

Nineteenth Quarterly Report

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

**Period
April 1, 2015 –
June 30, 2015**

July 2015

Submitted by:



Nineteenth Quarterly Report

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

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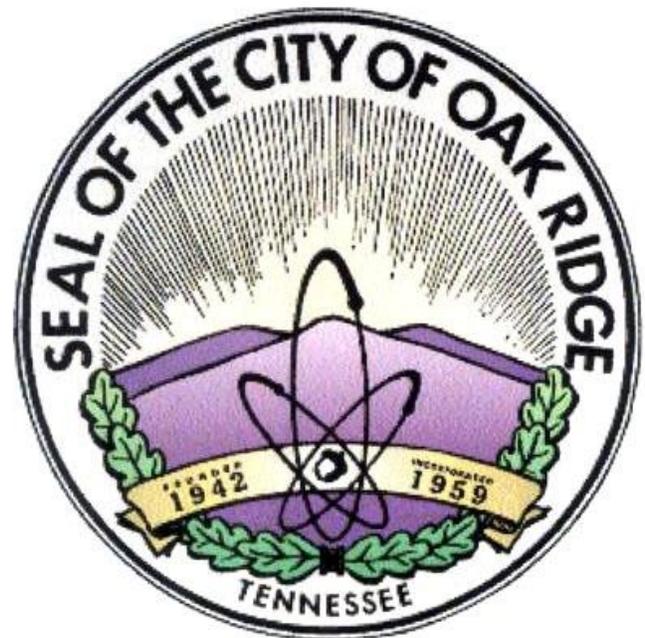
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SECTION I:

ACTIONS DURING THE NINETEENTH QUARTER



SECTION I

ACTIONS DURING THE NINETEENTH QUARTER

A. INTRODUCTION

On September 27, 2010 the United States Environmental Protection Agency (EPA) issued Administrative Order No. CWA-04-2010-4722 for the City of Oak Ridge to comply with four (4) major categories of activities. They are:

- a. Document sanitary sewer overflows
- b. Develop system evaluation and rehabilitation plans
- c. Develop sewer overflow response plan
- d. Develop management, operations and maintenance programs.

The order required a quarterly progress report to be submitted by the 28th of the month following the end of a quarter. The intent of the order is for compliance within five (5) years. This report is number nineteen which means that the City is nearing completion of the activities outlined in the remediation plan. Table I-1 is a summary and status of the activities a-d listed above.

Table I – 1 EPA Administrative Order CWA-04-2010-4772 Summary and Status
Accomplishments for Sections 16 and 18 of Administrative Order
<u>SECTION 16</u>
A. Sanitary Sewer Overflows Submitted: November 3, 2010
B. System Evaluation and Rehabilitation Plans (SERP)
i. Capacity Assessment Plan Submitted: March 23, 2011
ii. Capacity Assessment Report Submitted: April 30, 2012
iii. Sewer System Evaluation Summary Submitted: March 23, 2011



Table I – 1
EPA Administrative Order CWA-04-2010-4772
Summary and Status

- iv. WCTS Remediation Plan
 - Submitted: August 28, 2012
 - Project Status at June 30, 2015
 - East Plant I – complete
 - East Plant II – complete
 - East Plant III – completed
 - East Plant IV – substantially complete
 - Y-12 I – complete
 - Central City I – substantially complete
 - Turtle Park I – under construction, 64% complete, estimated completion date 9/19/2015
 - Emory Valley Equalization Basin – under construction, project approximately 60% complete
 - Scarboro Equalization Basin – under construction, project approximately 40% complete
 - East Plant Equalization Basin – under construction, project approximately 30% complete

- C. Sanitary Sewer Overflow Response Plan
 - Submitted: February 24, 2011
 - Revision 1 Submitted: July 2012

- D. Management, Operation and Maintenance Programs
 - i. Information Management System (IMS) Programs
 - Submitted: June 23, 2011
 - ii. Engineering Programs
 - Submitted: September 23, 2011
 - iii. Pump Station Operations Programs
 - Submitted: September 23, 2011
 - iv. Maintenance Programs
 - Submitted: September 23, 2011
 - Addendum Submitted: November 16, 2011

Section 18

Including this report, the City of Oak Ridge has submitted nineteen quarterly reports in a timely manner



B. CURRENT STATUS OF CONSTRUCTION

As can be seen from Table I-1 all sewer rehabilitation projects are complete except three (3). Two (2) of these were substantially complete at the end of the nineteenth quarter and should be closed out by the end of the twentieth quarter. The third project should be functional by the end of the twentieth quarter.

