

**Appendix E. National Pollutant Discharge
Elimination System Noncompliance
Summaries for 2010**

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E.1 Y-12 Complex

On August 29, 2010 approximately 300 gal of a lime slurry mix overflowed a neutralization process tank located in the Steam Plant Wastewater Treatment Facility. A portion of the overflow entered the storm drain system and reached East Fork Poplar Creek (EFPC) through Outfall 200, located at the upper reach of the stream. Members of the Y-12 Environmental Compliance Department and the Y-12 Biological Monitoring and Abatement Program's fish community task leader surveyed EFPC inside the Y-12 Complex area. Thirty-three dead minnows were found and collected. Live fish were seen in the area of Outfall 200 and downstream. Notification of the discharge was made to the Tennessee Emergency Management Agency on August 29, 2010. Follow-up notifications were made to TDEC personnel at the Knoxville Field Office and the DOE Oak Ridge Office. A written submission was provided to the TDEC Nashville, Knoxville, and Oak Ridge offices on September 2, 2010.

A composite sample taken on December 8, 2010, at Outfall 200 showed cadmium to be 0.00118 mg/l, which is above the permit limit of 0.001 mg/l. This outfall is tied to a large drain system that includes most of the western area of the Y-12 Complex. In investigation of potential cause for the exceedance, it is believed that runoff from the recently cleaned Old Salvage Yard site, located upstream of Outfall 200, is a possible cause. A stormwater sample taken from the Old Salvage Yard showed a cadmium concentration of 0.072 mg/l.

E.2 East Tennessee Technology Park

A single NPDES permit noncompliance attributable to an unpermitted discharge to the storm water drainage system occurred on January 20, 2010. A contractor maintenance worker poured the contents of two 5-gal paint cans into a storm drain catch basin that is part of the storm water outfall 100 drainage network. The material that was poured into the catch basin was diluted cleanup water from office painting that was being conducted inside an ETTP building. No harm to aquatic species was seen during investigation of the incident. The exceedance did not result in any discernable ecological impact.

E.3 Oak Ridge National Laboratory

Two noncompliances were reported to state regulators in 2010. Due to heavy rains which occurred during May 1–3, 2010, influent to the wet-well pumps at the ORNL Sewage Treatment Plant (STP – NPDES Outfall X01) exceeded pumping capacity into the aeration chamber, and the excess influent flowed directly into the disinfection contact chamber (per facility design). A NPDES Permit exceedance of the daily maximum limit for *E. coli* resulted on May 5, 2010, when the grab sample measured 5000 cfu/100mL. The permit limit at this facility is 941 cfu/100mL. Ozone disinfection was operationally increased to enhance treatment. However, during the rain event the creek level of the receiving stream, White Oak Creek, had risen and backed up into the contact chamber, causing additional operational uncertainties for the STP. ORNL is developing plans to replace the STP with a new plant that has greater surge capacity within the next few years.

On June 18, 2010, treatment and discharge of a wastewater batch at the Steam Plant Wastewater Treatment Facility (SPWTF – NPDES Outfall X02) became necessary; however, field measurements (i.e., pH and conductivity) from that week's treated batch were not taken, resulting in a calendar week discharge that was not sampled as required by the ORNL NPDES Permit. Operational data collected by SPWTF staff on this discharge demonstrated normal treatment plant effluent characteristics, and subsequent weekly compliance monitoring demonstrated normal ranges of measured field parameters.

Oak Ridge Reservation

Treatment plant staff and compliance monitoring staff developed additional measures to improve future communication to ensure that any batch discharged occurring outside normal shift hours will be sampled for compliance purposes. The SPWTF is scheduled to be taken off-line in the near future upon completion of steam plant upgrades.

No adverse effects on the receiving streams were observed from these two incidents.