

Fifteenth Quarterly Report

**United States Environmental Protection Agency
Administrative Order No. CWA-04-2010-4772**

**Period
April 1, 2014 –
June 30, 2014**

July 2014

Submitted by:



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SECTION I:

ACTIONS DURING THE FIFTEENTH QUARTER



SECTION I

ACTIONS DURING THE FIFTEENTH QUARTER

A. Introduction

Item 18 of the Administrative Order (AO) requires the City to submit quarterly reports. Those reports are due the 28th day of the month following the end of the quarter. They are to describe actions taken toward achieving compliance with the AO. This section of the report will deal with Management, Operation, Maintenance (MOM) matters, as well as remediation activities.

B. Funding

The City has secured additional SRF funds to complete the work described in the Remediation Plan beyond those reported in the Thirteenth Quarterly Report. The State was as slow in responding to this request as they were with the \$18 million.

C. System Evaluation and Rehabilitation Plans

The mini-basins (EPIII and IPIV) in the East Plant sewer shed are nearing completion. When completed, the East Plant sewer shed will be complete. That work should be completed in the sixteenth quarter. Post-construction flow monitoring, smoke testing, and manhole inspections are underway.

The City has secured sites for the three equalization basins identified in the rehabilitation plan. Geotechnical investigations have been completed. It is expected that construction will begin in fall 2014.



Construction has been bid and awarded for the Y-12 and Central City sewer sheds. The West End sewer shed construction should commence in the sixteenth quarter. The Turtle Park sewer shed will be designed during the sixteenth quarter.

D. Management, Operations, and Maintenance Programs

1. Information Management System

During the period, the City began utilizing the SL-RAT inspection equipment to assist in locating blocked sewer lines.

Pump Stations

- 485 weekly preventive maintenance work orders generated and completed.
- 72 monthly preventive maintenance work orders generated and completed.
- 45 quarterly preventive maintenance work orders generated and completed.
- 13 semi-annual preventive maintenance work orders generated and completed.
- 13 annual preventive maintenance work orders generated and completed.
- 8 pump station inspection work orders were generated for rain events.
- 34 work orders generated by the maintenance crew (not including PMs, and Rain Events)
- Total-to-date of 7,322 work orders generated in the Infor system for the WWTP maintenance crew.

Gravity Sewer

- As needed training continues.
- FOG asset routes in April, May, and June scheduled and completed.
 - 6 work orders assigned to Code Enforcement for failed FSE FOG inspections
- SSOs documented in the Infor system as required



- 193 work orders generated by the gravity crews (not including Call Center, Routing and Rain Events)
- Total-to-date of 2,279 work orders generated in the Infor system for the gravity crews.

Call Center

- Total-to-date of 6,028 work orders generated in the Infor system by the Call Center.
- 713 work orders generated during this quarter in the Infor system by the Call Center.
 - 32 work orders called in for “Check Sewer Problem” with 63% the owner’s problem

GIS

The City of Oak Ridge continues to add to and update the GIS mapping system. During this quarter the GIS Specialist integrated the sewer system GIS data into the Granite XP software. Going forward, the inspections are going to be asset based instead of project based. Consequently, two training sessions (office and field) are being scheduled with CUES. Work continues on loading approximately 22,000 inspection pictures from 2010 and 2011 that will be linked to the GIS mapping system.

The GIS Specialist collaborated with our Program Manager, LDA Engineering, in order to streamline the process of integrating the flow meter data into a FlowLink SQL database. As a result, the data is no longer limited to just those employees with the FlowLink Pro software, it is now viewable via an internal website.

The City of Oak Ridge continues the process of updating the base data GIS layers (streets, addresses, parcels, etc.) thus providing the field personnel more accurate geographic information.



2. Engineering

By-Pass Pumping Connections

By-pass pumping connections will be installed at the remaining seven pump stations when they are replaced or updated.

- Palisades #4 Pump Station
 - Pumps were bid during the previous quarter and ordered during this quarter. Preliminary site work has begun with completion of the replacement station by October 31, 2014.
- Palisades #1 Pump Station
- Palisades #2 Pump Station
- Palisades #3 Pump Station
- Castlewood Pump Station (completed)
- Westview Pump Station (completed)
- Peninsula (formerly Gregory's) Pump Station (completed)

Supervisory Control and Data Acquisition (SCADA)

The SCADA components were ordered during a previous quarter, were delivered in May 2014 and are scheduled for installation and expected operation by December 31, 2014.

3. Operations

City of Oak Ridge Program Coordination updates:

- a. Using the City's newly created Administrative Hearing Officer to hear FOG citations
- b. Continued new building permits to the FOG program for food service establishments (FSE) as certificate of occupancy requirement
- c. Frequent FSE Manager changes continue to cause problems with education and additional inspection follow ups.



Collection

East Plant Sewer Shed

- Sewer rehab contractors are now working in the East Plant Sewer Shed. As rehab contractors finish a mini system, city crews will move in to clean, CCTV, inspect manholes and smoke test.

