

Impacts for Hydrogen Sulfide at Reservoirs, Dams and Tailwaters

30 – 31 July 2002

Impacts to structures, concrete erosion, and inspection (Tappan Dam, Leesville Dam, Piedmont Dam, and Clendening Dam)

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In recent years, the district has initiated work activities related to monitoring deteriorating concrete conditions in outlet tunnels at Leesville, Piedmont, Tappan, and Clendening projects. These projects are located in east central Ohio near New Philadelphia, Ohio.

The program included using a rebar locator (Model Profometer 4) to measure the depth of concrete cover at specified locations within the tunnels and documenting measurement locations, measurements, and general condition of the concrete with photographs and videotape. These measurements were compared to previous depth of cover measurements taken between 1998 and 2001 to determine if measurable concrete deterioration has occurred.

The monitoring program at each project consisted of seven to nine sections. Typically, there were one to three sections near the tunnel outlet, one or two sections in the transition area between the sluice gates and the tunnel, and one or two sections in the gate sluices.

This discussion will focus on project site conditions, methodology of monitoring, data collection, and health and safety practices.