There are three (3) equalization basins under construction. These units meet the definition of “other major capital improvement” of Section D-iv-f.

C. Management, Operations, and Maintenance Programs

1. Information Management System

During the period, the City continued utilizing the SL-RAT inspection equipment to assist in locating blocked sewer lines and continued the development of the process for documentation of the findings in Infor. The documentation process will continue during the next quarter and will be consistent with the documentation of failed FOG inspections.

Pump Stations

- 469 weekly preventive maintenance work orders generated and completed.
- 67 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.
- 10 annual preventive maintenance work orders generated and completed.



- 4 pump station inspection work orders were generated for rain events.
NOTE: Beginning June 16, 2015, the newly installed and operational SCADA system monitors all but three (3) pump stations for rain events. The three (3) unmonitored stations have been added to the manhole rain event route in Infor. The pump station rain event route is no longer required.
- 5 SCADA alarm work orders generated from 5/18/2015 through 6/30/2015. See Infor work order 80535 in the Appendix of this report.
- 33 work orders generated by the maintenance crew (not including PMs, Rain Events and SCADA Alarms)
- Total-to-date of 9,830 work orders generated in the Infor system for the WWTP maintenance crew.

Gravity Sewer

- FOG asset routes in April, May and June were scheduled and completed.
 - 4 work orders assigned to Code Enforcement for failed FSE FOG inspections
- SSOs documented in the Infor system as required
- SL-RAT inspection routes (post rehabilitation construction) generated and completed for mini systems E8, E6, E9, E10 and E12 in the East Plant Sewer Shed
- 135 work orders generated by the gravity crews (not including Call Center, Routing and Rain Events)
- Total-to-date of 3,152 work orders generated in the Infor system for the gravity crews.

Call Center

- Total-to-date of 8,880 work orders generated in the Infor system by the Call Center.
- 723 work orders generated during this quarter in the Infor system by the Call Center.
 - 45 work orders called in for “Check Sewer Problem” with 60% the owner’s problem



GIS

During this quarter, the GIS Specialist continued to add to and update the GIS mapping system.

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 #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)
- Palisades #4 (completed)

Supervisory Control and Data Acquisition (SCADA)

The SCADA System for all of the pump stations (*except Palisades 1, 2 and 3 see above*) in the collection system are now connected to a new cellular SCADA system, allowing the SCADA data to be transmitted via cellular modem.

The SCADA System has two monitoring stations, one located at the Wastewater Treatment Plant and one located at the Water Treatment Plant. One of these monitoring stations is manned 24/7 and any alarm conditions occurring at any station is reported in real time. The operator receiving the alarm will notify the Wastewater Treatment Plant Maintenance Crew stand-by personnel for the required action.

Each monitoring station provides real time viewing of critical conditions at each station. These conditions include:

- Wet Well Level with high and low alarms
- Pump status including On/Off, Fault Condition i.e. High Temp, Seal Failure, High/Low Current and general fault



- Pump starts for last hour and cumulative for previous 24 hours
- Average Pump Starts per day for last 28 days
- Pump Run Times
- Power and Phase monitoring
- Wet well level trends
- Any break in communications

The SCADA System is designed to record all alarm conditions to the Infor System as well as pump run times, pump starts per hour and per day and average amp draw per 24 hours. This SCADA data is currently being stored on a SQL server that will allow the information to be eventually stored in the Infor system every night at midnight.

3. Operations

Fats, Oils, and Grease

Quick Stats:

- 116 establishments in program
- 4 open FOG violations being addressed
- Resolved 3 of 7 reported by Public Works identified FSE failures since last quarterly report
- Resolved 5 of 5 Code Enforcement reported FSE failures since last quarterly report
- Random Inspected 10 FSE locations since last quarterly report

City of Oak Ridge Program Coordination updates:

- Finalizing draft changes to FOG administrative policy
- Frequent FSE Manager changes continue to cause problems with education and additional inspection follow ups.
- The public works sewer crew continues to work in conjunction with the City Codes division notifying the department of any grease trap violations discovered.
- The grease traps are routinely checked by the Public Works Department's Sewer Crew on a 90 day cycle and documented in the Infor system.



