Indian Point Status - Groundwater Investigation, 12/22/2006

Synopsis:
Indian Point Energy Center (Entergy) is continuing investigation of the sources of radiological contamination that have affected onsite groundwater. This investigation includes efforts to complete an accurate site conceptual model of groundwater behavior. The licensee's geo-hydrological assessment, based on information to-date, indicates that groundwater flow is to the Hudson River, and there is little likelihood of any groundwater contamination beyond the site boundary. To-date, plant-related radioactive material has not been detected in any off-site environmental monitoring location. Radiological assessment of the currently understood conditions confirmed that public health and safety has not been, nor is likely to be, affected; and the dose consequence to the public is negligible with respect to NRC regulatory limits.

NRC Region I is continuing to facilitate and maintain bi-weekly communications between Entergy and interested federal, state, and local government stakeholders to keep them informed of progress and accomplishments, and NRC's assessment of the conditions and licensee performance. NRC Region I is continuing to coordinate inspection activities with the New York State Department of Conservation (NYS/DEC); and provide independent radiological analysis by split samples with Entergy and NYS/DEC. On December 21, 2006, NRC's Executive Director of Operations approved deviation from the baseline inspection program to provide for additional NRC inspection effort in this area in 2007.

Details:
In addition to previously existing monitoring wells, thirty-six new monitoring wells have been completed and are being used to characterize groundwater behavior and monitor the extent of onsite groundwater contamination. The number of offsite sampling locations has been increased to enhance the capability and sensitivity of the licensee's radiological environmental program. The licensee is continuing to collect and assess groundwater data; and is considering a process to recover a portion of the contaminated groundwater to effect direct monitoring and control of the effluent in accordance with current NRC regulatory requirements.

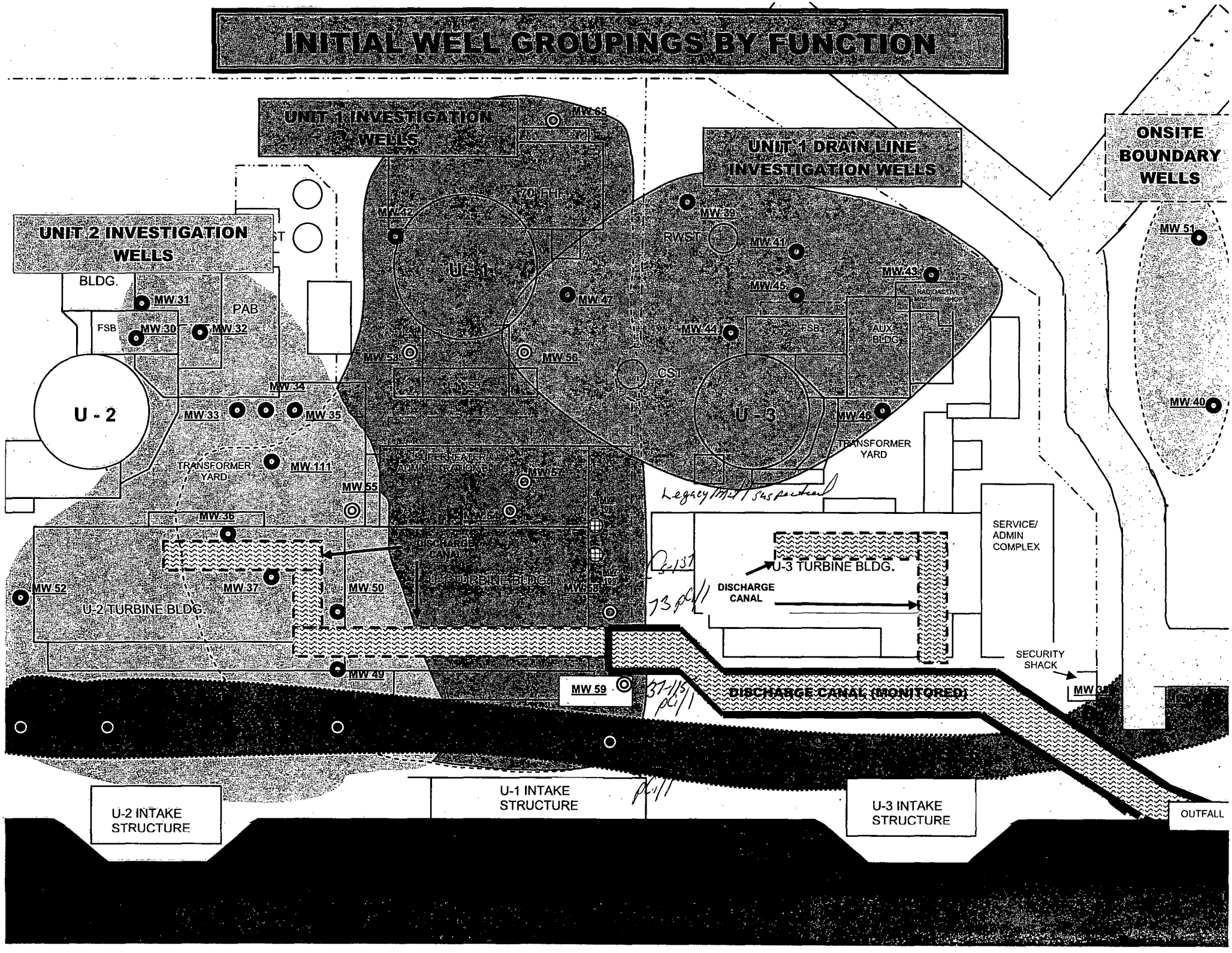
Previous underwater examination of the Unit-2 spent fuel pool and transfer canal systems revealed possible indications of through-wall leakage. Accordingly, the licensee is planning more extensive examination, including NDE, in January 2007. Repair is expected to be accomplished, as necessary.

