UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BLVD
ARLINGTON, TEXAS 76011-4511

March 5, 2013

Jeremy Browning, Site Vice President
Arkansas Nuclear One
Entergy Operations, Inc.
1448 SR 333
Russellville, AR 72802-0967

SUBJECT: ARKANSAS NUCLEAR ONE - NOTIFICATION OF NRC TRIENNIAL FIRE PROTECTION BASELINE INSPECTION (05000313/2013009 AND 05000368/2013009) AND REQUEST FOR INFORMATION

Dear Mr. Browning:

The purpose of this letter is to notify you that the U.S. Nuclear Regulatory Commission (NRC), Region IV staff will conduct a triennial fire protection baseline inspection at the Arkansas Nuclear One facility in June 2013. The inspection team will be comprised of four reactor inspectors from the NRC Region IV office. The inspection will be conducted in accordance with Inspection Procedure 71111.05T, "Fire Protection (Triennial)," the NRC's baseline fire protection inspection procedure.

The schedule for the inspection is as follows:

- Information gathering visit: May 21 - 22, 2013
- Onsite inspection: June 10 -14, 2013
  June 24 - 28, 2013

The purpose of the information gathering visit is to obtain information and documentation needed to support the inspection, to become familiar with the fire protection programs, fire protection features, post-fire safe shutdown capabilities and plant layout, and mitigating strategies to address Section B.5.b of the Interim Compensatory Measures (ICM) Order EA-02-026, of February 25, 2002, Part 10 CFR 50.54(hh)(2). The team leader will participate in the information gathering visit to select the fire areas for evaluation, identify additional documents needed to support the inspection, obtain unescorted access, and meet with the key personnel who will support the inspection. The fire area selection will require a walkdown of candidate fire areas in company with key personnel from your staff. The enclosure to this letter provides an initial list of the documents the team will need for their review.

We request that your staff transmit copies of the documents listed in the enclosure to the NRC Region IV office for team use in preparation for the inspection. Please send this information so that it will arrive in our office in Arlington, Texas, by the dates listed in the enclosure.

During the information gathering visit, the team will also discuss the following inspection support administrative details: office space size and location; specific documents requested to be made available to the team in their office spaces; arrangements for reactor site access; and the availability of knowledgeable plant engineering and licensing organization personnel to serve as points of contact during the inspection.

We request that during the onsite inspection weeks, you ensure that copies of analyses, evaluations, or documentation regarding the implementation and maintenance of the fire protection program, including post-fire safe shutdown capability, be readily accessible to the team for their review. Of specific interest for the fire protection portion of the inspection are those documents that establish that your fire protection program satisfies the NRC regulatory requirements and conforms to applicable NRC and industry fire protection guidance. For the B.5.b portion of the inspection, those documents implementing your mitigating strategies and demonstrating the management of your commitments for the strategies are of specific interest. Also, please ensure the availability of appropriate personnel knowledgeable of: (1) plant systems required to achieve and maintain safe shutdown conditions from inside and outside the control room, (2) the electrical aspects of the post-fire safe shutdown analyses, (3) reactor plant fire protection systems, (4) the fire protection program and its implementation and (5) the B.5.b program implementation should be available to support the team at the site during the inspection.

This letter does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, control number 3150-0011. The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Your cooperation and support during this inspection will be appreciated. If you have questions concerning this inspection or the inspection team's information or logistical needs, please contact John Mateychick, the team lead inspector, in the Region IV office at (817) 200-1560, or by email, John.Mateychick@nrc.gov

