

UNITED STATES OF AMERICA  
 NUCLEAR REGULATORY COMMISSION  
 OFFICE OF NUCLEAR REACTOR REGULATION

Brian W. Sheron, Acting Director

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| In the Matter of                            | ) | Docket No. 50-346 |
|   | ) |                   |
| FirstEnergy Nuclear Operating Company       | ) | License No. NPF-3 |
|   | ) |                   |
| (Davis-Besse Nuclear Power Station, Unit 1) | ) |                   |
|   | ) |                   |

DIRECTOR'S DECISION UNDER 10 CFR 2.206

**I. Introduction**

By letter dated February 3, 2003, Congressman Dennis Kucinich, Representative for the 10<sup>th</sup> Congressional District of the State of Ohio in the United States House of Representatives, filed a Petition pursuant to Section 2.206 of Title 10 of the *Code of Federal Regulations* (10 CFR). The Petitioner requested that the U.S. Nuclear Regulatory Commission (NRC) immediately revoke the FirstEnergy Nuclear Operating Company's (FENOC's or the licensee's) license to operate the Davis-Besse Nuclear Power Station, Unit 1 (Davis-Besse), located in Ottawa County, Ohio. As an alternative, the Petitioner asked the NRC to reexamine its denial of a previous 2.206 petition, submitted by the Toledo Coalition for Safe Energy et al., that requested the NRC issue an order to the licensee requiring a verification by an independent party for issues related to the reactor vessel head damage at Davis-Besse.

The basis for the request was that FENOC "has operated outside the parameters of their operating license for several years, has violated numerous federal laws, rules and regulations, and has hidden information from the NRC and lied to the NRC to justify the continuing operation of the Davis-Besse Nuclear Power Station." The Petitioner supported his request by citing various publicly available documents and information related to the reactor

pressure vessel head damage. The documents describe noncompliance with the Davis-Besse operating license and violations of NRC regulations. The documents include NRC inspection reports, newspaper articles, and reports published by the Union of Concerned Scientists.

In a letter dated February 10, 2003, the NRC informed the Petitioner that the issues in the petition were accepted for review under 10 CFR 2.206 and had been referred to the Office of Nuclear Reactor Regulation (NRR) for appropriate action. A copy of the acknowledgment letter is publicly available in the NRC's Agencywide Documents Access and Management System (ADAMS) under Accession No. ML030360647.

On March 27, 2003, the Petitioner submitted supplemental information to support the petition. The petition and the supplement to the petition are available in ADAMS under Accession Nos. ML030370067 and ML030900613, respectively, or are available for inspection at the Commission's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records are accessible from the ADAMS Public Electronic Reading Room on the NRC Web site, <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR reference staff at 1-800-397-4209 or 301-415-4737, or by e-mail to [pdrr@nrc.gov](mailto:pdrr@nrc.gov).

The licensee responded to the Petition on February 27, 2003, and to the supplement on April 11, 2003. These responses were considered, in part, by the staff in its evaluation of the petition. Copies of the licensee's responses are publicly available in ADAMS under Accession Nos. ML030640112 and ML031200095.

The NRC sent a copy of the proposed Director's Decision to the Petitioner and to the licensee for comment on June 6, 2003. The Petitioner and the licensee both responded with comments in letters dated July 7, 2003. Copies of these documents are also publicly available under ADAMS Accession Nos. ML031390067, ML031390107, ML031390138, ML031910746,

and ML032240057, respectively. The NRC also received comments on the proposed Director's Decision from an attorney who is representing a former FENOC employee in a letter dated June 6, 2003, and comments from a concerned citizen in a letter dated July 6, 2003. Copies of these documents are publicly available under ADAMS Accession Nos. ML032410501, and ML031910739. The comments and the NRC staff's responses to them are attached to this Director's Decision.

## **II. Discussion**

In the March 27, 2003, supplement, the Petitioner argued that an investigation being conducted by the NRC's Office of Investigations to determine whether FENOC willfully violated NRC requirements and whether FENOC deliberately misled the NRC must be completed before the NRC makes any decisions regarding the merits of this petition. The NRC staff has carefully evaluated the Petitioner's request to delay consideration of this petition pending *completion* of the NRC's wrongdoing investigation. As discussed in this decision, FENOC has initiated, and is still implementing, extensive corrective actions to address hardware, programmatic, and human performance issues to demonstrate or achieve compliance with NRC regulations. Based on the evidence gathered to date, the corrective actions taken by the licensee and the NRC's oversight of those corrective actions make it unnecessary for the NRC to delay consideration of this petition's merits pending the completion of activities associated with the NRC's wrongdoing investigation. The NRC Davis-Besse Oversight Panel, the Director of the NRC's Office of Enforcement, the NRC Regional Administrator for NRC Region III, and the management of the NRC's Office of Nuclear Reactor Regulation have been regularly briefed on the progress of the investigation and will continue to monitor the NRC Office of Investigations' activities and evaluate investigation results. However, because there are ongoing NRC activities that may lead to civil and/or criminal proceedings, information from the investigation conducted by the

NRC's Office of Investigations that is available to the NRC management for informing NRC decision-making is not currently available for public release. If new information is discovered that would support a conclusion that revocation of the Davis-Besse operating license is an appropriate sanction, that action would be taken by the NRC irrespective of whether a 2.206 petition were under review at that time.

The following outline is provided to assist readers in understanding the structure of the NRC staff's response to the petition and the associated supplement. The headings for Sections B.1 through B.5 merely paraphrase the Petitioner's arguments. These headings are *not* intended to convey any NRC staff conclusions regarding the petition or the supplement.

- A. Reactor Pressure Vessel Head Issues - Background Information
  - A.1 NRC response to reactor pressure vessel head damage at Davis-Besse
  - A.2 Licensee corrective actions
  - A.3 NRC regulatory philosophy
- B. Evaluation of Petitioner's Concerns
  - B.1 Enforcement actions "required" by NRC rules and guidelines
  - B.2 Revocation of license is necessary to hold FENOC accountable
  - B.3 NRC must revoke the Davis-Besse license in order to appropriately use the authority granted by Congress
  - B.4 NRC must revoke the Davis-Besse license in order to ensure that FENOC is Complying with all NRC regulations, guidelines, and the Davis-Besse Design and licensing bases
    - Aspects of petition supplement applicable to this argument
  - B.5 Revocation of the Davis-Besse license is required in order to ensure consistency in NRC enforcement
  - B.6 Petition Supplement
    - a. Effect of boric acid dust in containment
    - b. Conformance to the Davis-Besse design and licensing bases

- c. Davis-Besse leak detection capability
- d. Reactor coolant pump gaskets
- e. Completion of monitoring Davis-Besse under NRC's 0350 process
- f. Public participation in NRC's oversight of Davis-Besse
- g. Ongoing NRC Office of Investigation activities
- h. Safety culture at Davis-Besse

C. Petitioner's Alternative Request

The NRC staff has reviewed the petition and has not identified any new information on Davis-Besse of which the NRC staff was unaware. The supporting information in the petition contains a number of allegations and other issues. The NRC staff determined that all of these allegations and issues are appropriately (a) being addressed under the NRC's allegation process, or (b) have been addressed, or are being addressed, by the NRC's inspection process.

**A. Reactor Pressure Vessel Head Issues**

On March 6, 2002, while Davis-Besse was shut down for refueling, FENOC employees discovered a cavity in the reactor vessel head. The cavity was the result of corrosion caused by long-term leakage of reactor coolant, which contains boric acid, from small cracks in one of the control rod drive mechanism nozzles that passes through the reactor vessel head. The damaged area of the head was approximately 5 inches long, 4 inches wide, and 6 inches deep. The cavity penetrated the carbon steel portion of the reactor vessel head, leaving only the stainless steel lining. The liner thickness varies somewhat with a minimum design thickness of 1/8 inch. Subsequent examination by Framatome, FENOC's contractor, found evidence of a series of cracks in the liner, none of which was entirely through the liner wall.

### **A.1 NRC response to reactor pressure vessel head damage at Davis-Besse**

The NRC took a series of actions in response to the discovery of the cavity in the Davis-Besse reactor vessel head. An Augmented Inspection Team was sent to Davis-Besse on March 12, 2002, to collect factual information regarding the conditions that led to the head degradation. Additionally, the NRC issued a Confirmatory Action Letter to the licensee on March 13, 2002, which confirmed the licensee's agreement that NRC approval is required for restart of the Davis-Besse plant. The Confirmatory Action Letter also documented a number of actions that the licensee must implement before the NRC will consider a restart. By letter dated April 29, 2002, the NRC informed FENOC that its corrective actions at Davis-Besse would receive enhanced NRC oversight as described in NRC Inspection Manual Chapter 0350, "Oversight of Operating Reactor Facilities in a Shutdown Condition with Performance Problems." That enhanced monitoring began on May 3, 2002, and included the creation of an oversight panel (the 0350 panel, referred to here as the NRC Davis-Besse Oversight Panel) to provide the required oversight during the plant shutdown, any future restart, and following restart until a determination is made that the plant is ready for return to the NRC's normal Reactor Oversight Process.

On August 16, 2002, the NRC Davis-Besse Oversight Panel issued a Restart Checklist, which is a list of issues that require resolution before restart can be considered. The Restart Checklist includes the following issues:

- Adequacy of root cause determinations
- Adequacy of safety-significant structures, systems, and components
- Adequacy of safety-significant programs
- Adequacy of organizational effectiveness and human performance, and
- Readiness of systems and the Davis-Besse organization for restart

The NRC's inspection and oversight activities, and the associated Restart Checklist, evaluate the licensee's corrective actions related to the reactor vessel head issues. Additionally, the NRC's activities and Restart Checklist go beyond the issues specific to the reactor vessel head and look broadly at the safety-related plant systems and programs. This broader perspective is necessary to ensure (a) that the conditions that led to the reactor head corrosion are not widespread throughout the plant; (b) that the physical condition of the plant is adequate; and (c) that the licensee's operations, maintenance, and engineering organizations are prepared to operate the plant safely if it is permitted to restart.

