

**Appendix E. National Pollutant Discharge
Elimination System Noncompliance
Summaries for 2009**

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E.1 Y-12 Complex

A National Pollutant Discharge Elimination System (NPDES) permit excursion occurred when the measured cadmium monthly average at Outfall 200, 0.00162 mg/L, exceeded the permit limit of 0.001 mg/L on April 4, 2009. At the time of the reading there were no observed adverse effects on the receiving stream.

E.2 East Tennessee Technology Park

In January 2009, the East Tennessee Technology Park (ETTP) had one NPDES noncompliance at storm water outfall 340 located near the southwest corner of the K-25 building. Storm water outfall 340 receives surface runoff and roof drainage from the west wing of the K-25 building. Sampling subcontractor personnel obtained a pH reading of 9.1 standard units at the designated NPDES monitoring location while collecting routine NPDES permit compliance data. The permitted pH range is 4.0 to 9.0 standard units. The elevated pH reading may have been related to the sealing of the storm drain inlets, causing the backup of storm water into debris piles that had accumulated in the vicinity of the inlets. This backup may have caused the pH to be raised by contact of the storm water with concrete powder and other residues generated during the demolition of the K-25 building. Also, the elevated pH may have been caused by a cementitious material, used to seal the gap between the metal plate and the storm drain inlet, that may have broken apart due to heavy truck traffic and fallen into the storm drain inlet. Corrective action included identification of all storm water inlets that may have defective seals; removal of building debris and sealing material from storm water inlets with failed seals; the resealing of damaged storm water inlets with 4000-psi (pounds per square inch) concrete instead of flowable fill; placement of Jersey Bouncers over storm drain inlets to prevent future damage due to truck traffic; continued routine inspections of the storm drain inlets for damage; and modification of the Storm Water Pollution Prevention Plan (STP3); and the changing of storm water control measures as necessary for demolition activities. No threat to human health or the environment occurred as a result of this event, and no fish kills or other adverse impacts to the biota were observed.

E.3 Oak Ridge National Laboratory

An NPDES permit-limit nonconformance occurred at an instream monitoring point for total residual oxidant [(TRO) chlorine/bromine] on Fifth Creek within the ORNL main campus, where on February 16, 2009, 0.12 mg/L TRO was measured, compared to a daily maximum permit limit of 0.019 mg/L. The measurement resulted in a calculated exceedance of a second monthly average limit at that same monitoring point. No harm to aquatic species was seen as a result of this incident. A dechlorination system at Outfall 265 on Fifth Creek, which dechlorinates a potable/cooling water source to Fifth Creek, had malfunctioned and was determined to be the source of the chlorine that was detected in Fifth Creek. The unit was repaired, and there has been no recurrence since February 2009.