Sincerely,

/RA/

Geoffrey B. Miller, Chief
Engineering Branch 2
Division of Reactor Safety

Docket Nos.: 50-313; 50-368
License Nos.: DPR-51; NPF-6

Enclosure: Triennial Fire Protection Inspection Documentation Request

Electronic Distribution for Arkansas Nuclear One

Regional Administrator (Elmo.Collins@nrc.gov)
Deputy Regional Administrator (Steven.Reynolds@nrc.gov)
DRP Director (Kriss.Kennedy@nrc.gov)
Acting DRP Deputy Director (Michael.Scott@nrc.gov)
Acting DRS Director (Tom.Blount@nrc.gov)
Acting DRS Deputy Director (Jeff.Clark@nrc.gov)
Senior Resident Inspector (Alfred.Sanchez@nrc.gov)
Resident Inspector (William.Schaup@nrc.gov)
Branch Chief, DRP/E (Don.Allen@nrc.gov)
Senior Project Engineer, DRP/E (Ray.Azua@nrc.gov)
Project Engineer, DRP/E (Jim.Melfi@nrc.gov)
Project Engineer, DRP/E (Dan.Bradley@nrc.gov)
ANO Administrative Assistant (Gloria.Hatfield@nrc.gov)
Public Affairs Officer (Victor.Dricks@nrc.gov)
Public Affairs Officer (Lara.Uselding@nrc.gov)
Project Manager (Kaly.Kalyanam@nrc.gov)
Branch Chief, DRS/TSB (Ray.Kellar@nrc.gov)
RITS Coordinator (Marisa.Herrera@nrc.gov)
Regional Counsel (Karla.Fuller@nrc.gov)
Technical Support Assistant (Loretta.Williams@nrc.gov)
Congressional Affairs Officer (Jenny.Weil@nrc.gov)
RIV/ETA: OEDO (John.Cassidy@nrc.gov)
DRS/TSB STA (Dale.Powers@nrc.gov)

File located: R:\REACTORS\ANO\2013\ANO 2013009 FPT RFI - JMM ML13065A035

SUNSI Rev Compl.	X Yes ☐ No	ADAMS	X Yes ☐ No	Reviewer Initials	JMM
Publicly Avail	X Yes ☐ No	Sensitive	☐ Yes X No	Sens. Type Initials	JMM

RIV: DRS/EB2/SRI				C: EB2
JMMateychick				GBMiller
/RA/				/RA/
3/5/13				3/5/13

OFFICIAL RECORD COPY T=Telephone E=E-mail F=Fax

ENCLOSURE

Triennial Fire Protection Inspection Documentation Request

Please provide the following documentation (items 1 – 5) prior to the onsite information gathering visit, preferably no later than May 10, 2013. Where practical, please provide copies electronically. Please provide an index of the requested documents which includes a brief description of what the document is, and the numerical heading associated with the request (i.e., where it can be found in the list of documents requested).

1. The current version of your fire protection program and fire hazards analysis.

2. Post-fire safe shutdown analysis and the supporting calculations that demonstrate acceptable plant response.

3. Copies of the licensing basis documents for fire protection (safety evaluation reports, pertinent sections of the final safety analysis report, exemptions, deviations, letters to/from the NRC regarding fire protection/fire safe shutdown, etc.).

4. The fire probabilistic risk assessment or portions of the plant's individual plant examination for external events (IPEEE) report addressing fire events. Also, include the results of any post-IPEEE reviews, and listings of actions taken/plant modifications conducted in response to probabilistic risk assessment updates.

5. A list of the deficiencies with the current approved fire protection program identified as part of the transition to NFPA 805 and the compensatory measures established to assure an adequate level of fire safety until the transition to NFPA 805 is completed. (i.e., corrective action program documents including action items, engineering evaluations, fire impairments, compensatory measures such as fire watches, procedure changes, etc.).

Please provide the following documentation (items 6 – 48) prior to the week of June 3, 2013, to support inspection preparation. Whenever practical, please provide copies electronically. Drawings should be provided as paper copies of sufficient size such that all details are legible.

6. Plant layout and equipment drawings for fire areas that identify: (a) the physical plant locations of major hot standby and cold shutdown equipment; (b) plant fire area and/or fire zone delineation; (c) the locations of fire protection equipment, such as detection, suppression, and post-fire emergency lighting units; and (d) fire area boundaries. The specific documents needed to support inspection preparation will be discussed during the site visit.