Through a series of inspections, the NRC Davis-Besse Oversight Panel is evaluating the adequacy of FENOC's Return-to-Service Plan. These inspections consist of independent inspections performed by the NRC staff and NRC reviews of a sample of work performed by FENOC's staff in each of the areas covered by FENOC's Return-to-Service Plan. By comparing the results of the NRC's independent inspections to the results that the licensee obtained from its reviews of the same systems and programs, the NRC is able to gauge the depth and quality of FENOC's review processes. If the licensee's reviews produce the same or similar findings to those of the NRC independent inspections, then it is reasonable to conclude that the NRC can ensure adequate safety through an inspection program that combines independent inspections with reviews of the licensee's evaluations rather than having to perform independent inspections and evaluations for each of the systems or programs evaluated under FENOC's Return-to-Service Plan. If, however, the NRC's independent inspections produce results that are significantly different from those obtained by the licensee's reviews, the NRC will notify FENOC of the weaknesses discovered so that FENOC can take action to improve its evaluation processes. The NRC will then conduct followup reviews. In the case of significant differences between the results of NRC inspections and licensee reviews, the NRC may also perform additional independent inspections to ensure that appropriate

actions are taken to identify and correct deficiencies in plant systems or programs evaluated under FENOC's Return-to-Service Plan. As is always the case, any violations of NRC requirements are subject to regulatory actions consistent with the NRC's enforcement policy.

The NRC's activities also include an inspection of FENOC's corrective actions to improve management and human performance at Davis-Besse and an assessment of whether the Davis-Besse organization will be effective at running the plant safely. As part of its evaluation, the NRC hired independent consultants who have expertise in creating and assessing an effective safety-conscious work environment in which employees are encouraged to raise safety concerns and a safety culture where such concerns receive appropriate management attention based on their potential safety significance. This evaluation is ongoing and results will be documented following agency guidelines.

Finally, the NRC is conducting routine meetings with the licensee and the general public, at locations near the Davis-Besse facility, to discuss FENOC's corrective actions. The meetings with the licensee are open to members of the public so that they can observe the NRC's oversight of Davis-Besse. The meetings with the general public provide opportunities for members of the public to voice concerns and ask the NRC staff questions.

## **A.2 Licensee Corrective Actions**

Corrective actions taken by the licensee include the development of a Return-to-Service Plan, which was initially described in FENOC's May 16, 2002, letter responding to a 2.206 Petition submitted by the Toledo Coalition for Safe Energy, et al. This Return-to-Service Plan, which was submitted to the NRC on May 21, 2002, describes FENOC's intended course of



action for Davis-Besse's safe and reliable return to service. It contains corrective actions in the following areas:

- Reactor head resolution
- Containment health assurance
- System health assurance
- Program compliance
- Management and human performance
- Restart testing
- Restart action plan

Revisions to the Return-to-Service Plan were submitted on July 12, August 21, and September 23, 2002, as well as on January 9, and April 6, 2003. Copies of the plan and its revisions are publicly available in ADAMS under Accession Nos. ML021430429, ML022030464, ML022670616, ML022740488, ML 030150732, and ML031000739, respectively. The Return-to-Service Plan includes actions to address the issues identified in Congressman Kucinich's petition and the supplement to the petition concerning the material condition of the plant, the licensee's compliance with NRC regulations and the Davis-Besse operating license, conformance to the Davis-Besse design and licensing bases, and human performance and safety culture improvements at Davis-Besse.

As part of the implementation of its Return-to-Service Plan, the licensee established a Restart Organization, which includes not only reorganized and realigned internal senior leadership, but also includes separate oversight review and verification teams. Two of those teams include either an independent community representative or independent industry experts. Specifically, these two teams are (1) the Restart Overview Panel, consisting of licensee and nonlicensee executives and the local Ottawa County Administrator, which provides global oversight of implementation of the Return-to-Service Plan; and (2) the Engineering Assessment

Board, consisting of independent industry experts and members of the licensee's engineering organization, which is charged with reviewing engineering products and programs. Additionally, the licensee's restart organization includes a Restart Station Review Board, consisting of site managers and an independent quality assurance representative, which makes initial decisions regarding actions required for restart.

In its April 11, 2003, response to the petition supplement, FENOC stated that its corrective actions have included the replacement of several senior and mid-level managers who had been in positions of responsibility prior to February 2002.

### **A.3 NRC Regulatory Philosophy**

The NRC regards compliance with regulations, license conditions, and technical specifications as mandatory. However, the NRC also recognizes that plants will not operate trouble-free. This is clearly articulated in 10 CFR Part 50, Appendix B, "Quality Assurance for Nuclear Power Plants and Fuel Reprocessing Plants," Criterion XVI, "Corrective Action." This criterion states that "[m]easures shall be established to ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected."

The NRC's approach to protecting public health and safety is based on the philosophy of "defense-in-depth." Briefly stated, this philosophy (1) requires the application of conservative codes and standards to establish substantial safety margins in the design of nuclear plants; (2) requires high quality in the design, construction, and operation of nuclear plants to reduce the likelihood of malfunctions, and promotes the use of automatic safety system actuation features; (3) recognizes that equipment can fail and operators can make mistakes and, therefore, requires redundancy in safety systems and components to reduce the chance that malfunctions or mistakes will lead to accidents that release fission products from the fuel;

(4) recognizes that, in spite of these precautions, serious fuel-damage accidents may not be completely prevented and, therefore, requires containment structures and safety features to prevent the release of fission products; and (5) further requires that comprehensive emergency plans be prepared and periodically exercised to assure that actions can and will be taken to notify and protect citizens in the vicinity of a nuclear facility.

The appropriate response to an identified deficiency can and should vary, depending on the safety significance of the deficiency. For example, for rapidly developing situations, when prompt action is required to ensure that plants are not in an unsafe condition, automatic safety systems are in place to shut down the reactor. In other, less time-critical situations, technical specifications relating to structures, systems, and components vital to the safe operation of a nuclear plant require that specific actions be taken within a predetermined time period when the structure, system, or component is determined to be inoperable.

In summary, the licensee's compliance with NRC regulations, license conditions, and licensing commitments is fundamental to the NRC's confidence in the safety of licensed activities; and the licensee must demonstrate that corrective actions have been effectively implemented; that the Davis-Besse unit is in conformance with applicable NRC regulations, its license conditions, and its Updated Final Safety Analysis Report; and that applicable licensing commitments have been met before the NRC staff will consider a plant restart.

#### **B. Evaluation of Petitioner's concerns**

The Petitioner's request for enforcement states that the NRC must revoke the Davis-Besse operating license, "[b]ecause [FENOC] (1) has admittedly operated the plant in violation of NRC rules and regulations and its own operating license, (2) has admittedly failed to observe safety standards necessary to protect health and minimize danger to life or property, and (3) has deliberately withheld information from the NRC and fraudulently misrepresented plant

conditions in order to continue to operate the plant in an unsafe manner....” As an alternative, in a footnote, the Petitioner asks the NRC to reexamine its denial of a previous 2.206 petition, submitted by the Toledo Coalition for Safe Energy et al., that requested the NRC to issue an order to the licensee requiring a verification by an independent party for issues related to the reactor vessel head damage that occurred at Davis-Besse.

The February 3, 2003, petition offers five basic arguments, in various forms, of why revocation of the Davis-Besse license is required. These arguments may be summarized as follows:

1. NRC regulations and guidelines require revocation of the Davis-Besse license.
2. Revocation of the Davis-Besse license is necessary to hold FENOC accountable for its violations of NRC regulations and its own operating license.
3. If the NRC doesn't revoke the Davis-Besse license, NRC isn't appropriately using the authority granted it by Congress.
4. Revocation of the Davis-Besse license is necessary to ensure that FENOC is complying with all NRC regulations, guidelines, and the Davis-Besse design and licensing bases.
5. Revocation of the Davis-Besse license is required in order for there to be consistency in the manner that the NRC enforces its regulations.

The information in the main petition that the Petitioner uses to support these arguments was taken from NRC inspection reports, newspaper articles, reports from various citizen action groups, or licensee internal documents that had previously been made public. The NRC was already aware of all of these documents. The NRC staff reviewed the supporting information used by the petitioner to determine if it contained any new allegations; nothing new was found. Since the specific supporting information used in the main petition was already known to the NRC, and is already addressed by other NRC inspection or investigation activities, the following discussion in Sections II.B.1 through II.B.5 will address each of the general arguments summarized above rather than the specific supporting information.

The March 27, 2003, supplement to the petition raised the following specific concerns or issues, some of which are related to the fourth general argument of the main petition:

- a. Boric acid dust in the reactor containment building (from the reactor vessel head leakage) may have caused corrosion of the electrical system and cable trays.
- b. The as-built design of the plant may not be consistent with the plant's design or licensing bases. As a result, the training of FENOC personnel may not match the plant's licensing basis.
- c. Davis-Besse does not have the ability to detect a 1-gallon-per-minute leak from the reactor coolant system within 1 hour. Thus, Davis-Besse does not meet the requirements of the general design criteria contained in 10 CFR, Part 50, Appendix A, or the guidance of NRC Regulatory Guide 1.45.
- d. Two of the four reactor coolant pumps still have gasket leaks that have not been corrected by the licensee.
- e. The NRC's Davis-Besse Oversight Panel will end and the Davis-Besse plant will return to normal monitoring under the NRC's reactor oversight process before NRC has implemented changes to its reactor oversight process that were recommended by an NRC Lessons Learned Task Force.
- f. The NRC's enhanced oversight and inspection of FENOC's corrective actions does not allow intervenors or the public to participate in the licensing decision through a formal hearing. Such participation would be possible if the Davis-Besse license were revoked and FENOC had to reapply for another operating license.
- g. The investigation being performed by the NRC's Office of Investigations to determine whether FENOC willfully violated NRC requirements and an associated investigation to determine if FENOC deliberately misled the NRC must be completed before the NRC considers the petition. Furthermore, the NRC must consider the petition before allowing the Davis-Besse plant to restart.
- h. There are continuing safety culture problems at Davis-Besse.

With the exception of Item b, these specific concerns and issues are addressed individually in Section B.6 of this decision. Item b is addressed in Sections B.4 and B.6. The headings for Sections B.1 through B.5 merely paraphrase the general arguments made by the Petitioner.

These headings are *not* intended to convey any NRC staff conclusions regarding the petition or the supplement.

### **B.1 Enforcement actions “required” by NRC rules and guidelines**

The Petitioner asserts that NRC rules and guidelines require that the NRC revoke FENOC’s operating license for Davis-Besse. However, the petition does not specify the regulations and guidelines which contain the asserted requirement. The petition does reference a footnote in a previous version of the NRC’s enforcement policy (63 FR 26630-01, 26642, footnote 9) regarding exercise of enforcement discretion, but that particular footnote is associated with a section of the enforcement policy dealing with the use of noncited violations instead of Severity Level IV violations (nonescalated and low safety significance) under specific circumstances. The footnote is not applicable to the Petitioner’s requested enforcement action because the referenced guidance does not pertain to revocation of a license.

