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RELATED CORRESPONDENCE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
before the
ATOMIC SAFETY AND LICENSING BOARD

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In the Matter of

VERMONT YANKEE NUCLEAR
POWER CORPORATION

(Vermont Yankee Nuclear
Power Station)

)
)
) Docket No. 50-271-OLA-4
) (Operating License
) Extension)
)
)

INTERROGATORIES PROPOUNDED BY THE STATE OF VERMONT
TO THE
VERMONT YANKEE NUCLEAR POWER CORPORATION
(Set No. 1)

Pursuant to 10 C.F.R. §§ 2.740b and 2.741, the State of Vermont hereby propounds the following interrogatories to the Vermont Yankee Nuclear Power Corporation.

DEFINITIONS

1. "Document" as used herein is used in its broadest sense as expressed in Rule 34(a) of the Federal Rules of Civil Procedure, and specifically includes copies of every instrument or device by which, through which, or on which information has been recorded, including those reflecting meetings, discussions or conversations: notes; letters; memoranda (including internal Vermont Yankee Nuclear Power Corporation memoranda); manifests; tables; drawings; files; graphs; charts; maps; photographs; deeds; studies; data sheets; notebooks; books; appointment calendars; telephone bills; telephone messages; receipts; vouchers; minutes of meetings; pamphlets; computations; calculations; accounting statements; financial statements; voice recordings; computer printouts and disks; or any other device or media on which or through which information of any type is transmitted, recorded, or preserved. The term "document" also means every copy of a document when such copy is not an identical duplicate of the original.

2. "Person" as used herein is used in its broadest sense to include natural persons, public or private corporations and their subsidiaries or divisions, proprietorships, partnerships, governmental entities, associations, organizations, groups, trusts, estates and any other form of entity. Any reference herein to any "person,"

whether or not a party herein, that is a corporation, partnership, or any entity other than a natural person, shall be construed as including all past and present officers, directors, employees, and agents or members of the Board of Directors of the entity.

3. "Vermont Yankee" and "licensee" each refer to Vermont Yankee Nuclear Power Corporation, its predecessors, successors, parents, subsidiaries, affiliates, segments or divisions, including all past and present officers, directors, employees, agents or members of the Board of Directors of Vermont Yankee.

4. "Vermont Yankee plant" refers to the Vermont Yankee Nuclear Power Station.

5. The term "identify" means describe with particularity and provide the following information:

(a) When used with reference to a natural person, state his or her full name and present (or last known) business and residential addresses, present (or last known) business and residential telephone numbers, present (or last known) business affiliation, and employment position and relationship to Vermont Yankee at the time of the act to which the interrogatory relates;

(b) When used with reference to any entity other than a natural person, state its full name, the address of its principal place of business and its organizational form;

(c) When used with reference to a document, state its type (e.g., letter, contract, chart, memorandum), date, author(s), the name and address of each addressee, its title or heading, its substance, its present (or last known) location and custodian, the identity of each person to whom a copy was sent, and the date of such transmittal; and

(d) When used with regard to a communication, state the identity of each person making, receiving or present during the communication, the date and location of the communication, the substance of the communication, the manner in which the communication was made and, in the case of a written communication, the identity of the document comprising the communication.

6. "The application" refers to Vermont Yankee letter to NRC, BVY 89-41 of April 27, 1989, Proposed Amendment to Vermont Yankee Operating License to Extend the License Expiration to 40 years from Date of Issuance.

7. "Structures, systems, and components," unless otherwise qualified, refers to structures, systems, and components (and their supporting systems) whose failure could significantly affect the safety or security of the facility, and which are included in the plant's current licensing basis. This includes those systems, structures, and components (a) relied upon for the integrity of the reactor coolant pressure boundary, safe shutdown capability, and accident prevention and mitigation; (b) whose failure

can cause or adversely affect a transient or accident that significantly challenges structures, systems and components relied upon for the integrity of the reactor coolant pressure boundary, safe shutdown, or accident mitigation; and (c) other structures, systems and components not included above that provide reasonable assurance that the facility can be operated without undue risk to the public and plant personnel health and safety or to common defense and security (Draft Regulatory Guide DG-1001, Section C.1).

8. "Components" refers to items from which equipment is assembled (for example, attachments, bearings, bolts, capacitors, connectors, governors, inspection access ports, instrument sensors, locking devices, position indicators, resistors, seals, sight glasses, springs, switches, transistors, tubes, wires, etc), or to items from which systems are assembled (for example, piping, valves, pumps, heat exchangers, strainers, instrumentation, etc.).

9. "Equipment" refers to an assembly of components designed and manufactured to perform specific functions.

10. "Safety-related" structures, systems and components refers to structures, systems and components that are relied upon to remain functional during and following design basis events to ensure (i) the integrity of the reactor coolant pressure boundary, (ii) the capability to shutdown the reactor and maintain it in a safe shutdown condition, and (iii) the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the 10 CFR Part 100 guidelines. Design basis events are defined as conditions of normal operation, including anticipated operational occurrences, design basis accidents, external events, and natural phenomena for which the plant must be designed to ensure functions (i) through (iii) above. (10 CFR 50.49(b)(1))

11. "Nonsafety-related" structures, systems and components refers to all structures, systems and components that are not safety-related.

12. "Current licensing basis," refers to the original licensing basis as described in the licensee's Final Safety Analysis Report (FSAR), plus those additional requirements that have been made by the licensee during the period of plant operation up to the present. This includes, but is not limited to, plant-specific compliance with the Commission regulations as prescribed in parts 2, 19, 20, 21, 30, 40, 50, 51, 55, 72, 73, 100, and the appendices thereto of title 10 of the Code of Federal Regulations; orders; license conditions; exemptions; adjudicatory decisions; and written commitments made in correspondence such as responses to NRC bulletins and generic letters and other licensee correspondence (54 FR 4194).

13. "Qualified life" refers to the period of time, prior to the start of a design basis event, for which the structure, system or component was demonstrated to meet the design requirements for the specified service conditions.

14. "Design life" refers to the time during which satisfactory performance can be expected for a specified set of service conditions.

15. "Installed life" refers to the interval from installation or construction to removal during which the structure, system or component may be subject to design service conditions and system demands.

16. "Environmental conditions" refer to temperature, pressure, humidity, radiation, chemicals, and submergence in the area or, for the equipment or components in question.

