

RAS 14112

DOCKETED  
USNRC

September 10, 2007

September 10, 2007 (10:16am)

Paul O. Swartz  
Executive Director  
Susquehanna River Basin Commission  
1721 North Front Street  
Harrisburg, PA 17102-2391

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

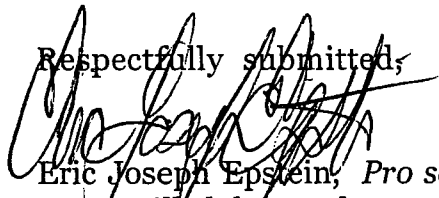
**Eric Joseph Epstein's Testimony and Reply to the  
Susquehanna River Basin Commission's Response  
of September 5, 2007  
Re: Eric Joseph Epstein's Notice of Appearance,  
Data Requests, and  
Motion to Postpone Final Determination of PPL  
Susquehanna, LLC's Application for Surface Water  
Withdrawal Request to Modify Application  
19950301-EPU-0572 until the  
Susquehanna River Basin Commission Meeting  
Scheduled for December 5, 2007 in Lancaster, Pennsylvania**

Dear Mr. Swartz:

Enclosed please find Eric Joseph Epstein's Testimony and Reply to the Susquehanna River Basin Commission's Response of September 5, 2007 Re: Notice of Appearance, Data Requests, and Motion to Postpone Final Determination PPL Susquehanna, LLC's Application for Surface Water Withdrawal Request to Modify Application 19950301-EPU-0572 until the Susquehanna River Basin Commission meeting Scheduled for December 5, 2007 in Lancaster, Pennsylvania.

Please note that Mr. Epstein will **not be available** to travel to Binghamton, New York on September 12, 2007

Respectfully submitted,

  
Eric Joseph Epstein, *Pro se*  
4100 Hillsdale Road  
Harrisburg, PA 17112  
ericepstein@comcast.net

Template=SECY-037

SECY-02

I hereby certify that on September 10, 2007 a copy of Eric Joseph Epstein's Testimony and Reply to the Susquehanna River Basin Commission's Response of September 5, 2007 Re: Notice of Appearance, Data Requests, and Motion to Postpone Final Determination PPL Susquehanna, LLC's Application for Surface Water Withdrawal Request to Modify Application 19950301-EPU-0572 until the Susquehanna River Basin Commission meeting Scheduled for December 5, 2007 in Lancaster, Pennsylvania was sent via electronic mail and by overnight delivery with tracking numbers to:

Michael Brownell  
Chief, Water Resource Management Division  
Susquehanna River Basin Commission  
1721 North Front Street  
Harrisburg, PA 17102-2391

Paul E. Russell, Esquire  
PPL Electric Utilities Corporation  
Two North Ninth Street  
Allentown, PA 18101-1179

DEP - RCSOB  
Cathleen Myers, DEP  
Deputy Secretary  
PO Box 2063  
Market Street  
Harrisburg, PA 17105-2063

Secretary James McNulty  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
400 North Street  
Harrisburg, PA 17120

Pennsylvania Public Utility Commission  
Attention: Law Bureau  
Bohdan R. Pankiw, Chief Counsel  
Robert F. Young Esquire  
Commonwealth Keystone Building  
400 North Street  
Harrisburg, PA 17120

**cc:**

I hereby certify that on September 10, 2007 a copy of Eric Joseph Epstein's Testimony and Reply to the Susquehanna River Basin Commission's Response of September 5, 2007 Re: Notice of Appearance, Data Requests, and Motion to Postpone Final Determination PPL Susquehanna, LLC's Application for Surface Water Withdrawal Request to Modify Application 19950301-EPU-0572 until the Susquehanna River Basin Commission meeting Scheduled for December 5, 2007 in Lancaster, Pennsylvania was was sent via electronic mail and/or via United States Postal Service:

Office of the Secretary  
U.S. Nuclear Regulatory Commission  
16th Floor  
One White Flint North  
11555 Rockville Pike,  
Rockville, Maryland 20852  
Attn: Rulemaking and Adjudications Staff

Office of the Commission  
Appellate Adjudication  
US NRC  
Washington, DC 20555-0001

Office of the Secretary of the Commission  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001  
Attn: Rulemaking and Adjudications Staff