Under the NRC’s enforcement policy a license *may* be revoked —

- when a licensee is unable or unwilling to comply with NRC requirements;
- when a licensee refuses to correct a violation;
- when a licensee does not respond to a notice of violation which required a response;
- when a licensee refuses to pay an applicable fee under the Commission’s regulations; or
- for any other reason for which revocation is authorized under Section 186 of the Atomic Energy Act.

Similar to the enforcement policy, Section 186 of the Atomic Energy Act states that, “[a]ny license *may* [emphasis added] be revoked....” Thus, the NRC’s authority to revoke a license is discretionary. With regard to the damage to the reactor vessel head at Davis-Besse, the NRC’s rules and guidelines neither require nor preclude revocation of the license. Rather, the NRC’s rules and guidelines allow for a broad spectrum of enforcement actions to be taken, and the NRC’s enforcement policy provides guidance on when revocation of a license may be appropriate.

## **B.2 Revocation of license is necessary to hold FENOC accountable**

The Petitioner's second argument is that revocation of the Davis-Besse license is required in order to hold FENOC accountable for its "egregious violations and willful non-compliance."

As noted in the discussion of the Petitioner's first argument, revocation of the license is not the only course of action that is available to the NRC for holding the licensee accountable for the violations of NRC regulations and the Davis-Besse operating license that have been identified by NRC inspections. The NRC's enforcement considerations are still ongoing. These matters will be appropriately handled consistent with NRC policies for enforcement and interface with the U.S. Department of Justice.

As a related issue, the Petitioner alleges that FENOC deliberately withheld information from the NRC and intentionally misrepresented plant conditions to the NRC in order to continue to operate the plant for economic gain. While the NRC's Augmented Inspection Team followup report, and the NRC Davis-Besse Lessons Learned Task Force report, did cite examples of information provided to the NRC that was inaccurate or incomplete, these reports *did not* make any findings regarding willfulness on the part of the licensee. The NRC is still conducting activities related to this issue. These matters will be appropriately handled consistent with NRC policies for enforcement and interface with the U.S. Department of Justice.

## **B.3 NRC must revoke the Davis-Besse License in order to appropriately use the authority granted by Congress**

The Petitioner asserts several times that if the NRC does not revoke the Davis-Besse operating license, the NRC isn't appropriately using the authority granted it by Congress. The petition cites 42 U.S.C. Section 2133(b) as giving the NRC authority to grant licenses and 42 U.S.C. Section 2137 as giving the NRC authority to revoke licenses. The Petitioner also cites 42 U.S.C. Section 2272 and 10 CFR 50.100 as relevant law or regulation.

A reading of 42 U.S.C. Section 2137 shows that it pertains to the revocation of operator licenses held by individuals rather than to facility operating licenses held by corporations or government entities. Thus, this portion of the law cited by the Petitioner does not apply to Petitioner's requested action — revocation of the Davis-Besse facility operating license. The appropriate portion of the U.S. Code is 42 U.S.C. Section 2236 (Section 186 of the Atomic Energy Act). As discussed in Section B.1 of this decision, the authority to revoke facility operating licenses granted in Section 186 of the Atomic Energy Act is discretionary.

At this point, activities related to the NRC investigation regarding potential willfulness of violations are still ongoing. This includes evaluations of the involvement of specific individuals, which may provide the basis for further action by the U.S. Department of Justice.

With regard to the need for immediate action, the Davis-Besse plant is currently shut down and is subject to increased scrutiny through the NRC's enhanced oversight process. Thus there is no immediate need to revoke the Davis-Besse license in order to protect the health and safety of the public.

The NRC agrees with the Petitioner's goal of ensuring the health and safety of the public. The ongoing processes associated with Davis-Besse are structured to achieve the safety results that the Petitioner is seeking without revoking the Davis-Besse operating license. The FENOC Return-to-Service Plan, as monitored by the NRC Davis-Besse Oversight Panel, provides an appropriate opportunity for FENOC to demonstrate or achieve compliance with NRC requirements. Thus far, the NRC has not observed an inability or unwillingness on the part of FENOC to achieve compliance with NRC regulations and the Davis-Besse operating license.



**B.4 NRC must revoke the Davis-Besse license in order to ensure that FENOC is complying with all NRC regulations, guidelines, and the Davis-Besse design and licensing bases**

The Petitioner requests that the “burden-of-proof” be placed on FENOC to show that it is in compliance with NRC requirements and operating the Davis-Besse plant safely. According to the petition, the only way to do that is for the NRC to revoke the Davis-Besse operating license and “force the Davis-Besse operating facility to undergo the exhaustive and meticulous inspections, tests, and inquiries necessary to obtain a new operating license. These inspections will cover Davis-Besse’s entire facility, not just those parts the NRC can justify inspecting based on their knowledge of past problems.” The Petitioner argues further that the NRC’s Davis-Besse Oversight Panel “cannot adequately ensure public safety. [The NRC Davis-Besse Oversight Panel is] fundamentally encumbered by the fact that the NRC has the burden of proving that [FENOC] is not operating safely. Because of [FENOC’s] failings, the burden-of-proof needs to be placed with [FENOC] to prove that they are operating safely.”

In related arguments the March 27, 2003, supplement states that “[t]he procedures instituted by the NRC concentrate on the corrosion of the reactor head, and seek to correct the causes of that corrosion.... The convened process may not uncover other systems that may be similarly degraded and that may contain hidden dangers of similar caliber to the hole discovered in the reactor head.” The Petitioner also asserts in the supplement that “[c]urrently, the NRC is not concerned with making sure that the Davis-Besse safety systems match the design and licensing basis of the plant.”

The Petitioner argues that the very reason for revoking FENOC’s license is to put the burden-of-proof on the licensee to demonstrate compliance because the NRC is “fundamentally encumbered.” In other words, the Petitioner is arguing that the Davis-Besse operating license should be revoked in order to force the licensee to demonstrate compliance with NRC

requirements because the NRC is unable to prove that the licensee *isn't* in compliance. In a license revocation proceeding, the NRC would have the burden of proving that the license should be revoked. If the NRC is unable to satisfy its burden-of-proof in a revocation proceeding, then the license cannot be revoked. The NRC's authority to revoke licenses does not allow the NRC to summarily revoke a license simply because it wishes to shift the burden to the licensee.

The NRC staff shares the Petitioner's concerns about verifying the adequacy of plant operator performance and ensuring that any future operation of the plant is conducted safely and in compliance with NRC requirements. Contrary to the Petitioner's assertion, the licensee's corrective actions and the NRC's oversight and inspection activities are not narrowly focused on the root causes and corrective actions associated with the reactor vessel head corrosion. FENOC's Return-to-Service Plan includes Operational Readiness Reviews, System Health Readiness Reviews, and Latent Issue Reviews for safety-related systems beyond the reactor vessel head issues. In plain terms, the licensee is evaluating, testing, or inspecting plant safety-related systems to ensure that they are able to perform their design-basis functions as defined in the plant's technical specifications and Updated Final Safety Analysis Report. Additionally, the licensee's Return-to-Service Plan includes activities to foster a safety-conscious work environment in which employees are encouraged to raise concerns and a culture where plant safety issues receive appropriate management attention. The results of the licensee's corrective actions are being closely monitored by the NRC staff through independent NRC inspections and reviews of FENOC's evaluations, tests, and inspections. Important issues that are discovered are being added to the NRC's Restart Checklist or carried as unresolved issues in the inspection tracking system as appropriate. The NRC inspections include a Systems Health Inspection, a Management and Human Performance Inspection, and a Program Effectiveness Inspection.

Regardless of where the “burden-of-proof” lies, the important point is that evaluations, inspections, and testing needed to ensure that the plant can operate safely are being performed. The NRC Davis-Besse Oversight Panel has specified in the NRC Restart Checklist the safety-significant issues that must be addressed before the NRC will consider a restart. The NRC’s oversight activities for Davis-Besse will ensure that the licensee’s corrective actions adequately address these issues before the NRC will consider allowing the facility to restart.

With regard to the Petitioner’s assertion that the NRC is not concerned with making sure that the Davis-Besse safety systems match the design and licensing bases of the plant, the NRC points to the very example cited by the Petitioner. The petition supplement states: “Several problems with the design-basis have been identified during the [NRC’s enhanced oversight] process, including finding that the plant has operated outside of its design-basis since it was built....” If the NRC were unconcerned as the Petitioner asserts, these items would not have been added to the NRC’s Restart Checklist or tracked as open items by the NRC’s inspection program. The fact that these issues were identified as part of the NRC’s enhanced oversight process and added to the NRC’s Restart Checklist, or added to the issues being tracked by the NRC inspection program, demonstrates that the NRC *is* ensuring that FENOC complies with the Davis-Besse design and licensing bases. The specific actions being taken by the NRC and FENOC with regard to this particular issue are discussed further in Section B.6.b.

#### **B.5 Revocation of the Davis-Besse license is required in order to ensure consistency in NRC enforcement**

The Petitioner argues that revocation of the Davis-Besse operating license is required in order for there to be consistency in the manner that the NRC enforces its regulations. To support this argument, the Petitioner cites a number of enforcement actions taken by the NRC to modify, suspend, or revoke the licenses of materials licensees. The petition implies that the NRC is inconsistently enforcing its requirements with regard to Davis-Besse because the NRC has not revoked FENOC’s operating license for the Davis-Besse facility. The petition states:

“[FENOC] has clearly violated NRC regulations and policies to a much greater degree with potentially much greater consequences than others who have had their licenses revoked by the NRC. If NRC does not act here, it raises the question of a double-standard - one consequence for those who have greater resources to challenge the NRC’s decision, and a different and much more serious consequence for those with fewer resources to challenge the NRC. The NRC is abusing the authority granted to it by Congress if it does not operate fairly and consistently with all of its licensees.”

In its February 27, 2003, response to the petition, FENOC argued that “[a]ll the license revocation cases cited by Petitioner involve materials licenses and are [irrelevant] and unpersuasive.” FENOC’s response correctly argues that a crucial factor in the NRC decision process on license revocation is whether a licensee is able and willing to comply with NRC requirements. To support this position, the licensee’s response cites a previous NRC denial of a 2.206 petition to shut down the Gore, Oklahoma, facility owned by Sequoyah Fuels. The denial stated that, although serious violations had occurred, the violations in and of themselves did not warrant suspension or revocation of the license. In denying that petition, the decision also noted that the Sequoyah Fuels history did not reflect an inability or unwillingness to comply with NRC requirements.