17. "Mild environment" refers to an environment that would at no time be significantly more severe than the environment that would occur during normal plant operation, including anticipated operational occurrences (10 CFR 50.49 (c)).

18. "Harsh environment" refers to an environment that is not a mild environment.

INSTRUCTIONS

1. The response to each Interrogatory is to be numbered in a manner consistent with these Interrogatories.

2. In responding to these Interrogatories, furnish all responsive information that is available to Vermont Yankee, including information that is in the possession of any of Vermont Yankee's officers, employees, agents, contractors, consultants, assigns and attorneys or otherwise subject to Vermont Yankee's custody or control.

3. In responding to these Interrogatories, Vermont Yankee shall identify the person or persons providing the information contained in its answers.

4. If any requested information is withheld pursuant to an objection or claim of privilege, Vermont Yankee shall identify the specific Interrogatory (including subparagraph) requesting the withheld information, state the nature of the objection or privilege and the precise grounds upon which the objection is made or the privilege is claimed, and identify each person who has knowledge of such information.

5. If any document is not produced because Vermont Yankee has not retained it or because it is being withheld pursuant to an objection or claim of privilege, Vermont Yankee shall identify the document by stating:

- (a) the name(s) and affiliation(s) of the document's author(s) or originator(s);
- (b) the name(s) and affiliation(s) of the document's addressee(s);
- (c) the document's date;
- (d) the document's title or heading;
- (e) the document's subject matter;
- (f) the document's type (e.g., letter, contract);

- (g) the name(s) and affiliation(s) of the present or last known custodian(s) of the original document or copies thereof;
- (h) the current or last known business and residential addresses of such custodian(s); and
- (i) the name(s) and affiliation(s) of all recipients of copies of the document.

6. If anything is deleted from a document produced in response to an interrogatory, Vermont Yankee shall state the reason for the deletion and the subject matter of the deleted material.

7. If any Interrogatory is objected to in part, for any reason, the remainder of the Interrogatory is to be responded to fully.

8. All responses must be supplemented as provided for in 10 C.F.R. § 2.740(e).

INTERROGATORIES

1. Please identify all persons who participated in the preparation of answers to these interrogatories and production requests:
 - a. Describe in detail the specific portions of each response to which each person contributed.
 - b. Provide the most current resume available for each identified individual.
 - c. Describe the qualifications of each identified individual, including training and papers published.
2. Identify each and every supervisor who has been responsible for maintenance or surveillance activities at the Vermont Yankee plant at any time since January 1, 1988. As to each such person, provide the following information:
 - a. What was his or her precise responsibility or responsibilities for maintenance and/or surveillance at the Vermont Yankee plant?
 - b. Identify each and every structure, system and component upon which he or she supervised maintenance or surveillance work.
 - c. Describe in detail the precise instructions he or she received in the performance of his or her maintenance tasks.
 - d. Describe in detail the manner in which he or she received instructions.

- 1) Who provided the instruction?
 - 2) In what form was it provided?
 - 3) Identify all documentation that exists to verify that the instructions were provided and received.
 - e. Identify his or her dates of employment by Vermont Yankee.
 - f. Describe any changes in responsibilities while employed with Vermont Yankee, and identify the effective dates of these changes.
 - g. For each person identified, state his or her qualifications and training, and provide the most current resume available.
3. Identify each and every Vermont Yankee employee who has been responsible for or has performed maintenance or surveillance activities at the Vermont Yankee plant at any time since January 1, 1988. As to each such person, provide the following information:
- a. What was his or her precise responsibility or responsibilities for maintenance and/or surveillance at the Vermont Yankee plant?
 - b. Identify each and every structure, system and component upon which he or she performed maintenance or surveillance work.
 - c. Describe in detail the precise instructions he or she received in the performance of his or her maintenance tasks.
 - d. Describe in detail the manner in which he or she received instructions.
 - 1) Who provided the instruction?
 - 2) In what form was it provided?
 - 3) Identify all documentation that exists to verify that the instructions were provided and received.
 - e. Identify his or her dates of employment by Vermont Yankee.
 - f. Describe any changes in responsibilities while employed with Vermont Yankee, and identify the effective dates of these changes.
 - g. For each person identified, state his or her qualifications and training, and provide the most current resume available.
4. Identify each and every contract employee who has been responsible for or has performed maintenance or surveillance activities at the Vermont Yankee plant at any time since January 1, 1988. As to each such person, provide the following information:

- a. What was his or her precise responsibility or responsibilities for maintenance and/or surveillance while under contract and working at Vermont Yankee?
 - b. Identify each and every structure, system and component upon which he or she performed maintenance or surveillance work.
 - c. Describe in detail the precise instructions he or she received in the performance of his or her maintenance tasks.
 - d. Describe in detail the manner in which he or she received instructions.
 - 1) Who provided the instruction?
 - 2) In what form was it provided?
 - 3) Identify all documentation that exists to verify that the instructions were provided and received.
 - e. Identify his or her dates of contract employment by Vermont Yankee.
 - f. Describe any changes in responsibilities while under contract to Vermont Yankee, and identify the effective dates of these changes.
 - g. For each person identified, state his or her qualifications and training, and provide the most current resume available.
5. Identify each and every licensed control room operator, senior control operator, and shift supervisor who is currently employed by Vermont Yankee, or has been in your employ at any time since January 1, 1988. (Please note: The information for operators is requested based on opinions reported in the Report #3-88 of LRS Incorporated, quoted in sub-part j of Contention VII.) As to each such person, provide the following information:
- a. The dates of employment at Vermont Yankee.
 - b. All changes in responsibilities while employed at Vermont Yankee, and the effective date to each such change.
 - c. For each person identified, state his or her qualifications and training, and provide the most current resume available.
6. Please describe in detail the current licensing basis for each structure, system and component of the Vermont Yankee plant.
7. For each of the items described in the preceding question:

