



CERTIFIED MAIL

November 11, 2005
PTS05021

Mr. Kent Tosch
Manager
Radiation Protection Programs
Bureau of Nuclear Engineering
New Jersey Department of Environmental Protection
33 Arctic Parkway
Trenton, New Jersey 08625

Dear Mr. Tosch:

**QUARTERLY REMEDIAL ACTION PROGRESS REPORT, THIRD QUARTER 2005
PSEG NUCLEAR, LLC, SALEM GENERATING STATION**

PSEG Services Corporation (PSEG) has prepared this Quarterly Remedial Action Progress Report (RAPR) to provide a summary of groundwater remediation activities conducted since the submission of the previous RAPR in August 2005 at the PSEG Nuclear, LLC Salem Generating Station (the Station). We are transmitting 3 copies of this report to you.

Continued Groundwater Monitoring

Groundwater samples continue to be collected from the monitoring well network according to the published schedule. Figure 1 presents the recent groundwater analytical results.

In general, tritium concentrations in groundwater samples continue to be stable or slightly decreasing. Observed increased concentrations at Well AC and Well M are believed to be a result of infrequent rain during most of the summer and early fall. Concentrations at Well M have historically fluctuated with variable precipitation.

Beyond the limits of the cofferdam, tritium concentrations in groundwater samples also continue to be generally stable or decreasing. Well W has shown a slight increase in concentration. Wells S and AO have not been operating recently due to low yield and

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the diesel fuel investigation, respectively. This has temporarily reduced the degree of control exerted by the Groundwater Extraction System (GES) on this portion of the plume. The mobile unit has been used in the interim period to maintain control in this area. The mobile unit remains on standby in the event that concentrations continue to rise in Well W. The mobile unit has already been effective in reducing the increased concentrations observed in samples collected from Well AP. Well AO has been placed back into service and the adjacent diesel fuel well is being closely monitored to see if diesel fuel is being drawn into that well.

To date the groundwater analytical data continues to indicate that the GES is effective at recovering tritium and thereby reducing the overall amount of tritium in groundwater. The pilot system removed approximately 0.9 curies during the 10 months that it was operational and the GES has removed approximately 0.6 curies during its period of operation.

Groundwater Extraction

In accordance with the RAWP, groundwater extraction activities continue using the GES that was activated on February 16, 2005.

Full-Scale System

The GES system consists of the extraction of groundwater from Wells S, AB, AD, AJ, AN, AS and AT. Well AO continues to be out of service to prevent interference with diesel fuel oil recovery operations and Well S has been operating intermittently as a result of the well's low yield. Additionally, Wells AO, AN, AS and AT required wiring modifications and were temporarily out of service. All eight extraction well pumps are currently in service.

As of September 22, 2005, the GES system has recovered greater than 2.7 million gallons of groundwater. Total well field operations have resulted in the recovery of 1.48 curies of tritium. The results of the groundwater remediation activities conducted using the well field are summarized on Figure 2. The recent average system effluent concentrations are presently around 47,000 pCi/L of tritium.

The various groundwater recovery activities conducted to date have been, and continue to be successful in recovering tritium from groundwater at and down gradient of the Salem Unit-1 seismic gap.

Operation of the Seismic Gap Drain

To date, periodic operation of the seismic gap drain in Unit 1 has resulted in the recovery of approximately 25,400 gallons of tritiated water. **Figure 3**, presents a summary of the activity of the Unit 1 Seismic Gap drain. As of September 28, 2005 a total of approximately 3.98 curies of tritium has been recovered from the operation of

the Unit 1 seismic gap drain. Unit 2 gap water continues to indicate no plant related gamma activity.

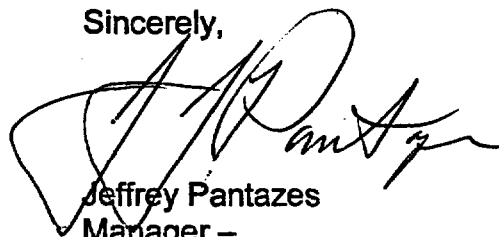
Upcoming Activities

Activities projected for the Fourth Quarter of 2005 (through December) include the following:

- Completion of present corrective maintenance activities on the groundwater extraction system (all eight extraction pumps are operating at the time of this report).
- Periodic download of data from permanent data-logging pressure transducers installed in 14 wells throughout the area to demonstrate that groundwater extraction is effectively maintaining hydraulic control;
- Continued groundwater monitoring activities;
- Continued operation and evaluation of data obtained through the full-scale groundwater extraction system; and,
- Place well AO pump back into service on a trial basis, and closely monitor diesel fuel well adjacent to well AO to observe whether or not diesel fuel is being drawn to that well. If no diesel fuel is observed, well AO will remain in service.

If you have any questions or comments regarding the contents of this report, please do not hesitate to contact me at (856) 878-6920.