The fact that the enforcement actions cited by the Petitioner are all from materials licenses does not in and of itself make these cases irrelevant. Indeed, the NRC staff believes that a close study of these enforcement actions shows, contrary to Petitioner’s assertion that the NRC uses a double-standard, that the NRC *does* treat its licensees fairly. Of the eight cases cited, only one involved the revocation of the license; two involved immediate suspension of the license, in one case after an employee of the affected licensee had received a significant overexposure to radiation; and the balance of the cited enforcement actions either involved confirmatory orders regarding commitments the licensees had made, or were notices of

violations and/or fines. The one cited enforcement action that revoked the license was taken only after the affected licensee had a substantial opportunity to comply with NRC requirements and had demonstrated an unwillingness to comply.

The NRC's ongoing inspection and oversight process for Davis-Besse affords FENOC an opportunity to demonstrate that all relevant restart issues have been satisfactorily addressed. NRC evaluations related to potential enforcement actions are still ongoing, as are NRC activities associated with the alleged willfulness of apparent violations and alleged willful withholding of information or deliberate misrepresentation of facts. In its oversight of the licensee's corrective actions for the apparent violations, the NRC has not observed an inability or unwillingness on the part of FENOC to achieve compliance with NRC regulations, the Davis-Besse operating license, or the Davis-Besse design and licensing bases.

## **B.6 Petition supplement**

The supplement raised the following specific concerns:

- a. Boric acid dust in the reactor containment building (from the reactor vessel head leakage) may have caused corrosion of the electrical system and cable trays.
- b. The as-built design of the plant may not be consistent with the plant's design or licensing bases. As a result, the training of FENOC personnel may not match the plant's licensing basis.
- c. Davis-Besse does not have the ability to detect a 1-gallon-per-minute leak from the reactor coolant system within 1 hour. Thus, Davis-Besse does not meet the requirements of the general design criteria contained in 10 CFR, Part 50, Appendix A, or the guidance of NRC Regulatory Guide 1.45.
- d. Two of the four reactor coolant pumps still have gasket leaks that have not been corrected by the licensee.
- e. The NRC's Davis-Besse Oversight Panel will end and the Davis-Besse plant will return to normal monitoring under the NRC's reactor oversight process before NRC has implemented changes to its reactor oversight process that were recommended by an NRC Lessons Learned Task Force.
- f. The NRC's enhanced oversight and inspection of FENOC's corrective actions does not allow intervenors or the public to participate in the licensing decision through a formal hearing. Such participation would be possible if the Davis-Besse license were revoked and FENOC had to reapply for another operating license.

- g. The investigation being performed by the NRC's Office of Investigations to determine whether FENOC willfully violated NRC requirements and an associated investigation to determine if FENOC deliberately misled the NRC must be completed before the NRC considers the petition. Furthermore, the NRC must consider the petition before allowing the Davis-Besse plant to restart.
- h. There are continuing safety culture problems at Davis-Besse.

The NRC staff has evaluated these concerns and, as discussed in the following sections, finds that they do not individually, collectively, or in combination with the original petition concerns warrant revocation of the Davis-Besse operating license.

#### **B.6.a Effect of boric acid dust in containment**

The Petitioner expresses a concern that the boric acid dust released into the containment atmosphere through the leak in the reactor vessel head may have caused corrosion of electrical systems and cable trays within the containment. Part of this concern is that the NRC's current inspection program, which looks at a sample of the licensee's work, may not identify such degraded conditions. The Petitioner argues that the inspections and examinations that would be conducted if FENOC had to reapply for an operating license would identify and correct any electrical system or cable tray deficiencies caused by the boric acid dust.

The structure of the NRC's inspection program and the means by which it provides reasonable assurance that FENOC is taking appropriate corrective actions to adequately protect the health and safety of the public have already been discussed in Section A.1 of this decision. With regard to this particular issue, the intent of the NRC inspection program at Davis-Besse is to ensure the licensee has a program in place that (a) will result in a thorough inspection of the containment and (b) will result in implementation of appropriate corrective actions. The NRC inspection program accomplishes this by verifying that the licensee has a program that will be able to address the concern then verifying, through a sampling process, that the licensee's program is effectively implemented.

The licensee has included this issue within the scope of its inspections and evaluations. Specifically, FENOC's "Containment Boric Acid Extent of Condition Plan" is included as a subset of the "Containment Health Assurance" portion of FENOC's Return-to-Service Plan. Under the "Containment Boric Acid Extent of Condition Plan," the licensee is conducting inspections and evaluating the extent of any damage that boric acid dust has caused to structures, systems, and components within the containment. Cable trays, conduit, electrical junction boxes, ventilation ducts, and other electrical and mechanical components were included in the scope of these inspections and evaluations. Additionally, the NRC Davis-Besse Oversight Panel has included adequacy of structures, systems, and components inside containment in the NRC's Restart Checklist of items that must be satisfactorily addressed before the NRC will consider allowing the facility to restart.

The NRC has conducted two inspections of the licensee's evaluations and corrective actions for this issue to ensure that FENOC has adequately addressed the effects of the boric acid dust in containment. These inspections are documented in NRC Inspection Reports 50-346/02-09 and 50-346/02-12 (ADAMS Accession Nos. ML022560237 and ML023370132). In the first inspection, the NRC determined that FENOC's "Containment Boric Acid Extent of Condition Plan" was sufficiently comprehensive to identify potentially degraded components affected by boric acid within containment. However, this inspection concluded that the licensee's initial implementation efforts were not effective. FENOC subsequently completed corrective actions, such as revision of inspection plans and re-training of inspection personnel, to address implementation deficiencies and performed repeat inspections. The NRC's second inspection determined that FENOC had implemented appropriate corrective actions to address the performance deficiencies identified during the first NRC inspection. The NRC inspectors found that FENOC's inspection staff was appropriately trained, had adequate equipment and tools, and followed procedures with adequate standards and guidance. The net result was that

boric acid and corrosion deposits observed by the NRC inspectors on components within the containment, including electrical components and safety-related equipment, had in each case been independently identified and documented by the licensee staff. Where the licensee's inspections identified corrosion, corrective actions had been developed to address the deficiency. This led the NRC staff to conclude that FENOC was effectively implementing its "Containment Health Assurance Plan."

As noted in Section B.4, the important point is that evaluations, inspections, and testing needed to ensure that the plant can operate safely are being performed and are being closely monitored by the NRC field inspection staff. The cable trays and electrical systems are included within this scope of work. Additionally, the NRC is still maintaining an open item on the NRC's Restart Checklist regarding the adequacy of structures, systems, and components inside of the containment. This item must be adequately addressed before the NRC will approve restart of the facility.

Thus far, although there are still open items that the licensee must address, the results of the NRC's inspections indicate that FENOC is implementing inspections and corrective actions to adequately identify and resolve equipment deficiencies caused by boric acid dust inside containment. Therefore, the NRC staff concludes that, although this issue may provide a basis for withholding approval of a plant restart, it does not provide a sufficient basis to revoke the Davis-Besse operating license.

For the longer term, in addition to the enhanced oversight of FENCO's ongoing corrective actions, the NRC's Action Plans for addressing the recommendations of the Davis-Besse lessons learned task force include activities to assess and improve the NRC's reactor operating experience program, as well as activities to assess and improve the NRC's inspection programs, to ensure that issues such as stress corrosion cracking are adequately addressed by licensees.



### **B.6.b Conformance to the Davis-Besse design and licensing bases**

The Petitioner alleges that the Davis-Besse facility may not meet its design or licensing bases and that neither the licensee nor the NRC is concerned with assessing and correcting the problem. As discussed in Section B.4 above, the NRC is concerned with ensuring that Davis-Besse conforms to its design and licensing bases. Not only is the licensee evaluating its plant safety systems and programs for compliance with NRC requirements such as design and licensing bases, but the NRC's oversight activities include independent NRC inspections and NRC reviews of the licensee's evaluations to ensure conformance of safety systems and programs to the design and licensing bases. Where deficiencies are identified by the licensee, they are entered into the licensee's formal corrective action program and prioritized based on safety significance. Safety-significant deficiencies identified by the NRC are being added to the NRC's Restart Checklist, and they must be resolved before the NRC will consider any future restart. Additionally, some issues that are identified by the licensee may also be added to the NRC Restart Checklist, depending on the safety significance of the issues. Some items of low safety-significance would not be required to be completed before a plant restart, but would be required to be captured within FENOC's corrective action program.

Finally, the Petitioner raises a separate but related issue with regard to training of FENOC personnel. Specifically, the supplement states: "The NRC has not concentrated on ensuring that the training of personnel matches the licensing basis of the plant as they would have to do if they conducted a full licensing and examination process."

In accordance with a 1996 Memorandum of Agreement between the NRC and the Institute of Nuclear Power Operations (INPO), INPO maintains a formal process for periodically evaluating the training programs of licensees for personnel who operate or maintain safety-related equipment. FENOC's training program has maintained its INPO accreditation. Additionally, the NRC's Operator Licensing program evaluates licensee requalification

programs for licensed operators to ensure that the operators maintain proficiency in operating the plant during normal and upset conditions, including responses to accidents.

The licensee's training program is correctly focused on both the licensing basis and component performance. The requalification program for licensed operators appropriately covers responses to various accident scenarios where components fail to operate as expected. While the training covers required design parameters to ensure that the reactor core remains in a safe condition and components operate properly, the training also emphasizes use of the site's emergency operating procedures for alternate means of responding to plant events or accidents if some equipment fails to operate as designed. Furthermore, when design issues are identified that warrant implementation of modifications or procedure revisions, the licensee's training program includes requirements to conduct training for plant operations personnel on revisions or modifications that are made to plant equipment.

The deficiencies in the Davis-Besse design and licensing bases that have been identified by the NRC's inspections or FENOC's reviews have been entered into the licensee's corrective action program as part of the FENOC Return to Service Plan. Additionally, this issue is being tracked under the NRC Restart Checklist "System Readiness for Restart" line item and it must be adequately addressed before the NRC will consider a restart of the plant. Furthermore, the NRC's oversight includes a specific inspection of the licensee's corrective action program. Therefore, since the licensee's ongoing corrective actions, as monitored by the NRC Davis-Besse Oversight Panel, are addressing this issue, the NRC staff considers that this concern does not provide a sufficient basis to revoke the Davis-Besse operating license.

