



Susquehanna Steam Electric Station

License Amendment Request for a Revision to the Dose
Consequence Analysis for a Loss of Coolant Accident

Pre-Application Meeting
October 29, 2019



Meeting Purpose

- Describe a future license amendment request
- Establish a common understanding of the scope of the request
- Establish a common understanding of the schedule
- Obtain NRC feedback

Proposed Changes to Analysis

- Upgrade to ORIGEN-ARP for source term
- Reduce assumed ESF leakage to align with RG 1.183
- Increase assumed Secondary Containment inleakage
- Increase assumed CRHE inleakage
- Eliminate CRHE continuous occupancy areas to align with RG 1.183
- Upgrade to RADTRAD Version 3.10

Impacted Parameters

Parameter	Existing DBA LOCA AOR
RB Inleakage	140%/day (4041.1 cfm)
SGTS Flow Rate	11,110 cfm (first 10 minutes) and 4041.1 cfm thereafter
ESF Leakage into RB	20 gpm (2.674 cfm)
CRHE Unfiltered Air Inleakage	500 cfm
Continuous occupancy locations	Elevation 741'-1" (all) Elevation 729' (all) Elevation 698' (Computer Room)

Continuous Occupancy Assumptions

Current Assumptions

- Elevation 741'-1"
 - All Areas
- Elevation 729'
 - All Areas
- Elevation 698'
 - Computer Room Only

Revised Assumptions

- Elevation 741'-1"
 - Technical Support Center Only
- Elevation 729'
 - Control Room Only
- Elevation 698'
 - Computer Room Only

Aggregate Dose Impacts

Post-LOCA Dose Type	Existing DBA LOCA AOR (Rem TEDE)	Regulatory Limit (Rem TEDE)
Control Room (30 Day)	4.69	5
EAB (Worst Case 2 Hour)	12.0	25
LPZ (30 Day)	4.53	25

- Control room dose will decrease
- EAB dose will increase
 - Remains below regulatory limit
- LPZ dose will decrease

Summary

- Change in method
- Multiple changes to assumptions/inputs
- Post-LOCA doses remain within 10 CFR 50.67 limits
- Minor impacts to TS and TS Bases
- Required to support fuel loading in spring 2021

List of Acronyms

AOR – Analysis of Record

LPZ – Low Population Zone

CR – Control Room

MSIV – Main Steam Isolation Valve

CRHE – Control Room Habitability Envelope

RB – Reactor Building

DBA – Design Basis Accident

RG – Regulatory Guide

EAB – Exclusion Area Boundary

SGTS – Standby Gas Treatment System

ESF – Emergency Safety Feature

TEDE – Total Effective Dose Equivalent

LOCA – Loss of Coolant Accident

TS – Technical Specifications