CITY OF
OAK RIDGE

Office of the City Manager

POST OFFICE BOX 1 • OAK RIDGE, TENNESSEE 37831-0001

December 15, 2008

Mr. Dennis Sayre
United States Environmental Protections Agency, Region 4
Water Programs Enforcement Branch
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960

Re: Information Request Relative to NPDES Permit No. TN0024155 and TN0024171

Dear Mr. Sayre:

This letter and the enclosures are in response to your letter dated November 20, 2008, addressed to the City of Oak Ridge Mayor Tom Beehan. The letter requested information on sanitary sewer overflows (SSO) in the portion of the City sewer collection system that terminate at one of the Wastewater Treatment Plants (WWTP) operated under the referenced NPDES permit.

Response to EPA Enclosure A - SSO Program:

1.

a) The City's Sanitary Sewer Collection System (SSS) consists of approximately 1.1 million feet of gravity sewer pipe and 5,700 manholes.

b) Enclosure A is a list of pumping stations in the City's SSS.

c) Enclosure B is a list of known constructed overflows in the SSS. The amount of inflow and infiltration (I/I) entering the City's collection system has steadily decreased as rehabilitation of the system progresses reducing occurrences of SSO's at these locations. The last known overflow at one of these locations was in July 2005 at the Athens Road location. The line downstream of that location along with the adjacent manhole has been replaced. Repairs for the expressed purpose of eliminating the need for the constructed overflows have been completed at four of the other locations and the entire gravity line downstream of the intersection of Nebraska Avenue and Oak Ridge Turnpike (ORTP) is currently being replaced as part of a state TDOT project to widen the ORTP. The forcemain serving the Oak Hills pump station previously discharged into this line. It is being replaced and extended to a point of termination near the Turtle Park pumping station; thereby reducing the hydraulic load on the gravity line. In addition, the Marina pump station was replaced in 1998 for the expressed purpose of eliminating overflows.

d) The average design flow for the Turtle Park WWTP as reported in NDPES discharge permit #TN0024155 is 30 MGD. The average design flow for the Clinch River Industrial Park (CRIP) WWTP as reported in NPDES discharge permit #TN0024171 is 0.01 MGD.

e) The peak design flow for both WWTP's is the same as the average design flow.

f) The annual flow in gallons for the Turtle Park WWTP for the past four years and 2008 to date is as follows:

2004	2,154,885,000
2005	1,749,786,000
2006	1,705,598,000
2007	1,475,973,000
2008	1,460,163,000

The annual flow in gallons for the Clinch River Industrial Park (CRIP) WWTP for the past four years and 2008 to date is as follows:

2004	1,896,955
2005	1,248,392
2006	1,274,683
2007	9,555,579
2008	1,016,845

g) The population of the City of Oak Ridge based on the 2000 census is 27,387. At that time, the entire population was served by the Turtle Park WWTP. The CRIP is a package type WWTP serving a small and remote industrial area containing a few businesses but no residences.

2.

a, b, d, f, g, h, i, and j)

Section 2 requests a listing of all SSO's for the previous five-year period along with eleven individual pieces of information for each SSO. A list is not available; however, I have enclosed copies (Enclosure C) of the Sanitary Sewer By-Pass reports, in chronological order beginning with the most recent. I have also included an example report showing the location of the letter code where the information requested in items 2a, 2b, 2d, 2f, 2g (comment section of form), 2h, 2i, and 2j is displayed.

c) Specific information for this item is not available. The City responds to SSO's during business hours as soon as personnel and equipment can be moved to the location after the SSO has been discovered and reported. The City maintains a "Stand By" schedule in order to have personnel available to respond quickly to incidents that occur during night and weekend hours.

e) Specific information correlating the need for and completion of a repair or the lack thereof to each by-pass report is not available. As stated above, the City responds to SSO's when they are reported and restores flow by whatever means may be necessary and then determines if a repair is needed. In the event the need for a repair is discovered, the location is maintained until it can be repaired permanently. Please see also 2k and 3a.

g) This information, when reported, is contained in the Comments section of the Sanitary Sewer By-Pass Report.