- e. FSE grease traps found to be in violation are turned over to the Codes division for the enforcement of corrective actions.

Collection

SL-RAT

- The City of Oak Ridge Public Works department purchased a Sewer Line Rapid Assessment Device Tool (SL-RAT) in January 2014. The SL-RAT is specifically designed as a cost effective tool to help prioritize maintenance operations based on a rapid assessment of a blockage within gravity fed sewer line segments.

The device relies on the fact that air flowing through the free space in a pipe acts very similarly to water. It consists of an acoustic transmitter (TX) and receiver (RX). The TX introduces a known sound into the pipe typically through a manhole. The RX listens at an adjacent manhole. Using a sophisticated algorithm to measure the sound energy it hears, the RX is able to make a blockage assessment that is immediately displayed to the user and also provides the ability to transfer that data to a computer file that can be further manipulated and analyzed by the SL-RAT user.

The TX sits on top of an open manhole and the RX sits on top of an open adjacent manhole. It uses the sound waves instead of sight to determine if a sewer line is open, partially or completely blocked. The TX emits a repeating series of tones similar to a musical scale to the RX which rates the sewer line segment on a scale of 1–10 with one of five possibilities:

Rating 10	No significant obstructions
Rating 7-9	Minor impediments
Rating 4-6	Impediments within the pipe
Rating 1-3	Significant impediments
Rating 0	Blockage

With a rating of 0 on the scale, the section of the pipe diameter may have been reduced in size due to a blockage of roots, grease or other debris. This sewer line would immediately be scheduled for further inspection to be cleaned and videoed to determine if there are any needed repairs.



With a rating of 1 to 6, this section of pipe would not need immediate attention but should be scheduled for further inspection in the near future.

With a rating of 7 or above, the pipe diameter is the correct size or close enough to the correct size that there are no blockages recorded. This sewer line would not need any further maintenance at this time.

Previous sewer maintenance inspections consisted of cleaning and CCTV each segment of sewer line which is extremely time consuming and labor intensive but was the only way to determine the pipe condition. The SL-RAT allows the sewer line to be assessed in minutes instead of hours. The crews can quickly and easily check the sewer lines in an area and clean and CCTV only those that are indicated as needing attention.

During a demonstration of the SL-RAT in December 2013, before it was purchased, the Public Works sewer maintenance crew tested 12,125 linear feet of sewer lines and determined 2,700 feet or roughly 22% needed to be cleaned and CCTV. The potential for saving time and labor were quickly realized by the number of lines that were checked compared to the number of lines that actually needed attention.

With this new technology, the City will be able to greatly reduce the need for cleaning and CCTV each and every sewer line segment and concentrate more on the lines that were discovered with the SL-RAT to be partially or totally blocked, possibly needing repairs. This will save the City a tremendous amount of time and money allowing the crews to inspect the system quicker and more efficiently.

Cleaning and CCTV Inspection

- As the rehabilitation work is winding down in the Turtle Park Sewer Shed, city crews are continuing to follow the rehab contractors as they complete a sewer shed.
- City crews will SL-RAT each sewer shed by routing each mini system in Infor.
- All line segments that SL-RAT rate a six (6) to (1) will be grouped into a route work order for sewer line cleaning and CCTV to determine any needed repairs.



- All line segments that rate a zero (0), have an Infor work order generated to clean and CCTV the line within one (1) work day.
- Any needed repairs discovered by the SL-RAT inspection will be documented in the INFOR system and depending on the scope of the work will either be repaired by city crews or slated for a future rehabilitation contract. Even though the city is checking all line segments, the contractor is still responsible for the cleaning and post CCTV of the lines that were repaired by the contractor.