ALJ US NRC  
G. Paul Bollwerk, III, Chair  
Mail Stop T-3 F23  
Washington, DC 20555-0001

US NRC  
Office of the General Counsel  
Lawrence J. Chandler, Esquire  
Mail Stop  
Washington, DC 20555-0001

ALJ US NRC  
Dr. Richard F. Cole  
Mail Stop T-3 F23  
Washington, DC 20555-0001

David Lewis, Esquire  
PPL c/o Pillsbury, Winthrop et al  
2300 N. Street, NW  
Washington, DC 20037

ALJ US NRC  
Dr. Lester S. Rubenstein  
Mail Stop T-23 F23  
Washington, D.C. 20555-0001

## **I. Background**

On July 27, 2007, Eric Joseph Epstein ("Epstein" or "Mr. Epstein"), officially announced his intent to file a Petition in Opposition to PPL Susquehanna's, LLC Application for Surface Water Withdrawal Request to Modify Application 19950301-EPU-0572 with the Susquehanna River Basin Commission ("SRBC").

On August 1, 2007, Eric Joseph Epstein formally filed his Petition in Opposition to PPL Susquehanna's, LLC Application for Surface Water Withdrawal Request to Modify Application 19950301-EPU-0572 at the Susquehanna River Basin Commission ("SRBC"), requested a Public Input Hearing under Subpart A - Conduct of Hearings § 808.1, and Proposed Remedies.

On August 15, 2007, Paul O. Swartz, Executive Director, of Susquehanna River Basin Commission filed a Response and Notice. However, the SRBC did not address numerous issues and contentions raised by Mr. Epstein and indicated that PPL's "application will be reviewed and acted upon by the Commission at a public hearing to be convened" in Binghamton, New York, on September 12, 2007. (1) Mr. Epstein received the correspondence on August 16, 2007.

On August 31, 2007, a copy of Eric Joseph Epstein's Notice of Appearance, Data Requests, and Motion to Postpone Final Determination PPL Susquehanna, LLC's Application for Surface Water Withdrawal Request to Modify Application 19950301-EPU-0572 until the Susquehanna River Basin Commission meeting Scheduled for December 5, 2007 in Lancaster, Pennsylvania was served on the enclosed service list.

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<sup>1</sup> Susquehanna River Basin Commission, Response and Notice, Re: Petition in Opposition to PPL Susquehanna's, LLC Application for Surface Water Withdrawal Request to Modify Application 19950301-EPU-0572 at the Susquehanna River Basin Commission ("SRBC") and Formal Request for A Public Input Hearing Under Subpart A - Conduct of Hearings § 808.1, p. 1 August 15, 2007.

On September 5, 2007, Paul O. Swartz, Executive Director of Susquehanna River Basin Commission, responded to Eric Joseph Epstein's Notice of Appearance, Data Requests, and Motion to Postpone Final Determination PPL Susquehanna, LLC's Application for Surface Water Withdrawal Request to Modify Application 19950301-EPU-0572 until the Susquehanna River Basin Commission meeting Scheduled for December 5, 2007 in Lancaster, Pennsylvania.

## **II. Introduction.**

Mr. Epstein respectfully requests that the court reporter read and transcribe the enclosed comments into the official record of the Susquehanna River Basin Commission's September 12, 2007 meeting.

Mr. Epstein appreciates the SRBC's responses and clarifications provided by Mr. Swartz. Some of the issues identified by Mr. Epstein in his previous filings have been addressed, while other items and contentions relating to water use, water safety, and interagency remain open, and portions of Mr. Epstein's Motion will not be addressed until September 12, 2007:

In closing, we would note that in your filing of August 1, 2007, you raised six substantive contentions covering various subjects such as approval of the 2001 uprate, penalty assessment and coordination. The SRBC staff plans to address these contentions at the Commission meeting on September 12, 2007 in Binghamton. (2)

Mr. Epstein's filings at the Susquehanna River Basin Commission and Nuclear Regulatory Commission ("NRC") relating to the relicensing and uprate of the Susquehanna Steam Electric Station have sought to refine and define, clarify and coordinate and address issues that have fallen through the regulatory gaps. Mr. Epstein has devoted a large amount of time, resources, and money in the last 12 months to make the relicensing and uprate process more transparent, open, and accessible to the general public.