Recent monitoring well sampling and analysis indicates that an improved filter/demineralizer system, previously installed in the Unit-1 spent fuel pool system to reduce the source term available for leakage to the groundwater, may be reducing the concentrations of Sr-90 and other radionuclides that have affected groundwater in the Unit-1 vicinity. Notwithstanding, the licensee is planning to transfer all fuel in the Unit-1 spent fuel pool to dry cask storage, and empty the pool by (or about) 2008, thereby eliminating all active leakage from this area.

A dye tracer test to determine groundwater flow velocity and direction is scheduled to begin on January 9, 2007. The test is expected to last about three months. Data from the test will be incorporated into Entergy's Site Conceptual Model of Indian Point.

Investigation is continuing to determine the cause and source for low levels of Sr-90 and other radionuclides, such as Cs-137 and Ni-63, that were recently detected in some monitoring wells. Information to-date suggests that this radioactive material is the result of historical leaks and

spills, and not the result of any on-going active leakage.


INITIAL WELL GROUPINGS BY FUNCTION
UNIT 1 INVESTIGATION WELLS
UNIT 1 DRAIN LINE INVESTIGATION WELLS
ONSITE BOUNDARY WELLS
UNIT 2 INVESTIGATION WELLS
MW-65
MW-42
MW-39
MW-41
MW-43
MW-45
MW-47
MW-44
MW-51
MW-40
MW-46
MW-58
MW-56
MW-31
MW-30
MW-32
MW-34
MW-33
MW-35
MW-111
MW-55
MW-36
MW-52
MW-37
MW-50
MW-49
MW-59
MW-38
U-1
U-2
U-3
RWST
CST
FSB
PAB
AUX BLDG.
RADIOACTIVE MACHINE SHOP
TRANSFORMER YARD
SUPERINTENDENT ADMINISTRATION BLDG.
U-2 TURBINE BLDG.
U-3 TURBINE BLDG.
DISCHARGE CANAL
SERVICE/ ADMIN COMPLEX
SECURITY SHACK
DISCHARGE CANAL (MONITORED)
U-2 INTAKE STRUCTURE
U-1 INTAKE STRUCTURE
U-3 INTAKE STRUCTURE
OUTFALL
Legacy Well Inspected