k) In 1991, the City entered an agreement with the Tennessee Department of Environment and Conservation (TDEC) to rehabilitate the City's sanitary sewer collection system. To date, the program has produced 18 contracts related to the rehabilitation of the collection system, four for replacement of pumping stations, and two to increase the capacity of the Turtle Park WWTP. Please see Enclosure D for a history. The original methodology was

to divide the City into mini-systems, prioritize those systems, and then construct repairs in the systems determined to be in greater need of repair. At that time when a blockage occurred that resulted in an SSO, the blockage was cleared using conventional cleaning methods and the line was inspected via closed circuit TV. Unless a structural failure was found, the location was placed on a "drilling" list to be cleaned frequently with the intention of repairing the location during planned construction rehab in the mini-system. Structural failures are repaired as soon as possible using an emergency point repair contract. As the program progressed, the list of locations on the "drilling" list waiting for repair grew beyond the ability of the sewer maintenance crews to maintain. In 2003, Public Works adopted the concept of correcting all known problem locations contained on the "drilling" list along with those in the particular mini-system. Since that time, the City has let two contracts, Contract "J", COR 03-13 and Contract "K", COR 05-07, for repairs and rehabilitation of the collections system and is currently designing a third, Contract "N," in anticipation of a bid letting in spring of 2009. Instant benefits were seen after the completion of Contract "J" in 2005. Insurance claims for overflow related damage decreased and City personnel are now able to do pro-active maintenance instead of spending their time reacting to blockages.

At present, the City's policy of corrective action when an SSO is reported requires City personnel to restore flow and then inspect the line to determine if the cause is man made (i.e. grease, rags, debris, etc.) and not likely to occur again, or if there is a problem that requires repair. In the event of the later situation, the line is monitored and cleaned periodically until it can be included in a rehabilitation contract for repair. The repair is tracked via a database recently created by Public Works, as described in item 3a.

3.

The City does not have a formal written plan pertaining exclusively to SSO's; however, as stated above, it does have an agreement with TDEC to conduct a sewer rehabilitation program to reduce the incidents of SSO's and correct them. The basis of that program is a three-volume study of the City's collection system prepared in 1993 by Lamar Dunn and Associates, the City's engineering consultant, that contains recommendations on means and methods for conducting the program. A complete description of the program is well beyond the scope of this letter; however, TDEC remains pleased with the City's progress allowing the program to operate on a voluntary basis as opposed to operating under a moratorium.

a) The City has recently created and implemented a database designed to track the need for repairs at specific locations. The data cells do not contain all the information contained in question 2, but instead contain information pertaining to the location, the cause/history, the recommended repair method, and whether the repair will be conducted in-house or using a contractor. It also displays the date of completion. Public Works feels it is more beneficial to track repairs as opposed to just tracking SSO's because there are many repairs in the database that have been discovered through routine cleaning and inspection at locations where an SSO has not occurred. By correcting these as soon as practical after they are discovered, Public Works is able to prevent overflow incidents before they occur.

b) Public Works knows of no way to measure the volume of an overflow stream. The estimate is based solely on the observer's judgment.

c) As stated in item 2 k), sewer lines where SSO's have occurred are inspected via closed circuit TV to determine if a defect exists that caused or contributed to the cause of the overflow.

d) Containment and cleanup procedures are location and situation specific. In most cases, Public Works is able to restore flow using conventional cleaning methods. In worse case

scenarios, Public Works will capture and contain as much overflow as is possible using a vactor with self-contained storage or by using the vactor in conjunction with its full size tanker. The City owns by-pass pumping equipment that can be used if needed. Cleanup of paved areas where overflows have occurred is accomplished by washing debris to the curb and then capturing it using the vactor. Grassy areas are raked by City personnel then hosed down and limed for odor control.

e) City personnel clean areas where backups have occurred inside buildings where the backup is confined to a fixture such as a toilet or bathtub. In cases where the flow has entered the living area, a professional cleaning service capable of disinfection of the area is employed at the City's expense. In the event of damage, the City's insurance carrier is notified and a professional damage appraiser responds.

f) During wet weather events, City personnel monitor the locations specified in Enclosure B; however, to date rehabilitation efforts have reduced the number and duration of wet weather SSO's occurring in the City's wastewater collection system. City personnel usually use wet weather events as an opportunity to look for sources of I/I by walking lines where problems are suspected and pulling manhole lids visually inspecting the manholes for clear water and then using investigative methods such as smoke testing and closed circuit TV to inspect the suspect line segments.

g, h, and i) After an incident, the appropriate person, usually a crew foreman, fills out the by-pass report. The report is sent to the WWTP supervisor who in turn sends it to TDEC via fax within the 24-hour reporting period. The WWTP supervisor includes any by-pass reports that may have occurred during any given month to TDEC along with his monthly report to that agency.

In compliance with your request, the information contained in this response and the accompanying certification is in accordance with 40 C.F.R. § 122.22:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Sincerely,

James R. O'Connor
City Manager

JRC/ks

Enclosures

pc: Gary M. Cinder, P.E., Director of Public Works
Paul E. Davis, P. E., TDEC
John West, TDEC