Cleaning and CCTV Inspection

- The rehab work is currently underway in the East Plant Sewer Shed. As the rehab contractors complete a mini system, the contractor will clean and CCTV the lines that were repaired, all other sewer lines in that mini system will be cleaned and CCTV by city crews.

Manhole Inspections

- Sewer rehab contractors are now working in the East Plant Sewer Shed. As rehab contractors finish a mini system, city crews will inspect the manholes.

Flow Monitoring

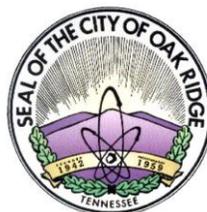
- City personnel continue to monitor the sewer flows during rain and dry weather.
- There are currently eighteen (18) flow meters strategically located throughout the city. The Emory Valley Sewer Shed has flow meters installed for post construction flow monitoring, and some of the East Plant Sewer Shed flow meters have been removed for construction but will be reinstalled for post construction flow monitoring.

Rain Gauges

- The three (3) rain gauges are recording rainfall data in the East, West and Center of the city. The central rain gauge being at the Water Treatment Plant is the primary used to call rain events of 0.5" or more.

Rain Events

- For this quarter the City of Oak Ridge has had a total of eight (8) rain events totaling .5" or more of rain.



Rainfall Data,

- Monthly rainfall amounts for the City of Oak Ridge recorded at the Water Treatment Plant for this quarter.
 - April 3.11”
 - May 2.91”
 - June 4.47”

SSOs

- 2 - SSOs during this quarter
 - 0 - wet weather overflows
 - 2 - dry weather overflow

Safety Training

- All Public Works employees attend monthly safety meetings.
- This quarter topics were
 - April – Excavations: Hazard Recognition in Trenching and Shoring Update.
 - May – Work Zone Safety Practices
 - June – Weather Related Emergency Preparedness



SECTION II:

**OTHER GENERAL
COMMENTS**



SECTION II

OTHER GENERAL COMMENTS

The City and EPA have had discussions concerning the National Nuclear Security Administration's (NNSA) Y-12 facility. The City recognizes they own the collection system and hold the NPDES permit. However, the Y-12 facility (an independent customer) operates at a level higher than city or state government. That facility, from a practical perspective, is not the same as any other industrial customer with a service lateral.

A letter from B&W Y-12 indicating their activity relative to VI reduction occurred during the quarter is Appendix A.

The State of Tennessee has renewed the NPDES permit for both of the City's wastewater treatment plants. The Turtle Park plant has a condition requiring a nutrient management plan. The permit recognizes the rehabilitation work and the expected benefits to the creek. Quarterly reports are required as a permit condition. It is the intent of the City to combine these reports and submit to both the EPA and TDEC.

The management plan requires two complete seasons of monitoring beginning in 2015. The management plan/monitoring results are to be submitted as an engineering report in 2017.



SECTION III:

SSO'S DURING FIFTEENTH QUARTER



EPA Sanitary Sewer Overflow Summary (See Attached SSO Reports for Details)

15th Quarterly Report - April 1, 2014 to June 31, 2014

Start Date	St Name	St #	Est Tot Flow (Gal)	Explain OF Cause	Other Measures	Flow in Surface	Name of Surface Water
5/24/2014	Jefferson Avenue	332	15	City continues work to correct I&I		<input type="checkbox"/>	
5/24/2014	Monterey Road	200	210	In plant overflow. Operator left air to digester on overnight and foamed over top onto ground. Contained sludge. Did not get in drain.	Vacuum Truck	<input type="checkbox"/>	

CITY OF OAK RIDGE

REPORT DATE: 5/28/2014

SANITARY SEWER OVERFLOW FINAL REPORT

NPDES PERMIT # TN0024155

LOCATION DATA

LOCATION: 332 Jefferson Ave.

1st Occurrence at this location? Y N

If No, Date of Last Occurrence:

POINT OF OCCURENCE

Manhole Clean Out In-House Backup

Pump Station Name: None or None or None

If Manhole; Give Mini-system # W12 Map Page # C-8

Manhole # W12-C8-21 Force Main:

FLOW DATA

Start Date: 5/24/2014 Time: 1:45 AM PM End Date: 5/24/2014 Time: 2:15 AM PM

Duration 30 min hours/minutes Est. Flow Rate: .5 gpm Estimated Total Flow: 15 gallons

CAUSES

(Check all that apply)

Rainfall [Estimated amount in] Power Outage Equipment Failure

Broken Sewer Blocked line from Roots Grease Collapse Other

Explain causes of overflow:

REMEDIAL MEASURES TO CORRECT, PREVENT OR MINIMIZE FUTURE OCCURANCES

Line was: Jet Rodded Nozzle Root Saw Lid Removed Lined Equipment Repair

Line will be: cleaned and TV'd for needed repair: Other: City continues work to correct I&I