Sincerely,



Jeffrey Pantazes

Manager –

Permitting & Technical Services

Attachments:

Figure 1, Groundwater Tritium Results

Figure 2, Historic Tritium Recovered Through Well Field Operation as of 9/22/05

Figure 3, Historic Tritium Recovered Through Seismic Gap Drain Operation as of 9/28/05

C Ron Nimitz- NRC
NRC – Salem Resident Inspector
NRC – Document Room

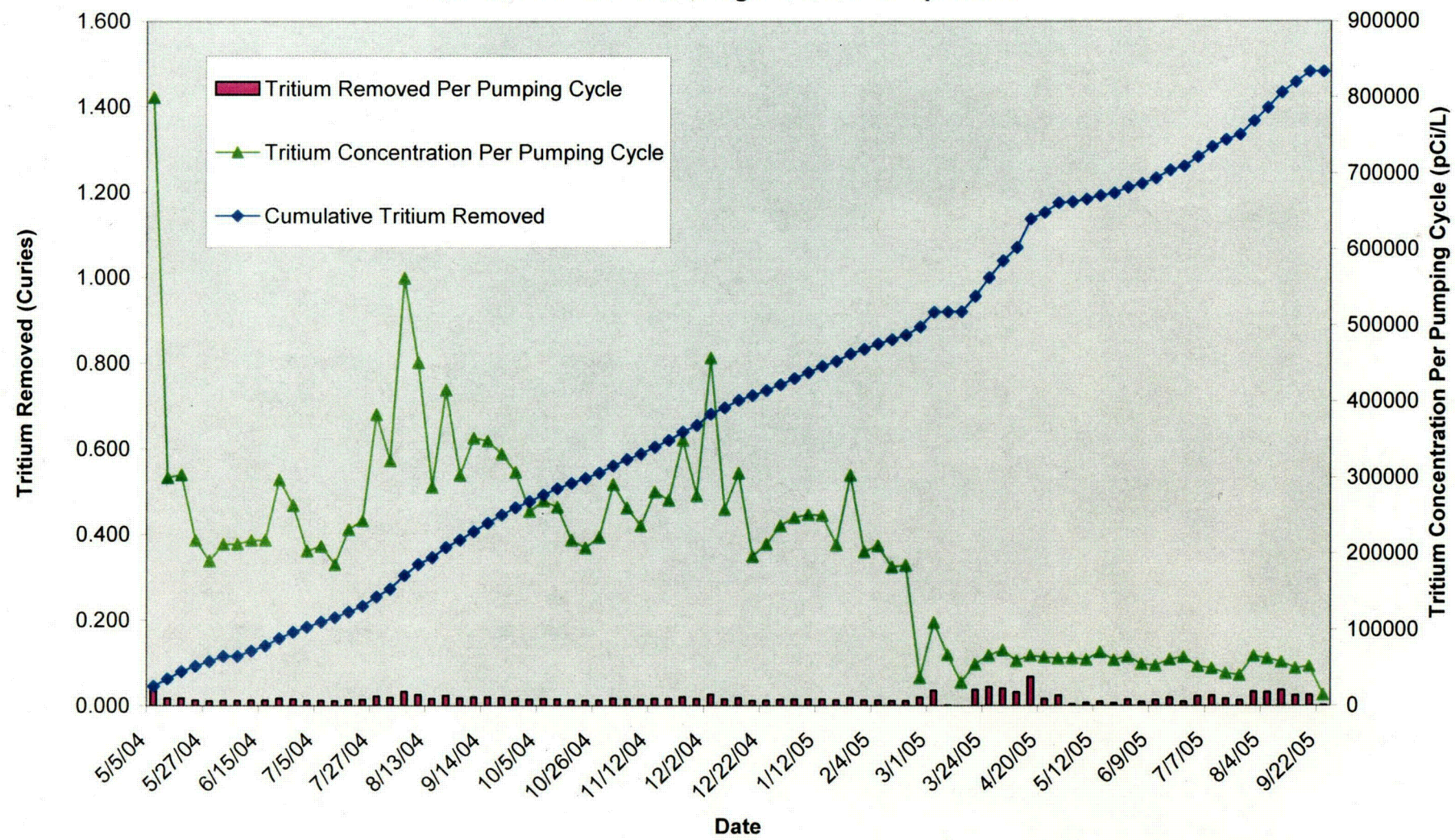
**THIS PAGE IS AN
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FIGURE,
THAT CAN BE VIEWED AT THE
RECORD TITLED:
DRAWING NO.: 1,
“GROUNDWATER TRITUM RESULTS”,
SHEET 1 OF 1**

**WITHIN THIS PACKAGE... OR,
BY SEARCHING USING THE
DOCUMENT/REPORT
DRAWING NO. 1**

D-01

G:\PROJECT\PSE&G\Salem - Remedial Actions\CADD\RAPRs\RAPR - 4 - 03 2005\FIG-02 HISTORIC TRITIUM RECOVERED THROUGH WELL FIELD OPERATION.DWG 11/08/2005

PSEG Nuclear, LLC Salem Generating Station - Unit 1 Tritium Recovered Through Well Field Operation



