

PSEGESPEnveRAIPEm Resource

From: Fetter, Allen
Sent: Wednesday, August 29, 2012 4:39 PM
To: PSEGRAIResponses@pseg.com
Cc: PSEGESPEnveRAIPEm Resource; Robillard, David L; Mallon, James; Hsia, Anthony; Silvia, Andrea; Saulsbury, James; Zimmerman, Gregory P.
Attachments: PSEG Site ESPA Final RAI Env-03 (eRAI_6731).pdf

Please find attached RAI Env-03 for the PSEG Site ESP Application. The Env-03 RAI encompasses the rHYD RAIs that were provided to you on July 20, 2012 as part of a complete table of draft RAIs. At your request, clarification discussions of rHYD-16, rHYD-21, rHYD-27 and rHYD-29 were held on August 8 and 9, 2012. rHYD-16 was deleted after noting that requested information was available in PSEG's electronic reading room, and minor changes to the text of rHYD-21 and rHYD-27 were made for clarity. No other changes are necessary; hence we are issuing this RAI as final.

The schedule we have established to the review of your application assumes technically correct and complete responses within 30 calendar days of receipt of RAIs. For any RAIs that cannot be responded to within 30 calendar days, it is expected that a date for receipt of this information will be provided to the staff within the 30-day period so that the staff can assess how this information might impact the published schedule.

Please contact me if you have any questions.

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Request for Additional Information Env-03

Issue Date: 8/29/2012

Application Title: PSEG Site ESP Environmental Review - Docket 52-043

Operating Company: PSEG Power LLC, PSEG Nuclear LLC

Docket No. 52-043

Review Section: ESP EIS 2.3 - Water

Application Section: ER

QUESTIONS

ESP EIS 2.3-1

rHYD-02: Provide information that clarifies the rate at which the MODFLOW model stabilized in the dewatering simulation.

Supporting Information: Under ESRP 4.2 the identification of hydrologic alterations expected to result from the project related construction activities requires adequate data and information.

The rate of model stabilization for the dewatering predictions is needed for evaluating the model calibration.

ER Section 4.2.2.2.1 contains no information about the rate at which the MODFLOW model stabilized in the dewatering simulation.

ESP EIS 2.3-2

rHYD-03: Provide the digital files corresponding to all map layers used in the following ER figures:

2.3-1
2.3-2
2.3-6
2.3-29
2.3-30
2.3-31
2.3-32
2.3-39
2.3-40
2.3-41
2.3-42
3.1-2
3.4-2
3.4-3
3.4-4
4.2-1
4.2-2
4.2-3
4.2-4
6.3-1

Supporting Information: Under 10 CFR 51.41, information that may be useful in aiding the NRC in complying with section 102(2) of NEPA may be requested of the applicant.

To complete an impact assessment that involves the use of spatial datasets such as maps and GIS layers, and to prepare figures for the EIS, the staff needs the digital files that were used to create the ER figures listed.

ESP EIS 2.3-3

rHYD-06: Provide details of (1) how the 152-acre existing floodplain area would be affected by the placement of fill and (2) what State of New Jersey requirements regarding the placement of such fill must be met. In particular, provide the rationale for the ER conclusion that the placement of fill would result in a minor reduction in available flood storage. Provide a description of the State of New Jersey requirements that are applicable to the placement of fill in floodplains.

Supporting Information: ER Section 4.2.1.1.5 states that 152 acres of onsite and offsite floodplains would be affected by the placement of fill. The ER further states that the placement of fill would result in a minor reduction in available flood storage. No additional details are provided in the ER that would support the finding stated above.

ESP EIS 2.3-4

rHYD-09: Provide details of how the effects of any frazil ice formation were accounted for in the calculation of through-screen velocities for the cooling water intake for the proposed plant.

Supporting Information: Regarding Clean Water Act, Section 316(b) requirements for the proposed plant's intake, the applicant has stated in the ER that the through-screen velocities did not consider potential blockage from frazil ice formation.

ESP EIS 2.3-5

rHYD-14a: Provide the input files and supporting data (such as the river cross section and ambient discharge) used for CORMIX simulations in digital form.

Supporting Information: To evaluate the appropriateness of the applicant's thermal plume analyses and to independently assess the impacts for the EIS, the staff requires sufficient information and supporting data used in CORMIX simulations.

ESRP 5.3.2.1 "Obtain information about physical impacts and thermal plumes in enough detail to determine potential impacts..."

ESP EIS 2.3-6

rHYD-14b: Provide justification for use of the CORMIX model for estimation of the thermal plume. In particular, explain how using CORMIX for the Delaware River near the PSEG site is appropriate and conservative.

Supporting Information: ESRP 5.3.2.1 "Obtain information about physical impacts and thermal plumes in enough detail to determine potential impacts..."

The CORMIX model uses a simplified representation of the stream cross-section in plume analysis. The Delaware River near the PSEG site has a complex cross section due to the presence of the dredged navigation channel. The river is also expected to be affected by tidal processes and salinity variances and wind-induced circulation that affect the dynamics of the Delaware Estuary.

ESP EIS 2.3-7

rHYD-14c: Provide a description of how the effects of climate change were addressed in thermal plume analyses.

Supporting Information: Under 10 CFR 51.41, information that may be useful in aiding the NRC in complying with section 102(2) of NEPA may be requested of the applicant.