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2 SRBC Response, September 5, 2007, p. 3

Clearly, Mr. Epstein has failed on all counts. The process remains adrift and concealed in a bureaucratic maze. Although the information and data received by Mr. Epstein are technically "public documents," this material is not readily accessible to the public which is largely unaware that this Application or regulatory process exist.

Based on the information contained in Mr. Swartz's Response, and the Commission's Draft documents indicating approval of PPL's Application, PPL's Application will likely be ratified as a Final Decision on September 12, 2007. Without the benefit of public input hearings, Mr. Epstein views devoting a another day of his time as an unnecessary hardship that has little to no chance of producing a a positive result. (3) **Mr. Epstein will not be present at the hearing**, and he has canceled his reservation at the Grand Royal Hotel. (4)

Normally, regulatory proceedings include and encourage the Right-to-Know based on the "presumption" that all material and responses between the Applicant and regulatory agency are publicly accessible data. When a member of the public or governmental body has announced an interest and registered concerns relating to a specific application, negotiations between an Applicant and the SRBC should include these entities. Additional value derived from diverse and informed stake holders can only serve to enhance and inform a Negotiated Settlement.

A final decision without the benefit of public input hearings, and after the Application was advertised in the media between December 20, 2006 through January 1, 2007, is little more than an insiders' game. This process can be repaired, expanded, and aligned with general accepted rules and practices associated with Right to Know and Sunshine laws.

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3      Mr. Epstein will be in synagogue on September 13 and 14, 2007 due to the observance of Rosh Hashanah. Missing large portions of three consecutive days of work is simply not an option for Mr. Epstein.

4      Instead, Mr. Epstein plans to devote a day to review data and records at the SRBC's office in Harrisburg, **after** a final decision is rendered and the staff's comments are registered.

Even more baffling are the regulatory moats that federal and state agencies erect to protect rigid and exclusive zones of interest that have been established without a collaborative framework. This type of regulatory behavior gives rise to undesired corporate behaviors such as "grandfathering" and "back fits," e.g., unapproved "uprates," passive deterioration of monitoring equipment, "immature" and inadequate scale model testing," time delays causing avoidable leaks, and waivers for monitoring wells.

For example, although PPL was unable to provide well logs for TW-1 and TW-2, (5) the SRBC is poised to "grandfather" TW-1 and TW-2. These wells are used to "supply sanitary water for the facility, to produce demineralized water, to maintain pumps seals, and for miscellaneous uses..." (6), and may (or may **not**) be included in the Company's tritium monitoring pogrom according to recent documents submitted to the NRC which indicate "quarterly sampling of four wells." (7) This is information the public has a Right-to-Know given the tritium leaks that have occurred at numerous nuclear plants across the nation, and PPL's identification of "inadvertent releases of radioactive liquids" in December 1983, April, 1988, July, 1991, and February, 1995. (Please refer to Enclosure )

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5 Draft Settlement, p. 3.

6 PPL Susquehanna, LLC, Susquehanna Steam Electric Station, Units 1 and 2; Draft Environmental Assessment and Finding of No Significant Impact Related to the Proposed License Amendment To Increase the Maximum Reactor Power Level, "Liquid Radioactive Waste and Offsite Doses [Federal Register: August 21, 2007 (Volume 72, Number 161)] [Notices] [Page 46670-46680].

7 Letter to the NRC, "Susquehanna Steam Electric Station Groundwater Protection - Data Collection Questionnaire," PLA 6086, Britt T. McKinney, Sr. Vice President & Chief Nuclear Officer, July 20, 2006.

### **III. Eric Joseph Epstein's Reply to the Susquehanna River Basin Commission's Response of September 5, 2007**

**SRBC:** This is a response to the above referenced document that you filed with the Susquehanna River Basin Commission ("SRBC" or "the Commission") on August 31, 2007. This filing, along with your earlier filings of July 27, 2007 and August 1, 2007, has been accepted and provided to the SRBC commissioners for their review. Please be aware, however, that these filings are, in a sense, premature, because no adversarial proceeding or appeal is yet underway in this case. Therefore, we are treating them as comment received on the record in this matter.

**Mr. Epstein:** Mr. Epstein believes the filings are timely, and in fact warranted in as much that he sought to develop a public and factual record prior to the Susquehanna River Basin Commission meeting and vote on the Application scheduled for September 12, 2007. In light of the fact that "...full and complete negotiations of all matters set forth..." have transpired according to the Settlement Agreement, Mr. Epstein reasserts that his filings are timely, prudent, and necessary to preserve his legal position.