Manhole Inspections

- The manhole inspection begins with a visual inspection as the city crews test the sewer system using the SL-RAT, each and every manhole will be opened for the SL-RAT.
- The manholes are then visually inspected by the crews and documented either as good or needing a more in depth inspection for repairs with the pole camera.
- The city has purchased a new GIS module and software and has upgraded the CUES pole camera and converted the city's old CUES CCTV van for manhole inspections.
- Any needed manhole repairs discovered will be documented in the INFOR system and depending on the scope of work will either be repaired by city crews or slated for a future manhole rehabilitation contract.

Flow Monitoring

- City personnel continue to monitor the sewer flows during rain and dry weather.
- There are currently twenty four (24) flow meters strategically located throughout the city.
- The city will continue flow monitoring pre and post construction as the rehabilitation work continues.
- Areas that are having increased flows during rain events will be document in the INFOR system and work orders will be generated for smoke tested these areas during dry months.



Sewer Easements

- The sewer easements are evaluated in conjunction with the initial SL-RAT inspection.
- Sewer easements discovered needing to be cleared are documented by the crews and put into the INFOR system with work orders generated to clear the easements before the sewer line cleaning and CCTV work begins.

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 gauge 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 five (5) 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 5.66"
 - May 0.74"
 - June 2.89"

SSOs

- 5 - SSOs during this quarter
 - All four (4) SSOs were dry weather overflows.
 - One was a wet weather issue at the treatment plant.

Safety Training

- All Public Works employees attend monthly safety meetings.
- This quarter topics were:
 - April – Work Related Noise and Protection
 - May – Carbon Monoxide: Prevention, Detection and Treatment
 - June – How To Beat THE Heat – Work Smart In Extreme Weather Conditions



SECTION II:

**REQUEST FOR
EXTENSION OF TIME**



SECTION II

REQUEST FOR EXTENSION OF TIME

Section 19 of the City of Oak Ridge EPA Administrative Order CWA-04-2010-4772 (AO) allows for the request (in writing) for any extension of time to comply with the requirements of the AO.

The City of Oak Ridge EPA Remediation Plan consists of seven (7) sewer rehabilitation projects and the Equalization Basins project that includes construction at three (3) sites. Four (4) of the sewer rehabilitation projects have been completed, two (2) are substantially complete and one (1) is scheduled for completion by mid-September 2015.

The Equalization Basins project is the most expensive project included in the Remediation Plan. The Equalization Basins project is considered a major construction project for the City of Oak Ridge. With all construction projects, there can be unforeseen circumstances that cause delays to complete the project. The complexities of site location, land acquisition, project specifications, site subsurface and inclement weather has caused this project to be the most time consuming to engineer and construct.

Utilizing information provided by the City, contractor, resident inspectors and program manager, the City of Oak Ridge respectfully requests a time extension of ninety (90) days until December 28, 2015 to complete the construction and start-up activities for the Equalization Basins Project fulfilling the requirements of EPA Administrative Order CWA-04-2010-4772.



SECTION III:

**SSO'S DURING
NINETEENTH QUARTER**



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

19th Quarterly Report - April 1, 2015 to June 30, 2015

Start Date	St Name	St #	Est Tot Flow (Gal)	Explain OF Cause	Other Measures	Flow in Surface	Name of Surface Water
4/1/2015	Cairo Lane	151	4000	At East Plant - pump failed to come on due to transducer failure.	Checked out instrumentation and reset equipment	<input checked="" type="checkbox"/>	Ernie's Creek
4/2/2015	Kentucky Avenue	85	4250	GOT 5 GALLONS OF TOWELS	CITY CONTINUES WORK TO CORRECT I&I	<input type="checkbox"/>	
4/3/2015	Monterey Road	200	100	When flow increased rapidly due to heavy rain, system flushed out a lot of grit causing #2 screen to stop up and overflow. Overflow overcame floor drains and approx. 100 gallons flowed onto roadway through open overhead door.	This door will be required to be closed at all times except when working in screening area. This will contain any future problems to inside the building area. We are going to check and clean out distribution boxes on screens.	<input checked="" type="checkbox"/>	East Fork Poplar Creek
5/11/2015	Manhattan Avenue	235	120	Blockage caused by roots, flushable wipes and a glass bottle.		<input type="checkbox"/>	
6/29/2015	California Avenue	165	180	Roots and flushable wipes blocked the invert of manhole E11-D21-9 causing the SSO. Debris could possibly have been caused by a plumber cleaning a private sewer lateral. The upper and lower line segment are slip lined and have no taps. A work order will be written to check the invert for any sharp edges on the liner pipe that may catch debris and cause a blockage.	City continues work to correct I&I	<input type="checkbox"/>	

