

## PMLevyCOLPEm Resource

---

**From:** Habib, Donald  
**Sent:** Tuesday, June 12, 2012 3:13 PM  
**To:** Bob Kitchen  
**Cc:** Tonacci, Mark; Snyder, Amy; LevyCOL Resource  
**Attachments:** Levy Seismic June18-20 Audit Plan.pdf

Bob –

Attached is the NRC audit plan for next week. Please contact me if you have any questions.

Thanks

Donald C. Habib  
Project Manager  
U.S. Nuclear Regulatory Commission  
Office of New Reactors, DNRL/LB4  
Room T-6D14  
Washington, DC 20555  
301-415-1035  
[Donald.Habib@nrc.gov](mailto:Donald.Habib@nrc.gov)

**Hearing Identifier:** Levy\_County\_COL\_Public  
**Email Number:** 1099

**Mail Envelope Properties** (Donald.Habib@nrc.gov20120612151200)

**Subject:**  
**Sent Date:** 6/12/2012 3:12:34 PM  
**Received Date:** 6/12/2012 3:12:00 PM  
**From:** Habib, Donald

**Created By:** Donald.Habib@nrc.gov

**Recipients:**

"Tonacci, Mark" <Mark.Tonacci@nrc.gov>  
Tracking Status: None  
"Snyder, Amy" <Amy.Snyder@nrc.gov>  
Tracking Status: None  
"LevyCOL Resource" <LevyCOL.Resource@nrc.gov>  
Tracking Status: None  
"Bob Kitchen" <robert.kitchen@pgnmail.com>  
Tracking Status: None

**Post Office:**

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	373	6/12/2012 3:12:00 PM
Levy Seismic June18-20 Audit Plan.pdf		63609

**Options**

**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**

Audit Plan for Review of Levy Calculations Associated with  
Seismic Re-Evaluation in Response to Request for Additional Information  
Associated with Near-Term Task Force  
Tier 1 Recommendation 2.1 and SECY-12-0025

Audit Date: June 18-20, 2012

Background

Following the nuclear accident at the Fukushima Dai-ichi Nuclear Power Plant in Japan, the Nuclear Regulatory Commission (NRC) established a Near-Term Task Force (NTTF) to review NRC processes and regulations and make recommendations for policy direction. The NTTF issued a report in July 2011 recommending, among other things, that NRC order licensees to reevaluate the seismic hazards at their sites against current NRC requirements and guidance and, if necessary, update the design basis and structures, systems, and components important to safety to protect against the updated hazards. Legislation imposing this requirement appears in Section 402 of the December 2011 Consolidated Appropriations Act, 2012 (PL 112-74).

In February and March 2012, the NRC issued SECY-12-0025 and SRM-12-0025, which included a 50.54(f) information request letter addressing the seismic reevaluation requirement (ML12039A103 and ML120690347).

On March 15, 2012, NRC issued a request for additional information (RAI) to Progress Energy Florida requesting information on the seismic re-evaluation (ML120550146).

On April 12, PEF submitted a 30-day response letter indicating that its preliminary evaluation showed that the Levy site is bounded by the existing evaluation, and that the preliminary evaluation does not implement the new NRC requirement that the cumulative absolute velocity (CAV) filter should be limited to  $M_w$  less than or equal to 5.5. PEF also stated that a more rigorous reevaluation would be submitted by August 2012.

On April 27, NRC held a public meeting to discuss PEF's planned approach to address NTTF Recommendation 2.1 (ML12123A186)

The NRC staff will audit PEF's seismic reevaluation calculations and documentation related to the RAI on the NTTF Recommendation 2.1 at the PEF office in Raleigh, NC. PEF informed the staff that this information is technically complete, but not yet through its internal review progress. The purpose of this planned audit is to examine and evaluate primarily non-docketed information including the newly calculated seismic hazard curves obtained using NUREG 2115, "Central and Eastern United States Seismic Source Characterization for Nuclear Facilities" seismic source model and the software used in these calculations. This is in order to gain understanding of PEF's seismic reevaluation, to verify applicable information and, as appropriate, to identify information that will require docketing to support the basis of a licensing or regulatory decision. Performing this audit should help the staff to conduct its review more efficiently.

