Floor
New York, NY 10007-1866

I would like to thank you and your staff for your cooperation and assistance during the sanitary survey. If you have any questions, please feel free to contact me at (212) 637-3093 or Rosa M. Brignoni-Tran, Ph.D. of my staff at (212) 637-3943.

Sincerely,

Nicole Foley Kraft, Chief
Groundwater Compliance Section

Enclosure

cc: Karen Fell, NJDEP
Melissa Hornsby, NJDEP
Rai Belonzi, NJDEP

Trenton Water Works (NJ1111001)

The observations and findings described below are based on information that was collected during an on-site file review and inspection of the Trenton Water Works (TWW) public water system (PWS), which took place May 3 - 13, 2013. The file review consisted of a review of data and records pertaining to the Safe Drinking Water Act (SDWA) and applicable New Jersey Department of Environmental Protection (NJDEP) drinking water regulations, for the compliance period of January 1, 2010 through March 31, 2013.

The following inspectors met with William Mitchell (Licensed Superintendent), Taya Brown-Humphries (Licensed Assistant Superintendent) and Charles Anzolut, Agra Environmental:

Name	Agency	Dates
Rosa M. Brignoni-Tran	EPA	May 3-13
Kara M. Sinon	EPA	May 3-13
Kofi Asante	NJDEP	May 3-13
Laura Scatena	NJDEP	May 3-9 and May 13
Melissa Hornsby	NJDEP	May 3-7 and May 13
Mark Germanski	NJDEP	May 8-9

Ms. Brown-Humphries and Mr. Anzolut provided documentation to EPA and NJDEP inspectors for their review.

The Trenton Water Works PWS (NJ1111001) is a municipally owned water utility operated by the City of Trenton. It is classified as a community water system (CWS) serving a population of 205,000 people within the City of Trenton and the Townships of Ewing, Hamilton, Hopewell and Lawrence. The PWS utilizes surface water from the Delaware River and provides conventional treatment. The filtration plant has a treatment capacity of 60 million gallons per day (MGD), but typically treats an average of approximately 28 MGD. Filter backwash water and backwash water from other treatment processes are re-circulated to the head of the treatment plant.

After treatment at Trenton Water Works, water enters the distribution system. The distribution system is comprised of: six storage tanks, which range in capacity from 0.6 to 1 MGD; an open reservoir with a usable capacity of 78 MGD; and booster stations to provide water to the highest areas within the distribution system.

A Supervisory Control and Data Acquisition (SCADA) system controls and monitors various processes within the treatment plant and the distribution system.

Violations

1. Failure to meet the Maximum Contaminant Level (MCL) for Total Trihalomethanes (TTHMs) at the Capitol Refrigeration sampling site (40 CFR §141.625 (b)). Public notice was issued.

2. TWW determines the Combined Filter Effluent (CFE) turbidity by calculating the arithmetic average of composite samples collected from the two east clear wells and the two west clear

wells which is inconsistent with NJDEP requirements. NJDEP drinking water regulation, N.J.A.C. 7:10-9.6, requires that PWSs utilizing surface water, monitor the CFE using continuous monitoring equipment. In the case of analyzer/recorder failure, the supplier of water shall take a grab sample at least once every four hours during the period in which the analyzer/recorder is out of service.

3. During the time period reviewed, the residual chlorine concentration entering the distribution system, as reported to NJDEP, is based on grab sampling collected every hour. 40 C.F.R. §141.74 requires that the residual chlorine concentration be measured continuously and, if there is a failure in the continuous monitoring equipment, the system may collect grab sampling for up to 5 days. No documentation was found providing evidence that public notice was conducted.

4. The eye wash in the chemical room is clogged. The shower in the outside delivery area (where the ferric chloride and fluoride are delivered) is not in operation. Chemicals in the dewatering sludge facility are stored underneath the shower, which impedes access to the shower in case of an emergency (N.J.A.C. 7:10-11:12) (Photos in Appendix A).

5. There are no day tanks for the ferric chloride or fluoride feeds. The ferric chloride feeder cannot be calibrated and the lime feeder strength solution cannot be checked (N.J.A.C. 7:10-11:12(a)(4)).

Significant Deficiencies

6. As discussed in the May 13, 2013 closing conference, there are problems with stagnation and water age at the Whitehorse storage tank caused by lack of water circulation.

7. Water was observed on the floor of the high service pump rooms from what appeared to be a leak in the east clear well.

8. There are data quality issues and therefore the SCADA system must be evaluated. The continuous monitoring equipment (i.e. the SCADA system) is inconsistently and/or inaccurately monitoring/recording for various parameters resulting in the need to assign the limited staff to collect grab samples. It was observed that grab sampling for various parameters (i.e. combined filter effluent turbidity and residual chlorine concentration at the entrance to the distribution system) is conducted hourly at TWW PWS.

    a. An evaluation of data collected by the continuous monitoring equipment shows, that between January 2010 and October 2011, the continuous monitoring equipment was recording erroneous readings of the residual chlorine concentration (Appendix B includes various examples).

    b. On May 9, 2013, inspectors observed lab personnel conduct grab sampling. The following discrepancies were identified when data from the continuous monitoring equipment was compared to grab sample results for various parameters:

	SCADA	Grab sampling
Raw Water Turbidity	0.18	10.36
Effluent pH	7.1	8
Residual Chlorine Concentration at the Entry point to the distribution system	0.94	0.83

9. There are 19 vacancies out of 44 positions at the treatment plant.

Observations and Findings

10. The Total Coliform Rule (TCR) monitoring data reported to NJDEP contains errors in the total number of samples collected within a month. The inspectors found that positive TCR samples are documented in a different section of the laboratory notebook, separate from other TCR samples. The inspectors learned that samples collected for special purposes (i.e. customer complaints) are recorded in the same section as the TCR positive samples. Based on a conversation with TWW, the documentation of special samples with compliance samples could be contributing to the data errors identified. See examples below and in Appendix C:

    a. May 2011: Information reported to NJDEP shows that 152 samples were collected (120 required) with zero positive results. Data from the laboratory notebook shows:
        i. Positive sample collected on May 18, 2011 at Deutz Ave. and three repeat samples collected on May 19, 2011.
        ii. Positive sample collected on May 18, 2011 at Hillhurst Ave. and three repeat samples collected on May 19, 2011.
        iii. Positive sample collected on May 23, 2011 at 26 Willis Drive and three repeat samples collected on May 24, 2011.
        iv. Positive sample collected on May 23, 2011 at 1564 Twelfth St. and three repeat samples collected on May 24, 2011.

    b. July 2011: Information reported to NJDEP shows that 152 samples were collected (120 samples required). Two of the 152 were positive; three repeat samples were taken. Data from laboratory notebook shows:
        i. One positive sample collected on July 19, 2011 at Slackwood Fire House and three repeat samples collected. The data indicates that the positive sample was reported twice to NJDEP.

11. Evaluation of the data showed that information used to calculate disinfection byproduct precursors (DBPP) contained errors. The inspectors found that the source water total organic carbon (TOC) and the treated water TOC are collected at the same time by a private lab, but alkalinity is collected by TWW at a different time than the TOC paired samples. Review of the TOC data reported to NJDEP shows the following (Appendix D):

    c. Data from the TWW laboratory notebook and the QC Laboratories analytical report contain inconsistencies when compared to the NJDEP DBPP compliance report. The QC Laboratories report with data for January 8, 2013 is reported on the NJDEP DBPP compliance report with a sample date of January 9, 2013. The source water alkalinity for this sample is reported on the NJDEP DBPP Compliance Report at 6.54 mg/L.

Source water alkalinity is documented in the laboratory notebook at 43.4 mg/L on January 8, 2013, and 42.8 mg/L on January 9, 2013.

d. The required TOC removal percentage, which is determined based on source water alkalinity and source water TOC, contains errors. In addition to the January 2, 2013 example provided below, similar errors were found for the following sample dates: February 1 and 7, 2011, March 8, 2011, July 13, 2011, August 1, 2011, and October 3, 2011.

    i. The DBPP Compliance Report submitted to NJDEP contained the following information for January 2, 2013: Source Water TOC: 4.56 mg/L, Source Water Alkalinity: 37, Required TOC Removal %: 35 **(The correct TOC removal is 45%)**

12. The Emergency Response Plan, dated December 2010, is not updated to reflect treatment process changes implemented within the last 2 years. In addition, the plan does not list Ms. Brown-Humphries, Engineer, as an emergency contact. Ms. Brown-Humphries was promoted to the position of Assistant Superintendent within the past year.

Information to be submitted to EPA

1. Individual filter monitoring data for the period of March 2012 through March 2013.

2. Information on the average monthly filter backwash recycle flow for the period of March 2012 through March 2013.

3. Sanitary deficiencies were identified at the Whitehorse, Mercerville and Lawrenceville storage tanks during inspections conducted in May and August 2012. Provide information on which sanitary deficiencies were corrected (Appendix E).

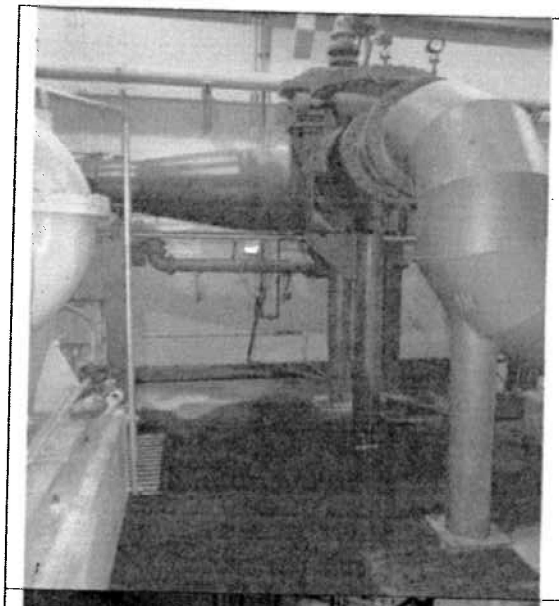
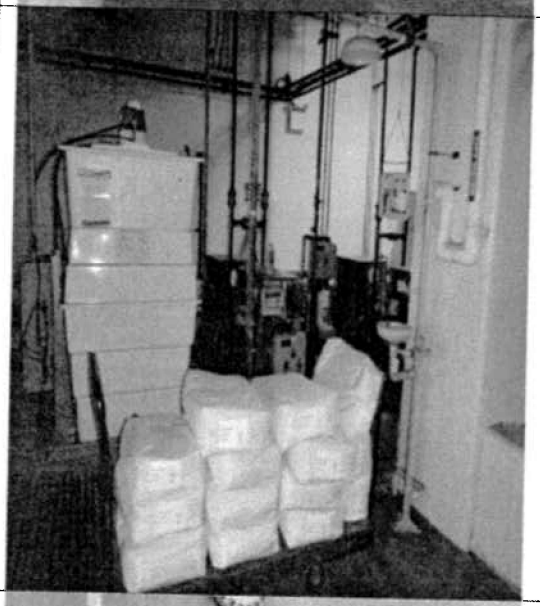
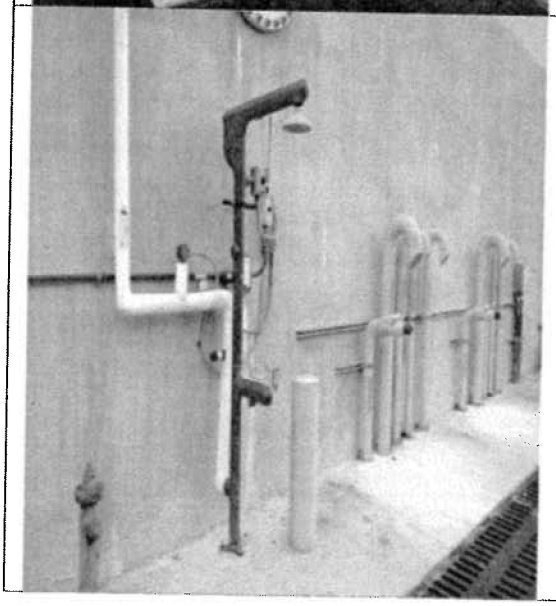
4. TWW was not able to provide information/documentation regarding the most recent inspections conducted at the Hopewell/Brandon Farms Hydropillar, the Ewing Storage Tank or the Jones Farm Standpipe. Submit to EPA, information/documentation from most recent inspections conducted at the three aforementioned storage tanks. The response must include information on sanitary deficiencies that were identified (if any) and corrective action information/documentation.