**SRBC:** Your "Notice of Appearance" indicates that you will require 90 minutes to brief the Commission. Please be aware, that as a matter of standard operating procedure, the Commission reserves the right to limit all oral statements made at public hearings in the interest of time. In view of the fact that the Commission has already been provided with copies of your filings, the Chair may suggest that you briefly summarize their contents and focus on any new matter that you wish to bring to the Commission's attention with whatever time is afforded to you.

**Mr. Epstein:** Epstein will **not be able to appear at the meeting** in Binghamton, New York and requests that: 1) This document be read into the record by the court reporter; or 2) The SRBC provide a teleconference line for Mr. Epstein to testify, monitor the proceedings, respond to questions and provide real-time comments.



**SRBC:** The Notice of Appearance also reiterates your August 1, 2007 request for a public input hearing. In a separate motion, you further request that the SRBC postpone a final determination of the PPL Susquehanna LLC Application for Surface Water Withdrawal until the SRBC meeting of December 5, 2007 in Lancaster, Pennsylvania. At its meeting in Binghamton, New York on September 12, 2007, the Commission will receive your presentation, along with other relevant information, and decide whether to grant these requests. (2)

**Mr. Epstein:** Based on scheduling challenges, the SRBC's intent to approve PPL's Application, and the amount of resources Mr. Epstein has expended on this project, a physical appearance represents an undue burden. Mr. Epstein will also have to take a day off a work to review data requests.

**SRBC:** With respect to your data requests, as we noted above, there is no ongoing adversarial proceeding or appeal with respect to the SRBC's review and approval of PPL Susquehanna, LLC's application that could trigger a discovery process at this point in time. Also, there is no general right of discovery in an administrative proceeding, unless the rules so provide. SRBC rules do not provide for discovery during an administrative proceeding. Therefore, the Commission is not obliged at this stage to respond to a data request. Instead, and as we have previously advised you, we will make the record available for review.

**Mr. Epstein:** Data requests are not analogous to formal discovery motions; but in this case, a tool used as a means of gathering information to review the "...full and complete negotiations of all matters set forth in the Settlement Agreement..." Frankly, this passage from the proposed Settlement is little more than preemptive litigation outside of the public's view, and supports Mr. Epstein's position that data requests are warranted and timely.

**SRBC:** Without prejudice to this position, we offer the following response to your data requests:

**Data Request 1** – The SRBC has not made any decision to waive §803.42, §803.44, §806.13, §806.22-23, §806.34, §806.4, §806.5 or §806.6 relating to the 1.4% Measurement Uncertainty Recapture (MUR) uprate in 2001 and therefore, there are no documents, work papers, or correspondence relating thereto.

**Mr. Epstein:** Based on the proposed Settlement, the SRBC may in fact waive the above noted regulations. Mr. Epstein's continues to seek correspondence, communications, and data relating to the discussions surrounding the uprate, e.g., "Specially PPL will admit or deny the allegations in part E of the settlement agreement which required approval from the SRBC pursuant to section §803.44 (a) (2)."

**Data Request 2** – The SRBC has not made any decision to waive applicable penalties associated with PPL's failure to apply and receive necessary approvals from the SRBC relating to the 1.4% Measurement Uncertainty Recapture uprate in 2001 and therefore, there are no documents, work papers, or correspondence relating thereto. There is a proposed settlement agreement relating to these penalties that has yet to be considered by the Commission.

**Epstein:** However, based on the Proposed settlement the SRBC may waive the above noted regulations. Mr. Epstein's seeks correspondence, communications, and data relating to the discussions surrounding the uprate, e.g., "Specially PPL will admit or deny the allegations in part E of the settlement agreement which required approval from the SRBC pursuant to section §803.44 (a) (2)."

Moreover, there is no apparent rhyme or reason as to the amount of the fine or whether this settlement was consistent and congruent with the Peach Bottom Atomic Power Station Agreement dated December 5, 2006.