CITY OF OAK RIDGE
SANITARY SEWER OVERFLOW FINAL REPORT

REPORT DATE: 4/6/15

NPDES PERMIT # TN0024155

LOCATION DATA

LOCATION: 151 Cairo Lane

1st Occurrence at this location? Y N

If No, Date of Last Occurrence: 7/28/14

POINT OF OCCURENCE

Manhole Clean Out In-House Backup Pump Station Name: None or None or None

If Manhole; Give Mini-system # E13B Map Page # G-22 Manhole # G22-14 Force Main:

FLOW DATA

Start Date: 4/1/15 Time: 9:19 AM PM End Date: 4/1/15 Time: 9:39 AM PM

Duration 20 min. hours/minutes Est. Flow Rate: 200 gpm Estimated Total Flow: 4,000 gallons

CAUSES (Check all that apply)

Rainfall [Estimated amount in] Power Outage Broken Sewer Blocked line from Roots
Grease Equipment Failure Collapse Other Explain causes of overflow below:

At East Plant - pump failed to come on due to transducer failure

REMEDIAL MEASURES TO CORRECT, PREVENT OR MINIMIZE FUTURE OCCURANCES

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

Line will be: Cleaned and TV'd for needed repair: Other (enter below):

Checked out instrumentation and reset equipment

WHERE DID DISCHARGE GO (Check all that apply)

Did flow run to surface water: Yes No Name of surface water: Ernie's Creek

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 Website The Oak Ridger Signs Posted Date:

Names of Responders: Jay Fink, Jim Roberts

Report completed by Ronnie Hill Title: Maintenance Supervisor Date: 4/6/15

Reviewed by Tom Roberts Title: Maintenance Superintendent Date: 4/6/15

Initial TDEC Notification by: Bob Currier Date: 4/1/15

After Review & Scott Jackson Title: Operations Manager Date: 4-7-15
Notification to TDEC

Final Review Bob Currier Title: Public Works Director Date: 4/7/15

Final Report Transmitted to TDEC by Chris Weil Date: 4-7-15

CITY OF OAK RIDGE
SANITARY SEWER OVERFLOW FINAL REPORT

REPORT DATE: 4/2/15

NPDES PERMIT # TN0024155

LOCATION DATA

LOCATION: 85 Kentucky 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 # E1 Map Page # E17 Manhole # E1-E17-45 Force Main:

FLOW DATA

Start Date: 4/2/15 Time: 9:25 AM PM End Date: 4/2/15 Time: 10:50 AM PM

Duration 1 hr 25 ⁰/₆₀ hours/minutes Est. Flow Rate: 50 gpm Estimated Total Flow: 4250 gallons

CAUSES (Check all that apply)

Rainfall [Estimated amount in] Power Outage Broken Sewer Blocked line from Roots
Grease Equipment Failure Collapse Other Explain causes of overflow below:

Got 5 gallon of towels

REMEDIAL MEASURES TO CORRECT, PREVENT OR MINIMIZE FUTURE OCCURANCES

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

Line will be: Cleaned and TV'd for needed repair: Other (enter below):

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 Website The Oak Ridger Signs Posted Date:

Names of Responders: David Patterson, Pat Mrochek, Jeremy Justice

Report completed by David Patterson Title: Sanitary Maint. Specialist Date: 4/2/15

Reviewed by _____ Title: _____ Date: _____

Initial TDEC Notification by: David Patterson Date: 4/2/15

After Review & Pat Mrochek Title: Operations Manager Date: 4-2-15
Notification to TDEC

