Environmental Monitoring

The following well established monitoring programs have been in existence for many years at the Zion Station and are covered under both the NRC Site License and State requirements.

Radiological Environmental Monitoring Program (REMP)

This program is required by the Nuclear Regulatory Commission (NRC). As part of this program, the aquatic environment is tested. This includes Lake Michigan sampling and analysis. The samples are analyzed for 13 radioisotopes including tritium. Several fish species and lake sediment are sampled semi-annually and analyzed for 11 radioisotopes. The REMP program results are reported annually to the NRC in the Annual Radiological Environmental Operating Report (AREOR).

Radiological Groundwater Protection Program (RGPP)

This program is also required by the NRC and includes the sampling and analysis of on-site groundwater monitoring wells and one surface water (lake) sample location. Samples are collected quarterly and analyzed for tritium. Recent industry program enhancements require annual analysis for Hard to Detect (HDT) radionuclides. The RGPP is reported annually to the NRC as an Appendix to the Annual Radiological Environmental Operating Report.

Radioactive Effluent Release Report

The most recent report to the NRC reviews 2010 effluent data and indicates that activity released from the Zion Station was far below any regulatory limit and there was no aquatic release of radioactivity.

National Pollution Discharge Elimination System (NPDES)

This is an Environmental Protection Agency (EPA) mandated program and includes the sampling at six locations along Lake Michigan. Sampling frequencies vary from three times a week to quarterly, as defined by the NPDES Permit. Samples are analyzed for pH, Total Suspended Solids, Oil and Grease, Copper, and Polychlorinated Biphenyls (PCBs). Sample results are reported to the Illinois Environmental Protection Agency monthly and quarterly using the required Discharge Monitoring Report (DMR).

ZionSolutions is committed to the safety of its employees, the citizens of Zion and surrounding communities, and the environment. The lakefront and wetlands will be protected through rigorous environmental controls and a comprehensive monitoring program.

Facilities Available Online

You can access these reports on the ZionSolutions website (address below). Hover over the “Project” menu button and click on “Decommissioning.”

- 2010 Radiological Environmental Operating Report
- 2010 Radioactive Effluent Release Report
- Q1 2011 Discharge Monitoring Report

For more information:

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