5. Provide information on the rationale for the calculation of Contact Time and methods utilized. At a minimum, the information must include the volume of each process unit, results of tracer studies, baffling factor utilized for the calculation and documentation supporting State approval of baffling factors for specific treatment processes.

6. Provide information on the actions that TWW will take to correct significant deficiencies, and observations/findings identified above. Each significant deficiency must include an action plan with deadlines for its correction. An Administrative Order will be received under separate cover to address the violations and identify corrective action required.

APPENDIX A

Trenton Water Works (PWS ID NJ1111001)
Inspection Dates: May 3-13, 2013

	Description: Water is leaking from raw water pump #2 in the area of the check valve.
	Description: Chemicals impede access to the shower in the sludge dewatering facility.
	Description: The shower, located in the outside delivery area where the ferric chloride and fluoride is delivered, is not in operation.

APPENDIX B

Trenton Water Works Public Water System					
Recording from Continuous Monitoring Equipment for Residual Disinfectant Concentration					
July 18 - July 19, 2010					
Data Point	Start Timestamp	End Timestamp	Min Value	Max Value	Record Count
Finished Water Chlorine	7/18/2010 2:41	7/18/2010 4:10	1.06615	1.10911	18
Finished Water Chlorine	7/18/2010 4:10	7/18/2010 5:39	-0.00518807	1.14786	18
Finished Water Chlorine	7/18/2010 5:39	7/18/2010 7:09	-0.00891699	0.0162127	18
Finished Water Chlorine	7/18/2010 7:09	7/18/2010 8:38	-0.00859274	0.0166991	18
Finished Water Chlorine	7/18/2010 8:38	7/18/2010 10:07	-0.00826848	0.00632296	17
Finished Water Chlorine	7/18/2010 10:07	7/18/2010 11:36	-0.00437743	0.00729572	18
Finished Water Chlorine	7/18/2010 11:36	7/18/2010 13:06	-0.00453956	0.00697147	18
Finished Water Chlorine	7/18/2010 13:06	7/18/2010 14:35	-0.00453956	0.00761997	18
Finished Water Chlorine	7/18/2010 14:35	7/18/2010 16:04	-0.00453956	0.00729572	18
Finished Water Chlorine	7/18/2010 16:04	7/18/2010 17:34	-0.00453956	0.00729572	18
Finished Water Chlorine	7/18/2010 17:34	7/18/2010 19:03	-0.00453956	0.00729572	18
Finished Water Chlorine	7/18/2010 19:03	7/18/2010 20:32	-0.00437743	0.00761997	17
Finished Water Chlorine	7/18/2010 20:32	7/18/2010 22:01	-0.00437743	0.00729572	18
Finished Water Chlorine	7/18/2010 22:01	7/18/2010 23:31	-0.0042153	0.0077821	18
Finished Water Chlorine	7/18/2010 23:31	7/19/2010 1:00	-0.00453956	0.00324254	18
Finished Water Chlorine	7/19/2010 1:00	7/19/2010 2:29	-0.00437743	0.00697147	18
Finished Water Chlorine	7/19/2010 2:29	7/19/2010 3:59	-0.00453956	0.00745785	18
Finished Water Chlorine	7/19/2010 3:59	7/19/2010 5:28	-0.00437743	0.0077821	18
Finished Water Chlorine	7/19/2010 5:28	7/19/2010 6:57	-0.00453956	0.00470169	17
Finished Water Chlorine	7/19/2010 6:57	7/19/2010 8:26	-0.00470169	0.00680934	18
Finished Water Chlorine	7/19/2010 8:26	7/19/2010 9:56	-0.00437743	0.00729572	18
Finished Water Chlorine	7/19/2010 9:56	7/19/2010 11:25	-0.00453956	0.00713359	18
Finished Water Chlorine	7/19/2010 11:25	7/19/2010 12:54	-0.00470169	0.00729572	18
Finished Water Chlorine	7/19/2010 12:54	7/19/2010 14:23	-0.0042153	0.00648508	18
Finished Water Chlorine	7/19/2010 14:23	7/19/2010 15:53	-0.00437743	1.14916	18

Trenton Water Works Public Water System					
Recording from Continous Monitoring Equipment for Residual Disinfectant Concentration					
August 1- 3, 2011					
Data Point	Start Timestamp	End Timestamp	Min Value	Max Value	Record Count
Finished Water Chlorine	8/1/2011 0:00	8/1/2011 1:29	-0.00453956	0.00729572	18
Finished Water Chlorine	8/1/2011 1:29	8/1/2011 2:58	-0.0042153	0.00713359	18
Finished Water Chlorine	8/1/2011 2:58	8/1/2011 4:27	-0.00437743	0.00713359	17
Finished Water Chlorine	8/1/2011 4:27	8/1/2011 5:57	-0.00453956	0.00632296	18
Finished Water Chlorine	8/1/2011 5:57	8/1/2011 7:26	-0.00470169	0.00810636	18
Finished Water Chlorine	8/1/2011 7:26	8/1/2011 8:55	-0.00535019	0.00713359	18
Finished Water Chlorine	8/1/2011 8:55	8/1/2011 10:24	-0.00470169	0.00843061	18
Finished Water Chlorine	8/1/2011 10:24	8/1/2011 11:54	-0.00486381	0.00713359	18
Finished Water Chlorine	8/1/2011 11:54	8/1/2011 13:23	-0.00891699	0.016537	18
Finished Water Chlorine	8/1/2011 13:23	8/1/2011 14:52	-0.00924124	0.0155642	17
Finished Water Chlorine	8/1/2011 14:52	8/1/2011 16:22	-0.00907912	0.0121595	18
Finished Water Chlorine	8/1/2011 16:22	8/1/2011 17:51	-0.00453956	0.00729572	18
Finished Water Chlorine	8/1/2011 17:51	8/1/2011 19:20	-0.00453956	0.00518807	18
Finished Water Chlorine	8/1/2011 19:20	8/1/2011 20:49	-0.00470169	0.00324254	18
Finished Water Chlorine	8/1/2011 20:49	8/1/2011 22:19	-0.00453956	0.00616083	18
Finished Water Chlorine	8/1/2011 22:19	8/1/2011 23:48	-0.00437743	0.00486381	17
Finished Water Chlorine	8/1/2011 23:48	8/2/2011 1:17	-0.00437743	0.000972763	18
Finished Water Chlorine	8/2/2011 1:17	8/2/2011 2:47	-0.00453956	0.00632296	18
Finished Water Chlorine	8/2/2011 2:47	8/2/2011 4:16	-0.0042153	0.00648508	18
Finished Water Chlorine	8/2/2011 4:16	8/2/2011 5:45	-0.00437743	0.00729572	18
Finished Water Chlorine	8/2/2011 5:45	8/2/2011 7:14	-0.00437743	0.00567445	18
Finished Water Chlorine	8/2/2011 7:14	8/2/2011 8:44	-0.00453956	0.00697147	18
Finished Water Chlorine	8/2/2011 8:44	8/2/2011 10:13	-0.00453956	0.00729572	17
Finished Water Chlorine	8/2/2011 10:13	8/2/2011 11:42	-0.00437743	0.00713359	18
Finished Water Chlorine	8/2/2011 11:42	8/2/2011 13:12	-0.00453956	0.00680934	18
Finished Water Chlorine	8/2/2011 13:12	8/2/2011 14:41	-0.00453956	0.00729572	18
Finished Water Chlorine	8/2/2011 14:41	8/2/2011 16:10	-0.00453956	0.00761997	18
Finished Water Chlorine	8/2/2011 16:10	8/2/2011 17:39	-0.0042153	0.00664721	18
Finished Water Chlorine	8/2/2011 17:39	8/2/2011 19:09	-0.0042153	0.00761997	18
Finished Water Chlorine	8/2/2011 19:09	8/2/2011 20:38	-0.00486381	0.0042153	17
Finished Water Chlorine	8/2/2011 20:38	8/2/2011 22:07	-0.00453956	0.00551232	18
Finished Water Chlorine	8/2/2011 22:07	8/2/2011 23:36	-0.00470169	0.00648508	18
Finished Water Chlorine	8/2/2011 23:36	8/3/2011 1:06	-0.0042153	0.00745785	18
Finished Water Chlorine	8/3/2011 1:06	8/3/2011 2:35	-0.00453956	0.00745785	18
Finished Water Chlorine	8/3/2011 2:35	8/3/2011 4:04	-0.00470169	0.00761997	18
Finished Water Chlorine	8/3/2011 4:04	8/3/2011 5:34	-0.00470169	0.0077821	18
Finished Water Chlorine	8/3/2011 5:34	8/3/2011 7:03	-0.00470169	0.00664721	17
Finished Water Chlorine	8/3/2011 7:03	8/3/2011 8:32	-0.00486381	0.00680934	18

APPENDIX C

Join our mailing list to receive important announcements		Water System Search

PWSID:	NJ1111001	Water System Type:	Community (C)
Water System Name:	TRENTON WATER WORKS	System Status:	A
		System Ownership:	Local govt. or municipal authority
Principal County & City:	MERCER, TRENTON CITY-1111	Primary Source of Water:	SW

WATER SYSTEM INFORMATION | Total Coliform Results | Chemical Results | Monitoring Schedules | Facilities | Site Visits | Violations | Other Data | Consumer Confidence Report (CCR) | PRINTER FRIENDLY PAGE

This list displays results for the last two year by default.
To search a specific date range, select the appropriate date(s) in the fields below and click on Search.

Sample Collection Date From **To** Search

Click on a monitoring period (MP) link to view any individual samples collected in that MP.

Distribution System Total Coliform (TC) Samples^

		Routine		Repeat		
Monitoring Period (MP)*	**Routine TC Samples Required**	**Negative (-) Samples**	**Positive (+) Samples**	**Negative (-) Samples**	**Positive (+) Samples**	**Total Samples Collected****
04/01/2013--04/30/2013	120	151				151
03/01/2013--03/31/2013	120	151				151
02/01/2013--02/28/2013	120	151				151
01/01/2013--01/31/2013	120	152				152
12/01/2012--12/31/2012	120	150				150
11/01/2012--11/30/2012	120	152				152
10/01/2012--10/31/2012	120	152				152
09/01/2012--09/30/2012	120	151				151
08/01/2012--08/31/2012	120	151				151
07/01/2012--07/31/2012	120	151				151
06/01/2012--06/30/2012	120	151				151
05/01/2012--05/31/2012	120	149				149
04/01/2012--04/30/2012	120	151				151
03/01/2012--03/31/2012	120	151				151
02/01/2012--02/29/2012	120	152				152
01/01/2012--01/31/2012	120	150				150
12/01/2011--12/31/2011	120	151				151
11/01/2011--11/30/2011	120	149				149
10/01/2011--10/31/2011	120	151				151

09/01/2011--09/30/2011	120	152				152
08/01/2011--08/31/2011	120	149				149
07/01/2011--07/31/2011	120	150	2	3	0	155
06/01/2011--06/30/2011	120	150				150
05/01/2011--05/31/2011	120	152				152
04/01/2011--04/30/2011	120	151				151

^Positive (+) means bacteria were present in the sample. Negative (-) means bacteria were absent from the sample.
*Monitoring Periods without a link means the results were submitted as a summary. No individual results can be reviewed.
**The total number will not include raw (source) water samples substituted for distribution systyem repeat samples.

