

**Appendix E. National Pollutant Discharge
Elimination System Noncompliance
Summaries for 2008**

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E.1 Y-12 Complex

The sampling results for Categories 2 and 3 outfalls for the previous six months were reported in the June 2008 Discharge Monitoring Report. A field measurement for total residual chlorine at Outfall 067 was made on January 9, 2008, and a result of 0.68 mg/l was obtained. This value is above the daily maximum concentration of 0.50 mg/l. At the time of the reading there were no observed adverse effects on the receiving stream. Outfall 067 is permitted for cooling water flow, which is basically once-through chlorinated potable water. There are several small, tablet-type dechlorination units located in the area that drain to this outfall. Corrective action was taken by checking operation of the tablet type dechlorination units located upstream. All units were found to be in working order. No problems were found in the drain system, and there was no observed adverse effect on the receiving stream or aquatic life.

E.2 East Tennessee Technology Park

There were no National Pollutant Discharge Elimination System (NPDES) noncompliances at ETTP in 2008.

E.3 Oak Ridge National Laboratory

In 2008, a total of nine NPDES Permit exceedances were reported to TDEC. Six of these non-compliances occurred at the Steam Plant Wastewater Treatment Facility (SPWTF), NPDES Outfall X02 (three exceedances for iron, two for copper, and one for silver). The noncompliances occurred in February and in July 2008. Operational logbooks from the SPWTF indicated normal operation conditions during these months of noncompliance. It was thought that the metals were contained in the sediments within the clay-lined holding ponds that are used as part of the SPWTF process. The metals would have accumulated via runoff from the time when the Steam Plant used coal as its primary fuel. Coal use was eliminated, but the SPWTF still receives regenerant wastewater and boiler blowdown at a low pH from steam plant operations, and still uses the clay-lined ponds as part of the treatment process. The ponds were dredged in July 2008, and a revised NPDES Permit was issued to ORNL and made effective on August 1, 2008. Monitoring requirements in the revised permit have been changed to reflect the current operational status of the treatment facility. The Steam Plant was converted in 2001 to use natural gas with a fuel oil backup. An upgrade to a biomass gasification unit that will use wood chips will be added in late 2010.

In June, a sewer manhole overflowed to an NPDES outfall as a result of power to the associated lift pump being shut off by a non-Utilities staff member. This overflow was reported as a bypass to TDEC. The Facility Use Agreement between the Utilities Division and the building occupants where this electrical switch to the pump was shut off is currently being revised to ensure that this type of situation does not reoccur.

Finally, two fish kills occurred in July and September, resulting in the mortality of ~180 varying species of fish at each incident. The mortalities are believed to be caused by a highly chlorinated discharge from Outfall 227. This outfall conveys cooling tower blowdown, storm drains, and some floor drains. Extensive investigation did not pinpoint an exact source of the toxic discharge. Awareness education to laboratory staff in various job categories continues to occur to dissuade inappropriate disposal of chemicals down storm drains. The existing tablet dechlorinator located on this outfall is checked for operational function twice daily.