7. Fire protection program implementing procedures (e.g., administrative controls, operator response procedures for fires, fire fighting procedures, etc.).

8. Operating procedures used for achieving and maintaining hot and cold shutdown conditions from the control room in the event of a fire outside the control room (III.G.2 areas).

9. Operating procedure(s) used to implement an alternative shutdown (III.G.3 areas) capability with or without control room evacuation.

10. A list of equipment used to achieve and maintain hot standby and cold shutdown in the event of a fire (safe shutdown equipment list).

11. Piping and instrumentation (flow) diagrams showing the components used to achieve and maintain hot standby and cold shutdown for normal and alternate shutdown. Please provide two copies of the piping and instrumentation (flow) diagrams for these systems of a size sufficient to read all details. These should include the systems used for reactor coolant system (RCS) makeup, RCS pressure control, decay heat removal, and reactivity control, including the essential support systems.

12. A listing, with descriptions, of design change packages which were determined to impact fire protection and post-fire safe shutdowns, performed since the last triennial fire protection inspection.

13. Copies of fire protection program change evaluations (Generic Letter 86-10 evaluations) performed since the last triennial fire protection inspection.

14. A listing of open and closed corrective action documents initiated since the last triennial fire protection inspection, which relate to the fire protection program or equipment, including corrective actions for fire-induced circuit failures, both single and multiple spurious actuations (for the selected fire areas). Include Corrective Action Process document number, date, and subject.

15. A listing of the applicable codes and standards (with the versions/dates) related to the design of plant fire protection features and evaluations of any code deviations. Copies of these codes should be available for review.

16. Drawings of the portions of the emergency lighting system which support fire response.

17. Procedures used to remove smoke from safety-related areas and the engineering studies or calculations which support the design basis.

18. Drawings of communication systems credited in the license basis for firefighting and plant operations during fires where control room is occupied and/or evacuated.

19. Piping and instrumentation (flow) diagrams for the fire water and sprinkler systems.

20. A listing of maintenance and surveillance testing procedures for alternative shutdown capability and fire barriers, detectors, pumps and suppression systems. Also, include a list of maintenance and surveillance testing procedures which verify fuse and breaker coordination in accordance with the post-fire safe shutdown coordination analysis.

21. Results of the last performance and trending of the fire pump flow tests and yard loop flow test.

22. Maintenance rule performance criterion and a summary of the performance history for systems or functions monitored within the maintenance rule program that support the fire protection program or involve safe shutdown equipment, over the period since the last triennial fire protection inspection.

23. A copy of fire protection program requirements (e.g., limiting conditions for operation, surveillance test requirements) covered by technical specifications, technical requirements manual, updated final safety analysis report, or similar documents.

24. Copies of internal and external self-assessments, audits, peer-assessments or similar reviews related to post-fire safe shutdown capability or the fire protection program completed since the last triennial fire protection inspection.

25. A list of manual actions taken outside the control room which are credited to mitigate the consequences of fires in III.G.2 areas (non-alternative shutdown areas). The list should group actions by the initiating fire area or zone and indicate where the action must take place.

26. Electronic copies of operator study guides (i.e., lesson plan text and graphics) or design basis documents that describe the purpose/function/operating characteristics of the safe shutdown systems (RCS makeup, RCS pressure control, decay heat removal, and reactivity control, including the essential support systems).

27. Two copies of one-line diagrams of the AC and vital DC electrical distribution systems. These should depict how power gets from the switchyard to the engineered safety feature loads (480V and 4160V).

28. A list of automatic and manually initiated gaseous fire suppression systems in the plant, giving location and the key equipment being protected.

29. A list of repairs (and the procedure that controls the actions) needed to: a) reach and/or maintain hot shutdown, and b) reach and/or maintain cold shutdown.

