

**Appendix D. National Pollutant Discharge
Elimination System Noncompliance
Summaries for 2012**

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D.1 Y-12 National Security Complex

A. National Pollutant Discharge Elimination System Permit

Analysis of water samples taken at Outfall 200 during March and April 2012 revealed a noncompliance of the Y-12 National Security Complex (Y-12 Complex) National Pollutant Discharge Elimination System (NPDES) permit average monthly value for cadmium. Outfall 200 is tied to a large drain system that includes most of the entire western half of the Y-12 Complex.

At Outfall 200 samples were taken on March 6, March 20, and March 29, 2012. Cadmium results obtained from analysis of the samples were 0.00106 mg/L, 0.00114 mg/L, and 0.00133 mg/L, respectively. All values were below the permit daily maximum value. The average of March cadmium values (0.00118 mg/L) exceeded the monthly average permit value of 0.001 mg/L cadmium.

During April, special monitoring for cadmium was conducted at Outfall 200 and upstream locations in the storm drain system. All values of cadmium obtained from Outfall 200 monitoring were below the permit maximum limit. However, the average of all values measured was 0.00131 mg/L, which is above the permit average value limit of 0.001 mg/L.

The cause of the elevated cadmium level at Outfall 200 is not exactly known. It may have been associated with upstream remediation projects including cleaning and lining of portions of the drain system upstream of Outfall 200. A review of groundwater data in the general area of the storm drain system indicates values similar to those now being measured at Outfall 200. This may indicate that legacy contamination from a land disposal unit is affecting the discharge of water from Outfall 200.

B. Industrial and Commercial User Wastewater Discharge Permit

Monitoring results during 2012 indicated one exceedance of the Industrial and Commercial User Wastewater Discharge Permit issued by the City of Oak Ridge for the discharge of wastewaters to the sanitary sewer system. This was for a daily flow in excess of the permit limit of 1.4 million gal per day, which occurred on September 18, 2012. Total flow was 2.03 million gal on this day. On September 17–18, 2012, the Y-12 Complex experienced a rain event that totaled 4.86 in.

Progress continues to be made in identifying and correcting sources of storm water inflow. The smoke testing of the sanitary sewer that was initiated in 2010 continued through 2012. Flow meters have been installed and used to indicate some areas of the Y-12 Complex for which additional smoke testing was needed, and minor repairs have been executed based on these tests. Since the beginning of CY 2012, approximately 9 miles of sewage pipe has been smoked tested and 2,000 ft has been subjected to video surveillance.

D.2 East Tennessee Technology Park

In 2012, compliance with East Tennessee Technology Park (ETTP) NPDES storm water permit TN0002950 was determined by about 420 laboratory analyses, field measurements, and flow estimates. The NPDES permit compliance rate for all discharge points for 2012 was 100%.

In 2012, compliance with the ETTP NPDES permit for industrial wastewater from the Central Neutralization Facility (CNF) was determined by more than 2,000 laboratory analyses and field measurements. The CNF NPDES permit compliance rate for 2012 was 100% with no noncompliances.

D.3 Oak Ridge National Laboratory

On May 24, 2012, effluent from the new Oak Ridge National Laboratory (ORNL) Melton Valley Steam Plant (MVSP), discharged through ORNL NPDES outfall 585, exceeded the permit limit for pH. The exceedance was due to the greater percentage of higher-pH boiler blowdown that is present in the outfall 585 effluent during the warmer months compared to the heating season. To correct this situation, MVSP was shut down until a pump and underground piping could be installed to redirect the MVSP effluent to the ORNL Sewage Treatment Plant for treatment. There has been no recurrence of the effluent pH issue since the effluent was redirected to treatment.