In fact, PPL is on record of spending more money on litigation costs in recent regulatory proceedings. PPL paid **\$827,000** on legal fees in the PUC's 2004 base rate case (Docket No. R-00049255). In that case, which was subject to public input hearings, the Company proposed to increase transmission rates by \$57.2 million. PPL is currently proposing to spend **\$700,000** on legal costs for its current base rate request of \$83.6 million. (8) The fine imposed by the SRBC should be punitive and indexed to the amount of additional revenue PPL generated by flaunting Commission regulations for six years. Certainly, the Company can pay the equivalent of what it invests to increase consumer rates.

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8 PPL EU's Response to Interrogatories of the Office of Trial Staff, Set XX II, Dated May 25, 2007, Docket No. R-00072155.

More distressing is that there were no materials provided to Mr. Epstein as to the discussions involving this Settlement:

After full and complete negotiations of all matters set forth in the Settlement Agreement, and upon mutual exchange of the convents herein, the parties desire to resolve the same, without resort to litigation, by agreeing to the following, with the intent of being legally bound hereby...

What documents were exchanged? When did the meetings take place? Who attended the "mutual exchanges?" Are the transcripts, memos, or other materials only available through discovery? Mr. Epstein has raised related issues before the NRC and the SRBC since last November, 2006, yet he was not invited to participate in the negotiations.

**Data Requests 3 & 4** – As was previously communicated to you by voice mail message on August 31, 2007, you are welcome to make arrangements with Mr. Michael Brownell of our staff to review our files anytime after 1:00 p.m. today.

**Mr. Epstein:** This response is appreciated, but insufficient in as much the SRBC has maintained that there is no data to view (See SRBC responses to Epstein's data requests). Mr. Epstein also believes that additional personnel have had input, discussions, and evaluations with PPL regarding this Applicant.

**Data Requests 5 & 6** – The SRBC does not provide legal opinions as to the scope of authority of other agencies to individuals or the general public. We would recommend that you contact counsel for those other agencies to obtain such an opinion. Under the authority of the Susquehanna River Basin Compact, Pub. L. 91-575, and the regulations of the SRBC found at 18 CFR Part 806, the Commission regulates certain consumptive uses and withdrawals in the Susquehanna River Basin. There may be agencies that "assess and receive compensation" for surface water withdrawals, but you would have to undertake your own investigation to determine that. Please note that the SRBC does not assess and receive compensation for surface water withdrawals.

**Mr. Epstein:** This response is insufficient and reflects regulatory inertia. Epstein strongly encourages the SRBC to convene a regulatory stake holders' meeting with the NRC, FERC, DEP, and PUC *prior* to AmerGen's application in the first-quarter of 2008 for a license extension and uprate at Three Mile Island Unit-1.

**SRBC:** To provide you with adequate notice prior to your upcoming appearance before the Commission, we are attaching the following information: 1) a copy of the draft docket which has been prepared by staff for consideration by the Commission; and 2) a copy of a proposed settlement agreement which has been offered by PPL Susquehanna, LLC to resolve the 2001 MUR uprate compliance matter. These documents, along with all the filings made by you, have been forwarded to our commissioners for their review.

**Mr. Epstein:** The Commission's responses were helpful and informative, but also created numerous questions that can not be resolved in 48 hours or even one week prior to a final decision.

**SRBC:** In closing, we would note that in your filing of August 1, 2007, you raised six substantive contentions covering various subjects such as approval of the 2001 uprate, penalty assessment and coordination. The SRBC staff plans to address these contentions at the Commission meeting on September 12, 2007 in Binghamton.

**Mr. Epstein:** Again, the notice is appreciated, but not timely. Mr. Epstein will review the decision and the transcript as well as the SRBC's new testimony. Mr. Epstein has sought to facilitate a transparent, inclusive and open process, and reserves the right to appeal the Commission's decision on September 12, 2007 on procedural and substantive grounds.

**SRBC:** Thank you for your interest and participation in this important matter. We will see you in Binghamton on September 12.