Final Review David Curran Title: Public Works Director Date: 4/6/15

Final Report Transmitted to TDEC by: David Patterson Date: 4.6.15

CITY OF OAK RIDGE
SANITARY SEWER OVERFLOW FINAL REPORT

REPORT DATE: 4/6/15

NPDES PERMIT # TN0024155

LOCATION DATA

LOCATION: 200 Monterey Road

1st Occurrence at this location? Y N

If No, Date of Last Occurrence: 2/10/15

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: 4/3/15 Time: 11:16 AM PM End Date: 4/3/15 Time: 11:20 AM PM

Duration 4 min. hours/minutes Est. Flow Rate: 25 gpm Estimated Total Flow: 100 gallons

CAUSES (Check all that apply)

Rainfall [Estimated amount in] Power Outage Broken Sewer Blocked line from Roots

Grease Equipment Failure Collapse Other Explain causes of overflow below:

When flow increased rapidly due to heavy rain, system flushed out a lot of grit causing #2 screen to stop up and overflow. Overflow overcame floor drains and approx. 100 gallons flowed onto roadway through open overhead door.

REMEDIAL MEASURES TO CORRECT, PREVENT OR MINIMIZE FUTURE OCCURANCES

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

Line will be: Cleaned and TV'd for needed repair: Other (enter below):

This door will be required to be closed at all times except when working in screening area. This will contain any future problems to inside the building area. We are going to check and clean out distribution boxes on screens.

WHERE DID DISCHARGE GO (Check all that apply)

Did flow run to surface water: Yes No Name of surface water: East Fork Poplar Creek

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 Website The Oak Ridger Signs Posted Date:

Names of Responders: Bob Currier, Mike Smith

Report completed by Bob Currier Title: Treatment Plant Operations Supervisor Date: 4/6/15

Reviewed by _____ Title: _____ Date: _____

Initial TDEC Notification by: Bob Currier Date: 4/3/15

After Review & Scott Jackson Title: Operations Manager Date: 4-7-15
Notification to TDEC

Final Review Bob Currier Title: Public Works Director Date: 4/7/15

Final Report Transmitted to TDEC by: Cindy Will Date: 4.7.15

CITY OF OAK RIDGE
SANITARY SEWER OVERFLOW FINAL REPORT

REPORT DATE: 5/14/15

NPDES PERMIT # TN0024155

LOCATION DATA

LOCATION: 235 Manhattan 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 # W3 Map Page # K13 Manhole # W3-K13-47 Force Main:

FLOW DATA

Start Date: 5/11/15 Time: 4:17 AM PM End Date: 5/11/15 Time: 6:15 AM PM

Duration 2 hrs hours/minutes Est. Flow Rate: 1 gpm Estimated Total Flow: 120 gallons

CAUSES (Check all that apply)

Rainfall [Estimated amount in] Power Outage Broken Sewer Blocked line from Roots
Grease Equipment Failure Collapse Other Explain causes of overflow below:

Blockage caused by roots, flushable wipes and a glass bottle.

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 (enter below):

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 Website The Oak Ridger Signs Posted Date:

Names of Responders: Todd Baker, Joey Wheeler

Report completed by Todd Baker Title: Operations & Maint. Manager Date: 5/14/15

Reviewed by Todd Baker Title: specialist Date: 5/14/15

Initial TDEC Notification by: Todd Baker Date: 5/12/15

After Review & Scott Palmer Title: Operations Manager Date: 5-15-15
Notification to TDEC

Final Review Greg Curdery Title: Public Works Director Date: 5/15/15

Final Report Transmitted to TDEC by: Cindy Weil Date: 5.15.15

CITY OF OAK RIDGE
SANITARY SEWER OVERFLOW FINAL REPORT

REPORT DATE: 6/29/15

NPDES PERMIT # TN0024155

LOCATION DATA

LOCATION: 165 California 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 # E11 Map Page # D21 Manhole # E11-D21-9 Force Main:

FLOW DATA

Start Date: 6/29/15 Time: 8:30 AM PM End Date: 6/29/15 Time: 10:00 AM PM

Duration 1 hr. 30 ⁺ hours/minutes Est. Flow Rate: 2 gpm Estimated Total Flow: 180 gallons

CAUSES (Check all that apply)

Rainfall [Estimated amount in] Power Outage Broken Sewer Blocked line from Roots
Grease Equipment Failure Collapse Other Explain causes of overflow below:

Roots and flushable wipes blocked the invert of manhole E11-D21-9 causing the SSO. Debris could possibly have been caused by a plumber cleaning a private sewer lateral. The upper and lower line segment are slip lined and have no taps. A work order will be written to check the invert for any sharp edges on the liner pipe that may catch debris and cause a blockage.