### **B.6.c Davis-Besse leak detection capability**

The Petitioner's stated concern is that the new leak detection system being installed by FENOC is not capable of detecting a 1-gallon-per-minute reactor coolant system leak within 1 hour. Thus, Petitioner asserts, Davis-Besse will not be in compliance with General Design Criterion 30 specified in 10 CFR, Part 50, Appendix A, or in conformance with the guidance provided in NRC Regulatory Guide 1.45. Additionally, the new leak detection system will only detect leakage from the reactor and not from other piping systems connected to the reactor. Finally, the Petitioner expresses a concern that containment radiation monitors are not capable of detecting a 1-gallon-per-minute reactor coolant leak within the 1-hour guideline and industry experience has shown that radiation monitors may take significantly more time to detect small reactor coolant system leaks than technical specifications allow to complete a plant shutdown when leakage exceeds the technical specification limits. The Petitioner argues that this issue would be rectified if FENOC were forced to reapply for a license to operate the Davis-Besse facility.

General Design Criterion 30 specifies that (a) "[c]omponents which are part of the reactor coolant pressure boundary shall be designed, fabricated, erected, and tested to the highest quality standards practical," and (b) "[m]eans shall be provided for detecting and, to the extent practical, identifying the location of the source of reactor coolant leakage." The Petitioner's stated concern deals with the second part of this general design criterion.

The NRC staff has reviewed this concern and determined that the enforcement action suggested by the Petitioner would not provide the relief that is sought. First, because the Davis-Besse construction permit was issued prior to May 21, 1971, the general design criteria are not applicable to Davis-Besse (see SECY-92-223, dated September 18, 1992; ADAMS Accession No. ML003763736). Second, if the NRC were to impose the requirement of General

Design Criterion 30 on the licensee, revocation of the operating license would not be required to accomplish that change in the Davis-Besse licensing basis.

As described in the Davis-Besse Updated Final Safety Analysis Report, the design and licensing bases of the facility do, however, contain leakage detection systems and the facility does have the ability to detect and monitor leakage that is of the magnitude about which the Petitioner expresses concern. The Davis-Besse facility has methods to detect and monitor reactor coolant system leakage other than the new leak detection system that is being installed. In addition to this new system and the radiation monitoring systems that the Petitioner has already noted, Davis-Besse has a containment sump level and flow monitoring system that provides a separate leak detection ability. The plant's technical specifications include requirements for the operability of the containment sump level and flow monitoring system, and the containment radiation monitors during plant operation. The technical specifications also include requirements for routine monitoring and trending of water inventory balances which provide indications of potential reactor coolant system leakage. The Davis-Besse Updated Final Safety Analysis Report describes an additional capability to detect leakage through trending of changes in makeup tank water level.

The NRC staff reviewed the Davis-Besse leakage detection systems during the plant's initial licensing. As documented in NUREG-0136, Supplement 1, "Safety Evaluation Report Related to Operation of Davis-Besse Nuclear Power Station Unit 1," dated April 1977, the NRC staff concluded that the plant design conformed sufficiently to the guidance of NRC Regulatory Guide 1.45 to satisfy the intent of General Design Criterion 30. The fact that the new leak detection system may not be capable of detecting a 1-gallon-per-minute reactor coolant system leak within 1 hour does not negate the NRC staff's previous conclusion that the plant design meets the intent of General Design Criterion 30. That is because the principal leak detection systems described in the plant's Updated Final Safety Analysis Report are still in place and still

part of the plant design and licensing bases. The new leakage detection system provides an additional level of diversity in the plant's leakage detection capability.

The NRC staff notes that inability of containment instrumentation to detect reactor coolant system leakage was not a contributing factor to the corrosion of the Davis-Besse reactor vessel head. Rather, the corrosion was the result of the licensee's failure to understand the indications that were available (in addition to the physical flaws in the reactor vessel head). In other words, the licensee had ample indication that a problem existed, but failed to take an appropriate response. Indeed, as Petitioner noted in Section E of the main petition, "[b]eginning in the spring of 1999, the [radiation detector air filters] were becoming clogged on an increasingly frequent basis, sometimes as often as every day... Although engineers suspected a coolant leak, they did not find it. Instead, they continued to clean and change the filters, sometimes every day. Workers, moreover, moved the monitor intakes to different spots, and even bypassed one of the devices' three sensors because it continued to trigger alarms." The actual leakage rate throughout the plant's last operating cycle never reached 1 gallon per minute, and averaged less than 0.3 gallon per minute. Thus, the actual plant experience demonstrates that the plant does have an ability to detect small leakage rates through direct or indirect effects of leaks.

Because the general design criterion cited by the Petitioner does not apply to Davis-Besse, because the NRC staff has previously reviewed the plant design and determined that the intent of the general design criterion is met, and because actual plant experience has demonstrated that the physical systems can detect a small reactor coolant system leak, the NRC staff concludes that the Petitioner's stated concern regarding Davis-Besse's leak detection capability does not provide a basis to revoke the Davis-Besse operating license. Hence, the associated issue regarding the amount of time required for radiation monitors to detect reactor coolant system leakage is not relevant to the question of whether the Davis-Besse operating license

should be revoked. In and of itself, this issue does not provide a basis for revoking an operating license. For the sake of completeness, however, this issue will be addressed here.

The Petitioner argues that the amount of time required to detect reactor coolant system leakage using radiation monitors must be consistent with the amount of time allowed by the technical specifications to complete a shutdown. Although it might seem that the amount of time required to detect leakage is linked to the amount of time that technical specifications allow to complete a shutdown, in actuality there is no such link. The technical specification limits are set conservatively low in order to prompt operators to initiate action before leakage gets worse and seriously challenges plant safety. The amount of time that the technical specifications allow to complete a shutdown when the leakage limits are exceeded, on the other hand, provides a reasonable amount of time to conduct an orderly shutdown of the plant once it is concluded that a technical specification leakage limit has been exceeded.

The NRC staff is aware, as the Petitioner correctly points out, that improvements in nuclear fuel integrity since 1973, when NRC Regulatory Guide 1.45 was issued, have resulted in decreases in reactor coolant radioactivity levels at many plants. This has created reductions in radiation monitor abilities to detect reactor coolant system leakage at some plants. However, radiation monitors may be able to detect a 1-gallon-per-minute leak rate within a period longer than 1 hour and still provide adequate leak-before-break detection capability. Moreover, when considered in conjunction with other diverse leakage detection systems, the NRC staff concludes that the availability of at least one detection method that is capable of detecting a leak rate increase of about 1-gallon-per-minute within 1 hour provides adequate leak-before-break detection capability. That detection method might not employ radiation monitors. For Davis-Besse, the containment sump level and flow monitoring system described in the plant's Updated Final Safety Analysis Report is capable of detecting a 1-gallon-per-minute leak rate within such a period that meets the intent of NRC Regulatory Guide 1.45.

The NRC's "Action Plan for Addressing Davis-Besse Lessons Learned Task Force Recommendations Regarding Assessment of Barrier Integrity Requirements," includes a milestone to re-evaluate the bases for reactor coolant system leakage requirements and re-assess the capabilities of currently used and state-of-the-art leakage detection systems. This will appropriately address the issues regarding detector capabilities and technical specification requirements on an industry-wide basis rather than an ad-hoc manner.

#### **B.6.d Reactor coolant pump gaskets**

The Petitioner expresses a concern that FENOC has only replaced gaskets in two of the four reactor coolant pumps at Davis-Besse. To support this concern, the Petitioner cites a complaint by a former FENOC employee filed with the Department of Labor, and a March 27, 2003, report issued by the Union of Concerned Scientists. Both of those documents claim that known deficiencies exist with gaskets on all four of the Davis-Besse reactor coolant pumps. The Union of Concerned Scientists report draws on internal FENOC documents and a July 2, 2002, letter from a reactor coolant pump technical support vendor (Flowserve) to support its argument that the reactor coolant pump gaskets are deficient and, further, that both FENOC and the NRC have failed to take appropriate corrective actions.

The statements made in the petition supplement regarding the condition of the reactor coolant pump gaskets are restatements of allegations that were recently reviewed by the NRC. As noted in the petition supplement, and in the documents the Petitioner used as sources, the gaskets in two of the reactor coolant pumps were replaced during the current outage. The remaining two reactor coolant pumps, 2-1 and 2-2, are the pumps at issue.

In the July 2, 2002, letter from Flowserve to FENOC, the vendor stated that minor gasket leakage during thermal transients might occur and is not indicative of an at-power leak. The NRC inspectors who reviewed the engineer's allegation were unable to locate vendor

statements that the gaskets require replacement as soon as an inner gasket leak is detected. Instead, the vendor stated (both in the second paragraph of the July 2, 2002, letter and in a letter dated September 16, 2002,) that it is acceptable to continue operating with an inner gasket leak provided that the outer gasket does not leak. FENOC performed air tests on pumps 2-1 and 2-2 in August 2002. No leakage was detected and, thus, the results of those tests indicated that the reactor coolant pump gaskets are sound. The NRC inspectors determined that previous indications of gasket leakage found during air tests were the result of poor testing conditions that resulted in inaccurate test results.

Additionally, in its April 11, 2003, response to the supplement, FENOC stated that all four of the reactor coolant pumps will be tested with water at normal operating pressure prior to restart to inspect for reactor coolant pump gasket leakage. The NRC staff will monitor the results of the operating pressure test and ensure that any needed corrective actions are incorporated into the licensee's corrective action process. Therefore, the NRC staff concludes that this issue does not provide a sufficient basis to revoke the Davis-Besse operating license.

#### **B.6.e Completion of monitoring Davis-Besse under the NRC's 0350 process**

The Petitioner expresses a concern that the NRC's enhanced oversight (0350) process will be terminated after the Davis-Besse plant is allowed to restart but before the NRC has implemented changes to the NRC's Reactor Oversight Process as recommended by an NRC Lessons Learned Task Force. Additionally, the Petitioner asserts that there is no mechanism that allows for public involvement to ensure that the Lessons Learned Task Force recommendations relative to the NRC's reactor oversight process are implemented prior to the end of the NRC's enhanced oversight of Davis-Besse.

The Petitioner is essentially arguing that the NRC's normal Reactor Oversight Process is potentially inadequate and that the recommendations of the NRC Lessons Learned Task Force



must be implemented to correct the Reactor Oversight Process's deficiencies. This is a separate issue from the question of whether the Davis-Besse operating license should be revoked. Neither the NRC Lessons Learned Task Force nor the Petitioner identified fundamental flaws in the NRC Reactor Oversight Process. Rather, the NRC Lessons Learned Task Force recommended actions to improve and enhance the normal oversight process. The need for such improvements in the NRC's normal Reactor Oversight Process, however, is not a basis for revoking a facility operating license since the existence of a flawless NRC oversight program is not a prerequisite for a licensee to be granted or to retain a facility operating license.