**Mr. Epstein:** Unfortunately, Mr. Epstein will not be able to attend. (9)

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9 It is Mr. Epstein position (which has not been rebutted by the SRBC) that if the Commission construes a public input hearing **109 miles north** of Berwick is an "affected area," than **109 mile downstream** from Berwick is also an affected area. (Motion, p. 11)

**ENCLOSURE 1**

**Britt T. McKinney**  
Sr. Vice President & Chief Nuclear Officer

**PPL Susquehanna, LLC**  
769 Salem Boulevard  
Berwick, PA 18603  
Tel. 570.542.3149 Fax 570.542.1504  
btmckinney@pplweb.com



**JUL 20 2006**

Mr. Stuart A. Richards, Deputy Director  
Division of Inspection and Regional Support  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**SUSQUEHANNA STEAM ELECTRIC STATION  
GROUNDWATER PROTECTION –  
DATA COLLECTION QUESTIONNAIRE  
PLA-6086**

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**Docket Nos. 50-387  
and 50-388**

Dear Mr. Richards:

The nuclear industry, in conjunction with the Nuclear Energy Institute, has developed a questionnaire to facilitate the collection of groundwater data at commercial nuclear reactor sites. The objective of the questionnaire is to compile baseline information about the current status of site programs for monitoring and protecting groundwater and to share that information with the NRC. The completed questionnaire for PPL Susquehanna, LLC is enclosed.

This submittal contains no new regulatory commitments.

Please contact Richard Doty at (610) 774-7932 if you have questions about the enclosed information.

Sincerely,

A handwritten signature in black ink, appearing to read "B. T. McKinney", written over a horizontal line.

B. T. McKinney

Attachment: Groundwater Protection Data Collection Questionnaire

cc: USNRC Document Control Desk  
Samuel Collins, USNRC Regional Administrator – Region I  
Mr. A. J. Blamey, NRC Sr. Resident Inspector  
Mr. R. V. Guzman, NRC Project Manager  
Ralph Andersen, Nuclear Energy Institute  
Mr. R. Janati, DEP/BRP

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**Attachment to PLA-6086**

**Groundwater Protection Data  
Collection Questionnaire**

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**Industry Groundwater Protection Initiative  
Voluntary Data Collection Questionnaire**

**Plant: Susquehanna Steam Electric Station**

- 1. Briefly describe the program and/or methods used for detection of leakage or spills from plant systems, structures, and components that have a potential for an inadvertent release of radioactivity from plant operations into groundwater.**

**ANSWER:**

- Susquehanna SES has identified seven systems that are more likely to contaminate groundwater with tritium than the other plant systems: Cooling Tower (via blowdown line), Emergency Service Water, Fuel Pool, Residual Heat Removal Service Water, Ultimate Heat Sink, Condensate Transfer, and Radwaste. In the case of the Fuel Pools, a liner leakage detection system is monitored to detect leakage. There are no inspection programs to determine the condition of underground piping associated with the systems mentioned above that include underground piping. There are no inspection programs to monitor the integrity of the concrete berms around the above-surface Condensate Storage Tanks and Refueling Water Storage Tank.
- The Susquehanna plant has an underdrain (French drain) system which is installed around the entire perimeter of the power block immediately above the building base slab. Groundwater, which may infiltrate into this piping system would flow to one of three foundation drain manholes. Without sump pumps, accumulation of water would occur in those manholes until the water reached the elevation of overflow pipes (to the station storm drain system). However, sump pumps are in place and actuate to direct the water to the overflow pipes at a level below the overflow elevation. There is no periodic radioactive-material sampling system in place at these manholes; however, a sampling program is in development as described in the answer to question 2.
- All plant systems are periodically and routinely walked down by Operations and Systems Engineering personnel independently. Additionally, Health Physics personnel perform walk-downs of radiologically controlled areas of the station. (As noted above, there are no inspections of the underground piping). The expected response to the discovery of a system leak or spill is the notification of supervision and the generation of a Condition Report, which leads to evaluation of appropriate corrective actions. A bi-annual surveillance test is performed on the Ultimate Heat Sink for indications of gross leakage into groundwater.
- Groundwater sampling is conducted as part of the Radiological Environmental Monitoring Program (REMP).

- Spills of potentially radioactive materials are addressed in accordance with established procedures. These procedures include notifications to appropriate plant personnel and initiation of appropriate control and clean-up actions.
2. Briefly describe the program and/or methods for monitoring onsite groundwater for the presence of radioactivity released from plant operations.