NJ Primary & Secondary Drinking Water Standards | NJ Dept. of Environmental Protection (NJDEP) | NJDEP - Division of Water Supply | USEPA

Violations (USEPA Envirofacts)

Write suggestions/comments to the webmaster

Positive Coliform Samples (UpStream/DownStream)

Methods SM9222B + SM9223B

Date	Address (Location) UpStream / DownStream	MF (+/Ø)/CFU Coliform (+/Ø)	LT (+/Ø)	BG (+/Ø)	EC (+/Ø)	
2-9-11	109 Nancy Lane	MF (ONG suspect col)	+	+	Ø	
2-10-11	109 Nancy Lane (original)	MF <1				
2-10-11	110 Nancy Lane (upstream)	MF <1				
2-10-11	119 Nancy Lane (DownStream)	MF <1				
5-18-11	1304 Deutz Ave. #Cond 374 *	MF 40 colonies	+	+	Ø	*Installed new H_2O heater
5-19-11	1304 Deutz Ave. #Cond 385 (original)	MF <1				
5-19-11	1310 Deutz Ave. # 387 (upStream)	MF <1				
5-19-11	1214 Deutz Ave. # 386 (DownStream)	MF <1				
5-18-11	73 Hillhurst Ave, #375	MF-1 Suspect Colony *	+	+	Ø	*Suspected carry over
5-19-11	73 Hillhurst Ave #382 (Original	MF <1				
5-19-11	91 Hillhurst Ave. #384 (upstream)	MF <1				
5-19-11	39 Hillhust Ave. #383 (DownStream)	MF <1				
5-23-11	26 Willis Drive #434	MF 140 Colonies	+	+	Ø	~~Unable to remove screen~~; Called Bather
5-24-11	26 Willis Drive #447 (Original)	MF <1				
5-24-11	25 Willis Drive #449 (Repeat Upstream)	MF <1				
5-24-11	30 Willis Drive #448 (~~Down~~ UpStream)	MF <1				
5-23-11	1564 Twelfth St. #435	MF 35 colonies	+	+	Ø	Unable to remove screen, Called Bather
5-24-11	1564 Twelfth St. #450 (Original)	MF <1				
5-24-11	1563 Twelfth St. #445 (DownStr)	MF <1				
5-24-11	1570 Twelfth St. #446 (upStream)	MF <1				
7-19-11	Slackwood Fire House #1231	PA + (EC Ø)	—	—	—	
7-20-11	Slackwood Fire House #1241	PA Ø	—	—	—	
7-20-11	22 Slack Ave #1242 (~~upstream~~ Down)	PA Ø	—	—	—	
7-20-11	36 Slack Ave #1243 (UpStream)	PA Ø	—	—	—	
8-19-11	Main St. Fire Hyd-Groveville #1672	MF 90 colonies	+	+	Ø	
8-22-11	Main St. Fire Hyd-Groveville #1700	MF <1				
8-22-11	Capitol Recrig-55 Main St. #1701	MF <1				
8-22-11	147 main street-upstream #1702	MF <1				
4-24-12	251 old Penn/Lawrenceville Rd	MF (2 Suspect Colonies)	Ø	Ø	Ø	Confirmed: <1 CFU/100ml
4-24-12	251 old Penn/Lawrenceville Rd	MF <1				
4-24-12	25 Henley Drive (upStream)	MF <1				
4-24-12	21 Henley Drive (DownStream)	MF <1				

Continued on Page

Project: 11494 April 2011

Incubate 18-22hr at 35°C

Date	#	# of Sa.	Sample Information	Tech / Time	pH	mg/L Chlorine Free	mg/L Chlorine Total	+ / ⊖	Ave Per Inst	Tech / Time	Date / Time	Tech
5-24-11	1	1	Mercer Medical Center	JP 8:45	8.08	1.15	1.28	⊖				
	2	2	Michael's Auto Serv.	JP 9:05	7.63	.85	.98	⊖				
	3	3	NJ Dept. of Corrections	JP 9:45	7.98 / 8.00	.73 / .70	.84 / .82	⊖				
	4	4	2300 Stuyvesant Ave	JP 10:10	8.55	1.08	1.16	⊖				
* QC	11	106	Raw Duplicates	CON 2:40pm	NA	NA	NA	+/+				
	5	5	DOT-Bear Tavern Rd.	JP 10:35	8.14	1.03	1.18	⊖				
	6	6	850 Mt. View Park	JP 11:00	8.30	.61	.67	⊖				
	7	7	The Learning Experience	JP 11:25	8.57	.17	.23	⊖				
	8	8	Exxon-Rt. 31	JP 11:40	8.69	1.27	1.49	⊖				
	9	9	Slocum's Bowling	JP 12:00	8.17	1.56	1.76	⊖				
	10	10	Monro Muffler	JP 12:20	8.13	1.64	1.82	⊖				
	11	11	Citgo-Rt. 31	JP 12:35	8.45	1.23	1.46	⊖				
	12	12	Lawr. Comm. Center	JP 1:10	8.53	1.26	1.42	⊖				
	13	13	Best Price Furniture	JP 1:30	7.96	1.15	1.28	⊖				
5-31-11	14	1	TWW-Meter Shop	JP 9:05	8.53	1.45	1.60	⊖				
	15	2	Sunoco-Brunswick Pk	JP 9:30	8.51	.30	.41	⊖				
	16	3	Slackwood Fire Co.	JP 9:45	8.38	1.18	1.35	⊖				
	17	4	DOT-US1	JP 10:05	8.38 / 8.36	1.17 / 1.15	1.30 / 1.28	⊖				
	18	5	Pullen's Garage	JP 10:35	8.91 / 8.93	1.12 / 1.12	1.27 / 1.29	⊖				
	19	6	Valero-Notting Way	JP 11:05	8.52	.61	.68	⊖				
	20	7	Mufflex Muffler	JP 11:15	8.47	.52	.67	⊖				
	21	8	Mercerville Fire Co.	JP 11:35	8.65	1.01	1.11	⊖				
	22	9	Hess-Rt. 33	JP 11:50	8.47	1.17	1.33	⊖				
	23	10	Lukoil-Rt. 33	JP 12:00	8.47	1.27	1.51	⊖				
* QC	~~24~~ 11	21	Raw Duplicates	CON 2:35pm	NA	NA	NA	+/+				
	~~24~~ 25	11	Hamilton Library	JP 12:25	9.18	1.07	1.14	⊖				
	~~25~~ 26	12	Shell-White Horse Ave	JP 12:45	8.45	1.18	1.36	⊖				
	~~26~~ 27	13	Goodyear-S. Olden Av	JP 1:15	8.60	.83	.96	⊖				
	27	14	Gulf-S. Olden Av.	JP 1:30	8.28	1.34	1.51	⊖				
5-4-11	28	1	Trenton City Hall	JP 8:50	8.38	.78	.88	⊖				
	29	2	St. Francis Medical	JP 9:30	8.08	1.37	1.55	⊖				
	30	3	Washington School	JP 10:10	8.33	1.50	1.71	⊖				
	31	4	Casco-Greenwood Ave	JP 10:55	8.03	1.46	1.54	⊖				

CONNIE O'NEAL — 1 — 2:45 pm 5-3-2011 — Connie O'Neal

CONNIE O'NEAL — 1 — 2:37 pm 5-4-2011 — Connie O'Neal

Connie O'Neal 2:20-2:30pm 05-05-11 — Cat ID 11am — Connie O'Neal

Continued on Page

May 2011

Bacteria Std 4.2250
Incubate 18–22 hr at 35°C

Date	#	Sta. #	Sample Location	Tech Time	pH	Chlorine mg/L Free	Total	Temp °C	Tech Time	Date Time
5-4-11	32	5	E. State Automotive	11:15	7.60	.95	1.03	6	Connie O'Neal — 2:20pm-2:30pm	05-05-2011 — at 10AM
	33	6	Klockner School	11:40	8.22	1.04	1.16	6		Connie O'Neal
	34	7	Exxon-Klockner Rd	11:35	7.96	.82	.94	6		
	35	8	Hamilton Lanes	12:20	7.87	1.33	1.50	6		
	36	9	Midas Muffler	1:00	7.87	1.09	1.20	6		
	37	10	Miriam Morris Sch	1:35	7.95	1.61	1.78	6		
5-5-11	38	1	NJ Div of Motor Veh.	9:10	7.89	.74	.88	6		
	39	2	Sunoco-Rt. 29	9:35	8.15	.73	.88	6		
	40	3	NJCAR-River Rd	9:55	8.14	1.25	1.37	6		
	41	4	Elite Adult Day Care	10:20	7.95	1.31	1.55	6		
* QC#	152	—	Raw Dupl: Cules	CON 8:30AM	NA	NA	NA	+/+		
	42	5	W. Trenton Prb. Church	10:35	8.17	.97	1.11	6		
	43	6	Katzenbach School	11:00	~~7.93~~ 7.91	~~.69~~ .72	~~.80~~ .86	6		
	44	7	Four Seasons Center	11:40	~~8.20~~ 8.15	~~1.13~~ 1.15	~~1.30~~ 1.30	6		
	45	8	Stony Brook School	12:05	8.84	.92	1.00	6		
	46	9	Liberty-Parkway Ave	12:35	7.93	1.35	1.54	6		
	47	10	Curtis Lanes	12:45	7.93	1.30	1.45	6		
	48	11	Valera-Parkway Ave	1:05	8.09	1.56	1.76	6		
	49	12	Monument School	1:45	7.96	1.09	1.21	6		
	50	13	Mercer St. Friends	2:05	8.24	1.02	1.16	6		
5-9-11	51	1	Mercer Medical Center	8:55	7.76	1.34	1.51	6	Connie O'Neal — 3:00pm-3:10pm	05-06-2011 at 10:15AM
	52	2	Michael's Auto Service	9:15	7.77	.34	.44	6		Connie O'Neal
	53	3	NJ Dept. of Corrections	10:05	7.81	1.27	1.54	6		
	54	4	2300 Stuyvesant Ave	10:25	8.54	1.09	1.25	6		
	55	5	DOT-Bear Tavern Rd	10:50	7.95	1.20	1.37	6		
	56	6	850 Mt. View Park	11:10	8.15	.65	.73	6		
	57	7	The Learning Exper.	11:30	8.42	.06	.11	6		
	58	8	Exxon-Rt. 31	11:55	8.52	1.19	1.35	6		
	59	9	Slocum's Bowling	12:15	8.01	1.53	1.76	6		
	60	10	Antheil School	12:40	8.03	1.65	1.83	6		
* QC#	2524	—	Raw Duplicates	CON 8:15AM	NA	NA	NA	+/+		
	61	11	Lawr. Comm. Center	12:55	8.01	1.54	1.72	6	Connie O'Neal — 3:50pm-4:00pm	05-10-2011 at 9:25AM
	62	12	Kwik-Fill-Princeton Pike	1:15	7.98	1.32	1.55	6		Connie O'Neal

Continued on Page

Incubate 18-22hrs at 35°C

Project May 2011 Notebook No.

Continued from Page

Date	#	Sample Location	pH	Chlorine mg/L Free	Chlorine mg/L Total	+/-	HPC per 1mL	
5-9-11	63	13 Hess-Princeton Ave	7.94	1.11	1.22	0		CON 2:50:5pm 5-10-11 9:05AM Low
5-10-11	64	1 TWW-Meter Shop	7.79	1.86	2.06	0		
	65	2 Sunoco-Bruns. Pike	8.21	1.10	1.27	0		
	66	3 Slackwood Fire Co.	7.94	.49	.61	0		
	67	4 Jiffy Lube-US1	8.05 8.07	1.35 1.28	1.41 1.45	0		
	68	5 Exxon-US1 & Texas Av	7.91 7.93	1.76 1.79	1.93 1.96	0		
	69	6 Valero-Notting. Way	8.30	.51	.65	0		
	70	7 Mercerville Fire Co.	8.21	.88	1.00	0		
	71	8 Hess-Rt. 33	7.90	1.28	1.43	0		
	72	9 Lukoil-Rt. 33	7.87	.99	1.07	0		
	73	10 Hamilton Library	8.55	1.25	1.44	0		
	74	11 Trent Box	9.31	.44	.52	0		
	75	12 City Auto Collision	8.23	.93	1.08	0		
	76	13 Garden State Fuel	8.42	1.06	1.19	0		
5-11-11	77	1 Trenton City Hall	8.42	.20	.28	0		
	78	2 St. Francis Medical	7.90	1.52	1.71	0		
	79	3 Washington School	8.00	1.39	1.61	0		
*QC	#278	Raw Duplicates	CON 9:10AM	NA	NA	+/+		
	80	4 Hedgepeth-Williams Sc	7.81	.87	.97	0		
	81	5 Casco-Greenwood Av	8.02	1.42	1.53	0		
	82	6 Estate Automotive	8.04	1.26	1.44	0		
	83	7 Klockner School	8.47	.90	1.02	0		
	84	8 Exxon Klockner Rd	8.16	.81	.97	0		
	85	9 Hamilton Lanes	8.24	1.34	1.57	0		
W. Horse Fire Co.	86	10 ~~White Horse~~ ~~Township~~ Fire Co.	7.93	1.29	1.49	0		
	87	11 Lakeside Shell	8.61	.50	.62	0		
	88	12 Miriam Morris Sch	8.29	1.40	1.57	0		
	89	13 Citgo-Lalor St.	7.79	1.43	1.63	0		
5-12-11	90	1 Best Price Furniture	7.89 7.91	.37 .33	.44 .46	0		
	91	2 W. Trenton Prb. Church	7.81 7.83	.73 .75	.84 .87	0		
	92	3 Katzenbach School	8.27	1.08	1.20	0		
	93	4 Four Seasons Center	8.37	.97	1.08	0		
	94	5 Stony Brook School	8.85	.78	.91	0		