WHERE DID DISCHARGE GO (Check all that apply)

Did flow run to surface water: Yes No Name of surface water:

Ran on/in: Ground & absorbed into soil Ditch Storm Sewer

Basement Back-up No. of basements Use (i.e., commercial, residential)

Other (describe)

Notified Public: Yes No How: City Web Site The Oak Ridger Signs Posted Date:

Names of Responders: Chris Webb, Jeremy Justice, Eugene Wilson

Report completed by [Signature] Title: Operator Specialist Date: 5-29-14

Reviewed by [Signature] Title: Operations & Maint Manager Date: 5/28/14

Initial TDEC Notification By: Chris Webb Date: 5/24/14

After Review & Notification to TDEC [Signature] Title: Operations Manager Date: 5-29-14

Final Review [Signature] Title: Public Works Director Date: 6/2/14

Final Report Transmitted to TDEC By: [Signature] Date: 6/2/14

CITY OF OAK RIDGE

REPORT DATE: 5/27/2014

SANITARY SEWER OVERFLOW FINAL REPORT

NPDES PERMIT # TN0024155

LOCATION DATA

LOCATION: 200 Monterey Road Wwtp

1st Occurrence at this location? Y N

If No, Date of Last Occurrence:

POINT OF OCCURENCE

Manhole Clean Out In-House Backup

Pump Station Name: None or None or None

If Manhole; Give Mini-system #

Map Page #

Manhole #

Force Main:

FLOW DATA

Start Date: 5/24/2014 Time: 6:30 AM PM

End Date: 5/24/2014 Time: 7:00 AM PM

Duration 30 hours/minutes Est. Flow Rate: 7 gpm Estimated Total Flow: 210 gallons

CAUSES

(Check all that apply)

Rainfall [Estimated amount in] Power Outage Equipment Failure

Broken Sewer Blocked line from Roots Grease Collapse Other

Explain causes of overflow: In plant overflow. Operator left air to digester on overnight and foamed over top onto ground. Contained sludge. Did not get into storm drain.

REMEDIAL MEASURES TO CORRECT, PREVENT OR MINIMIZE FUTURE OCCURANCES

Line was: Jet Rodded Nozzle Root Saw Lid Removed Lined Equipment Repair

Line will be: cleaned and TV'd for needed repair: Other: Vacuum Truck

WHERE DID DISCHARGE GO (Check all that apply)

Did flow run to surface water: Yes No Name of surface water:

Ran on/in: Ground & absorbed into soil Ditch Storm Sewer

Basement Back-up No. of basements Use (i.e., commercial, residential)

Other (describe) Contained and vacuumed up and put back into plant

Notified Public: Yes No How: City Web Site The Oak Ridger Signs Posted Date:

Names of Responders: Bob Currier, Mitchell Price, Eugene Wilson, Chris Webb and Jeremy Justice

Report completed by Bob Currier Title: Treatment Plant Operations Supervisor Date: 5-27-14

Reviewed by _____ Title: _____ Date: _____

* Initial TDEC Notification By: Bob Currier Date: 5/24/14

After Review & Bob Currier Title: Operations Manager Date: 5-28-14
Notification to TDEC

Final Review Bob Currier Title: Public Works Director Date: _____

Final Report Transmitted to TDEC By: Kathy Stout Date: 5-28-14

* Initial notification sent out 5/24/14 at 10:54am. Resent notification on 5/26/14 at 7:17am. Due to computer glitch, unsure if first notification was sent.

* Two 24-hr notices were sent, the 2nd had wrong date (5-24-13), there was only one overflow, T8f

APPENDIX A:

B&W Y-12

CORRESPONDENCE



**Status of Y-12 National Security Complex
Sanitary Sewer Inflow and Infiltration Program
June 30, 2014**

A project has been initiated to line approximately 1,300 lineal feet of 8" and 10" vitrified clay pipe. This line runs from the old Biology Complex to the 18" main sewer line which parallels East Fork Poplar Creek (EFPC). This line was selected as a result of the smoke testing conducted in 2012. The scope of work has been defined and a contract has been awarded to the Avrett Company to perform the lining. This is the same company which performed the work in the spring near the Y-12 Garage. They employ the use of a fiberglass liner with an ultraviolet light curing process. The transition from B&W Y-12 to Consolidated Nuclear Security delayed the procurement process somewhat, but the schedule for completion of the work sometime this summer remains.

Per a revised National Pollutant Discharge Elimination System permit issued to Y-12 on April 1, 2014, the Y-12 Complex no longer augments the flow in EFPC via transfer of raw water from the Clinch River. This revision became effective on May 1, 2014, and the raw water flow was terminated on April 30. This has resulted in a 60 percent reduction in flow in EFPC which may have the unintended consequence of reduced infiltration into the sewer system from the creek bank into gaps in the nearby sewer line. To date, the data is inconclusive as to this possible reduction. However, dry weather flows will continue to be monitored and any conclusive evidence will be reported when it becomes available.