TVA Clinch River SMR Project

Application of Plant Parameter Envelope

Agenda

Purpose and Background

Approach to Vendor Data Submittals

Vendor Data Verification and Refinement

Specific Topic Areas

- Meteorology
- Boundary Dose Conditions
- Accident Source Term
- Dose Estimates
- Severe Accidents

Purpose

Follow-up to September 11, 2014 meeting on Plant Parameter Envelope (PPE) methodologies

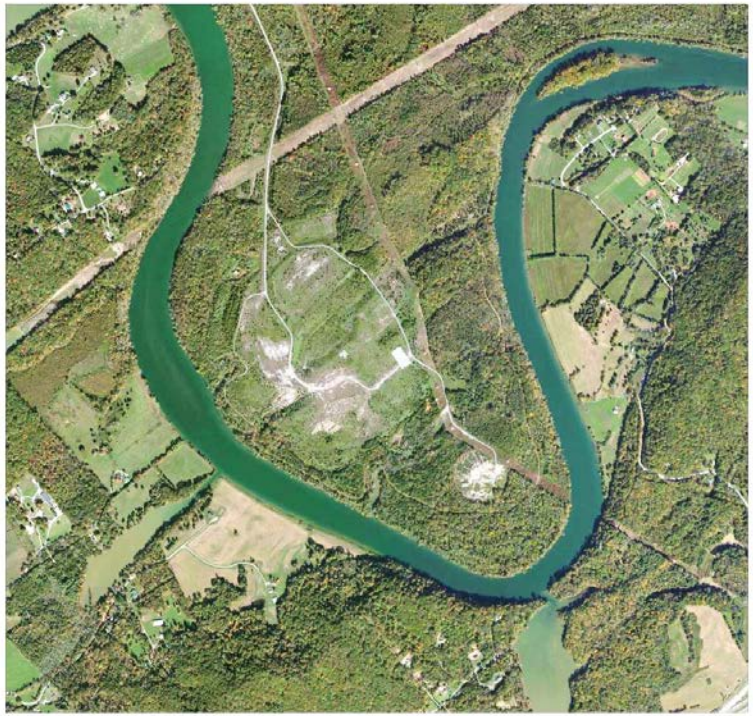
Describe TVA approach to vendor data submittals

Describe TVA verification and refinement of vendor data

Illustrate PPE development with specific examples

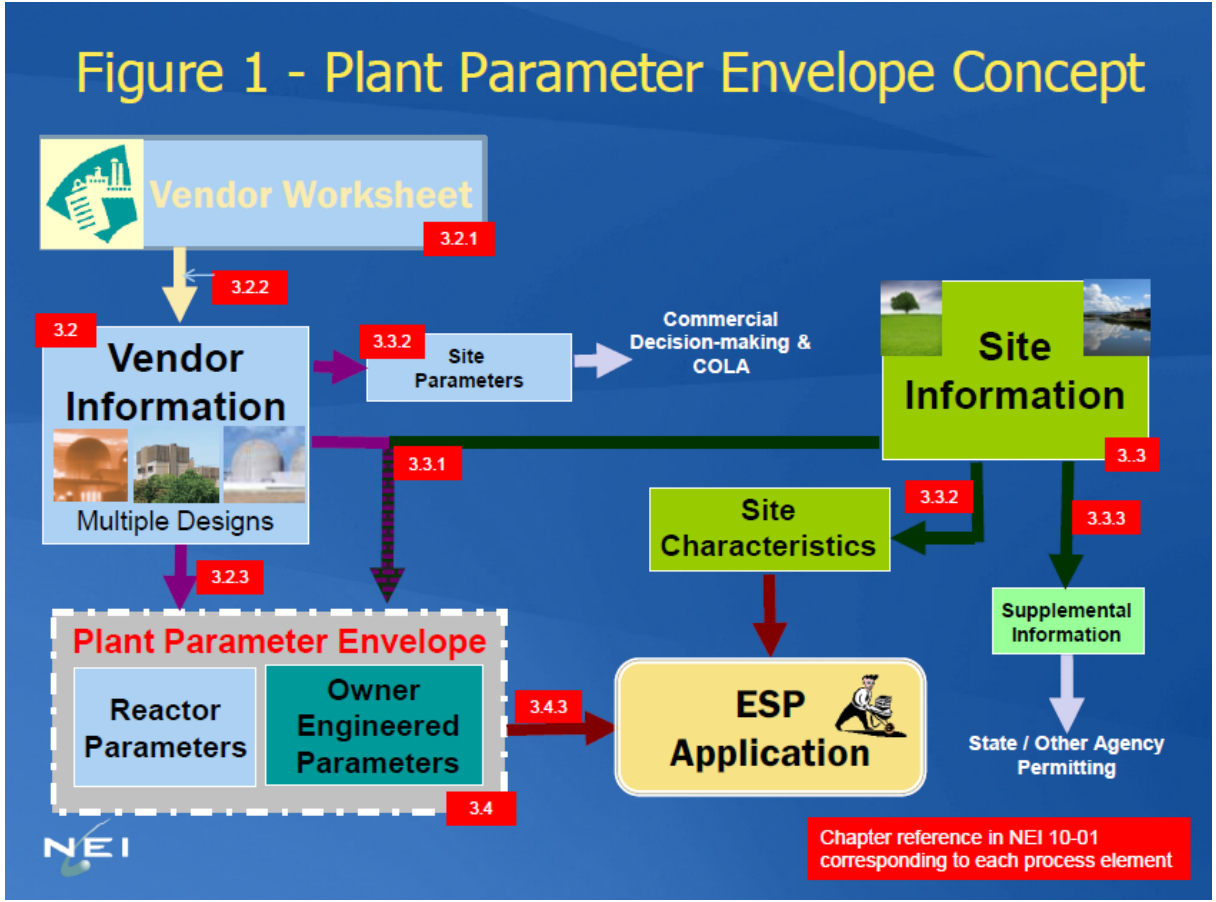
Project Background - Location

Located in Oak Ridge, TN



PPE Methodology

Based on NEI 10-01, Revision 1



Approach to Vendor Data Submittals (1/2)

Vendor worksheets from NEI 10-01 used for technical data collection from four Small Modular Reactor (SMR) vendors

- B&W mPower
- Holtec
- NuScale
- Westinghouse

Additional information requested to assess design and regulatory readiness

- Assess technical and regulatory progress
- Gain better understanding of technology and risk areas
- Assess progress toward resolution of risks

Approach to Vendor Data Submittals (2/2)

Appropriate due diligence exercised by TVA to assure vendor input understood

Focus areas for assessment of vendor input

- Degree of design completion
- Vendor margin included
- Uniqueness of SMR design
- Additional vendor discussions during ESP application development

PPE Data Verification & Refinement

Vendor data evaluated for bounding values

- Composite spreadsheet for vendor data
- Identified bounding values
- Identified missing data
- Evaluated for consistency within vendor data set
- Comparison of vendors' data sets for reasonableness
- Compared to benchmark values to evaluate outlier data
- Assignment of reasonable margin

PPE Data Use in ESPA

- Regulatory guidance reviewed for specific requirements
- Assessed use of parameters in Environmental Report and Site Safety Analysis Report
- Using option in NEI 10-01 to place PPE data tables in both SSAR and ER

Summary

Vendor data evaluated for bounding values

Regulatory guidance reviewed for specific requirements

Use in ER and SSAR considered when determining reasonable PPE values

PPE values contained in both SSAR and ER