CONNIE O'NEAL - 1 - 2:48pm - 2:58pm - 05-13-11 at 10:15AM Connie O'Neal

CONNIE O'NEAL - 1 - 2:40pm - 2:30pm - 05-12-11 at 8:30AM Connie O'Neal

CONNIE O'NEAL - 1 - 2:54pm - 3:04pm - 05-13-11 at 9:30AM Connie O'Neal

Continued on Page

Read and Understood By

33.13

May 2011

Bacteria Std 9223B
Incubate 35°C ± 1°C 18-22 hrs

5-16-11	95	1	Mercer Medical Center	TP 8:45	7.91	1.34	1.50	⊖		
	96	2	Michael's Auto Serv.	TP 9:10	7.84	1.06	1.19	⊖		
	97	3	NJ Dept of Correction	TP 9:50	7.98	1.04	1.17	⊖		
	98	4	2300 Stuyvesant Ave	TP 10:15	8.38	1.17	1.32	⊖		
	99	5	DOT-Bear Tavern Rd	TP 11:15	7.91	.88	1.01	⊖		
+ QC# 3409 - Raw Duplicates				Coll 8AM	NA	NA	NA	+/+		
	100	6	850 Mt. View Park	TP 11:35	8.54	.34	.43	⊖		
	101	7	BFPA Clubhouse	TP 12:00	8.38	1.57	1.78	⊖		
	102	8	The Learning Exper.	TP 12:30	8.33	.06	.10	⊖		
	103	9	Slocum's Bowling	TP 12:55	7.79	1.58	1.78	⊖		
	104	10	Monro Muffler	TP 1:15	7.64	1.64	1.86	⊖		
	105	11	Antheil School	TP 1:40	7.84	1.27	1.55	⊖		
5-17-11	106	1	TWW-Meter Shop	TP 9:05	7.97	1.17	1.36	⊖		
	107	2	Hess-Princeton Ave	TP 9:30	~~7.87~~ 7.89	~~1.59~~ 1.59	~~1.73~~ 1.73	⊖		
	108	3	Valero-Nottingham Wy	TP 10:40	8.15	.61	.77	⊖		
	109	4	Mercerville Fire Co.	TP 10:55	~~7.67~~ 7.69	~~1.16~~ 1.09	~~1.20~~ 1.24	⊖		
	110	5	Hess-Rt 33	TP 11:20	7.91	1.25	1.42	⊖		
	111	6	Lukoil-Rt 33	TP 11:40	7.93	1.23	1.48	⊖		
	112	7	Hamilton Library	TP 12:05	8.46	1.12	1.24	⊖		
	113	8	Shell-White Horse Av	TP 12:20	7.90	1.40	1.62	⊖		
	114	9	Goodyear-S. Olden Av.	TP 1:00	7.92	.72	.83	⊖		
	115	10	Gulf-S. Olden Ave	TP 1:15	7.86	1.20	1.45	⊖		
5-18-11	116	1	NJCAR-River Rd.	TP 8:55	8.46	1.24	1.40	⊖		
	117	2	Mufflex Muffler	TP 10:50	8.53	.68	.81	⊖		
	118	3	Pullen's Garage	TP 12:00	8.88	1.01	1.13	⊖		
* QC# 3604 - Raw Duplicates				Coll 8:10AM	NA	NA	NA	+/+		
	119	4	Trent Box	TP 12:20	9.39	.31	.40	⊖		
	120	5	Capitol Refrigeration	TP 12:55	9.57	.40	.51	⊖		
	121	6	Tilden Auto Care	TP 1:50	6.84	1.10	1.25	⊖		
5-19-11	122	1	Citgo-Rt 31	TP 12:05	~~8.52~~ 8.54	~~1.35~~ 1.31	~~1.50~~ 1.53	⊖		
	123	2	Liberty-Parkway Ave	TP 12:25	~~8.06~~ 8.08	~~.90~~ .90	~~1.05~~ 1.01	⊖		
	124	3	Curtis Lanes	TP 12:50	8.41	1.27	1.42	⊖		
	125	4	Valero-Parkway Ave	TP 1:05	7.88	1.44	1.66	⊖		

C. ONeal Connie ONeal — 2:40pm - 2:50pm 05-17-2011 — 10:10am — Connie ONeal
Connie ONeal — 2:55pm - 3:05pm 05-18-2011 — 9:45Am — Connie ONeal
Connie ONeal — 3:05pm - 3:15pm 05-19-2011 — 10:35am — Connie ONeal
C. ONeal — 2:53pm - 3:05pm 05-20-11 — 11:00am — C. ONeal

Continued on Page

Project MAY 2011 Notebook No.

Continued from Page

Bacteria Sm#9223B
Incubate 18-22hr at 35°C

5-19-11	126	5	Helene Fuld Medical	~~TP 11:40~~	8.05	1.95	2.12	Ø		
5-23-11	127	1	NJ Dept. of Corrections	~~TP 11:10~~	7.96	1.02	1.15	Ø		
	128	2	2300 Stuyvesant Ave	~~TP 11:25~~	8.30	1.22	1.41	Ø		
	129	3	DOT-Bear Tavern Rd	~~TP 11:50~~	7.99	1.00	1.11	Ø		
	130	4	850 Mt. View Park	~~TP 12:05~~	8.17	.53	.65	Ø		
	131	5	BFPA Club House	~~TP 12:30~~	8.41	1.34	1.57	Ø		
	132	6	Exxon-Rt. 31	~~TP 12:50~~	8.28	1.17	1.31	Ø		
	133	7	Slocum's Bowling	~~TP 1:05~~	7.69	1.51	1.75	Ø		
	134	8	Anthel School	~~TP 1:30~~	7.93	1.50	1.73	Ø		
QC	#433		Raw Duplicates	~~Low 8:30 PM~~	NA	NA	NA	+/+		
	135	9	Lawr. Comm. Center	~~TP 1:45~~	8.06	1.48	1.71	Ø		
5-25-11	136	1	Trenton City Hall	~~TP 8:45~~	8.33	.27	.33	Ø		
	137	2	St. Francis Medical	~~TP 9:15~~	7.71	1.33	1.51	Ø		
	138	3	Washington School	~~TP 9:45~~	8.08	1.42	1.63	Ø		
	139	4	Hedgepeth-Will School	~~TP 10:10~~	7.78	.56	.70	Ø		
	140	5	Pioneer-S. Broad St.	~~TP 10:30~~	8.01	.63	.75	Ø		
	141	6	Hamilton Library	~~TP 11:20~~	8.66	1.11	1.23	Ø		
	142	7	Hamilton Lanes	~~TP 11:50~~	7.80	.68	.73	Ø		
	143	8	Valero-S. Broad St.	~~TP 12:15~~	8.53	1.12	1.27	Ø		
	144	9	Piciernos-S. Broad St.	~~TP 12:30~~	8.23	1.06	1.18	Ø		
	145	10	Greco's Barber	~~TP 12:50~~	8.36	1.15	1.30	Ø		
5-26-11	146	1	NJ. Div of Motor Veh.	~~TP 8:03~~ 8:45	8.05	.72	.80	#		
	147	2	Sunoco-Rt. 29	~~TP 8:05~~ 9:15	8.07	.77	.89	Ø		
	148	3	NJCAR-River Rd	~~TP 9:50~~	7.96	1.06	1.18	Ø		
	149	4	Elite Adult Day Care	~~TP 10:20~~	7.98	1.06	1.19	Ø		
	150	5	Katzenbach School	~~TP 10:40~~	8.13	.59	.67	Ø		
	151	6	Valero-Parkway Ave	~~TP 11:05~~	7.90	1.50	1.67	Ø		
	152	7	Monument School	~~TP 12:05~~	7.90	1.10	1.22	Ø		

26.82

Time

COW 33305 5-2011 11 Am

COW: Connie O'Neal | 1 | 3:37 pm | 05-24-2011 | Connie O'Neal

COW: Connie O'Neal | 1 | 1:45pm - 1:55 PM | 05-26-2011 | Cut 8:00 AM Connie O'Neal

COW: Connie O'Neal | 1 | 8:18pm - 8:28pm | 05-27-2011 | 8:15 AM Connie O'Neal

Continued on Page

Read and Understood by

July 2011

Bacteria Sm# 92238
Incubate 35°C - 18-22 hrs
Collect Lot# LG724 (Exp 2312)

Date	#	Hydrant #	Sample Location	Time	pH	mg/L Chlorine Free	mg/L Chlorine Total	T/B	HPC per 1 mL	Temp °F	Time	Tech
7-5-11	1	1	TWW-Meter Shop	9:20	7.83	.77	.9	C				
	2	2	Jiffy Lube-US1	9:55	8.75	.83	.91	C				
	3	3	Exxon-US1 & Texas Av	10:20	7.74	.43	.55	C				
QC	1008	-	Raw Duplicates	2:35	—	—	—	+/+				
	4	4	Valero-Notting Way	10:50	8.16	.75	.87	C				
monthly SA Duplicate	5	5	Mufflex Muffler	11:05	7.88	.35	.46	C	4/21	Connie O'Neal	10-06-2011	
	6	6	Mercerville Fire Co.	11:40	7.80	.45	.58	C		2:44pm - 2:54pm	10 AM	
	7	7	Hess-Rt. 33	11:55	7.77	.71	.82	C				
	8	8	Lukoil-Rt. 33	12:10	7.79	.74	.86	C				
	9	9	Hamilton Library	12:35	8.41	.92	1.05	C				
	10	10	Trent Box	1:00	8.95	.06	.08	C				
	11	11	Capitol Refrigeration	1:25	8.66	.18	.23	C				
	12	12	Lakeside Shell	1:45	8.45	.16	.27	C				
7-6-11	13	1	Trenton City Hall	8:40	8.09	.15	.21	C				
	14	2	St. Francis Medical	9:20	7.69	1.58	1.68	C				
	15	3	Washington School	9:50	7.79	1.33	1.54	C				
	16	4	Hedgepeth-Williams Sch	10:15	7.66	.22	.32	C				
	17	5	Gasco-Greenwood Av	10:40	7.64	.82	.91	C				
	18	6	E. State Automotive	11:00	7.73	1.57	1.70	C				
	19	7	Exxon-Klockner Rd	11:30	7.72	.52	.63	C				
	20	8	Hamilton Lanes	12:15	7.86	.25	.36	C				
	21	9	White Horse Fire Co	12:35	7.58	1.22	1.35	C				
	22	10	Midas Muffler	1:10	7.85	.18	.28	C				
QC	1035	-	Raw Duplicates	2:30	NA	NA	NA	+/+				
	23	11	Miriam Morris Sch.	1:30	7.68	1.36	1.54	C				
	24	12	Citgo-Lalor St.	1:50	7.58	1.16	1.23	C				
7-7-11	25	1	NJ Div of Motor Veh	9:15	7.32	.28	.35	C				
	26	2	Sunoco-Rt. 29	9:45	7.61	.26	.37	C				
	27	3	NJCAR-River Rd.	10:10	7.92	1.02	1.16	C				
	28	4	Elite Adult Day Care	10:35	7.74	1.13	1.26	C				
	29	5	W. Trenton Prb. Church	10:55	7.83	1.02	1.16	C				
	30	6	Katzenbach School	11:20	7.73	.91	1.04	C				
	31	7	BFPA Club House	11:55	8.10	1.30	1.52	C				

Connie O'Neal | 2:37pm - 2:47pm | 10-04-2011 | 10 AM | Connie O'Neal

July 2011

Incubate 35°C 18-22 hr
Coliert Lot # CG724 (Exp. 6-23-12)