- a. State whether the current licensing basis is different from the licensing basis when the Vermont Yankee plant was originally granted its operating license.
 - b. If the current licensing basis is different from the original licensing basis, identify each and every document which caused the licensing basis to change from its original basis.
8. Identify each and every person who has been responsible for reviewing maintenance requests or work orders for the Vermont Yankee plant with regard to the current licensing basis of structures, systems and components, or with regard to the regulatory or safety impact of the request or work orders, at any time since January 1, 1988. As to each such person, provide the following information:
 - a. What was his or her precise responsibility or responsibilities?
 - b. Identify each and every structure, system and component upon which he or she determined the current licensing basis or determined the regulatory or safety impact.
 - c. Describe in detail the precise instructions he or she received for the performance of his or her review of maintenance requests or work orders.
 - d. Describe in detail the manner in which he or she received instructions.
 - 1) Who provided the instruction?
 - 2) In what form was it provided?
 - 3) Identify all documentation that exists to verify that the instructions were provided and received.
 - e. Identify his or her dates of employment by Vermont Yankee.
 - f. Describe any changes in responsibilities while employed with Vermont Yankee, and identify the effective dates of these changes.
 - g. For each person identified, state his or her qualifications and training, and provide the most current resume available.
9. Explain how personnel identified in the preceding question are able to access the current licensing basis for structures, systems and components. In your response, please provide the following information:
 - a. Identify all procedures which control or establish this review of current licensing basis.

- b. Is the current licensing basis maintained in a central location, accessible to personnel responsible for maintenance review?
- c. Is the current licensing basis distributed by a controlled distribution? If yes, please respond to the following:
 - 1) Identify the names of the documents in this distribution.
 - 2) Identify the procedure by which these documents are controlled and distributed.
 - 3) Identify the dates and describe in detail the contents of the last five revisions to these documents.
- d. Is the current licensing basis maintained in a format accessible by computer? If yes, please respond to the following:
 - 1) Identify the manual and descriptive information which describe the computer program, including how to access information in the current licensing basis by structure, system or component.
 - 2) Identify the procedure by which this computer data base is controlled.
 - 3) How is the modification of this computer data base controlled?
 - 4) Who may modify this computer data base?
 - 5) In what ways is the data base modify?
 - 6) How are modifications to this data base verified as correct?
- e. Is the current licensing basis for these reviews considered to be the FSAR? If yes, please respond to the following:
 - 1) Does the FSAR contain the complete current licensing basis for each and every structure, system and component?
 - 2) If the response to the above is negative, how does the reviewer include the missing portions of the current licensing basis in his or her review?
 - 3) Is the FSAR indexed in detail by structure, system, and component? If not, describe how the reviewer is able to assure himself or herself that all of the licensing basis has been considered (for example, an electrical requirement that is embedded within the accident analyses assumptions)?
- f. If the current licensing basis is not maintained for the maintenance reviewer by either of the methods of b,c,d or e above, then:
 - 1) Please describe the method by which the current licensing basis is available to the reviewer.
 - 2) Identify all documents relied upon for this review.

- 3) Describe the qualifications and provide the most current resume available and employment history at Vermont Yankee for all personnel relied upon for this review.
10. State the dates of any and all quality assurance audits since January 1, 1988, which reviewed the adequacy of the process of reviewing maintenance requests or work orders with regard to the current licensing basis or regulatory or safety impact of the request or work order. Identify all the results of these audits, including audit reports, reports to management, audit check lists, informal check lists and hand written notes.
11. State the dates of any and all quality assurance audits since January 1, 1988, which reviewed the adequacy of the process of maintaining the current licensing basis in a current and correct condition. Identify all the results of these audits, including audit reports, reports to management, audit check lists, informal check lists and hand written notes.
12. Please identify all documents for which copies or access were provided to NRC Maintenance Team Inspectors for the inspection reported on Inspection Report No. 50-271/89-80. These documents should include those identified in Appendix 1 of Inspection Report No. 50-271/89-80 (also attached as Appendix 1 to this set of interrogatories), as well as any other documents provided to or reviewed by NRC inspectors.
13. For all revisions to the documents identified in question 12 since the maintenance team inspection:
- a. Please identify the location and nature of each revision.
 - b. Please describe in detail the reason each revision has been made.
14. Please identify each and every document, in addition to those in response to interrogatory 12 above, which constitutes the maintenance program upon which the licensee relies for the license extension sought in the application. Please organize your response in the following categories:
- a. Each and every written procedure.
 - b. Each and every industry standard, recommendation or practice.
 - c. Each and every NRC requirement.
 - d. Each and every vendor recommendation.
 - e. Every other document relied upon.

15. Specifically identify all maintenance documents produced since or as a result of the maintenance team inspection. This identification should include the "comprehensive and formal maintenance program document" identified in BVY 89-75.
16. Please respond to the following concerning the vendor manual update program:
 - a. Identify the person or persons who have performed or are performing the vendor manual update. For each such person, state his or her technical qualifications, and provide the most recent resume available.
 - b. Identify the procedure(s) which govern(s) the vendor manual update program.
 - c. Identify the date of any and all quality assurance audits of:
 - i. The status of vendor manuals.
 - ii. The progress of the vendor manual update program.
 - iii. The adequacy of the vendor manual update program.
 - d. Identify the documentation of the results of the audits identified in sub-part c, including audit reports, reports to management, audit check lists, handwritten check lists, and informal notes.
 - e. As of the date of response to these interrogatories, what percentage of the vendor manuals for safety-related structures, systems and components has not been updated?
 - f. Identify each vendor manual included in the percentage provided for the above sub-part e, i.e., that has not been updated.
 - g. As of the date of response to these interrogatories, what percentage of the vendor manuals for nonsafety-related structures, systems and components has not been updated?
 - h. Identify each vendor manual included in the percentage provided for the above sub-part g, i.e., that has not been updated.
17. Please identify all documents related to the "Computerized Maintenance Material Management System (CMMMS)" referred to in BVY 89-75, including the development plan referred to in BVY 89-75, all assessment documentation referred to in BVY 89-86, the system description, bid specification, purchase specification, and all internal and external correspondence, with attachments.