30. A list of high to low pressure interface valves.

31. A copy of procedures governing the training and operation of the fire brigade.

32. Organization charts of site personnel down to the level of fire protection staff personnel.

33. A contact list of key site personnel who will be supporting this inspection, giving location of their office and phone number onsite.

34. The team would like to observe an unannounced fire brigade drill in the plant, if possible, during the week of June 24, 2013. Please put us in contact, during the onsite information gathering trip, with the appropriate personnel for planning drills.

35. The team would like to perform a walkthrough of the procedure for control room evacuation due to fire with qualified operators in the plant during the week of June 10, 2013. The team would like to perform a walkthrough of a sample of manual actions required for other fires not requiring control room evacuation. Please put us in contact, during the onsite information gathering trip, with the appropriate personnel for planning the walkthrough.

The following documents (items 36 – 48) involve B.5.b mitigating strategies.

36. A copy of the license condition that incorporated the requirements issued to address the requirements of Section B.5.b of the ICM Order, EA-02-026, dated February 25, 2002, and 10 CFR 50.54(hh)(2).

37. A list of all modifications to regulatory commitments made to meet the requirements of Section B.5.b of the ICM Order, EA-02-026, dated February 25, 2002, the subsequently imposed license conditions, and 10 CFR 50.54(hh)(2).

38. A list of procedures/guidelines which were revised or generated to implement the mitigation strategies. These could be extensive damage mitigation guidelines (EDMGs), severe accident management guidelines (SAMGs), emergency operating procedures (EOPs), abnormal operating procedures (AOPs), etc.

39. A matrix that shows the correlation between the mitigation strategies identified in Nuclear Energy Institute 06-12 and the site-specific procedures or guidelines that are used to implement each strategy.

40. A list of engineering evaluations/calculations that were used to verify engineering bases for the mitigation strategies.

41. Copies of piping and instrumentation diagrams (P&ID) or simplified flow diagrams for systems relied upon in the mitigation strategies. These could be the type used for training.

42. A list of modification packages and simplified drawings/descriptions of modifications that were made to plant systems to implement the mitigation strategies.

43. Copies of procedure(s) used to inventory equipment (hoses, fittings, pumps, etc.) required to be used to implement the mitigation strategies.

44. A list of B.5.b strategies, if any, which have implementing details that differ from that documented in the submittals to the NRC and the safety evaluation report.

45. A copy of site general arrangement drawing(s) that show the majority of buildings/areas referenced in B.5.b documents.

46. Training records/ training matrix/ lesson plans related to B.5.b.

47. Copies of Memoranda of Understanding (MOUs) (e.g., with local fire departments) required to implement any mitigating strategies.

48. The team would like to perform a walkthrough of the procedure implementing a sample mitigating strategies and the inventory equipment (hoses, fittings, pumps, etc.) required to be used to implement the mitigation strategies during the week of June 24, 2013. Please put us in contact with the appropriate personnel for planning the walkthrough during the onsite information gathering trip

The following documentation needs (items 49 – 52) will be dependent upon sample selections, and will be finalized during discussions with your staff during the information gathering visit. Please provide the required documents prior to the week of June 3, 2013. Whenever practical, please provide copies electronically. Drawings should be provided as paper copies of sufficient size such that all details are legible.

49. Pre-fire plans for the selected fire areas (areas to be selected by the team during the information-gathering trip).

50. List of identified fire induced circuit failure configurations (for the selected fire areas) that could prevent operation or cause maloperation of equipment credited for safe shutdown in the event of a fire. Include failure configurations associated with hot shorts, open circuits, or shorts to ground identified as potentially causing spurious or multiple spurious actuations or maloperations of this equipment.

51. Cable routing information for components and equipment credited for safe shutdown in the selected fire areas. This information request item will be discussed and finalized with your staff during the information gathering visit.

52. Drawings showing the location details for detection and suppression systems in the selected fire areas.