## Regulatory Audit Basis

The basis for the audit is found in the following regulations:

- 10 CFR 100.23, "Geologic and seismic siting criteria"
- 10 CFR 52.79, "Contents of applications; technical information in final safety analysis report"

## Regulatory Audit Scope or Methodology

1. Review details of the implementation of the new Central and Eastern United States (CEUS) seismic hazard model for Levy site.
2. Review input parameters and seismic source zones used by the applicant in Levy seismic hazard calculations.
3. Review new model computer code implementation by comparing applicant's hazard calculations for the seven test sites presented in NUREG-2115 released in February 2012. This report describes a new seismic source characterization (SSC) model for the Central and Eastern United States (CEUS). It is replacing the *Seismic Hazard Methodology for the Central and Eastern United States*, EPRI Report NP-4726 (July 1986) and the *Seismic Hazard Characterization of 69 Nuclear Power Plants east of the Rocky Mountains*.
4. Review comparisons of the newly performed calculations of 10<sup>-4</sup> and 10<sup>-5</sup> rock hazard curves with existing Levy FSAR calculations.
5. Review applicant's application of the new cumulative absolute velocity (CAV) filter settings for removing effect of non-damaging earthquakes in ground motion response spectra (GMRS) calculations.
6. Review final comparisons of the new GMRS calculations with that of the FSAR.

## Documents and other Information to be Provided by PEF to Support Audit

1. CEUS software QA validation
2. CEUS calculation (Includes 7 benchmark sites)
  - a. Approved by Joint Venture Team
  - b. Initial review in progress at Progress Energy
3. RAI response outline (including FSAR changes)
4. LNG-0000-X7C-030 Seismic Hazard Model for the LNP Site
5. LNG-0000-X7C-031 Computation of Rock PSHA
6. LNG-0000-X7C-032 Site Response and Development of Safe Shutdown Earthquake Spectra
7. LNG-0000-X7C-044 Development of Inputs for SSI Analysis

8. Private conference room with speakerphone
9. Internet Access for NRC audit team

### Team Assignments

- Don Habib – Project Manager (Audit Leader)
- Amy Snyder – Project Manager
- Vladimir Graizer – Technical Reviewer
- Stephanie Devlin – Technical Reviewer
- Dogan Seber – Technical Reviewer

### Schedule

- Monday, June 18
  - 1:00 – 2:30 Introductions & Overview
  - 2:30 – 5:00 Audit Reviews
- Tuesday, June 19
  - 8:00 – 11:30 Audit Reviews
  - 11:30 – 12:30 Lunch
  - 12:30 – 5:00 Audit Reviews
- Wednesday, June 20
  - 9:00 – 11:30 Exit/RAI Discussion (ML12158A510 Meeting Notice and Agenda)
  - 11:30 – 12:30 Lunch
  - 12:30 – 1:00 Follow-up (if required)

### Available Applicant Personnel

- Bob Kitchen (PEF)
- Tillie Wilkins (PEF)
- Vann Stephenson (PEF)
- Chris Keenan (PEF)
- AK Singh (Sargent & Lundy)
- Bob Youngs (AMEC)

### Audit Points of Contact, Location, and Directions

#### Progress Energy Contacts

- Dana Rose 919-546-2496
- Bob Kitchen 919-546-6992 or 919-219-6356 (Cell)

The audit will be conducted at:

Progress Energy Building – PEB CR1072  
410 S. Wilmington Street  
Raleigh, NC 27601

### Directions

1. From RDU Airport take Aviation Parkway to I-40 East to Raleigh.
2. At approx. 12 miles take exit 298B (South Saunders Street/Downtown Raleigh Exit).
3. Going north, follow South Saunders Street, will run into McDowell Street, stay on McDowell Street (a very short distance) turn right onto South Street.
4. At the 2nd stop light go left onto Wilmington Street.
5. The Progress Energy Building (PEB) is at the corner of S Wilmington and E. Davie St. (entrance from either S. Wilmington St or Fayetteville St). Look for a parking deck on the right.

### Deliverables

The NRC staff will issue a regulatory audit summary. The goal is to issue this summary within 30 days of the audit and place the summary on the docket and in ADAMS within 90 days of the completion of the audit. The audit summary may be publically available, as appropriate.