18. For the CMMMS identified in the interrogatory above, please respond to the following:
- a. If a CMMMS supplier has been chosen, identify the supplier.
 - b. If a CMMMS supplier has been chosen, state in full the qualifications of the supplier to provide a CMMMS.
 - c. If a CMMMS supplier has not been chosen, identify each supplier who is on your approved bidders list, or from whom you have received, or expect to receive, a bid.
 - d. If bids have been received, provide the date upon which they were received and identify the suppliers who provided bids.
 - e. If bids have not been received, provide the date upon which bids are expected, or, if that date cannot be determined, the date and identification of the next schedule milestone for the CMMMS.
19. Please identify all documents related to containment integrity testing (i.e., testing in accordance with 10 CFR 50, Appendix J) during the life of the Vermont Yankee plant, including all test reports, licensee event reports, test results, calibration records, internal memoranda, maintenance requests, correspondence, and contractor records.
20. Please list of all structures, systems and components. Your attention is directed to the definition of structures, systems and components, and specifically part b) of the definition, "structures, systems and components whose failure can cause or adversely affect a transient or accident that significantly challenges structures, systems and components relied upon for the integrity of the reactor coolant pressure boundary, safe shutdown, or accident mitigation." In your response, please include the physical location of each component.
21. Please identify "the plant master equipment list for safety-related equipment" that is referenced in Enclosure 1 of BVY 89-75.
22. Please identify by revision number and date the current or most recent Master Equipment List for Environmentally Qualified (EQ) equipment that is referenced in Enclosure 1 of BVY 89-75.
23. Please identify all documents which describe the environmental conditions of each area of the Vermont Yankee plant evaluated as part of your 10 CFR 50.49 evaluation, including those areas considered to be mild environments.
24. Please identify all documents which describe the environmental conditions of each area of the Vermont Yankee plant, not provided as part of the above

interrogatory, which house systems or components whose failure can cause or adversely affect a transient or accident that significantly challenges structures, systems and components relied upon for the integrity of the reactor coolant pressure boundary, safe shutdown, or accident mitigation.

25. Regarding qualified life, design life and installed life:

- a. Please list, in the format of the listing provided in interrogatory 20 (or alternatively, the formats of the lists from interrogatories 21 and 22, plus any additional structures, systems and components not appearing on these lists), the qualified life, design life and installed life of each structure, system and component in the Vermont Yankee plant.
- b. Please indicate with specificity the bases for the qualified life, design life and installed life of the structures, systems and components. For each document upon which you rely, identify the document and state the precise location within the document which provides the qualified life, design life and installed life for each for each structure, system and component.
- c. Describe and identify documents which describe the manner in which qualified life, design life or installed life is determined or demonstrated for each structure, system or component. Describe and identify this information specifically for the following categories of Vermont Yankee plant equipment (Your attention is directed to the definition section for the meaning of "safety-related" and "nonsafety-related"):
 1. Safety-related electrical components located in areas subjected to harsh environments for which the exclusion of 10 CFR 50.49(k) is applied.
 2. Safety-related electrical components located in areas subjected to harsh environments for which the exclusion of 10 CFR 50.49(k) is not applied.
 3. Safety-related electrical components located in areas subjected to mild environments.
 4. Nonsafety-related electrical components located in areas subjected to harsh environments
 5. Nonsafety-related electrical components located in areas subjected to mild environments
 6. Safety-related mechanical components located in areas subjected to harsh environments.

7. Safety-related mechanical components located in areas subjected to mild environments.
 8. Nonsafety-related mechanical components located in areas subjected to harsh environments
 9. Nonsafety-related mechanical components located in areas subjected to mild environments.
 10. Safety-related and nonsafety-related structures.
- d. In the response to sub-part c above, identify all written procedures which govern the determination of qualified life, design life and installed life of each category of equipment.
 - e. Identify the dates of all quality assurance audits since January 1, 1988, which reviewed the adequacy of the process of determining qualified life or design life of structures, systems and components. Identify all the results of these audits, including audit reports, reports to management, audit check lists, informal check lists and handwritten notes.
26. Please identify all documents available to you providing failure rate information on the structures, systems and components of the Vermont Yankee plant. Include data which is industry wide and data which is Vermont Yankee plant specific.
 27. Please identify all purchase specifications for Vermont Yankee plant structures, systems and components.
 28. Please describe in detail all procurement quality control requirements (or identify the documents where these requirements are found) for the structures, systems and components of the Vermont Yankee plant. This includes, but is not limited to, review and approval of vendor drawings and procedures, nondestructive examinations, performance tests and analyses. This request seeks information to determine the amount of pre-aging introduced by procurement tests and examinations, and the level at which manufacturing flaws affecting aging could have been detected by nondestructive examinations.
 29. Please identify the documents which demonstrate that the procurement quality control requirements were satisfactorily completed.
 30. Please describe in detail all construction quality control and quality assurance requirements (or identify documents where these requirements are found) for the structures, systems and components of the Vermont Yankee plant. This includes, but is not limited to, receipt inspections, weld

examinations, preoperational tests and hydro tests. This request seeks information to determine the amount of pre-aging introduced by construction tests and examinations.

31. Please identify the documents which demonstrate that the construction quality control and quality assurance requirements were satisfactorily completed.
32. Please identify all inservice testing and inservice inspection requirements (or identify documents where these requirements are found) for the structures, systems and components of the Vermont Yankee plant.
33. Please identify the documents which demonstrate that the inservice testing and inservice inspection requirements were satisfactorily completed. Include the records of inspections completed under the ISI Program referred to in Section 3.2.2.1 of Attachment 2 of the application.
34. Please state the purchase date, manufacture date, receipt date and installation date for the structures, systems and components of the Vermont Yankee plant which are requested to be listed in interrogatory 20.
35. Please describe in detail the process by which the storage requirements for each structure, system and component, before installation, are determined. Identify all documents establishing or describing these requirements.
36. Please identify the procedures which established storage methods during the construction period. In this identification, provide the dates of each revision to each of these procedures.
37. Please identify the procedures which have established storage methods for structures, systems and components since initial operation. In this identification, provide the revision history of the storage procedures.
38. Please identify all documents which verify the manner in which structures, systems and components are stored prior to installation at the Vermont Yankee plant.
39. Please state the dates of all quality assurance audits of the storage methods during the construction period of the Vermont Yankee plant.
40. Please identify all documentation of the audits listed in response to the previous interrogatory, including audit reports, reports to management, audit check lists, informal check lists, and handwritten notes.
41. Please identify all documents available concerning the environmental conditions which structures, systems, components of the Vermont Yankee plant experienced during the period between the construction period date

and the operating license date. This should include all documents remaining available on environmental conditions for storage locations and for as-installed in-plant conditions before operation.