Date	#	Sample Location	Time	pH	Chlorine Free	Chlorine Total	+/- 10	Color Pres/Abs	Comments
7-7-11	32	8 Four Seasons Center	12:10	7.80	.70	.77	0		Connie O'Neal 2:37pm-3:47pm 07-08-11 — cut 10:45am C. O'Neal
	33	9 Stony Brook School	12:30	8.19	.20	.28	0		
	34	10 Curtis Lanes	1:00	7.70	1.41	1.62	0		
	35	11 Valerie Parkway Av	1:25	7.60	1.71	1.95	0		
	36	12 Monument School	1:50	7.90	.39	.51	0		
7-11-11	37	1 Mercer Medical Cent	9:05	7.26	1.56	1.79	0		Connie O'Neal — 2:20pm-3:34pm — 07-11-2011 — 9:10 AM Connie O'Neal —
	38	2 Michaels Auto Srv	9:30	7.22	.80	.94	0		
	39	3 NJ Dept. of Correct.	10:25	7.58	.98	1.09	0		
	40	4 2300 Stuyvesant Ave	10:45	7.77	1.10	1.19	0		
	41	5 DOT-Bear Tavern	11:15	7.57	.65	.78	0		
* QC 10	QC	— Raw Duplicates	2:20pm	NA	NA	NA	+/+		
	42	6 850 Mt. View Park	11:35	7.80	.22	.34	0		
	43	7 The Learning Exper	12:00	8.09	.07	.13	0		
	44	8 Exxon-Rt. 31	12:20	7.92	.70	.77	0		
	45	9 Slocums Bowling	12:35	7.57	1.89	2.13	0		
	46	10 Monro Muffler	1:00	7.44	1.83	2.06	0		
	47	11 Lawr. Comm. Center	1:25	7.64	1.43	1.67	0		
	48	12 Best Price Furnt.	1:40	7.55	.24	.34	0		
7-12-11	49	1 TNW-Meter Shop	9:10	7.69	1.24	1.41	0		Connie O'Neal — 2:20pm-3:34pm — 07-12-2011 — 9:10 AM Connie O'Neal —
	50	2 Sunoco-Brunswick Pike	9:50	7.71	1.20	1.40	0		
	51	3 Slackwood Fire Co	10:05	7.78	.23	.39	0		
	52	4 Fuller's Garage	10:25	7.80	.55	.66	0		
	53	5 Mercerville Fire Co	10:50	7.63	.44	.56	0		
	54	6 Hess-Rt. 33	11:40	7.75	.82	.94	0		
	55	7 Lukoil-Rt. 33	12:10	7.67	1.21	1.32	0		
	56	8 City Auto Collision	12:30	7.83	1.52	1.66	0		
	57	9 Garden State Fuel	12:50	8.28	1.20	1.37	0		
	58	10 Lakeside Shell	1:15	8.16	.18	.29	0		
	59	11 Miriam Morris Sch	1:30	8.06	1.41	1.62	0		
	60	12 White Horse Fire Co	1:45	7.70	.65	.74	0		
* QC 11	QC	— Raw Duplicates	8:20am	—	—	—	+/+		Connie O'Neal — 3:51-4:04pm — 07-11-11 — 10:10am C. O'Neal
7-13-11	61	1 Trenton City Hall	9:45	8.91	.17	.25	0		
*Lime Feeder malfunction	62	2 St. Francis Medical	10:15	8.10	1.99	>2.20	0		

Project July 2011 — Notebook No.

Continued from Page

Bacteria SM# 9230 D.
Incubate 35°C 18-22h
Collect # C6724(E)p623-12

Date	#	Sample #	Sample Location	TC+ / Time	pH	mg/L Chlorine Free	mg/L Chlorine Total	+ / −	HPC Per 1ml	Rec'd / Time	Read / Time	Tech
7-13-11	63	3	Washington School	# 10:50	8.13	1.41	1.58	−		Connie O'Neal 3:51pm - 4:01pm	0 7-14-2011	
	64	4	Hedgepeth-Williams Sch	# 11:10	8.23	.97	1.02	−			1 at 10:00 AM	
	65	5	Pioneer-S. Broad St.	# 11:50	8.29	.41	.47	−				Lori Neal
	66	6	Klockner School	# 12:25	8.95	.07	.12	−				
	67	7	Hamilton Library	# 1:10	8.60	1.41	1.60	−				
	68	8	Hamilton Lanes	# 1:30	8.89	.58	.63	−				
	69	9	Citgo-Lalor St	# 1:50	8.05	1.63	1.80	−				
7-14-11	70	1	NJ Div of Motor Veh	# 9:10	6.56	.34	.44	−				
	71	2	Sunoco-Rt. 29	# 9:40	7.48	.18	.27	−				
	72	3	NJCAR-River Rd	# 10:15	7.62	.92	1.00	−				
	73	4	Elite Adult Day Care	# 10:50	7.34	1.07	1.17	−				
	74	5	W Trenton Fire Church	# 11:10	7.58	.87	.95	−		Connie O'Neal 3:01pm - 3:11pm	0 7-15-2011	
	75	6	Katzenbach School	# 11:40	7.63	.79	.88	−			1 at 10:40AM	
	76	7	Curtis Lanes	# 12:05	7.47	1.10 1.12	1.20 1.24	−				Lori Neal
	77	8	Valero-Parkway Ave	# 12:40	7.26	1.90	2.11	−				
	78	9	Helene Fuld Medical	# 1:20	7.03	1.89	2.10	−				
	79	10	Monument School	# 1:40	7.40	1.02	1.13	−				
QC #	159	—	Raw Duplicates	CL2 8:28am	—	—	—	+/+				
	80	11	Mercer St Friends	# 2:05	6.89	.64	.73	−				
7-18-11	81	1	Mercer Medical Cent	# 9:05	7.41	1.95	2.09	−				
	82	2	Michael's Auto Serv	# 9:25	7.43	1.79	1.96	−				
	83	3	NJ Dept of Corrections	# 10:05	7.47	1.18	1.34	−				
	84	4	2300 Stuyvesant Ave	# 10:25	7.69	1.07	1.21	−				
	85	5	DOT-Bear Tavern Rd	# 10:50	7.39	.77	.84	−				
	86	6	850 Mt. View Park	# 11:15	7.84	.24	.31	−				
	87	7	BFPA Clubhouse	# 11:50	7.78	1.34	1.56	−				
	88	8	Slocum's Bowling	# 12:10	7.50	1.93	2.17	−				
	89	9	Citgo-Rt 31	# 12:35	7.65	1.63	1.80	−				
	90	10	Antheil School	# 1:00	7.63	1.13	1.26	−				
	91	11	Lawr. Comm. Cent.	# 1:25	7.57	1.79	2.03	−				
	92	12	Hess-Princeton Ave	# 1:45	7.42	1.98	2.20	−				
7-19-11	93	1	Twp-Meter Shop	# 9:00	7.73	1.28	1.52	−		Connie O'Neal 2:43pm - 2:53pm	0 7-19-2011	
	94	2	Sunoco-Bruns Pike	# 9:30	7.85	.54	.69	−			1 at 9:30 AM	Lori Neal

Continued on Page

Reviewed/Approved By

35.82

Project July 2011 Notebook No

Continued from Page

7-19-11	95	3	Slackwood Fire Co	~~9:50~~	7.79	.19	.28			
	96	4	Jiffy Lube-US1	~~10:25~~	7.84	1.10	1.22	Ø		
	97	5	Exxon-US1 & Texas Av	~~10:50~~	7.54	1.04	1.10	Ø		
	98	6	Valero-Nottingway	~~11:30~~	7.71	.84	.92	Ø		
	99	7	Mercerville Fire Co	~~11:45~~	7.52	1.03	1.12	Ø		
QC #1228			Raw Duplicates	8am	—	—	—	+/+		
	100	8	Hess-Rt. 33	~~12:20~~	7.57	1.01	1.09	Ø		
	101	9	Lukoil-Rt. 33	~~12:45~~	7.53	1.15	1.27	Ø		
	102	10	Hamilton Library	~~1:00~~	7.97	1.33	1.57	Ø		
	103	11	Goodyear-S. Olden Av	~~1:30~~	7.68	.79	.87	Ø		
	104	12	Gulf-S. Olden Av	~~1:45~~	7.55	1.11	1.26	Ø		
7-20-11	105	1	Slackwood Fire Co.	~~9:20~~	7.60	.39	.49	Ø		
	106	2	St. Francis Medical	~~10:30~~	7.55	1.78	1.98	Ø		
	107	3	Washington School	~~11:16~~	7.48	1.52	1.68	Ø		
	1084		Hedgepeth-Williams Sch	~~11:30~~	7.70	1.42	1.61	Ø		
	1095		Exxon-Klockner Rd	~~12:00~~	7.65	.34	.47	Ø		
	110	6	Hamilton Lanes	~~12:20~~	7.54	.20	.30	Ø		
	111	7	Valero-S. Broad St.	~~12:50~~	7.96	.99	1.15	Ø		
	1128		Piciennos S. Broad St	~~1:10~~	8.05	1.20	1.38	Ø		
	1139		Greco's Barber	~~1:25~~	8.04	.93	1.09	Ø		
	114	10	Capitol Refrigeration	~~1:40~~	8.45	.14	.22	Ø		
7-21-11	115	1	NJ Div of Motor Vehic	~~8:50~~	8.06	.39	.47	Ø		
	1162		Sunoco-Rt. 29	~~9:20~~	7.88	.27	.34	Ø		
	1173		NJCAR-River Rd	~~9:50~~	7.96	.29	.37	Ø		
	1184		Elite Adult Day Care	~~10:15~~	7.93	1.03	1.11	Ø		
QC #1286			Raw Duplicates	8:45	7.71	1.28	1.58	Ø		
	1195		Katzenbach School	~~10:50~~	8.00	.96	1.08	Ø		
	1206		Four Seasons Center	~~11:15~~	8.04	1.63	1.84	Ø		
	1217		Stony Brook School	~~11:40~~	7.96	.32	.37	Ø		
	1228		Curtis Lanes	~~12:10~~	7.75	.99	1.12	Ø		
	1239		Valero-Parkway Av	~~12:30~~	7.77	1.02	1.15	Ø		
	124	10	Tilden Auto Care	~~12:45~~	7.53	2.03	>2.20	Ø		
	1251	1	Mercer St. Friends	~~1:10~~	7.55	.80	.95	Ø		
				~~1:40~~	7.77	.77	.92	Ø		

Connie O'Neal
3:48pm - 3:52pm
1 07-21-2011
Cut — 11:00am
Connie O'Neal

Connie O'Neal
2:12pm - 2:22pm
1 07-22-2011
Cut — 8:30am
Connie O'Neal

Continued on Page

Read and Understood By
7-29-11

Signed

Project July 2011 — Notebook No. [illegible]

Continued from Page [illegible]

Date	#	Sample Location	Time	Free Cl	Combined Cl	+/-	HPC per mL	Coliform Present/Absent	E. coli Present/Absent
7-25-11	126	1 NJ Dept of Corrections	JP 10:45	7.69	.96	1.01	0		
	127	2 2300 Stuyvesant Ave	JP 11:05	7.87	.66	.76	0		
	128	3 DOT-Bear Tavern Rd	JP 11:25	7.57	.59	.65	0		
	129	4 850 Mt. View Park	JP 11:45	7.77	.17	.26	0		
	130	5 Exxon-Rt. 31	JP 12:05	8.10	.87	.92	0		
	131	6 Slocum's Bowling	JP 12:25	7.60	1.77	2.08	0		
	132	7 Monro Muffler	JP 12:40	7.58	.60	.72	0		
	133	8 Antheil School	JP 1:00	7.82	1.00	1.10	0		
	134	9 Lawr. Comm. Center	JP 1:15	7.85	1.39	1.65	0		
	135	10 Kwik-Fill-Princeton Pk	JP 1:35	7.70	1.34	1.51	0		
	136	11 Best Price Furniture	JP 1:50	7.58	1.46	1.67	0		
7-26-11	137	1 TWW-Meter Shop	JP 9:10	7.68	1.20	1.33	0		
* QC#	1337	Raw Duplicates	Lewis 10 Am	—	—	—	++		
	138	2 Sunoco-Brunswick Pike	JP 9:40	7.60	.20	.26	0		
	139	3 DOT-US1	JP 10:00	7.98 / 8.00	.96 / .92	1.00 / 1.02	0		
	140	4 Pullen's Garage	JP 10:35	7.66	1.06	1.21	0		
	141	5 Muffler Muffler	JP 11:00	7.64 / 7.66	.47 / .44	.56 / .51	0		
	142	6 Mercerville Fire Co.	JP 11:20	7.67	.83	.97	0		
	143	7 Hess-Rt. 33	JP 11:45	7.69	.79	.91	0		
	144	8 Lukoil-Rt. 33	JP 12:00	7.62	.87	.99	0		
	145	9 Hamilton Library	JP 12:20	7.93	1.10	1.25	0		
	146	10 Shell-White Horse Av	JP 12:40	7.60	.87	.95	0		
*	147	11 Trent Box	JP 1:15	9.07	.07	.13	0		
7-27-11	148	1 St. Francis Medical	JP 9:05	8.00	1.84	1.97	0		
	149	2 City Auto Collision	JP 12:20	7.91	1.23	1.46	0		
	150	3 Garden State Fuel	JP 12:45	8.27	.92	1.00	0		
	151	4 Lakeside Shell	JP 1:10	8.14	.19	.26	0		
	152	5 Miriam Morris School	JP 1:35	8.17	1.28	1.49	0		

