Groundwater Investigation Overview

- In September 2005 a moist hairline crack was found on the southwest wall of the Indian Point Unit 2 spent fuel pool. Water collected from the crack tested positive for tritium and other radionuclides characteristic of spent fuel pool water. Entergy installed a series of test wells across the site to determine the extent of contamination and found tritium in many of the wells. Several wells located near the discharge canal also tested positive for Strontium-90, a radioactive fission product. Most recently, monitoring wells near the Indian Point Unit 3 Reactor Water Storage Tank and spent fuel building tested positive for tritium and Strontium-90, but at very low levels.
- Entergy has embarked on an extensive program to determine the source(s) of groundwater contamination, characterize the groundwater flow on site, and develop remediation strategies.
- A leak collection box has been installed to collect and monitor leakage from the crack.
- The company has installed 25 new monitoring wells and plans to drill about 12 additional wells to aid in the investigation. The new monitoring well and associated sampling program is a multi-million dollar project.
- The groundwater investigation team is comprised of staff from Indian Point and experts in hydrology and hydrologic modeling, dose assessment, remediation, radiochemistry and civil and structural engineering.
- Entergy is committed to finding the source(s) of the contamination, stopping the leak(s) and implementing a remediation program.

Drill used to install monitoring wells at Indian Point. Ground penetrating radar is used to ensure that the drill will not intercept buried service lines. Then a vacuum drill is used for the first 6-8 feet followed by a diamond bit drill for the deeper depths.

Regulatory Oversight

- Entergy, the Nuclear Regulatory Commission and New York State Department of Environmental Conservation are participating in split sample program where all three organizations obtain samples for analysis at the same locations. The sample are analyzed

at different laboratories and compared. Thus far, sample results have been comparable at all sample locations.

- All three entities, Entergy, NRC and DEC, have obtained samples from off-site monitoring wells and surface water supplies. No radioactivity above background has been found at any off-site location.
- The Nuclear Regulatory Commission has conducted a special inspection of the groundwater investigation project and has concluded that Entergy is conducting a thorough and appropriate investigation. The NRC continues to monitor the progress of the investigation very closely. The project team holds twice weekly conference calls with the NRC and DEC.

Representatives from Entergy, NRC and DEC take sediment samples from Hudson River shoreline.

Leak Identification

- The source of the Strontium-90 can most likely be traced back to the IP1 spent fuel pool, which has been leaking for a number of years. Concentrations of Sr-90 are much higher in the IP1 spent fuel pool than in the IP2 spent fuel pool.
- At this point in the investigation, it appears that the high levels of tritium found in monitoring wells adjacent to the IP2 spent fuel pool building and the IP2 transformer yard are the result of a leak from a different source, most likely the IP2 spent fuel pool or other IP2 structures. We have not been able to determine definitely whether the leak is an active leak or the result of prior operations.

Diver conducting vacuum box test in IP2 spent fuel pool.

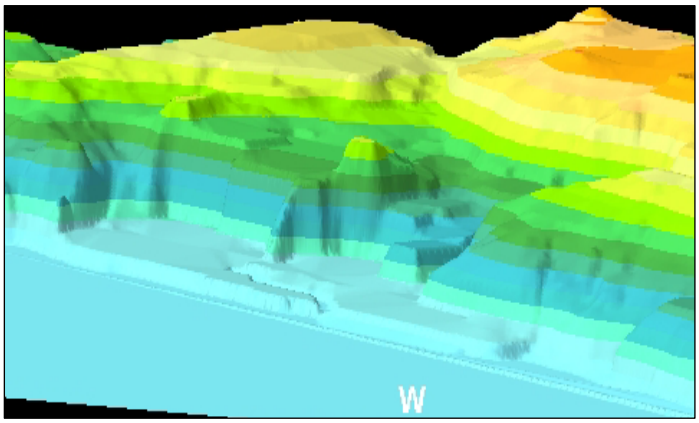
- Entergy has a project underway to remove the spent fuel from the IP1 spent fuel pool, move them into dry cask storage and drain the pool. Entergy made this commitment when purchasing Unit 1.
- Entergy has conducted a video inspection of the accessible areas of the IP2 spent fuel pool liner. Divers

conducted vacuum box tests of six areas that showed some discoloration, but to date no through wall leaks have been found.

- In June, Entergy will conduct an inspection of the areas of the IP2 spent fuel pool liner along the walls adjacent to the fuel racks. This inspection involves the use of highly sophisticated video equipment that can produce high resolution images in a high radiation flux. The inspection will also determine the feasibility of conducting an inspection of the spent fuel pool floor. Entergy has inspected about 40% of the walls and 10% of floor previously. To ensure a thorough extent of condition, Entergy is examining historical records of contamination events, inspecting pipes, sumps, valves, tanks and other pieces of equipment for contamination

Radiological Impacts

- Since there are no drinking water wells on site and local communities receive their drinking water from surface reservoirs, there are no dose impacts from groundwater contamination.
- The levels of tritium and Sr-90 found on site are orders of magnitude less than what is routinely discharged to the Hudson River as allowed by our NRC license. We discharge only a small fraction of what is allowed by regulation.
- Conservative dose calculations show that annual dose to the public from these groundwater sources is <.1% of federal limits.



Hydrogeologic models such as shown above help the project team to determine groundwater flow paths and predict the migration of contaminants. Note the depression where bedrock has been hollowed out to form the foundation for the units.

- The dose calculations are refined as more information is obtained from samples and hydrologic models.

Indian Point's Comprehensive Environmental Monitoring Program

- Indian Point like all nuclear plants in the country has a Radiological Environmental Monitoring Program, which monitors air, water, soil, and aquatic organisms to ensure that radiation levels around the plant are negligible and well below our limits.
- Years of sampling and thousands of analyses have shown that Indian Point does not pose a health risk to the public.
- As part of the groundwater investigation, Entergy has committed to expanding the REMP to include analysis of Sr-90 in shoreline sediments and aquatic organisms.
- We will continue to sample wells on site and monitoring locations off-site to ensure that no radioactivity above background is detected.

Fuel from Indian Point's spent fuel storage pools will be loaded into shielded casks and placed on this storage pad. The picture shows the pad under construction.

Public Outreach

- Indian Point has hosted stakeholder briefings on the groundwater investigation for local public and elected officials. In these briefings, our experts have reviewed the results of monitoring well samples, dose calculations, the hydrogeologic model of the site, and various inspections
- Entergy participates in regular conferences with key representatives of the four-counties, congressional delegation, local officials and state representatives. The conference call is hosted by the NRC.
- A status report with regular updates on the groundwater investigation is sent 4-5 times/week to about 150 officials in the tri-state area.
- Information on the groundwater investigation is published on Entergy's safesecurevital.org web site.
- The NRC along with Entergy and New York State held a public meeting on the groundwater project in March.
- Reporters and photographers from local newspapers and TV have been to Indian Point to report on the groundwater investigation

Industry Participation

- Entergy hosted a workshop on groundwater issues with participants from DOE and nuclear power sites to exchange lessons learned and help develop standards for environmental investigations.
- Entergy is working with NEI to develop improved detection and monitoring techniques to protect groundwater resources

Representatives from Entergy and other nuclear facilities discuss groundwater issues at a workshop held at Indian Point.

CONCEPTUAL SKETCH OF IPEC PHASE 1, PHASE 2, AND PHASE 2A MONITORING WELL LOCATIONS