42. Regarding the activity of "reconstituting the design basis," as described by Mr. Donald Reid of Vermont Yankee at the meeting with NRC Region I in King of Prussia, PA, on January 26, 1989, please answer the following:
- a. Describe what is meant by "reconstituting the design basis."
 - b. Why is it necessary to reconstitute the design basis?
 - c. Identify the personnel performing the work involved in reconstituting the design basis.
 - d. Describe in detail the schedule for the design basis reconstitution activity; include the dates when the program began and when it is scheduled to be completed.
 - e. Has the completion date been adjusted since the beginning of the project? If so, how?
 - f. Identify the procedure by which this work is being accomplished.
 - g. Provide the percentage of work (or percentage of design bases) for which reconstitution has not been completed.
 - h. State all design bases which have not been "reconstituted".
43. Please describe in detail the external events and natural phenomena for which the Vermont Yankee plant is designed, for each of the design conditions and design basis events.
44. Please identify all documents related to any safety system functional inspections (SSFIs) performed for the Vermont Yankee plant. This request includes, but is not limited to, all internal correspondence and correspondence with Westec Incorporated, or other contractors; all Westec Incorporated inspection results, records, data sheets, findings, Westec internal memoranda; all documentation related to resolution of inspection findings; and the SSFI reports.
45. Please identify all INPO reports describing reliability information of Vermont Yankee plant specific equipment, including all documents identifying the Vermont Yankee Uninterruptible Power Supply (UPS) as a reliability outlier.

46. State which of the reports identified in response to the previous interrogatory identify the UPS as a reliability outlier.
47. Please identify all procedures applicable to requalifying components to a longer installed life, as stated in Sections 3.2.2.2 and 3.4.3 of Attachment 2 of the application.
48. Please describe in detail all methods by which components are requalified to longer lives, and explain why these methods are valid.
49. Please list the following, in the format of the listing provided in interrogatory 20 (or alternatively, the formats of the lists from interrogatories 21 and 22, plus any additional structures, systems and components not appearing on these lists), for of each structure, system and component in the Vermont Yankee plant: Each vendor recommendation for maintenance and each vendor recommendation which contributes to maintaining the design life or qualified life of the structure, system or component. This listing should include, but not be limited to, preventive maintenance actions, preventive maintenance frequencies, allowable or assumed environmental conditions, repetitive actuations and lubrication type.
50. If for any reason, you decline to provide the listing of vendor recommendations requested in the foregoing interrogatory, identify with specificity the location of each vendor recommendation for each structure, system and component. This identification must state what portion of a document, by page number or section number, contains the referenced vendor recommendation.
51. For each vendor recommendation listed or identified in response to the previous two interrogatories, indicate whether:
 - a. The recommendation has been followed precisely, or
 - b. The recommendation has generally been followed, or
 - c. The recommendation has not been followed.
52. For each vendor recommendation listed or identified in response to interrogatories 49 and 50 which you have either generally followed or not followed (if any), provide:
 - a. An explanation of why the vendor recommendation has been generally followed or not followed.
 - b. A description of the evaluation or justification performed (if any) which demonstrates the acceptability of not precisely following the vendor recommendations.

- c. An identification of all documents which are part of the evaluation or justification for not precisely following vendor recommendations.
53. If a vendor recommendation for structures, systems and components is not precisely followed, do you always receive vendor concurrence for this action?
- a. If your answer is yes, identify every vendor concurrence for each vendor recommendation which has not been precisely followed.
 - b. If your answer is no, provide every reason why vendor concurrence is not necessary when vendor recommendations are not followed.
54. Identify any and all documents providing direction or instructions regarding following vendor recommendations for maintenance of structures, systems and components.
55. Please identify all procedures guiding personnel in the determination of failure and root cause analysis.
56. Please describe in detail the method by which failure and root cause evaluations are performed and documented for the following cases:
- a. Failures which result in LERs
 - b. Failures for which a PRO is generated, but which do not result in LERs.
 - c. Failures of structures, systems and components which do not result in generation of a PRO.
 - d. Failures of nonsafety-related structures, systems or components whose failure can cause or adversely affect a transient or accident that significantly challenges structures, systems and components relied upon for the integrity of the reactor coolant pressure boundary, safe shutdown, or accident mitigation.
57. Identify all documentation of the root cause evaluations, including but not limited to documentation of methodology, discussed in the foregoing interrogatory.
58. Please identify each and every training module, course or segment, used by Vermont Yankee, which trains personnel to perform failure and root cause evaluations.
59. Please identify each and every instruction, policy guidance, or memorandum which has been operative since January 1, 1988, which provides guidance or instructions to personnel performing root cause evaluations.

60. Do you agree with the statement from IR 89-80, at page 15, which states, "However, the inspectors noted that no formal training program has been established in the methodology for performing root cause analysis"?
- If your response is anything other than an unqualified affirmative, state each and every reason for your disagreement.
 - If your response is affirmative, explain how your personnel perform root cause evaluations without formal training.
61. Please identify all procedures guiding personnel in the determination of the safety consequences and implications of the failure, inoperability or degradation of structures, systems and components, or of procedural inadequacies.
62. Please describe in detail the method by which the safety consequence and implications of failure, inoperability or degradation of structures, systems and components are performed and documented for the following cases (include identification of each document named):
- Failures which result in LERs.
 - Failures for which a PRO is generated, but which do not result in LERs.
 - Failures of structures, systems and components which do not result in generation of a PRO.
 - Failures of nonsafety-related structures, systems or components whose failure can cause or adversely affect a transient or accident that significantly challenges structures, systems and components relied upon for the integrity of the reactor coolant pressure boundary, safe shutdown, or accident mitigation.
63. Please describe in detail each and every training module, course or segment which trains personnel to perform the evaluation of safety consequence and implications of failures, inoperabilities and degradations of structures, systems and components.
64. Please identify each and every instruction, policy guidance, memorandum, and other document which has been operative since January 1, 1988, which provides guidance or instructions to personnel performing the evaluation of safety consequence and implications of failures, inoperabilities and degradations of structures, systems and components.