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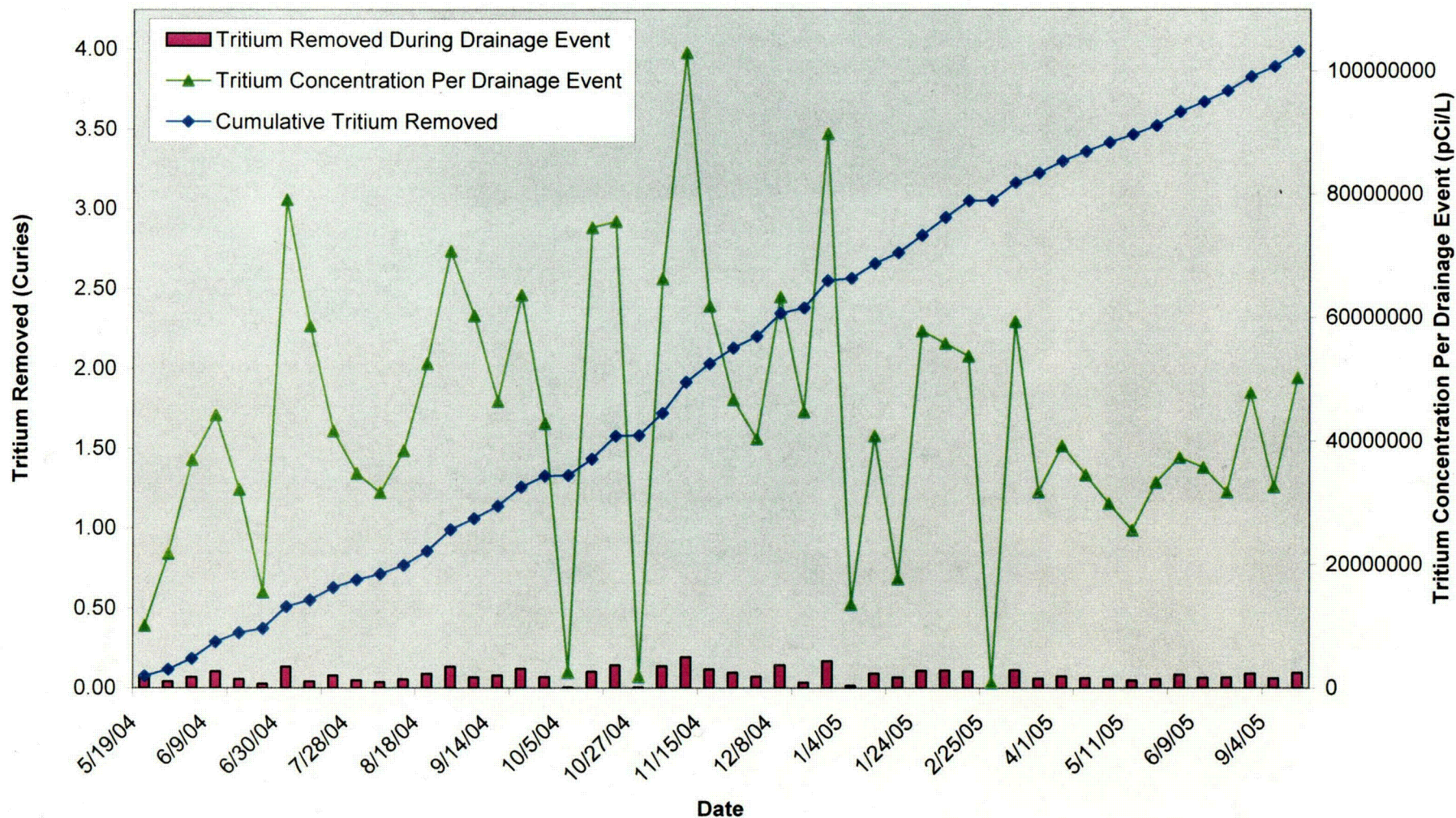


PSEG NUCLEAR, LLC
SALEM GENERATING STATION
ARTIFICIAL ISLAND
HANCOCK'S BRIDGE, NEW JERSEY

DRAWN M. WASILEWSKI	DATE 7/27/05	PROJECT MANAGER P. MILONIS	DEPARTMENT MANAGER M. BEDARD
HISTORIC TRITIUM RECOVERED THROUGH WELL FIELD OPERATION AS OF 9/22/05		LEAD DESIGN PROF. S. POTTER	CHECKED B. PIERCE
		PROJECT NUMBER NP000571.0004	DRAWING NUMBER 2

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PSEG Nuclear, LLC Salem Generating Station - Unit 1 Tritium Recovered Through Seismic Gap Drain Operation



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PSEG NUCLEAR, LLC
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HANCOCK'S BRIDGE, NEW JERSEY

DRAWN
M. WASILEWSKI

DATE
7/27/05

PROJECT MANAGER
P. MILONIS

DEPARTMENT MANAGER
M. BEDARD

HISTORIC TRITIUM RECOVERED
THROUGH SEISMIC GAP DRAIN
OPERATION
AS OF 9/28/05

LEAD DESIGN PROF.
S. POTTER

CHECKED
B. PIERCE

PROJECT NUMBER
NP000571.0004

DRAWING NUMBER
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