Considering that the NRC Lessons Learned Task Force identified areas for improvement in the normal Reactor Oversight Process, it is understandable, however, that the Petitioner seeks assurance that future NRC oversight of Davis-Besse will adequately ensure that FENOC operates and maintains the plant in compliance with NRC requirements. If the NRC does approve a restart of the Davis-Besse facility, the NRC's Inspection Manual Chapter 0350, which governs the NRC's Enhanced Oversight Process, specifies that enhanced NRC oversight will continue after restart until such time that the NRC Davis-Besse Oversight Panel determines that the licensee has demonstrated acceptable performance. Post-restart enhanced oversight will not be terminated unless the NRC Davis-Besse Oversight Panel recommends to the appropriate NRC Regional Administrator that the plant be returned to monitoring under the normal Reactor Oversight Process. That Regional Administrator, in consultation with the NRC Director of the Office of Nuclear Reactor Regulation and the Office of the Executive Director for Operations, will decide whether a return to the normal Reactor Oversight Process is warranted.

The recommendation of the NRC Davis-Besse Oversight Panel to return Davis-Besse to the normal Reactor Oversight Process would also provide the basis for the panel's conclusion that the plant can be returned to routine monitoring. The NRC's evaluation process to reach such a conclusion will include the use of an inspection plan that is specifically tailored to the particular

circumstances of the Davis-Besse plant. Under that plan, critical licensee performance areas of concern, for example Management and Human Performance, will be inspected. A return of the Davis-Besse facility to the normal Reactor Oversight Process would include an assessment of the plant's performance and a determination of whether significant additional NRC oversight is required in accordance with the normal Reactor Oversight Process guidance.

Additionally, some of the Lessons Learned Task Force's near-term recommendations are already being functionally accomplished through the NRC's enhanced oversight of Davis-Besse. For example, the Lessons Learned Task Force recommendations included development of inspection guidance (a) to ensure that reactor vessel head penetrations nozzles and the reactor pressure vessel head area are periodically reviewed by the NRC during licensee inservice inspections activities and (b) provide for timely periodic inspections of pressurized water reactor boric acid corrosion control programs. The NRC's Restart Checklist for Davis-Besse includes the adequacy of the reactor pressure vessel head replacement and the adequacy of the Davis-Besse Boric Acid Corrosion Management Program as issues that must be satisfactorily addressed before the NRC will consider a plant restart. Thus, for these examples, the issues are being addressed as part of the NRC Davis-Besse Oversight Panel's activities and, in the short-term, the associated recommendations of the Lessons Learned Task Force will be functionally accomplished even though the NRC's programmatic implementation of the NRC Lessons Learned Task Force recommendations may not be fully implemented at the time a decision regarding restart of the Davis-Besse plant is made.

With regard to the Petitioner's assertion that there is a lack of opportunity for public involvement to ensure that the Lessons Learned Task Force recommendations relative to the NRC's reactor oversight process are implemented prior to the end of the NRC's enhanced oversight of Davis-Besse, the NRC is planning to conduct public meetings to discuss the NRC's action plans that will address the NRC Lesson's Learned Task Force's recommendations.

These meetings will provide members of the public an opportunity to voice concerns and comment on the action plans. Additionally, the NRC's Inspection Manual Chapter 0350 recommends that the NRC Davis-Besse Oversight Panel conduct public meetings with the licensee to discuss licensee performance, and hold separate meetings with the public, prior to termination of the NRC Enhanced Oversight Process. Consistent with the NRC's practice of conducting routine public meetings, as has been done throughout the entire Enhanced Oversight Process for Davis-Besse, such meetings would afford members of the public an opportunity to ask questions of the NRC staff and voice concerns about returning Davis-Besse to the NRC's normal Reactor Oversight Process. Finally, the NRC's normal Reactor Oversight Process also provides a means for public participation through the annual performance review, which includes a public meeting with the licensee at which the public can ask questions of the NRC staff regarding licensee performance and raise issues for NRC followup.

#### **B.6.f Public participation in NRC's oversight of Davis-Besse**

Petitioner expresses a concern that the NRC's enhanced oversight and inspection of FENOC's corrective actions does not allow the public to participate in the licensing decision through a formal hearing. The Petitioner states that such participation would be possible if the Davis-Besse license were revoked and FENOC had to reapply for another operating license.

The NRC staff believes that, in keeping with the overall approach of the NRC's Reactor Oversight Process, the enhanced oversight of FENOC's corrective actions under its Return-to-Service Plan is transparent and affords substantial opportunities for interested members of the public to voice safety concerns. The NRC Davis-Besse Oversight Panel has been conducting public meetings with the licensee and the general public on a routine basis. The meetings held with the licensee are open for the public to observe and time is provided after the business portions of these meetings for public questions and comments. The meetings with the general

public allow interested parties to voice their concerns and ask questions of the NRC staff. Since the discovery of the damaged reactor vessel head at Davis-Besse in March 2002, the NRC has conducted more than 25 meetings with FENOC that were open for public observation/participation and more than 12 meetings directly with the public to discuss the licensee's corrective actions and listen to the public's concerns. Furthermore, the local residents of Ottawa County have a representative on the FENOC Restart Overview Panel to whom they can communicate concerns.

For all the reasons discussed in this Director's Decision, the petitioner has not provided a sufficient basis for revoking the Davis-Besse operating license. Thus, the procedural implications attendant to issuance of an operating license do not arise.

#### **B.6.g Ongoing NRC Office of Investigations activities**

The Petitioner asserts that the investigation being conducted by the NRC's Office of Investigations to determine whether FENOC willfully violated NRC requirements and whether FENOC deliberately misled the NRC must be completed before considering this petition or allowing the Davis-Besse plant to restart. This decision has already discussed the reasons for considering the petition prior to completion of activities related to the NRC's wrongdoing investigation. Therefore, the following discussion will focus on the matter of a potential NRC decision to allow plant restart.

The wrongdoing investigation looks at the past actions of any suspect individuals. However, an NRC decision to allow plant restart would be based on an assessment of the licensee's current performance and its effectiveness in following conservative decision making processes to ensure adequate nuclear and personnel safety. The NRC Davis-Besse Oversight Panel, the Director of the NRC's Office of Enforcement, the NRC Regional Administrator for NRC Region III, and the management of the NRC's Office of Nuclear Reactor Regulation have been

regularly briefed on the progress of the wrongdoing investigation and will continue to monitor the NRC Office of Investigations' activities. The NRC Davis-Besse Oversight Panel, with input from other NRC organizations, such as the Office of Investigations, the Office of Enforcement, the Office of the General Counsel, and the Office of Nuclear Reactor Regulation, will evaluate evidence gathered during the investigation prior to making a recommendation for restart of the Davis-Besse facility to ensure that due consideration is given to any matter that could affect public health and safety. If any individuals are implicated in wrongdoing, the NRC will consider whether the individual is in, and if so should remain in, a position of responsibility at Davis-Besse. Hence, although it will be informed of the evidence gathered during the NRC's wrongdoing investigation, an NRC decision regarding restart of the plant would not be linked to the *completion* of all activities related to the NRC's wrongdoing investigation.

The NRC's enhanced oversight of Davis-Besse's corrective actions includes a Management and Human Performance Inspection, a Program Effectiveness Inspection, and an assessment of the effectiveness of FENOC's activities to foster a healthy safety culture. Any future NRC decision to allow a restart of the Davis-Besse facility will be based on the NRC's assessment of whether FENOC has adequately addressed the issues covered by the NRC Restart Checklist. That assessment will include, but is not limited to, a determination of whether (a) the conditions that led to the reactor head corrosion have been adequately addressed; (b) the physical condition of the plant, including safety systems, is adequate; and (c) the licensee's management, operations, maintenance, and engineering organizations are committed to, and capable of, operating the plant safely if it is permitted to restart.

#### **B.6.h Safety culture at Davis-Besse**

The Petitioner asserts that there are continuing deficiencies in the safety culture of the Davis-Besse staff. To support this argument, the Petitioner repeats allegations made by a former FENOC employee who claims that FENOC terminated his employment in retaliation for

his engaging in protected activities. The petition states: “[t]he NRC should thoroughly investigate [FENOC’s] refusal to test or repair the remaining two Reactor Coolant Pumps, and [the former employee’s] claims of retribution.... This is also offered as a supplement to the 2-206 petition, Section G, detailing [FENOC’s] lack of rehabilitation in its safety culture following the discovery of the hole in the reactor head.”

As discussed in Section B.6.d, the reactor coolant pump 2-1 and 2-2 gaskets were tested during August 2002 with satisfactory results and the licensee’s test plan includes a test of all four reactor coolant pumps with water at normal operating pressure prior to any future restart to inspect for reactor coolant pump gasket leakage in accordance with the pump vendor’s recommendations. The NRC staff will monitor the results of this test and ensure that any needed corrective actions are incorporated into the licensee’s corrective action process. Therefore, there is no FENOC refusal to test the reactor coolant pumps for the NRC to investigate as requested by the Petitioner.

The NRC 2.206 process is not an appropriate forum for addressing wrongful termination claims of a former employee. The allegations made by the former employee, which the Petitioner cites in the supplement, are contained in a formal complaint filed with the U.S. Department of Labor by that individual, which is monitored by the NRC. The Department of Labor process and the NRC’s Allegations process are the appropriate means for addressing the former FENOC employee’s complaint and allegations.

With regard to the broader safety culture issue, FENOC has developed a “Management and Human Performance Corrective Action Plan,” to address deficiencies in the safety culture at Davis-Besse. The plan includes training sessions for all FENOC employees on raising safety concerns and the proper handling of safety issues. The plan also includes an independent assessment of FENOC’s safety culture at the Davis-Besse facility led by an industrial psychologist. Additionally, with the support of industry experts, the NRC is assessing the

licensee's approach to improving the safety culture and safety-conscious work environment at Davis-Besse. The NRC will not authorize restart of the Davis-Besse plant unless the NRC is satisfied that FENOC has effectively implemented corrective actions to foster a safety-conscious work environment in which employees are encouraged to raise concerns and a culture where plant safety issues receive appropriate management attention based on safety significance.

Therefore, the NRC staff concludes that, although this issue may provide a basis for withholding approval of a plant restart, it does not provide a sufficient basis to revoke the Davis-Besse operating license.