65. Please describe in detail each occurrence in which Vermont Yankee plant equipment has been modified because it has become obsolete, as referred to in Section 3.3.2 of Attachment 2 of the application.
66. For each occurrence identified in the preceding interrogatory, describe in detail how the determination of obsolescence was made.
67. Please provide the date and the structure, system and component that was modified for each occurrence in which a structure, system or component has been modified because it had reach its end-of-useful life, as referred to in Section 3.3.2 of Attachment 2 of the application.
68. For each occurrence identified in the preceding interrogatory, describe in detail how the determination of end-of-useful life was made.
69. Please describe in detail or identify the trend analyses for safety-related electrical equipment not covered by the Equipment Qualification Program, referred to in Section 3.4.3 of Attachment 2 of the application.
70. Please describe in detail or identify the strict construction procedures referred to in Section 3.4.4.1 of Attachment 2 of the application.
71. Please describe in detail or identify the good maintenance practices for corrosion prevention, concrete surface repair and protective coating upkeep, referred to in Sections 3.4.4.1 and 3.5 of Attachment 2 of the application.
72. Please identify by date all surveillances of containment performed under OP 4115, and all surveillances performed or documented under earlier procedures or methods.
73. Please identify all documentation which exists for each of the surveillances identified in response to the foregoing interrogatory.
74. Please identify the coating specialist identified on page 4 of Enclosure A of BVY 89-69.
75. Please describe in detail the technical qualifications (education, employment history, licenses and certificates, experience, or other information which the licensee believes establishes the qualifications of the person) of the coating specialist identified on page 4 of Enclosure A of BVY 89-69.
76. Please identify the "YNSD and Vermont Yankee engineers" who inspected the results of the manual scraping effort, referenced on page 5 of Enclosure A of BVY 89-69.
77. Please describe in detail the technical qualifications (education, employment history, licenses and certificates, experience, or other information which the

licensee believes establishes the qualifications of the person) of the "YNSD and Vermont Yankee engineers" who inspected the results of the manual scraping effort, referenced on page 5 of Enclosure A of BVY 89-69.

78. Please describe in detail the results of the inspections of paint scraping activities for drywell and torus, referenced on page 5 of Enclosure A of BVY 89-69.
79. Please identify all documents relating to the inspections of paint scraping activities for drywell and torus, referenced on page 5 of Enclosure A of BVY 89-69.
80. Please provide a description of the design of the strainers for the core spray, RHR, HPCI, RCIC pump suctions. As part of your description, identify all drawings and specifications that exist for the screen mesh of each.
81. Please identify the procurement specifications for the core spray, RHR, HPCI and RCIC pumps.
82. Please state the manufacturer, model number and year of purchase for the core spray, RHR, HPCI and RCIC pumps.
83. Please state the minimum net positive suction head for the core spray, RHR, HPCI and RCIC pumps.
84. Please identify all references documenting the minimum net positive suction head values stated in response to the forgoing interrogatory.
85. For all minimum net positive suction head acceptance tests which were required or performed for the core spray, RHR, HPCI and RCIC pumps, state:
 - a. The date of test.
 - b. The test organization.
 - c. The test report title and test report number.
 - d. The test specification or procedure by which the test was performed.
 - e. The date upon which the licensee or licensee's agent approved the test specification or test procedure.
86. Please describe in detail all quality assurance and quality control inspection requirements for the tests identified in the preceding interrogatory.

87. Please identify all documents which established the requirements described in response to the foregoing interrogatory.
88. Please identify all quality assurance and quality control inspection reports and documentation, and reviews of test results, for the tests identified in interrogatory 85.
89. Please provide the available net positive suction head for the core spray, RHR, HPCI and RCIC pumps.
90. Please identify the calculations which support these values, including calculation title, date, number, and performing organization.
91. Please state the size of the largest particle or debris which the core spray, RHR, HPCI and RCIC pumps, respectively, can pass.
92. Please describe in detail the bases for the sizes of particles identified in response to the previous interrogatory.
93. Please identify all documents which support the bases described in response to the foregoing interrogatory.
94. Please describe in detail the original licensing basis for the coating system in the drywell and torus.
95. Please describe in detail the current licensing basis for the coating system in the drywell and torus.
96. Please explain each and every reason why the topcoat was applied to the drywell and torus.
97. Identify all document references for:
 - a. Original licensing basis for the coating system of the drywell.
 - b. Original licensing basis for the coating system of the torus.
 - c. Current licensing basis for the coating system of the drywell.
 - d. Current licensing basis for the coating system of the torus.
98. Please identify the code or standard which governs the coating requirements for:
 - a. The drywell.
 - b. The torus.

99. LER 86-04, at page 2 of 5, identifies a review of maintenance requests. Please describe in detail the method by which this review was conducted.
100. LER 86-04, at page 5 of 5, identifies a departmental review of surveillance procedures. Please describe in detail the method this review is documented.
101. On page 5 of 5 of LER 86-04, it is stated that "further assurance" is provided for systems which cannot be tested online by a "closer look [at] drawings and procedures."
- a. Please describe in detail how this "closer look" is reflected in procedures.
 - b. Please describe in detail how this "closer look" is documented.
102. Please identify all the Vermont Yankee personnel with whom LRS Incorporated personnel spoke during Visit #3-88 of October 10 - 13, 1988.
103. The report of LRS Incorporated Visit #3-88, on page 7, contains the following statement:
- "Generally, the operators do not feel that Vermont Yankee pays sufficient heed to their desires for hardware repair and replacement."
- Please identify the LRS Incorporated employee(s) who conducted this interview and reported this statement.
104. Concerning the statement from the LRS Incorporated Report cited in the preceding interrogatory, please identify the operator or operators who held this view.
105. Describe your program to determine any significant aging mechanisms for the structures, systems and components of the Vermont Yankee plant, other than harsh environment equipment covered by 10 CFR 50.49.
106. For your program to determine any significant aging mechanisms for the structures, systems and components of the Vermont Yankee plant, other than harsh environment equipment covered by 10 CFR 50.49, please identify the criteria that are used for determining if an aging mechanism is significant.
107. Please state all bases for the criteria identified in response to the previous interrogatory.
108. Please identify all documents on which you rely for each basis stated in the previous interrogatory.