John Pullitt 2:30 PM - 2:40 PM 7-26-2011 Ok 9° 10 AM Connie O'Neal

Connie O'Neal 1-2:50 PM 3:00 PM 7-27-2011 Connie O'Neal 1-2:50 PM 3:00 PM 7-28-2011 O.K. 9:30 AM Connie O'Neal Connie O'Neal

.92 1.05 1.84

c/c

24 of 63

Continued on Page

* Trent Box - Yardville Ham. Square Hydrant - pH - 7.85 CL/CL_2 - 1.26/1.14 - 1 service before location
Card # 1336 250 Fuser Rd (Med Arts Bldg) - pH - 7.73 CL/CL_2 - 1.33/1.49 - 1 service after location

Reviewed and Understood by

Signature Date Signature Date

APPENDIX D

TABLE 2-1

Required Removal of TOC by Enhanced Coagulation For Plants Using Conventional Treatment: Step 1 Removal Percentages[a, b]

SOURCE WATER TOC (mg/L)	SOURCE WATER ALKALINITY (mg/L as $CaCO_3$)		
	0 to 60	>60 to 120	>120[c]
>2.0 - 4.0	35.0%	25.0%	15.0%
>4.0 - 8.0	45.0%	35.0%	25.0%
>8.0	50.0%	40.0%	30.0%

Notes:

a. Enhanced coagulation and enhanced softening plants meeting at least one of the six alternative compliance criteria in Section 2.4 are not required to meet the removal percentages in this table.
b. Softening plants meeting one of the two alternative compliance criteria for softening in Section 2.4 are not required to meet the removal percentages in this table.
c. Plants practicing precipitative softening must meet the TOC removal requirements in this column.

Inconsistencies in Disinfection Byproducts Precursors Data

Date	TOC Raw Water	TOC Treated Water	Alkalinity	% TOC Removal	Comments
2/1/2011	5.55	1.11	46.90	**35**	Correct % of TOC Removal is 45
2/7/2011	5.94	1.21	45.30	**35**	Correct % of TOC Removal is 45
7/13/2011	4.86	1.41	38.00	**35**	Correct % of TOC Removal is 45
8/1/2011	4.46	1.55	52.00	**35**	Correct % of TOC Removal is 45
10/3/2011	4.72	1.85	32.80	**35**	Correct % of TOC Removal is 45
1/2/2013	4.56	1.01	37.00	**35**	Correct % of TOC Removal is 45
1/9/2013	2.21	1.06	**6.54**	35	TOC Raw/Treated Water Collected on 01/08/2013 at 9:04 AM Alkalinity on 01/08/2013 at 9:12 AM is 43.4 mg/L Alkalinity on 01/09/2013 at 10:53 AM is 42.8 mg/L

New Jersey Department of Environmental Protection
Water Supply Administration - Bureau of Safe Drinking Water
401 East State Street, P.O. Box 426
Trenton, New Jersey 08625-0426
Tel (609) 292-5550 Fax (609) 292-1654

Disinfection Byproduct Precursors Compliance Report

PC

System Name: Trenton Water Works
Address: Route 29 South
City: Trenton State: NJ Zip: 08604

PWSID # 1111001
Facility Name: Filtration
Facility ID #: 01

Number of paired TOC samples taken in quarter: 5

Period (check one): [X] 1st (Jan-March) [ ] 2nd (Apr - June) [ ] 3rd (July-Sept) [ ] 4th (Oct - Dec)

[ ] **Check here if not in compliance**

Source Sample Location: Delaware River/ Raw Sample

Treated Sample Location: Finished Water Sample

Sample Results

Month	Sample Date mm/dd/yy	Analysis Date mm/dd/yy	A Source Water TOC	B Treated Water TOC	C Source Water Alkalinity	D (1-(B/A)) x 100 = %	E Required TOC removal %	F Applicable Alternative criteria	G D/E
1	01/02/13	01/10/13	4.56 mg/l	1.01 mg/l	37.00 mg/l	77.85	35		
	01/09/13	01/10/13	2.21 mg/l	1.06 mg/l	6.54 mg/l	52.04	35		
			mg/l	mg/l	mg/l			Code	Value
			mg/l	mg/l	mg/l				
			mg/l	mg/l	mg/l				
		Monthly Averages	3.39 mg/l	1.04 mg/l	21.77 mg/l	64.94	35.00		1.86
2	02/04/13	02/21/13	2.55 mg/l	0.94 mg/l	36.10 mg/l	63.10	35		
	02/11/13	02/21/13	2.20 mg/l	0.90 mg/l	38.00 mg/l	59.27	35		
			mg/l	mg/l	mg/l			Code	Value
			mg/l	mg/l	mg/l				
			mg/l	mg/l	mg/l				
		Monthly Averages	2.38 mg/l	0.92 mg/l	37.05 mg/l	61.19	35.00		1.75
3	03/25/13	04/03/13	3.77 mg/l	1.03 mg/l	39.10 mg/l	72.68	35		
			mg/l	mg/l	mg/l				
			mg/l	mg/l	mg/l				
			mg/l	mg/l	mg/l				
			mg/l	mg/l	mg/l			Code	Value
		Monthly Averages	3.77 mg/l	1.03 mg/l	39.10 mg/l	72.68	35.00		2.08

H Compliance Determination If the average of Column G results for last twelve months < 1.0 not in compliance

Month	Previous Quarter 12-Feb	12-Mar	12-Apr	Previous Quarter 12-May	12-Jun	12-Jul	Last quarter 12-Aug	12-Sep	12-Oct	This Quarter 13-Jan	13-Feb	13-Mar	Running Annual Average
Value Col G	1.54	1.47	1.26	1.64	1.87	1.90	1.71	1.72	1.62	1.86	1.75	2.08	**1.70**

If more than five paired samples per month use continuation sheet See page 2 of form for additional notes and further information

[ ] **Check here if a continuation sheet used**

I certify that these samples were collected in accordance with procedures approved by the New Jersey Department of Environmental Protection

Name: Connie O'Neal [ ] Purveyor [X] Laboratory [ ] Approved Party

I certify that these samples were analyzed in accordance with procedures approved by the New Jersey Department of Environmental Protection

Name: Oommen V. Koppil [X] Laboratory [ ] Approved Party

If applicable:
Laboratory Name : QC Laboratoeis Laboratory ID # PA166

Form prepared by: [ ] Purveyor [ ] Laboratory [X] Approved Party

Charles T. Anzolut
Signature of Representative

Print Name: Charles T. Anzolut/AGRA Phone: 609-292-3379 Date: 4/10/13

QC Laboratories

Analytical Report

Account No:SA0030, AGRA ENVIRONMENTAL SERVICES DOVER NJ P.O. No: Inv. No: 1483965
Project No: SA0030 TRENTON, TRENTON WATER WORKS PWSID No: 1111001

Sample Number Sample Description
L4359882-4 1/8 DELIVERED
Received Date/Time/Temp 01/09/13 02:35pm 3.6 C Iced (Y/N): Y
Samp. Date/Time/Temp Sampled by
01/08/13 09:04am NA C Customer

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
TOTAL ORGANIC CARBON	SM 5310C	1.06 mg/l	0.500 mg/l	01/10/13 03:14PM TES

Sample Number Sample Description
L4359882-5 1/8 RAW
Received Date/Time/Temp 01/09/13 02:35pm 3.6 C Iced (Y/N): Y
Samp. Date/Time/Temp Sampled by
01/08/13 09:04am NA C Customer

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
TOTAL ORGANIC CARBON	SM 5310C	2.21 mg/l	0.500 mg/l	01/10/13 03:35PM TES

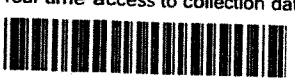
Sample Number Sample Description
L4359882-6 1/8 CENTRAL
Received Date/Time/Temp 01/09/13 02:35pm 3.6 C Iced (Y/N): Y
Samp. Date/Time/Temp Sampled by
01/08/13 12:10pm NA C Customer

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
TOTAL ORGANIC CARBON	SM 5310C	1.05 mg/l	0.500 mg/l	01/10/13 03:56PM TES

Notes:

A result of "ND" indicates that the analyte tested was either not detected or the concentration was below the RLs.
Definitions: NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC= Too numerous to count; pres=presumptive
A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
MCL= EPA recommended "maximum contaminant level", PLs = Customer-specific permit limits.
The test results meet all requirements of NELAC unless otherwise specified.
The report shall not be reproduced except in full without the written consent of the laboratory.
Unless otherwise specified, the Environmental and Food Chemistry testing except Field Parameters were performed by QC Inc. located at 1205 Industrial Blvd., Southampton, PA 18966; Pharmaceutical, Dairy and Food Microbiological tests were performed by QC Inc. located at 702 Electronic Dr., Horsham, PA 19044.
QCL Accreditations: Southampton Div: EPA ID PA00018; NELAP ID's: PA 09-00131, NJ PA166, NY 11223
State ID's: CT PH-0768, DE PA-018, MD 206, SC 89021001; FDA Reg. # : 2515238
ACL Div: State ID's: DE 00011, MD 138; Wind Gap Div: State ID's: PA 48-01334, NJ PA001
E. Rutherford Div: State ID: NJ 02015; Vineland Div: State ID: NJ 06005; Reading Div: State ID: PA 06-03543
The reported results relate only to the samples.
All samples are collected as "grab" samples unless otherwise identified.

Regulatory authorities are assessing substantial fines for testing omissions. Please track your sample collections and results on a weekly, monthly, or quarterly basis to ensure compliance. QC's internet program 'LIVE ACCESS' will provide you with real-time access to collection dates and results. Please contact Customer Service for further information on acquiring LIVE ACCESS.