Climate change can result in warmer air temperatures, alterations in Delaware River discharge, and sea-level rise. Provide a description of how these and other climate change-related effects were addressed in thermal plume analyses. National Oceanographic and Atmospheric Administration (NOAA) National Climatic DataCenter meteorological data for the nearest National Weather Service (NWS) station (from ESRP 2.7)

ESP EIS 2.3-8

rHYD-14d: Provide a description of how the Chesapeake and Delaware Canal affects the dynamics of the Delaware River near the PSEG site and the Delaware Estuary, and describe how these effects influence thermal plume analyses.

Supporting Information: ESRP 5.3.2.1 "Obtain information about physical impacts and thermal plumes in enough detail to determine potential impacts..."

ESP EIS 2.3-9

rHYD-15: Provide a description of the chemical treatment that would be used in the cooling water system for biological control and to prevent impacts to surface water quality. Provide a list of the chemicals that would be processed through each system (e.g., corrosion inhibitors, antifouling agents) and total amounts used per year, frequency of use, and concentrations of these chemicals or their products in each waste stream. Identify activities of other agencies and projects that could contribute to a cumulative impact on the water-related impacts of the proposed waste discharge systems.

Supporting Information: ESRP 3.3.2 - identification, quantities, and points of addition of chemicals and additives to be used by each system (from the ER)

ER Section 5.2.3.1.1 contains no detail on the chemical treatment that would be used in the cooling water system.

ESP EIS 2.3-10

rHYD-21: Provide post-construction grading plans and the planned placement of engineered fill, and describe the impact this would have on infiltration and surface runoff characteristics, groundwater gradients, and flow paths.

Supporting Information: ESRP 4.2.1 – obtain data and information on the identification and description of project related construction activities expected to result in hydrologic alterations at the site

ESRP 5.2.1 – obtain data and information on the identification and description of project related operating activities expected to result in hydrologic alterations at the site

ER Section 5.2.3.2 does not address the impacts of potential groundwater mounding after construction. See NRC PSEG Safety Review RAI 60.

ESP EIS 2.3-11

rHYD-27: Provide a characterization, with supporting data and rationale, to discuss tritium deposition from aerial releases near the containment dome at SGS Unit 1 and the potential for a similar issue at the proposed plant. If this potential exists, please discuss cumulative impacts to water resources and users from aerial deposition of releases from both the existing and proposed plants.

Supporting Information: ER Section 5.2.3.2 contains no information about tritium deposition from aerial releases near the containment dome at SGS Unit 1.

At SGS Units 1 and 2, fuel pool water evaporates and is vented to the atmosphere. Total liquid and vapor release has been 1000-2100 Ci/yr (tritium). Samples are taken of the air venting resulting in approximately 300 Ci/yr (tritium) release. PSEG first discovered this in a storm drain at SGS Unit 2 that collected the condensate containing the tritium.

In 2010, PSEG agreed with the State of New Jersey to install 10 monitoring wells, and in 2011 found 3000-20000 pCi/L outside the tritium plume. The wells were installed in a complete areal coverage. A buried piping evaluation program was also implemented to check for leaks, but no patterns of high concentration were found and no change in areal distribution of high values was found.

During the Environmental Site Audit, PSEG committed to placing the remedial investigation work plan addendum and the original work plan in the electronic reading room. Sampling on the roof of SGS Unit 1 found 60,000 pCi/L; however, furthest from the containment dome only 100s to 1000s pCi/L were measured. PSEG plans to collect additional samples closer to the dome, and to examine the wind rose to see if there is a pattern to the release. For the proposed plant, all pipes would be double-walled or in an accessible chase. PSEG would monitor for tritium and respond according to requirement at the time.

ESP EIS 2.3-12

rHYD-28: Provide a description of the hydraulic changes that would occur if Site 15G is again used by the Corps for dredge spoils deposition.

Supporting Information:

ER Sections 5.2.2 and 5.2.3 contain no description of the hydraulic changes that would occur if Site 15G is again used by the Corps for dredge spoils deposition. This issue needs to be addressed in the EIS.

“piezometric contour maps and hydraulic gradients (historical, if available, and current) (from the ER and the general literature)”.

ESP EIS 2.3-13

rHYD-29: Provide additional description and data used to support the assessments of the effects of the proposed causeway. In particular, provide (1) a detailed description of data sources, data analyses, and assumptions made in the analyses to arrive at the results in ER Tables 4.1-2, 4.2-1, and 4.3-2 and (2) provide the spatial data layers (in GIS and/or other spatial analysis software format) used to create ER Figures 4.2-1, 4.3-1, 4.3-2, and 4.3-4.

Supporting Information: The ER describes the details of the causeway in Section 4.1.1.2.1 and its building-related impacts in Sections 4.2.1.1.2, 4.2.1.1.3, 4.2.3.1. ER Tables 4.1-2, 4.2-1, and 4.3-2 provide details of the applicant's assessment of the impacts to various land use types, surface waters, land covers, and wetlands. ER Figures 4.2-1, 4.3-1, 4.3-2, and 4.3-4 show the various areas that may be impacted from building of the causeway. However, the ER does not provide sufficient details of the assumptions and of the spatial analyses used by the applicant to arrive at the quantitative impacts to various land and water resources listed in Tables 4.1-2, 4.2-1, and 4.3-2. The requested information is needed for the staff's confirmatory analyses and impact assessment related to building of the causeway.