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Liquid Effluent Performance Improvement at Ginna Station

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Ginna Station is a 490 net MWE two-loop Westinghouse PWR located in western New York State on Lake Ontario. It has been in commercial operation since September, 1969. The Main Condenser was re-tubed in 1995, the Steam Generators were replaced in 1996, and the Reactor Vessel Head was replaced in 2003. An application for License Renewal is currently under review by the NRC. Ginna Station is owned by Rochester Gas and Electric Corporation, a subsidiary of Energy East Corporation. Sale of Ginna Station to Constellation Energy Group is scheduled for June 2004.

For several years Ginna Station has had indications of poor performance in liquid effluents. EPRI report TR-109441 (1997) indicated that Ginna was near the bottom of the industry in gallons of water processed per cubic feet of resin used. In 2001 and 2002 we exceeded our business plan goals for liquid effluent millicuries on three occasions. Although Ginna Station had taken steps to begin correcting some deficiencies in liquid waste processing, this recent inadequate performance led to an INPO AFI in our 2003 E&A.

Changes that have been made since 2002 include new procedures and equipment for operation of the liquid waste treatment system, increased Station focus on pathways for organics and high conductivity water to the waste treatment system, creation of a Station water management committee, and improvements in consumable control procedures.

Issues described in the presentation include:

- Potential misinterpretation of performance indicator data - total gallons processed vs. gallons per cubic feet of media buried.
- Error traps in operating procedures - circumstances where inadequately treated waste could not be reprocessed.
- Use of cost basis to drive repair of "low priority" leaks.
- Plan to treat high organic/high conductivity waste separately.
- Review of contaminants that reduce system performance. Included is a description of a system failure mechanism due to surfactants.
- A summary of cost savings and performance improvement over the past two years.