109. Identify your program policy directive and implementing procedures for qualifying safety system equipment other than those equipment covered by 10 CFR 50.49.
110. Please provide the full statement of the entire basis that you rely upon for claiming that there is reasonable assurance (within the meaning of 10 CFR 50.57(a)(3)), if you so claim, that the paint undercoat (primer) of the drywell and torus will remain intact in the extended period, and that the metal surface will be protected. In addition, provide the following:
- a. Identify each and every document upon which you rely for this assurance.
 - b. Identify and provide the technical qualifications of any person on whose expertise you rely for this assurance.
111. Inspection Report 89-80 (June 2, 1989) contains the following statement:
- "The licensee stated that the paint peeling problem has been evaluated ... the analysis of the paint chips indicated that the paint pieces will break up into fine pieces, so small that they will pass through the pump suction screens and core spray nozzle without causing clogging."
- Please provide the full statement of the entire basis that you rely upon for claiming that there is reasonable assurance (within the meaning of 10 CFR 50.57(a)(3)), if you so claim, that peeling paint in containment will break into small pieces so small they will pass through the pump suction screens and core spray nozzle without causing clogging. In addition, provide the following:
- a. Identify each and every document upon which you rely for this assurance.
 - b. Identify and provide the technical qualifications of any person on whose expertise you rely for this assurance.
112. Please provide the full statement of the entire basis that you rely upon for claiming that there is reasonable assurance (within the meaning of 10 CFR 50.57(a)(3)), if you so claim, that drywell paint failure in the extended period will be in the form of small chips which have a higher density than water. In addition, provide the following:
- a. Identify each and every document upon which you rely for this assurance.
 - b. Identify and provide the technical qualifications of any person on whose expertise you rely for this assurance.

113. Please provide the full statement of the entire basis that you rely upon for claiming that there is reasonable assurance (within the meaning of 10 CFR 50.57(a)(3)), if you so claim, that the comprehensive and formal maintenance program document identified in BVY 89-75 is effective for providing clearly documented objectives, policies, responsibilities, authorities, programmatic controls, and comprehensive and structured reviews of Vermont Yankee plant maintenance requirements, at present, and for the extended period. In addition, provide the following:
- a. Identify each and every document upon which you rely for this assurance.
 - b. Identify and provide the technical qualifications of any person on whose expertise you rely for this assurance.
114. Please provide the full statement of the entire basis that you rely upon for claiming that there is reasonable assurance (within the meaning of 10 CFR 50.57(a)(3)), if you so claim, that the Computerized Maintenance Material Management System, identified in BVY 89-75, if implemented, will be effective for its intended use in the maintenance program in the extended period. In addition, provide the following:
- a. Identify each and every document upon which you rely for this assurance.
 - b. Identify and provide the technical qualifications of any person on whose expertise you rely for this assurance.
115. Please provide the full statement of the entire basis that you rely upon for claiming that there is reasonable assurance (within the meaning of 10 CFR 50.57(a)(3)), if you so claim, that a maintenance staff, with the requisite nuclear skills and knowledge, can be retained in the extended period. In addition, provide the following:
- a. Identify each and every document upon which you rely for this assurance.
 - b. Identify and provide the technical qualifications of any person on whose expertise you rely for this assurance.
116. Please provide the full statement of the entire basis that you rely upon for claiming that there is reasonable assurance (within the meaning of 10 CFR 50.57(a)(3)), if you so claim, that trend analyses will determine decreased equipment reliability and expected (design) life in the extended period. In addition, provide the following:

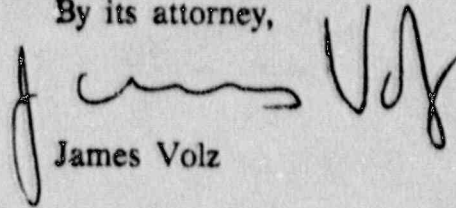
- a. Identify each and every document upon which you rely for this assurance.
 - b. Identify and provide the technical qualifications of any person on whose expertise you rely for this assurance.
117. Please provide the full statement of the entire basis that you rely upon for claiming that there is reasonable assurance (within the meaning of 10 CFR 50.57(a)(3)), if you so claim, that all components with design lives less than Vermont Yankee plant service life will be determined, and replaced, requalified or upgraded. In addition, provide the following:
- a. Identify each and every document upon which you rely for this assurance.
 - b. Identify and provide the technical qualifications of any person on whose expertise you rely for this assurance.
118. Please provide the full statement of the entire basis that you rely upon for claiming that there is reasonable assurance (within the meaning of 10 CFR 50.57(a)(3)), if you so claim, that the maintenance and surveillance program in the extended period will be effective in limiting containment leakage to the leakage limits in the current licensing basis. In addition, provide the following:
- a. Identify each and every document upon which you rely for this assurance.
 - b. Identify and provide the technical qualifications of any person on whose expertise you rely for this assurance.
119. Please provide the full statement of the entire basis that you rely upon for claiming that there is reasonable assurance (within the meaning of 10 CFR 50.57(a)(3)), if you so claim, that age-related degradation of active and passive mechanical components will be identified and corrected by the in-service inspection/testing and maintenance program, and that component functional capability will be maintained, in the extended period. In addition, provide the following:
- a. Identify each and every document upon which you rely for this assurance.
 - b. Identify and provide the technical qualifications of any person on whose expertise you rely for this assurance.
120. Please provide the full statement of the entire basis that you rely upon for claiming that there is reasonable assurance (within the meaning of 10 CFR

50.57(a)(3)), if you so claim, that structural integrity of Vermont Yankee plant structures will be maintained in accordance with the current licensing basis in the extended period. In addition, provide the following:

- a. Identify each and every document upon which you rely for this assurance.
 - b. Identify and provide the technical qualifications of any person on whose expertise you rely for this assurance.
121. Please provide the full statement of the entire basis that you rely upon for claiming that there is reasonable assurance (within the meaning of 10 CFR 50.57(a)(3)), if you so claim, that any policy and implementing procedures for controlling and updating manufacturer technical manuals, contemplated in BVY 89-75, will be effective for this purpose in the extended period. In addition, provide the following:
- a. Identify each and every document upon which you rely for this assurance.
 - b. Identify and provide the technical qualifications of any person on whose expertise you rely for this assurance.
122. Please provide the full statement of the entire basis that you rely upon for claiming that there is reasonable assurance (within the meaning of 10 CFR 50.57(a)(3)), if you so claim, that revisions to the Maintenance Request Procedure (AP 0021), contemplated in BVY 89-75, will be effective to control post maintenance testing in the extended period. In addition, provide the following:
- a. Identify each and every document upon which you rely for this assurance.
 - b. Identify and provide the technical qualifications of any person on whose expertise you rely for this assurance.
123. Please provide the full statement of the entire basis that you rely upon for claiming that there is reasonable assurance (within the meaning of 10 CFR 50.57(a)(3)), if you so claim, that Maintenance Requests for completed maintenance activities will be completed in a timely fashion in the extended period. Indicate the basis for this assurance. In addition, provide the following:
- a. Identify each and every document upon which you rely for this assurance.