**ANSWER:**

- The REMP groundwater monitoring program consists of quarterly sampling of four wells. These wells are located within the site boundary but are outside of the Protected Area boundary (security fencing). The four wells are used for domestic water (drinking and various system support) supply to buildings within the site boundary. The water is sampled from faucets within the applicable buildings being supplied by the respective wells. The wells vary in location from 1,400 to 4,500 feet from the centerline of the Unit 1/2 reactor buildings. A well located approximately 6 miles from the site is sampled (quarterly) as a "control" location.
- The plant has a foundation drainage system for collection of groundwater along the perimeter of the reactor and turbine buildings (both units) and the radwaste building, as described in the answer to question 1. Excess water (overflow) collected from the underdrain system in the three manholes is pumped to the storm drain system. The storm water collection basin is sampled/analyzed for tritium and gamma emitting radionuclides quarterly. The three underdrain system manholes are scheduled to be added to the REMP groundwater sampling and analysis program later in 2006.
- Radiological analysis performed on groundwater samples includes tritium and gamma-emitting radionuclides. Typical groundwater sample Minimal Detectable Concentrations (MDC) are as follows:

Radionuclide	MDC (pCi/L)
H-3	150
Mn-54	15
Fe-59	30
Co-58/60	15
Zn-65	30
Zr-95	30
Nb-95	15
I-131	1
Cs-134	15
Cs-137	18
Ba-140	60
La-140	15
Gross alpha	2
Gross beta	4

- 3. If applicable, briefly summarize any occurrences of inadvertent releases of radioactive liquids that had the potential to reach groundwater and have been documented in accordance with 10 CFR 50.75(g).**

**ANSWER:**

- Four events have been identified which are judged to have had the potential, however small, for inadvertent release to groundwater. Each event has been documented in the 10 CFR 50.75(g) files.
- The first event occurred in December 1983 (with Unit 1 in operation and Unit 2 under construction) and involved a condensate system leak into a Unit 2 Turbine Building central area sump, which was being pumped to a temporary sump outside the Unit 2 Turbine Building. The areas impacted included the central area sump inside the Unit 2 Turbine Building and the temporary sump outside the Radiologically Controlled Area. Cleanup of the affected sumps (contaminated liquid removal via pumping and sump decontamination) was promptly initiated. The potential for significant contamination of groundwater is believed to be small.
- The second event occurred in April 1988. Liquid from a spill from the Unit 2 condensate system extended beyond the Radiologically Controlled Area boundary at a Turbine Building train bay door. Cleanup of the liquid and affected soil was promptly initiated. Construction of a Tool Room has since occurred in the affected area, with that Tool Room being inside the Radiologically Controlled Area. The potential for significant contamination of groundwater is believed to be small.
- The third event occurred in July 1991. Liquid from the radwaste/condensate-transfer system was inadvertently released into a cement silo building affixed to the radwaste building. The area impacted was the immediate vicinity of the cement silo building. Cleanup of the area was promptly initiated. The potential for significant contamination of groundwater is believed to be small.
- The fourth event occurred in February 1995. There was a leak of condensate system water into a drain pipe in the area of the Unit 2 Condensate Storage Tank (CST) berm. The area impacted was the Unit 2 CST berm area. Monitoring of the liquid in the berm area and the leakage path showed very low levels of radioactive material. The potential for significant contamination of groundwater is believed to be small.

4. If applicable, briefly summarize the circumstances associated with any onsite or offsite groundwater monitoring result indicating a concentration in groundwater of radioactivity released from plant operations that exceeds the maximum contaminant level (MCL) established by the USEPA for drinking water.

ANSWER:

- PPL has identified no instances where a groundwater monitoring result indicated a groundwater concentration of tritium or other radionuclide released from plant operations that exceeded the MCL established by the USEPA for drinking water.

5. Briefly describe any remediation efforts undertaken or planned to reduce or eliminate levels of radioactivity resulting from plant operations in soil or groundwater onsite or offsite.

ANSWER:

- The potential for contamination of groundwater and/or soils is being re-evaluated as part of the on-going review of events (see question 3) involving inadvertent releases of liquid radioactive materials outside of the Radiologically Controlled Area. At this time, there is no indication that remediation efforts need to be initiated on-site or off-site, based on evaluations and sampling results obtained to date. By virtue of placement of the events in the plant decommissioning files, residual contamination, if any, resultant from the four events listed in the response to question 3, would be considered at the time of plant decommissioning.
- As noted in the response to question 3 above, the spill that occurred in April 1988 involved the removal of soils just outside a Unit 2 train bay door.