

Hartsville Nuclear Plant
NPDES Permit No. TN0027740
Construction Effects Monitoring Program

The Construction Effects Monitoring Program for Hartsville Nuclear Plant is unchanged from the one described in the "Hartsville Nuclear Plants, Special Construction Effects Monitoring Study, Report for the Second Year of Construction, January 1979." The program is summarized below.

A. Primary Water Quality Monitoring

Primary water quality surveys during the construction period are conducted on a quarterly basis and includes mid-channel sampling stations at Cumberland River miles (CRM) 292.6, 284.5, 282.0, and 278.6. Analysis of water samples includes, but is not limited to, the following parameters: pH, temperature, dissolved oxygen, conductivity, alkalinity, coliforms (total and fecal), solids (suspended and dissolved), turbidity, nitrogen (organic, ammonia, and nitrite plus nitrate), phosphorus (soluble and total), BOD, and an array of metals (see ER Amendment 3, Table 2.5-3).

B. Special Construction Effects Monitoring

Peripheral runoff monitoring is conducted at least monthly at construction zones and adjacent drainageways and streams. Additional samples are collected during and/or immediately following selected periods of specified heavy rainfall (i.e., 0.3 inch or more per hour or 1.0 inch or more over a 24-hour period). These samples are analyzed for parameters directly affected by construction activities and runoff from the construction areas (i.e., pH and total suspended solids). This aspect of construction monitoring began prior to the start of onsite construction activity (preconstruction phase) and will continue throughout the construction period (construction phase).

The specific total suspended solids concentration criterion for determining the need for mitigation of erosion is two standard deviations greater than the combined mean total suspended solids concentration observed during the preconstruction peripheral monitoring program. This is 160 mg/l suspended solids. This criterion is not applicable when the rainfall exceeds the 10-year, 24-hour rainfall event.

Periodic revisions to the sampling locations are made to reflect changes in the stage of construction activities which may result in the initiation or termination of runoff discharge at a particular sampling location. The present sampling locations are:

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1. Corley Branch mile 0.03 (mouth of creek)
2. Mouth of unnamed tributary at Cumberland River mile 383.52 (will receive discharge from Borrow Area No. 13 settling pond)
3. West Construction Holding Pond Discharge (sampled once per discharge)
4. East Construction Holding Pond Discharge (sampled once per discharge)
5. Mouth of Dixon Creek

There have been no recent amendments to the above program by NRC. Also, no additions to the program were necessitated by the discharge from Borrow Area No. 13, since the unnamed tributary at CRM 283.52, which receives this discharge, was already included in the program. The only recent NRC amendments were in relation to the special discharge diffuser construction monitoring plan for mussels.

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