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 (enter below):

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 Website The Oak Ridger Signs Posted Date:

Names of Responders: David Patterson, Jansen Hamm, Kris Hahn, Thomas Martin,

Report completed by Rich Lawen Title: Operations & Maint. Manager Date: 7/1/15

Reviewed by David Patterson Title: Sewer Specialist Date: 7/1/15

Initial TDEC Notification by: David Patterson Date: 6/29/15

After Review & Scott Jackson Title: Operations Manager Date: 7-1-15
Notification to TDEC

Final Review Joey Curran Title: Public Works Director Date: 7/1/15

Final Report Transmitted to TDEC by: Cindy Will Date: 7.1.15

APPENDIX A:

Y-12 CORRESPONDENCE



**Status of Y-12 National Security Complex
Sanitary Sewer Inflow and Infiltration (I&I) Program
June 30, 2015**

Three open conveyances on the north side of Building 9201-5 were recently discovered. These were in the slab of a previously demolished building and are presumed to be floor or toilet drains from restroom facilities in the building. These have been permanently grouted closed and are no longer allowing I&I of storm water into the sanitary sewer system.

The next planned I&I repair effort is to rehabilitate thirteen manholes along the same section of piping that was lined in September and October 2014. The contractor will use a spray-on liner technique which precludes the need to wash and rinse the interior of the manholes prior to application of the epoxy. Hence, there will be no additional water introduced into the sanitary sewer collection system and the potential for a second disruption of latent mercury is minimal. This activity was initially planned to start in June 2015. However, it was delayed due to issues with the subcontract. It is currently planned to commence in late July or early August 2015.

There are no other planned I&I repair efforts currently planned for fiscal year (FY) 2015 (which ends on September 30, 2015). The manhole rehabilitation project will exhaust the remaining available funding for this year. Additional funding is being requested for FY 2016 and beyond in the upcoming budget planning cycles. With the realization that discharges of mercury are a real possibility with any washing and rinsing activities, the need to capture and treat these waters has the potential to significantly increase the cost above what normal operational savings can provide.

APPENDIX B:

**INFOR WORK ORDER
80535**



Work Order	80535	SCADA ALARM, PENINSULA PUMP STATION	Scheduled Start	06/25/2015
Created By	TLWARD		Scheduled End Date	07/25/2015
Created	06/25/2015		Status	Referred to Manager
Problem Address				
Caller First Name	PENINSULA PS			
Caller Last Name				
Caller Phone #				

Parent WO		WO Type	INSP
Department	PW-WWTP-MAINT Public Works - Wastewater Treatment Plant - Maintenance	Call Type	
PM Schedule		Priority	1
Cost Code	22650 Maintenance - Sewer Mains	Warranty	
Problem Code		Safety	
Project		Assigned To	4485
Standing WO (Trade)	47208	Reported By	4193
		Assigned By	
		Date Started	06/25/2015 00:00
		Date Completed	
		Time Completed	

Equipment	PS:E30-G24-2013 (*)	Peninsula, MELTON LAKE PENINSULA (formerly Greggorys)
	T-PS:E30-G24-2013 (*)	Peninsula Pump Station (formerly Greggorys)
	PUMP-STATIONS (*)	PW Pump Stations
	SEWER-SYSTEM (*)	PW Sewer System
	PUBLIC-WORKS (*)	Public Works
	COR (*)	City of Oak Ridge
Manufacturer		
Model		
Serial Number		
Location	T-PS:E30-G24-2013 (*)	Peninsula Pump Station (formerly Greggorys)

WO/PM Comments

TLWARD [06/25/2015 02:52:12]:
SCADA ALARM AT PENINSULA POWER OUTAGE,ALSO CHECKED ALL PALISADES PUMP STATIONS.

Asphalt Concrete Top Soil Paint Other: _____

Chlorine Residual: _____

Cross Connection Inspection: Yes No Results: _____