### **C. Petitioner's Alternative Request**

The petition includes an alternative request that the NRC revisit its previous denial of a 2.206 petition that sought NRC action to issue an order to FENOC requiring verification by independent party for issues related to the Davis-Besse reactor head corrosion. The Director's Decision issued for that 2.206 petition concluded:

The NRC staff finds that its ongoing actions are sufficient to verify the adequacy of the licensee's performance related to [reactor vessel] head degradation issues and to reassure the public that all reasonable safety measures have been taken prior to plant restart. The combined efforts of the [NRC Augmented Inspection Team] and the [NRC Davis-Besse Oversight Panel] will adequately identify and evaluate the technical and programmatic issues at Davis-Besse. The [NRC] staff has adequate expertise and resources to monitor the licensee's corrective and preventative actions. Thus, the enforcement-related action requested by the Petitioners for [verification by independent party] is not warranted. Additionally, the licensee is already taking action to provide an adequate level of independent verification for restart activities. Therefore, the Petitioners' request for the NRC to issue an Order to the licensee requiring the establishment of a [verification by independent party] is denied. If further assessment by the [NRC Davis-Besse Oversight Panel] identifies new and/or different issues that warrant consideration of an enforcement-related action similar to Millstone, a change to the current staff regulatory approach will be considered.

Since that Director's Decision was issued, FENOC has continued to include independent industry experts in its restart oversight organization, and the NRC Davis-Besse Oversight Panel continues to closely monitor the licensee's corrective actions. Additionally, FENOC has

contracted with a team of independent experts to perform an independent assessment of FENOC's safety culture at the Davis-Besse facility. The February 3, 2003, petition did not provide information of a new or different nature that warrants reconsideration of the previous Director's Decision.

### **III. Conclusion**

The NRC staff has carefully considered the Petitioner's arguments regarding why FENOC's operating license for the Davis-Besse Nuclear Power Station should be revoked, as well as the alternative request for reconsideration of a previous request for verification by an independent party. The NRC staff shares the Petitioner's concerns about verifying the adequacy of plant operator performance and ensuring that future operation of the plant is conducted safely and in compliance with NRC requirements. The licensee has established, and is implementing, a Return-to-Service Plan that is comprehensive and addresses human factors, programmatic, and equipment issues as well as issues associated with the corrosion of the reactor vessel head. This includes evaluating, testing, or inspecting plant safety-related systems to ensure that they are able to perform their design-basis functions as defined in the plant's technical specifications and Updated Final Safety Analysis Report. Additionally, the NRC's inspection activities and the NRC's Restart Checklist go beyond ensuring that the direct causes of the damage to the reactor vessel head are properly identified and corrected. The NRC's activities also look broadly at safety-related plant systems and programs to ensure that the physical condition of the plant is adequate and the licensee's operations, maintenance, and engineering organizations are prepared to operate the plant safely if it is permitted to restart. Thus the NRC believes that the FENOC Return-to-Service Plan, as monitored by the NRC Davis-Besse Oversight Panel, provides an appropriate opportunity for FENOC to demonstrate or achieve compliance with NRC requirements, and that these activities will provide results that adequately address the Petitioner's stated safety concerns.



With regard to the specific action of revoking the Davis-Besse operating license sought by the Petitioner, the NRC staff finds that there is insufficient basis to take the requested action. While serious violations did occur at the Davis-Besse facility, the violations in and of themselves do not warrant revocation of the license. The Davis-Besse facility is currently shut down, and will remain so until the NRC is fully satisfied that there is reasonable assurance of adequate protection of the public health and safety and that any restart issues associated with management of the facility and potential wrongdoing have been satisfactorily addressed. In its oversight of the licensee's corrective actions for the apparent violations, the NRC has not observed an inability or unwillingness on the part of FENOC to achieve compliance with NRC regulations, the Davis-Besse operating license, or the Davis-Besse design and licensing bases. Therefore, the Petitioner's request that the NRC revoke FENOC's license to operate the Davis-Besse Nuclear Power Station is denied. Additionally, the NRC staff finds that the petition provides an insufficient basis for the NRC to reverse its previous decision on the alternative request for verification by independent party.

As provided in 10 CFR 2.206(c), a copy of this Director's Decision will be filed with the Secretary of the Commission for the Commission to review. As provided for by this regulation, the decision will constitute the final action of the Commission 25 days after the date of the decision unless the Commission, on its own motion, institutes a review of the decision within that time.

Dated at Rockville, Maryland, this 12th day of September, 2003.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Brian W. Sheron, Acting Director  
Office of Nuclear Reactor Regulation

Attachment: Staff Responses to Comments on  
Proposed Director's Decision DD-03-03

STAFF'S RESPONSES TO COMMENTS ON  
PROPOSED DIRECTOR'S DECISION DD-03-03

This attachment documents the Nuclear Regulatory Commission (NRC) staff response to comments received on proposed Director's Decision DD-03-03. The comments were solicited by letter dated June 6, 2003.

**I. Petitioner's Comments**

The Petitioner replied by letter dated July 7, 2003. Parts of the Petitioner's comments were restatements of arguments or assertions made in the February 3, 2003, petition or the March 27, 2003, supplement. These arguments are addressed at length in the Director's Decision and are not readdressed here. The Petitioner also provided a miscellaneous comment that addresses material within the proposed Director's Decision but that is not directly related to the final Director's Decision.

The Petitioner's comments offered two basic arguments against the substance of the NRC's proposed Director's Decision, the second of which is composed of five parts. In summary, the Petitioner asserts that

- A. The proposed Director's Decision does not adequately explain why the NRC is ruling on the petition before the investigation being conducted by the NRC's Office of Investigations (OI investigation) is completed. Additionally, the OI investigation must be completed before the NRC makes any decision regarding restart of the Davis-Besse facility.
- B. The proposed Director's Decision fails to hold FENOC accountable.
  - 1. In introductory comments the petitioner asserts the NRC proposed Director's Decision does not justify the NRC's refusal to hold FENOC accountable and that the decision repeats some licensee's claims without further evaluation.
  - 2. The petitioner's specific comments on this issue may be summarized as follows:
    - a. the NRC oversight process described is inadequate,
    - b. FENOC inspections/corrective actions are inadequate or otherwise can not be trusted,
    - c. NRC can not adequately assess whether or not a licensee is willing to comply with NRC requirements if NRC is unwilling to enforce its requirements,
    - d. the proposed Director's Decision misunderstands the Petitioner's argument regarding shifting of burden, and
    - e. the proposed Director's Decision does not address all events at Davis-Besse cumulatively.

More detailed summaries of these arguments and the NRC's staff's responses, are provided below.

ATTACHMENT

## **A. Issues related to completion of ongoing NRC Investigation**

### Summary of Petitioner's Comment

The proposed Director's Decision does not justify the NRC's ruling on the petition before the OI investigation regarding willfulness of violations is completed. The Petitioner remarks that "because the OI investigation is not complete, the proposed decision is able to evade the question of whether [FENOC's] license should be revoked due to its willful and fraudulent campaign to delay inspections of the Davis-Besse plant." The Petitioner argues that "if the OI investigation is sufficiently mature to adequately inform the NRC's decision, then it should be ready for public release - at least in synopsis form. Conversely, if the OI investigation is not mature enough for public release, then it is not evolved sufficiently to inform the NRC's decision making process."

The Petitioner further asserts that "[d]etaching the results of the OI investigation from the NRC's restart decision undermines the NRC oversight efforts and allows the NRC and [FENOC] to avoid any public discussion of accountability for criminal behavior until it is too late to further delay the restart of Davis-Besse." The Petitioner then goes on to suggest that if the NRC OI investigation (and the release of its findings) is delayed FENOC, and any individuals who committed criminal violations, will be able to evade justice.

### NRC Staff's Response

In cases where the results of an OI investigation identify potential wrongdoing, those results are provided to the U.S. Department of Justice in accordance with the Memorandum of Understanding between the NRC and the Department of Justice. In addition, wrongdoing by an individual may result in civil and/or criminal enforcement actions against the licensee and/or that individual. The NRC's Enforcement Manual describes the processes involved in actions against individuals and the relationship between the NRC and Department of Justice. Because there are ongoing NRC activities that may lead to civil and/or criminal proceedings, information from the OI investigation that is available to the NRC management for informing NRC decisionmaking is not currently available for public release. The NRC Davis-Besse Oversight Panel, the Director of the NRC's Office of Enforcement, the NRC Regional Administrator for NRC Region III, and the management of the NRC's Office of Nuclear Reactor Regulation have been regularly briefed on the progress of the OI investigation and will continue to monitor OI activities and evaluate investigation results.

Regarding the Petitioner's concern that any future restart decision should wait until the OI investigation is completed, Section B.6.g has been clarified to indicate that an NRC decision regarding restart of the plant would be informed of the evidence gathered during the NRC's wrongdoing investigation. The NRC Davis-Besse Oversight Panel, with input from other NRC organizations, such as the Office of Investigations, the Office of the General Counsel, the Office of Enforcement, and the Office of Nuclear Reactor Regulation, will evaluate evidence gathered during the investigation prior to making a recommendation for restart of the Davis-Besse facility to ensure that due consideration is given to any matter that could affect public health and safety. Thus, any future NRC decision regarding restart of the Davis-Besse facility is not "detached" from the OI investigation as suggested by the Petitioner.

## **B. NRC must hold FENOC accountable** (introductory comments)

### 1a. Summary of Petitioner's comment

Petitioner remarks that “the proposed Director’s Decision does not justify the NRC’s refusal to hold [FENOC] accountable for its past and present behavior by properly exercising its authority to revoke [FENOC’s] license to operate the Davis-Besse facility.” In the introductory material to the subparts for this argument (Section II of Petitioner’s July 7, 2003, letter), Petitioner cites a FENOC consultant’s Safety Culture Evaluation report which noted that many plant personnel at Davis-Besse feel that FENOC senior management has failed to accept accountability or responsibility for the reactor head event and that managers directly involved have just been reassigned but not held accountable. Petitioner also cites FENOC’s response to the recent discovery of plant design flaws as evidence that FENOC must still be held accountable by revocation of the Davis-Besse operating license.

### NRC staff’s response

The Director’s Decision notes that revocation of the license is not the only course of action that is available to the NRC for holding the licensee accountable for violations of NRC regulations and the Davis-Besse operating license. The decision also notes that the NRC still has ongoing enforcement considerations regarding apparent violations at Davis-Besse and that these matters will be appropriately handled consistent with NRC policies for enforcement and for interfacing with the U.S. Department of Justice. The decision discusses in detail why the arguments offered by the Petitioner fail to support a conclusion that the Davis-Besse operating license must or should be revoked. Furthermore, the decision notes that the NRC’s current oversight and enforcement activities regarding Davis-Besse are consistent with NRC oversight and enforcement policies and with NRC oversight of other licensees that have displayed similar performance deficiencies.