Serial Number: 2550187

Sq. Vol rooms

Sample Date/ID	Sample Location	Sample Time	Analysis Date	Analysis Time	Boat Start	Boat Fuel	Tot Alk mg/L	Lot # H2SO4 T. Hard	Mg/L Ca	Analyst	Low Level Alkalinity mls	Low Level Alkalinity mg/L	DOC's w/ Alk, CO3 SA Values
1-3-13-14	Central	11:30	1-3	12:56pm	7.2	10.0	2.8	211026 00 - 3 (Rec. 1-12-13; DBd 12-6-13; Eyp/Kpl 3-13)	28.0				
1-3-13-16	Del. Petra	13:20	1-3	13:20	10.0	13.33	3.33		32.3				
1-4-13-17	Delivered	9:11	1-4	9:20	0.0	3.41	3.41		34.1		5.26	13.9	
1-4-13-18	East	9:42	1-4	9:38	3.41	5.03	1.62		116.2		7.17	14.7	
1-4-13-19	West	9:25	1-4	9:26	5.26	6.95	1.69		116.9				
1-4-13-20	Raw ①	9:30	1-4	9:42	7.17	11.17	4.0		40.0				
1-4-13-21	Raw ②	9:38	1-4	10:03	11.17	15.2	4.03		40.3				
1-4-13-20	Raw Sk	9:25	1-4	10:33	15.2	21.61	6.41		61.1				9.61.1
1-4-13-21	Central	10:30	1-4	20:00	0.0	2.94	2.94		28.4				
1-5-13-22	Del.	8:44	1-5	8:31	0.0	3.40	3.40		34.0		5.4	14.6	
1-5-13-23	East	8:27	1-5	8:31	3.4	5.13	1.73		17.3		7.31	14.5	
1-5-13-24	West	8:46	1-5	8:46	5.4	7.11	1.71		17.1				
1-5-13-25	Raw	8:55	1-5	8:55	7.37	11.6	4.23		42.3				
1-7-13-26	Central	11:45	1-7	11:43	11.9	15.1	3.20		32.0				
1-7-13-27	Deliv	9:00	1-7	9:05	5.53	9.13	3.61		36.1		2.53	14.2	
1-7-13-28	East	9:18	1-7	9:20	0.71	2.33	1.62		16.2		4.41	14.4	
1-7-13-29	West	9:30	1-7	9:29	2.53	4.19	1.66		16.6				
1-7-13-30	Raw	9:41	1-7	9:38	4.41	8.56	4.15		41.5				
1-7-13-31	Central	10:25	1-7	10:25	8.56	11.81	3.25		33.5				
1-7-13-32	DIS T# 08825	10:25	1-7	3:00	15.10	18.61	3.51		35.1				
1-7-13-33	Deliv	8:54	1-8	8:38	1.35	5.39	4.04		40.4				
1-8-13-34	East	8:44	1-8	8:49	5.39	7.28	1.89		18.9		7.51	16.6	
1-8-13-35	West	8:54	1-8	8:58	7.51	9.39	1.88		18.8		9.63	16.1	
1-8-13-36	Raw	9:05	1-8	9:12	9.63	13.97	4.34		43.4				
1-8-13-37	Central	10:10	1-8	9:47	13.17	17.39	3.33		33.5				
1-8-13-38	DIS T# 08846	10:10	1-8	2:40	17.32	20.90	3.58		35.8				
1-9-13-39	Raw ①	10:50	1-9	10:54	8.91	13.19	4.28		42.8				
1-9-13-39	Raw ②	11:05	1-9	11:05	13.14	17.48	4.34		46.4				1 90.4
1-9-13-39	Raw Sp	11:35	1-9	11:35	6.93	13.44	6.51		65.4				
1-9-13-40	Deliv	10:14	1-9	10:24	1.12	4.78	3.66		36.6				
1-9-13-41	East	10:23	1-9	10:38	4.78	6.68	1.90		19.0		6.39	16.9	
1-9-13-42	West	10:46	1-9	10:48	6.89	8.73	1.83		18.3		8.91	16.4	
1-9-13-43	Central	11:38	1-9	10:55	13.59	16.98	3.39		33.9				
1-10-13-44	Deliv	11 A	1-10	11:02	1.72	5.61	3.89		38.9				

Sample Date / ID	Sample Location	Sample Time	Analysis Date	Analysis Time	Burette Start	Burette End	Lot # H_2SO_4 Titrant	Total mL	mg/L $CaCO_3$	Analyst Initials	Low Level Alkalinity mg/L		0.05 N Na_2CO_3 SA mL	
*12-27-12-117	Raw(S)	9:30 A	12-27	9:44 A	14.95	19.92	2-1060-9-3 (Rec 1-12-12) Exp 3-1-13	4.97	49.7	TC			1	10
12-27-12-118	Central	10:32 A	12-27	11:12 A	19.92	22.65		2.73	27.3	TC				
12-28-12-119	Deliv	8:35 A	12-28	8:38 A	8.37	10.51		2.14	21.4	TC				
12-28-12-120	East	8:45 A	12-28	8:48 A	10.51	11.10		0.59	5.9	TC	11.28	4.1		
12-28-12-121	West	8:55 A	12-28	8:58 A	11.28	11.89		0.61	6.1	TC	12.07	4.3		
12-28-12-122	Raw	9:03 A	12-28	9:14 A	12.07	14.80		2.73	27.3	TC				
12-28-12-123	Central	11:40 A	12-28	2:43	14.80	17.93		3.13	31.3	TC				
12-29-12-124	Raw	10:40 AM	12-29	10:45 AM	17.50	20.54		3.04	30.4	JP				
12-29-12-125	DELIV	10:50 AM	12-29	10:55 AM	20.54	23.20		2.66	26.6	JP				
12-29-12-126	East	11:00 AM	12-29	11:05 AM	23.20	24.23		1.03	10.3	JP	24.39	8.7		
12-29-12-127	West	11:15 AM	12-29	11:20 AM	24.39	25.45		1.06	10.6	JP	25.00	9.1		
12-30-12-128	Central	12:30 PM	12-31	11:50 AM	25.82	28.33		2.51	25.1	JP				
12-31-12-129	DELIV	12:00 PM	12-31	12:05 PM	28.33	31.40		3.07	30.7	JP				
12-31-12-130	Raw	12:10 PM	12-31	12:15 PM	31.40	34.90		3.50	35.0	JP				
12-31-12-131	East	12:25 PM	12-31	12:30 PM	34.90	36.44		1.54	15.4	JP	36.50	14.8		
12-31-12-132	West	12:30 PM	12-31	12:35 PM	36.50	38.09		1.59	15.9	JP	38.40	12.8		
12-31-12-133	Central	12:20 PM	12-31	1:25 PM	38.40	40.99		2.59	25.9	JP				
1-01-13-01	Raw	6:51 AM	01-01	7:04 AM	0.0	3.5		3.5	35.0	TC				
1-01-13-02	East	7:06 AM	01-01	7:15 AM	3.5	4.82		1.32	13.2	TC	5.0	11.4		
1-01-13-03	West	7:19 AM	01-01	7:24 AM	5.0	6.4		1.40	14.0	TC	6.59	12.1		
*1-01-13-04	Deliv	7:25 AM	01-01	7:31 AM	6.59	9.59		3.0	30.0	TC				
*1-01-13-04	Deliv	7:25 AM	01-01	7:39 AM	9.59	12.6		3.01	31.0	TC	30.1			
*1-01-13-04	Deliv	7:25 AM	01-01	7:58 AM	12.6	18.1		5.5	55.0	TC			1	100
~~1-01-13-05~~	~~Central~~	~~9:50 AM~~	~~01-01~~	~~11:06 AM~~	~~18.1~~	~~21.95~~		~~3.85~~	~~38.5~~	~~TC~~	~~Hard Acid~~			
1-01-13-05	Central Recheck	9:50 AM	01-01	11:25 AM	0.0	2.61		2.61	26.1	TC	1-1-13			
1-2-13-06	Raw	10:25 AM	1-2	10:33 AM	0.0	3.7		3.7	37.0	TC				
1-2-13-07	East	10:34 AM	1-2	10:40 AM	3.7	5.1		1.4	14.0	TC	5.3	12.0		
1-2-13-08	West	10:43 AM	1-2	10:50 AM	5.3	6.74		1.44	14.4	TC	7.0	11.8		
1-2-13-09	Deliv	11 AM	1-2	11:10 AM	7.0	10.07		3.07	30.7	TC				
1-2-13-10	Central	11:44 AM	1-2	12:57 PM	0.0	2.71		2.71	27.1	TC				
1-2-13-11	DIST# 08756	1:10 PM	1-2	2:40 PM	2.75	7.72		4.97	49.7	TC				
1-3-13-12	Raw	10:00 AM	1-3	10:07 AM	0.0	3.89		3.89	38.9	TC				
1-3-13-13	East	10:12 AM	1-3	10:18 AM	3.89	5.31		1.42	14.2	TC	5.52	12.6		
1-3-13-14	West	10:24 AM	1-3	10:34 AM	5.52	6.95		1.43	14.3	TC	7.17	12.1		

Continued on Page

Read and Understood By

Signed Date Signed Date

BSDW - 20 Revised 02/02

New Jersey Department of Environmental Protection
Water Supply Administration - Bureau of Safe Drinking Water
401 East State Street, P.O. Box 426
Trenton, New Jersey 08625-0426
Tel (609) 292-5550 Fax (609) 292-1654

March 2011

TOC 1st Q 2011

Disinfection Byproduct Precursors Compliance Report

PC

System Name: Trenton Water Works | PWSID # 1111001
Address: Filtration Plant, Route 29 | Facility Name: Filtration Plant
City: Trenton | State: NJ | Zip: 08604 | Facility ID #: 01

Number of paired TOC samples taken in quarter: 6

Period (check one): [X] 1st (Jan-March) [ ] 2nd (Apr - June) [ ] 3rd (July-Sept) [ ] 4th (Oct - Dec)

[ ] **Check here if not in compliance**

Source Sample Location: Influent Port | Treated Sample Location: Delivered Water Port

Sample Results			A	B	C	D	E	F		G
Month	Sample Date mm/dd/yy	Analysis Date mm/dd/yy	Source Water TOC	Treated Water TOC	Source Water Alkalinity	(1-(B/A)) x 100 = %	Required TOC removal %	Applicable Alternative criteria		D/E
1	01/03/11	01/12/11	3.53 mg/l	1.10 mg/l	42.00 mg/l	68.84	35			
	01/10/11	01/12/11	2.28 mg/l	1.12 mg/l	46.00 mg/l	50.88	35			
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l			Code	Value	
		Monthly Averages	2.91 mg/l	1.11 mg/l	44.00 mg/l	59.86	35.00			1.71
2	02/01/11	02/08/11	5.55 mg/l	1.12 mg/l	46.90 mg/l	79.82	35			
	02/07/11	02/08/11	5.94 mg/l	1.21 mg/l	45.30 mg/l	79.63	35			
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l			Code	Value	
		Monthly Averages	5.75 mg/l	1.17 mg/l	46.10 mg/l	79.72	35.00			2.28
3	03/01/11	03/13/11	3.70 mg/l	1.27 mg/l	31.00 mg/l	65.68	35			
	03/08/11	03/13/11	4.07 mg/l	1.02 mg/l	25.00 mg/l	74.94	35			
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l			Code	Value	
		Monthly Averages	3.89 mg/l	1.15 mg/l	28.00 mg/l	70.31	35.00			2.01

H Compliance Determination If the average of Column G results for last twelve months < 1.0 not in compliance

Month	Previous Quarter			Previous Quarter			Last quarter			This Quarter			Running Annual Average
	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Dec-10	
Value Col G	1.77	1.78	2.33	1.29	2.21	1.49	1.62	1.75	1.77	1.71	2.28	2.01	**1.83**

If more than five paired samples per month use continuation sheet See page 2 of form for additional notes and further information

[ ] **Check here if a continuation sheet used**

I certify that these samples were collected in accordance with procedures approved by the New Jersey Department of Environmental Protection

Name: Connie O'Neil [ ] Purveyor [X] Laboratory [ ] Approved Party

I certify that these samples were analyzed in accordance with procedures approved by the New Jersey Department of Environmental Protection

Name: Thomas Kunes [X] Laboratory [ ] Approved Party

If applicable:
Laboratory Name : QC Laboratories | Laboratory ID # PA166

Form prepared by: [ ] Purveyor [ ] Laboratory [x] Approved Party

Signature of Representative | Print Name: Charles T. Anzolut | Phone 973-989-0010 | Date 4/5/11

This form is available from the DEP web site at http://www.state.nj.us/dep/watersupply

BSDW - 20 Revised 02/02

New Jersey Department of Environmental Protection
Water Supply Administration - Bureau of Safe Drinking Water
401 East State Street, P.O. Box 426
Trenton, New Jersey 08625-0426
Tel (609) 292-5550 Fax (609) 292-1654

3q 2011 TOC Sept.

