April 26, 2010

MEMORANDUM FOR: Juan Peralta, Chief
Quality and Vendor Branch 1
Division of Construction Inspection
& Operational Programs
Office of New Reactors

FROM: Robert Prato, Inspection Team Leader ***/RA/***
Quality and Vendor Branch 1
Division of Construction Inspection
& Operational Programs
Office of New Reactors

SUBJECT: INSPECTION PLAN FOR STP AIRCRAFT IMPACT ASSESSMENT

VENDOR: South Texas Project

VENDOR CONTACT: Scott M. Head, Regulatory Affairs Manager
South Texas Project Nuclear Operating Company
P.O. Box 289
Wadsworth, Texas 77483
(361) 972-7136

INSPECTION DATES: May 17 - 21, 2010

VENDOR LOCATION: Anatech
5435 Oberlin Drive
San Diego, CA 92121

VENDOR DOCKET NOs.: 05200012 and 05200013

INSPECTION REPORT NOs.: 05200012/2010202 and 05200013/2010202

INSPECTION TEAM: Robert Prato, Team Leader, NRO/DCIP/CQVA
Yamir Diaz-Castillo, NRO/DCIP/CQVA
Mark Caruso, NRO/DSRA/SPRA
Dennis Andrukat, NRO/DSRA/SPRA/SFPT
Bret Tegler, NRO/DE/SEB1
David Jeng, NRO/DE/SEB2
Nanette Gilles, NRO/DNRL/DDIP/NRGA
Bhagwat Jain, NRO/DE/SEB1
Dr. J. Guadalupe Argüelles, Sandia National Laboratory
Dr. Alexander L. Brown, Sandia National Laboratory

Enclosure: Inspection Plan

CONTACT: Robert Prato, NRO/DCIP/CQVA
301-415-6035

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Dr. Alexander L. Brown, Sandia National LaboratoryEnclosure:
Inspection Plan

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ADAMS ACCESSION #: ML100900315

OFFICE	CQVP/DCIP	BC: CQVP/DCIP
NAME	R Prato	J Peralta
DATE	04/26/2010	04/26/2010

OFFICIAL RECORD COPY

INSPECTION BASES:

10 CFR Part 50.150, “Consideration of Aircraft Impacts for New Nuclear Power Reactors”

INSPECTION SCOPE:

This inspection is a special inspection that is being implemented on the South Texas Project, Units 3 and 4 (STP 3/4), ABWR design to verify the correct and effective implementation of the Nuclear Regulatory Commission (NRC) requirements in 10 CFR 50.150 and related regulatory guidance associated with the Aircraft Impact Assessment (AIA) process. The inspection will verify the follow specific activities:

a. Verify that the AIA identifies and incorporates the necessary design features and functional capabilities to show that, with reduced use of operator actions, the reactor core remains cooled or the containment remains intact, and spent fuel cooling or spent fuel pool integrity is maintained.

b. Verify that the AIA is a realistic, design-specific assessment of the physical, fire, shock, and specific plant system-loss effects from the impact of a large, commercial aircraft used for long distance flights in the United States, with aviation fuel loading typically used in such flights, and an impact speed and angle of impact considering the ability of both experienced and inexperienced pilots to control large, commercial aircraft at the low altitude representative of a nuclear power plant's low profile.

c. Verify that the AIA is being documented, and maintained consistent with the requirements of the rule.

TEAM ASSIGNMENTS:

Robert Prato	Team Leader
Yamir Diaz-Castillo	Quality-related activities
Marc Caruso	Systems Engineering
George Thomas	Systems Engineering
Bret Tegler	Structural Engineering
David Jeng	Structural Engineering
Dr. J. Guadalupe Argüelles	Structural Engineering
Dennis Andukat	Fire Protection Engineering
Dr. Alexander L. Brown	Fire Protection Engineering

PURPOSE AND INSPECTION PROCEDURES USED:

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, “Domestic Licensing of Production and Utilization Facilities,” Section 150, “Aircraft Impact Assessment,” the NRC will perform an inspection to verify that STP 3/4 has effectively implemented the aircraft impact regulations. The inspection team will review the STP 3/4 AIA process and results to verify compliance with 10 CFR 50.150 requirements.

The AIA inspection team will verify that STP 3/4 performed a rigorous, realistic, and design specific assessment to identify and incorporate into its design those design features and

functional capabilities to show that, with reduced use of operator actions: 1) the reactor core remains cooled or the containment remains intact; and 2) spent fuel cooling or spent fuel pool integrity is maintained. The inspection will verify that the assessment is accurate and complete, and is sufficiently documented to ensure a clear understanding of the damage footprint and the availability of the specific design features and functional capabilities necessary to show that, with reduced use of operator action, the design can withstand the effects of a large commercial aircraft impact.

Inspection Procedure 37804, "Aircraft Impact Assessment," will be used to perform the STP 3/4 AIA inspection.

