



PSEG Site Early Site Permit Application
RAI No. 67 Supplemental Response
NRC Public Meeting

April 6, 2015



Introduction

- **Introductions**
- **Purpose of Meeting**
 - Present proposed SSAR changes in RAI No. 67 Supplemental Response
 - Facilitate technical discussion with NRC staff
 - Discuss remaining actions for ASER Section 2.4

Agenda

- Background
- Discuss Supplemental Response to RAI No. 67
- Response Schedule
- Remaining NRC Action for Section 2.4 ASER
- Questions

- **PSEG ESPA Storm Surge Analysis based on Probable Maximum Hurricane (PMH) Storm (NWS 23)**
 - Modeled with Bodine storm surge method,
 - Coupled with HEC-RAS; Kamphuis wind setup method; and Coastal Engineering Manual wave run-up method
 - Produces total Water Surface Elevation (WSEL) of 42.4 ft. NAVD
- **PSEG developed a high resolution 2-D storm surge model (ADCIRC+SWAN) to support development of the response to ESPA RAI No. 67**

Discuss Supplemental Responses to RAI No. 67

Proposed Approach to Design Basis Storm Surge

- Maintain existing Bodine/HEC-RAS PMH screening based on NWS 23
- Two-dimensional models are recognized as a more accurate storm surge modeling tool
- Use high resolution ADCIRC+SWAN Model to determine the total design basis WSEL for the selected PMH storm

Proposed Changes to SSAR Subsection 2.4.5

- Introduction to SSAR 2.4.5 will describe the use of a two-dimensional model to define the design basis WSEL
- Subsections 2.4.5.5 and 2.4.5.6 will be revised to describe the use of the ADCRIC+SWAN model as a refined modeling approach
- PMH Simulation #2 with antecedent WSEL set to projected sea level rise of 1.35 ft. is used to produce design basis total WSEL of 32.1 ft. NAVD

Other Changes to the ESPA

- **The following ESPA Sections will be updated:**
 - SSAR Table 2.0-1, Site Characteristics
 - Areas of SSAR Section 2.4 will be updated to show a design basis total WSEL of 32.1 ft. NAVD and describe the site grade as 36.9 ft. NAVD
 - Grade elevation will be described as being established at a level providing for clearance above the design basis flood, as required by Tier 1 of the DCD for the selected technologies
 - ER Subsection 2.3.1.1.4 will be updated to reflect a design basis total WSEL of 32.1 ft.

Summary of RAI No. 67 Supplemental Response

- Bodine/HEC-RAS/Kamphuis screening process based on NWS 23 is maintained
- Retain description of the Bodine/HEC-RAS/Kamphuis/CEM model
- High resolution ADCIRC+SWAN model used to perform a refined analysis of the selected PMH storm
 - Establishes design basis flood level of 32.1 ft. NAVD

RAI 67 Response Schedule

- NRC Public Meeting 4/6/2015
- Submit Supplemental Response 4/15/2015
- NRC issues draft ASER for 2.4 4/??/2015
- ACRS Sub-Committee Meeting 5/4/2015

Discussion and Questions

- Thank You
- Open for discussion and questions

- **PMH Screening Process – Matrix of Nine Storms**
 - Bodine Model – Storm Surge at Mouth of Bay
 - HEC-RAS Model – Translate Surge to PSEG Site
 - Kamphuis Equation for Wind Setup
- **Design Basis Flood Level – Single PMH Storm**
 - Bodine/HEC-RAS/Kamphuis
 - Coastal Engineering Manual (CEM) Wave Runup
- **Confirmatory Analysis – Single PMH Storm**
 - ADCIRC+SWAN Model with CEM Wave Runup
 - Varied Antecedent Water Level