- b. Identify and provide the technical qualifications of any person on whose expertise you rely for this assurance.

By its attorney,


James Volz

Dated: April 27, 1990

APPENDIX 1

Appendix 1 is a copy of the attachment to the December 27, 1988 letter to the licensee requesting site specific information.

PRE-INSPECTION REQUESTED INFORMATION

To aid us in preparing for the maintenance inspection please provide us with the following documents, procedures and information in accordance with the designated numbers. If you do not have the requested document or information, it is not necessary to generate it to comply with this request. We recognize that many of the documents requested separately may be inclusive in a larger single document. Please provide five sets of the requested documents. A member of our staff will contact you regarding the best method of transmitting the documents to us.

Section 1 - Description of General Plant Maintenance Activities

- 1-1 Maintenance administrative procedures which describe your corrective, preventive and predictive maintenance activities.
- 1-2 Organization charts including the maintenance organization and plant-wide organizations.
- 1-3 Procedures, charts and other documents which describe your Planning Department and its activities.
- 1-4 Documents which describe maintenance planning and scheduling meetings and status of maintenance reports.
- 1-5 Documents which describe the Maintenance and Operations interface during planning, scheduling, work start, work closeout and post maintenance/functional testing.
- 1-6 Documents which describe your work control process: how a work order is started, planned, executed, closed out and equipment returned to service.
- 1-7 Documents which describe training and retraining of plant and contractor maintenance personnel. (For maintenance activities only, do not include GET.)
- 1-8 Documents which describe interfaces and communications among the technical support, engineering support and the maintenance/I&C Departments.
- 1-9 Documents which describe maintenance work procedure establishment and control: Criteria as to when a procedure is to be used; initial writeup; reviews and approval; revisions; human factors review; QA reviews; requirements for conduct of work; troubleshooting criteria; work closeout; post maintenance testing and restoration of systems.

- 1-10 Description of methods by which maintenance performance is measured. Are performance indicators used? What are they? Who is informed of the results?
- 1-11 Description of process for communications with vendors for technical services and latest technical information on equipment and systems installed at the plant, and interfaces with vendors of NSSS for training, modifications and equipment replacement.
- 1-12 Documents which describe the preventive maintenance and predictive maintenance programs.
 - Which equipment is included?
 - How is maintenance frequency determined?
 - What is done with results of these maintenance actions?
- 1-13 Documents which describe management involvement in maintenance.
 - Are there goals set for the maintenance and I&C Departments?
 - Are these goals used in the performance evaluation of managers and supervisors?
 - Are these goals communicated to first line supervisors and chiefs?

Section 2 - Status of Plant and Contractor Personnel Who Perform Maintenance.

- 2-1 The number of craft personnel for electrical, mechanical and I&C maintenance organizations. Please include foremen and foreman to craft ratio.
- 2-2 The average years of experience for each individual and the turnover rate.
- 2-3 Description of shift work and work assignments. How do foremen decide on which craft is to perform what type of work?

Section 3 - Status of Plant Equipment and Plant Maintenance

- 3-1 What equipment failures occurred during the last year of operations?
- 3-2 What equipment failures have been found during shutdown of plant?
- 3-3 Describe maintenance and testing for diesel generators and electrical equipment including switchgear that would be required in case of loss of offsite power.
- 3-4 What component failures present greatest risk from a probabilistic risk standpoint to the plant?

- 3-5 What have been the areas of high maintenance activity on safety related and non-safety related equipment and components?
- 3-6 Provide the following status concerning Maintenance Work Orders (MWO).
- Current total listing and status of MWOs, number in planning, number in final sign-off, number on hold for lack of parts, number on hold for engineering assistance, number available to be worked on.
 - Projected number of corrective MWOs to be outstanding at start-up by priority.
 - Rate of completion of corrective MWO in terms of number completed/month and manhours expended (by craft)/month for the past 12 months.
 - Current number of preventive maintenance work orders overdue.
 - Rate of completion of preventive MWO for the past 12 months.
 - Estimated manhours required to complete current preventive maintenance MWOs.
 - Number MWOs requiring rework over past 6 months.
- 3-7 Provide five corrective maintenance procedures for work that is scheduled for the upcoming outage. MOVs, PRVs, ECS Pumps, Batteries, Switchgear, etc.
- 3-8 Provide five preventive maintenance procedures that are scheduled for the upcoming outage.
- 3-9 Provide your overall outage schedule.

10301
RELATED CORRESPONDENCE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
before the
ATOMIC SAFETY AND LICENSING BOARD

DOCKETED
USNRC

'90 APR 30 P4:45

In the Matter of
VERMONT YANKEE NUCLEAR
POWER CORPORATION

(Vermont Yankee Nuclear
Power Station)

OFFICE OF SECRETARY
OF SERVICE
Docket No. BG-271-OLA-4
(Operating License
Extension)

CERTIFICATE OF SERVICE

I hereby certify that on April 27, 1990, I made service of the within document in accordance with rules of the Commission by mailing a copy thereof postage prepaid to the following:

Administrative Judge
Robert M. Lazo, Chairman
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Administrative Judge
Jerry Harbour
Atomic Safety and Licensing
Board
U.S. Nuclear Regulatory
Commission
Washington, DC 20555

Administrative Judge
Frederick J. Shon
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

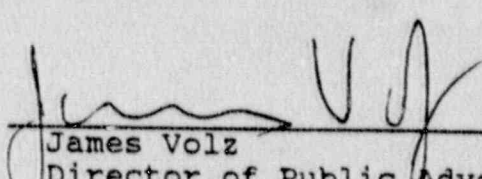
Ann P. Hodgdon, Esq.
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Adjudicatory File
Atomic Safety and Licensing
Board Panel
U.S.N.R.C.
Washington, DC 20555

Dated: 4-27-90


James Volz
Director of Public Advocacy

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