CONDUCT OF INSPECTION:

The NRC AIA inspection is expected to last five days from the entrance meeting to the exit meeting. The inspection team makeup will consist of the team leader, six NRC staff engineers/inspectors and two contractors. Although the staff is anticipating that five days will be sufficient to perform the specified objectives of this inspection, the NRC has scheduled a second week of inspection in the event that more time is needed to complete the inspection. Each inspection schedule is assuming one day of travel for each team member.

All potential findings will be brought to the team leader's attention as soon as identified. Potential findings will be summarized in the daily briefing and during the exit meeting with the applicant. Upon returning from the inspection, each potential finding will be documented including a clear statement of the finding, a description of the circumstances associated with the finding, and the bases for the finding (refer to the AIA rule, statements of consideration (SOC), or other technical requirements). This information will be reviewed by the applicable branch chief(s) in preparation for presentation to the AIA Findings Review Panel.

The AIA Findings Review Panel will be made up of NRC managers (Deputy Division Directors) and one member from OGC**.** Post-inspection follow-up will be coordinated through the Team Leader.

Inspection team members will provide their documented inspection activities and results within five business days after the inspection exit meeting in a format consistent with IMC 0617. The team leader will issue the initial draft of the inspection report within 10 business days after the inspection exit meeting.

Preparation Activities: Each team member will review 10 CFR 50.150, the associated Statement of Consideration, Draft Guide 1176 and related NEI guidance document, and the available AIA documentation relating to his/her functional area of inspection. Members will prepare a list of additional documents, information and inquiries in preparation for the onsite inspection. Members will prepare a list of interview candidates, related interview notes and questions, drawings and calculations that need to be reviewed, etc. Members will prepare an outline of their inspection report input including boiler plate text and results of documentation reviewed prior to the site inspection.

Entrance Meeting: The Entrance Meeting is an NRC meeting with the applicant that is conducted on the opening day of the inspection to brief the applicant on the ensuing inspection. This meeting will include introductions, an

applicant overview of its design-specific AIA, the team leader's overview of the inspection, identification of points of contact, and a brief discussion period. The NRC has requested a brief presentation of the applicant's AIA process during the entrance meeting.

Inspection Activities: Inspection activities will typically include documentation review and interviews. Each inspector will focus on his/her assigned area of expertise. Any information obtained that is not relative to their assigned area will be forwarded to the appropriate inspector or the team leader.

Each inspector will use the AIA inspection procedure, inspection plan, and the NEI guidance document (NEI 07-13) endorsed by the NRC in Draft Guide -1176. Inspection activities will remain consistent with the applicable inspection procedure and any inspection activity not specified should be discussed with the team leader before pursuing.

Briefing: The team leader will conduct daily briefings with his/her team followed by daily briefings with the applicant regarding the activities reviewed, needed information, potential findings and other miscellaneous items. The team leader will also brief headquarters management, as appropriate, on progress and any potential concerns.

Exit Meeting The Exit Meeting is an NRC meeting with the applicant that is conducted at the end of the last day to summarize the results of the overall inspection. The information provided at the exit meeting should be consistent with the information provided during the daily briefings plus whatever new information is found during the last day of inspection. This meeting should primarily include a summary of the inspection performed, the results, and any potential findings from the inspection.

Inspection Report Inspection Team members will provide the result of their inspection activities in a format consistent with IMC 0617. Each team member is to provide his/her input within five business days of the completion of the inspection. The team leader will submit an initial draft of the inspection report for team review within 10 days of completing the inspection.

Each AIA inspection report will not be made final until the AIA Findings Review Panel decides on each potential finding presented by the inspection team. To this end, an AIA Findings Review Panel meeting will be scheduled immediately after each inspection scheduled is set and agreed upon by the NRC inspection team and applicant. The meeting will be scheduled within the first three weeks after the completion of the inspection.

LOGISTICS:

Hotel reservations have been confirmed.

Hotels: Courtyard San Diego Sorrento Mesa/La Jolla
9650 Scranton Road,
San Diego, California 92121
Phone: 1-858-558-9600

Per-diem rate: $147/71/218, San Diego, CA.

Inspection Schedule: 8:00 am to 5:00 pm.

Team meetings will be conducted daily.

An entrance meeting is scheduled for May 17, 2010, 2:00 pm in the offices of Anatech in San Diego, California.

An exit meeting is scheduled for May 21, 2010, 11:00 am in the offices of Anatech in San Diego, California.

The inspectors will charge time in HRMS to Inspection Report No. 05200012/2010202 and 05200013/2010202, "STP Units 3 and 4."

DELIVERABLES:

a. Each inspector will provide input into the daily briefings including a summary of progress made, observations, potential issues, any items owed by the applicant.
b. Each inspector will provide a written outline of observations and any potential findings to the team leader by 10:00 am on the last day for input into the exit meeting.
c. Each inspector will develop their input into the inspection report within one week after the inspection. (Input should be formatted similar to the Inspection Report format in MC0613).
d. The team leader will submit the draft inspection report for team review within two weeks after the inspection. The team will have 3 working days to complete their review.
e. Management review and approval of the inspection report is due by July 05, 2010.