Disinfection Byproduct Precursors Compliance Report

PC

System Name: Trenton Water Works
Address: Route 29 South
City: Trenton Water Works State: NJ Zip: 08604

PWSID # 1111001
Facility Name: Filtration
Facility ID #: 01

Number of paired TOC samples taken in quarter [ ]

Period (check one): [ ] 1st (Jan-March) [ ] 2nd (Apr - June) [X] 3rd (July-Sept) [ ] 4th (Oct - Dec)

[ ] **Check here if not in compliance**

Source Sample Location: Influent Port

Treated Sample Location: Delivered Port

Sample Results

Month	Sample Date mm/dd/yy	Analysis Date mm/dd/yy	A Source Water TOC	B Treated Water TOC	C Source Water Alkalinity	D (1-(B/A)) x 100 = %	E Required TOC removal %	F Applicable Alternative criteria Code	F Value	G D/E
1	07/04/11	07/15/11	2.99 mg/l	1.30 mg/l	35.00 mg/l	56.52	35			
	07/13/11	07/15/11	4.86 mg/l	1.41 mg/l	38.00 mg/l	70.99	35			
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
		Monthly Averages	3.93 mg/l	1.36 mg/l	36.50 mg/l	63.75	35.00			1.82
2	08/01/11	08/09/11	4.46 mg/l	1.55 mg/l	52.00 mg/l	65.25	35			
	08/08/11	08/09/11	2.66 mg/l	1.51 mg/l	48.70 mg/l	43.23	35			
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
		Monthly Averages	3.56 mg/l	1.53 mg/l	50.35 mg/l	54.24	35.00			1.55
3	09/05/11	09/15/11	3.29 mg/l	1.56 mg/l	39.80 mg/l	52.58	35			
	09/13/11	09/15/11	3.52 mg/l	1.43 mg/l	32.00 mg/l	59.38	35			
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
		Monthly Averages	3.41 mg/l	1.50 mg/l	35.90 mg/l	55.98	35.00			1.60

H Compliance Determination If the average of Column G results for last twelve months < 1.0 not in compliance

Month	Previous Quarter			Previous Quarter			Last quarter			This Quarter			Running Annual Average
	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	
Value Col G	1.62	1.75	1.77	1.71	2.28	2.01	1.48	2.18	1.57	1.82	1.55	1.60	1.78

If more than five paired samples per month use continuation sheet See page 2 of form for additional notes and further information

[ ] **Check here if a continuation sheet used**

I certify that these samples were collected in accordance with procedures approved by the New Jersey Department of Environmental Protection

Name: C. O'Neal [ ] Purveyor [X] Laboratory [ ] Approved Party

I certify that these samples were analyzed in accordance with procedures approved by the New Jersey Department of Environmental Protection

Name: Thomas Hoos [X] Laboratory [ ] Approved Party

If applicable:

Laboratory Name : QC Laboratories Laboratory ID # PA166

Form prepared by: [ ] Purveyor [ ] Laboratory [X] Approved Party

Signature of Representative Print Name Charles T. Anzolut Phone 973-989-0010 Date 10/7/11

1/12/12

New Jersey Department of Environmental Protection
Water Supply Administration - Bureau of Safe Drinking Water
401 East State Street, P.O. Box 426
Trenton, New Jersey 08625-0426
Tel (609) 292-5550 Fax (609) 292-1654

Disinfection Byproduct Precursors Compliance Report

PC

System Name: Trenton Water Works
Address: Route 29 South
City: Trenton Water Works State: NJ Zip: 08604

PWSID # 1111001
Facility Name: Filtration
Facility ID #: 01

Number of paired TOC samples taken in quarter: 6

Period (check one): [ ] 1st (Jan-March) [ ] 2nd (Apr - June) [ ] 3rd (July-Sept) [X] 4th (Oct - Dec)

[ ] **Check here if not in compliance**

Source Sample Location: Influent Port

Treated Sample Location: Delivered Port

Sample Results

Month	Sample Date mm/dd/yy	Analysis Date mm/dd/yy	A Source Water TOC	B Treated Water TOC	C Source Water Alkalinity	D (1-(B/A)) x 100 = %	E Required TOC removal %	F Applicable Alternative criteria Code	F Value	G D/E
1	10/03/11	10/12/11	4.72 mg/l	1.85 mg/l	32.80 mg/l	60.81	35			
	10/10/11	10/12/11	3.60 mg/l	1.47 mg/l	41.00 mg/l	59.17	35			
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
		Monthly Averages	4.16 mg/l	1.66 mg/l	36.90 mg/l	59.99	35.00			1.71
2	11/03/11	11/10/11	3.91 mg/l	1.45 mg/l	47.00 mg/l	62.92	35			
	11/07/11	11/10/11	2.19 mg/l	1.17 mg/l	49.00 mg/l	46.58	35			
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
		Monthly Averages	3.05 mg/l	1.31 mg/l	48.00 mg/l	54.75	35.00			1.56
3	12/05/11	12/15/11	4.00 mg/l	1.02 mg/l	35.70 mg/l	74.50	35			
	12/12/11	12/15/11	2.98 mg/l	1.00 mg/l	34.00 mg/l	66.44	35			
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
			mg/l	mg/l	mg/l					
		Monthly Averages	3.49 mg/l	1.01 mg/l	34.85 mg/l	70.47	35.00			2.01

H Compliance Determination If the average of Column G results for last twelve months < 1.0 not in compliance

Month	Previous Quarter Jan-11	Feb-11	Mar-11	Previous Quarter Apr-11	May-11	Jun-11	Last quarter Jul-11	Aug-11	Sep-11	This Quarter Oct-11	Nov-11	Dec-11	Running Annual Average
Value Col G	1.71	2.28	2.01	1.48	2.18	1.57	1.82	1.55	1.60	1.71	1.56	2.01	1.79

If more than five paired samples per month use continuation sheet See page 2 of form for additional notes and further information

[ ] **Check here if a continuation sheet used**

I certify that these samples were collected in accordance with procedures approved by the New Jersey Department of Environmental Protection

Name: C. O'Neal [ ] Purveyor [X] Laboratory [ ] Approved Party

I certify that these samples were analyzed in accordance with procedures approved by the New Jersey Department of Environmental Protection

Name: Thomas Nims [X] Laboratory [ ] Approved Party

If applicable:
Laboratory Name : QC Laboratories Laboratory ID # PA166

Form prepared by: [ ] Purveyor [ ] Laboratory [X] Approved Party

Signature of Representative Print Name: Charles T. Anzolut Phone 973-989-0010 Date 1/3/2012

This form is available from the DEP web site at http://www.state.nj.us/dep/watersupply

Inconsistencies in Disinfection Byproducts Precursors Data

Date	TOC Raw Water	TOC Treated Water	Alkalinity	% TOC Removal	Comments
2/1/2011	5.55	1.11	46.90	**35**	Correct % of TOC Removal is 45
2/7/2011	5.94	1.21	45.30	**35**	Correct % of TOC Removal is 45
7/13/2011	4.86	1.41	38.00	**35**	Correct % of TOC Removal is 45
8/1/2011	4.46	1.55	52.00	**35**	Correct % of TOC Removal is 45
10/3/2011	4.72	1.85	32.80	**35**	Correct % of TOC Removal is 45
1/2/2013	4.56	1.01	37.00	**35**	Correct % of TOC Removal is 45
1/9/2013	2.21	1.06	**6.54**	35	TOC Raw/Treated Water Collected on 01/08/2013 at 9:04 AM Alkalinity on 01/08/2013 at 9:12 AM is 43.4 mg/L Alkalinity on 01/09/2013 at 10:53 AM is 42.8 mg/L

APPENDIX E

- the roof platform toe bar height was dimensionally too small,
- the roof platform access openings from the shell ladder and from the roof ladder were not equipped with closure chains,
- the interior container ladder width and head clearance were dimensionally too small,
- the interior container ladder was not equipped with a safe-climbing device,
- the interior container ladder rungs were not of slip-resistant design, and
- the riser opening in the bowl was not equipped with a safety grate.

If the Owner wishes to fully comply with OSHA and safety-related standards, it is recommended that these deficiencies be rectified.

AWWA and Operational Deficiencies: There were sanitary and operating deficiencies on this tank as well. These deficiencies included:

- the screening on the overflow pipe discharge was torn,
- a hole was located in the roof,
- misaligned anode hand hole cover plates resulted in uncovered openings in the roof plates,
- the roof manhole cover was not locked,
- the roof vent pallet was warped,
- gaps up to 3/16 in. were noted around the vent gasket,
- the inlet/outlet pipe was not equipped with a protective cover, and
- what appeared to be a lead joint was observed at the pipe-to-floor intersection.

These deficiencies should be corrected.

The safety-related, sanitary, and operating deficiencies listed above are not intended to be a complete list of deficiencies on this tank. The Owner should refer to the complete report text and accompanying photographs for a complete account of all observed deficiencies.

This evaluation and the reporting of the condition of this tank do not warrant the original structural condition of the tank or any of the original design for seismic loadings. Likewise, recommendations for this tank do not include modifications which may be required for compliance with present structural codes.

PHOTOGRAPHS:

Color photographs were taken of the visible portions of the foundations, the tank interior and exterior and are included as a part of this report. The significant photographs are keyed to the observations.

NOMENCLATURE:

The terms used in describing the various components of steel water tanks are unique to the industry. In fact, the terms vary from firm to firm and from person to person. In an attempt to define the terms used in this report, a sketch of the general type of tank covered is included at the end of the narrative portion

- the cables which extended across the balcony created a head hazard,
- the shell/roof ladder width was dimensionally too small,
- the shell/roof ladder rungs were not of a slip-resistant design,
- the shell/roof ladder was not equipped with a safe-climbing device,
- cables extended up the shell/roof ladder side rail,
- the shell/roof ladder safety cage width was dimensionally too small,
- the spacing between horizontal bars on the tower ladder safety cage exceeded the maximum allowed spacing intervals,
- the roof platform ladder safety cage width was dimensionally too small,
- the roof platform and safety railing minimum handrail height was dimensionally too small,
- the mid-rails on the roof platform and safety railing were dimensionally too small,
- the gaps between the roof and toe bar exceeded the maximum allowed gap width,
- the roof platform access opening was not equipped with closure chains,
- the circular manhole cover was hinged to open toward the center of the roof,
- the interior container ladder width and minimum head clearance were dimensionally too small,
- the interior container ladder safe-climbing device was loose,
- the rust tubercles on the interior container ladder safe-climbing device could prevent its proper operation,
- the interior container ladder rungs were not of slip-resistant design,
- one of the interior container ladder brackets was bent, and
- the riser opening in the bowl was not equipped with a safety grate.

If the Owner wishes to fully comply with OSHA and safety-related standards, it is recommended that these deficiencies be rectified.

AWWA and Operational Deficiencies: There were sanitary and operating deficiencies on this tank as well. These deficiencies included:

- the screening on the overflow pipe was clogged,
- the screening on the overflow pipe discharge was not adequately sized,
- missing and misaligned anode hand hole cover plates resulted in uncovered openings in the roof plates,
- the cover overlap on the circular roof manhole was dimensionally too small,
- the roof manholes were not locked,
- the flanged connection at the roof vent did not appear to be equipped with a gasket, and
- the roof vent pallet was warped.

These deficiencies should be corrected.

The safety-related, sanitary, and operating deficiencies listed above are not intended to be a complete list of deficiencies on this tank. The Owner should refer to the complete report text and accompanying photographs for a complete account of all observed deficiencies.

This evaluation and the reporting of the condition of this tank do not warrant the original structural condition of the tank or any of the original design for seismic loadings. Likewise, recommendations

- the roof platform access opening was not equipped with closure chains,
- the interior container ladder width and minimum head clearance were dimensionally too small,
- the interior container ladder rungs were not of slip-resistant design,
- the interior container ladder was not equipped with a safe-climbing device,
- significant corrosion and metal loss were noted on the interior container brackets and bolts, and
- the riser opening in the bowl was not equipped with a safety grate.

If the Owner wishes to fully comply with OSHA and safety-related standards, it is recommended that these deficiencies be rectified.

AWWA and Operational Deficiencies: There were sanitary and operating deficiencies on this tank as well. These deficiencies included:

- the screening on the overflow pipe was clogged,
- the screening on the overflow pipe discharge was not adequately sized,
- two holes were located in the roof,
- misaligned anode hand hole cover plates resulted in uncovered openings in the roof plates,
- the roof manholes were not locked,
- the roof vent pallet was warped, and
- the vent did not appear to be equipped with a gasket.

These deficiencies should be corrected.

The safety-related, sanitary, and operating deficiencies listed above are not intended to be a complete list of deficiencies on this tank. The Owner should refer to the complete report text and accompanying photographs for a complete account of all observed deficiencies.

This evaluation and the reporting of the condition of this tank do not warrant the original structural condition of the tank or any of the original design for seismic loadings. Likewise, recommendations for this tank do not include modifications which may be required for compliance with present structural codes.

PHOTOGRAPHS:

Color photographs were taken of the visible portions of the foundations, the tank interior and exterior and are included as a part of this report. The significant photographs are keyed to the observations.

NOMENCLATURE:

The terms used in describing the various components of steel water tanks are unique to the industry. In fact, the terms vary from firm to firm and from person to person. In an attempt to define the terms used in this report, a sketch of the general type of tank covered is included at the end of the narrative portion of this report. Also, to aid in reference to the columns, the ladder column is referred to as column 1 and the remaining 7 columns are numbered clockwise. **Warning: Some appurtenances on this tank may be referred to as erection or rigging attachments, lugs, or brackets. This does not mean that**