The Petitioner selectively quotes from the FENOC consultant’s Safety Culture Evaluation report to advance a claim that the Davis-Besse safety culture “has not been repaired” and, by extension, that this asserted failure to correct the safety culture supports the assertion that the Davis-Besse operating license must, or should, be revoked in order to (a) hold FENOC accountable for its behavior and (b) affect needed improvements in the Davis-Besse safety culture. The NRC staff notes that a balanced reading of the FENOC contractor’s report does not support the Petitioner’s claim that the extreme action of license revocation is needed to affect improvement in the Davis-Besse safety culture. Although the report does state, as Petitioner has cited, that many FENOC employees believe that managers have not been held accountable, the report (which is a point-in-time snapshot of the licensee safety culture in February 2003) also makes the following observations:

- “Use of the Employee Concerns Program has increased.”
- “Personnel are writing more Condition Reports (CRs) to raise management issues related to safety.”
- “Many individuals indicate that it has not been a problem to raise safety issues in the past, and they do not perceive it to be a problem now.”
- “Overall, individuals surveyed believe that taking responsibility is something that is valued and reinforced within the organization. In addition, interviewees

- generally indicated a willingness to take personal responsibility for their actions and the consequences of the actions.”
- “Significant efforts through the [Safety Conscious Work Environment] program are being made to establish an open reporting culture without blame at the Station and most personnel express the opinion that raising issues has never been a problem.”
  - “In general, personnel feel that avoiding responsibility for fear of being punished is not a desired behavior within the Davis-Besse organization.”

To avoid confusion on this point, the NRC staff’s citation of these statements from the FENOC contractor’s report *is not* an NRC endorsement of the findings of that report or an NRC staff conclusion that the Davis-Besse safety culture is adequate. The NRC staff’s purpose in using the above quotations is merely to illustrate that the report contains favorable information as well as the unfavorable information quoted by the Petitioner. If one gives the report’s findings credence, as Petitioner apparently does, an objective interpretation of the report would be that, although more progress is needed, the licensee is making improvements in its safety culture and, therefore, revocation of the license is not needed to address the Petitioner’s stated safety concern regarding safety culture.

As is explained in the Director’s Decision, with the support of industry experts, the NRC is independently assessing the licensee’s approach to improving the safety culture and safety-conscious work environment at Davis-Besse. The adequacy of the Davis-Besse safety culture remains an open item on the NRC’s checklist of safety-significant issues that FENOC must adequately address before the NRC will consider a restart of the Davis-Besse facility.

#### 1b. Summary of Petitioner’s comment

Petitioner remarks that the proposed Director’s Decision repeats a licensee claim that FENOC’s corrective actions have included “replacement of several senior and mid-level managers who had been in positions of responsibility prior to February 2002,” but that the proposed Director’s Decision provides “no analysis or discussion over whether these replacements are sufficient to address [FENOC’s] lack of safety culture, or whether the managers replaced were even the ones who were directly involved in the reactor head events.”

#### NRC Staff’s response

The important issue with regard to FENOC’s replacement of management personnel is the effect that those changes have on the safe operation and maintenance of the plant and the site’s safety culture. The NRC staff’s inclusion of the licensee’s statement in the Director’s Decision is nothing more than an acknowledgment that the management changes have taken place. The proposed Director’s Decision states explicitly that the NRC still has ongoing assessment activities to evaluate the licensee’s efforts to improve its safety culture as well as a Management and Human Performance inspection. Those assessments are the means by which the NRC will evaluate the effect of the management changes on the Davis-Besse safety culture.

## **2. NRC must hold FENOC accountable**

### **a. The NRC oversight process is inadequate**

#### Summary of Petitioner's comment

"The proposed [Director's Decision] argues that the NRC's current oversight procedures are sufficient to protect the health and safety of the public and outlines the procedure it uses to inspect Davis-Besse. The proposed decision states that the NRC performs independent inspections and reviews samples of work performed by [FENOC] staff. If the NRC finds discrepancies between its inspections and [FENOC] inspections, or finds problems in the samples of work that it reviews, it simply notifies [FENOC] of these problems. Then the NRC conducts follow-up reviews.... The NRC's rules and regulations specifically give it the power to modify, suspend, or revoke a license and to assess civil penalties. Nowhere in [the inspection process described] does the NRC even contemplate taking such steps.

#### NRC Staff's response

The comment refers to a paragraph in Section A.1 (page 7) of the proposed Director's Decision that discusses the NRC inspections under the NRC's enhanced oversight of Davis-Besse. That paragraph is intended to describe the methods by which the NRC (a) verifies that the licensee's inspection process is adequate and (b) gets the licensee to improve its inspection processes where deficiencies are identified. That paragraph is not intended to be a complete overview of the NRC's reactor oversight and enforcement processes. As is always the case, violations of NRC regulations or the plant's license requirements are subject to regulatory actions consistent with the NRC's enforcement policy. The paragraph in question has been revised to clarify that the NRC's inspection process at Davis-Besse will still provide input to the enforcement process if violations of NRC requirements are identified.

Additionally, although it is not explicitly stated in the paragraph in question, the Director's Decision as a whole clearly indicates that if the licensee fails to adequately address discrepancies identified by the NRC inspection process the NRC will not consider a restart of the facility.

### **b. FENOC inspections/corrective actions are inadequate or otherwise can not be trusted**

#### (1) Summary of Petitioner's comment

"The proposed director's decision refers often to the reviews and inspections that [FENOC] is conducting in the Davis-Besse plant and its reliance on [FENOC] to do a thorough and complete job of those inspections and repairs. The 2.206 petition and supplement has repeatedly questioned the trust that the NRC has placed in [FENOC] to review itself." In a footnote to this statement, the Petitioner then states: "Petitioner has not, however, requested that the NRC disallow credit for any work [FENOC] has already conducted. The repair work that [FENOC] has performed to date at Davis-Besse can form a foundation for the relicensing process. If there are gaps or deficiencies in this work, a relicensing procedure, rather than spot inspections, is the better regulatory vehicle to find and fix them." The petition and supplement also asked what safety

issues, other than those already discovered, “have been overlooked by [FENOC] during the years that [FENOC] admits to having a less than adequate safety focus.... The proposed director’s decision does not answer this question. It merely puts forth its procedures for limited independent inspections and spot-checking [FENOC’s] work.”

### NRC Staff’s Response

Even if the Davis-Besse operating license were to be revoked, the NRC’s inspections of the plant in a relicensing process would *still* use a sampling technique. Petitioner’s suggestion that the licensee can be given credit for any repair work done to date is a tacit acknowledgment that the current inspection and corrective action process as monitored by the NRC’s enhanced oversight is adequate for addressing concerns regarding the material condition of the plant, the licensee’s compliance with NRC requirements, and conformance to the Davis-Besse design and licensing bases. If the existing process were not adequate, the work done to date could not be given credit and would need to be redone.

Taken as a whole, the Director’s Decision explains that the licensee’s Return-to-Service Plan specifies the scope for the structures, systems, components, and programs that must be evaluated or inspected. Furthermore, the NRC’s restart checklist maintains open items regarding the adequacy of safety-significant structures, systems, and components and the adequacy of safety-significant programs. The open items must be satisfactorily addressed before the NRC will consider allowing plant restart. The licensee follows its inspection and corrective action processes to conduct the inspections, evaluations, tests, and corrective actions needed to ensure that safety-significant structures, systems, components, and programs are adequate and meet NRC requirements. The Petitioner raises issue with but tacitly acknowledges the adequacy of this process. Thus, the Director’s Decision does address the Petitioner’s question regarding “what else may have been overlooked” by explaining that, on top of the licensee’s corrective actions that address safety-significant equipment and programs throughout the plant, the NRC’s inspection and oversight activities are looking broadly at safety-significant structures, systems, components, and programs throughout the plant. Indeed, the example Petitioner cites regarding the recent identification of design flaws in the high-pressure injection pumps demonstrates that the NRC’s oversight of FENOC’s corrective actions is effective at ensuring that safety-significant issues are identified and addressed.

### (2) Summary of Petitioner’s comment

Petitioner offers his, “hypothetical economic analysis of [FENOC’s] financial incentives under the program the NRC describes in the proposed director’s decision” to do less than adequate work. The Petitioner asserts:

If employees of [FENOC] believed that it was more likely than not that the NRC would not find a problem during its spot inspections and reviews, it may make financial sense for [FENOC] to hide the problem from the NRC, or to never find it in the first place. If the NRC finds the problem, [FENOC] would only have to expend the same resources it would have had to expend if it had disclosed the problem to the NRC. According to the inspection policy the NRC has outlined here, [FENOC] will face no more consequence than a mere notification from the NRC of the deficiency so that [FENOC] can take action to improve its evaluation process. If the NRC does not find

the problem, then [FENOC] can save the time and money it would have had to expend to fix the problem. Under the current enforcement scheme, [FENOC's] financial incentive is to do the minimum to comply with the NRC's requirements, because it suffers no financial penalty if it is doing sub-par inspections or overlooking design and safety flaws.

#### NRC Staff's Response

As noted in the NRC staff's response to item 3.a(i) above, violations of NRC requirements are subject to regulatory actions consistent with the NRC's enforcement policy. This is always the case. Depending on their safety-significance, those enforcement actions can include monetary penalties. Thus, the suggestion that potential consequences for inadequate work are limited to "mere notification from the NRC of the deficiency so that [FENOC] can take action to improve its evaluation process" is not correct.

The tests and inspections that FENOC is performing in order to return the plant to service are covered by the FENOC Return-to-Service Plan and these are being closely monitored by the NRC's field inspection staff. Furthermore, NRC requirements with respect to tests and inspections that FENOC must perform on safety-significant structures, systems, and components are specified in the plant's technical specifications, its technical requirements manual, and 10 CFR Part 50. The NRC's regulations at 10 CFR 50.72 and 50.73 specify reporting requirements for safety-significant issues that are discovered. If, as Petitioner suggests, the licensee were "doing sub-par inspections or overlooking design and safety flaws," the licensee would not be meeting the NRC's minimum requirements. The "minimum" NRC requirements, discussed in Section A.3 of the Director's Decision, are conservatively established to provide reasonable assurance of adequate protection of public health and safety.

#### **c. Willingness to comply with NRC regulations**

##### Petitioner's comment

"The proposed Director's Decision places emphasis on the fact that Davis-Besse is different from other licensees who have had their licenses revoked in the past because the NRC has not observed that [FENOC] is unwilling to achieve compliance with NRC regulations. How can the NRC decide whether a licensee is unwilling to comply with its rule if [the NRC] will not enforce them?"

##### NRC Staff's response

The NRC staff does not agree with the Petitioner's assertion that the NRC is not enforcing its regulations. Petitioner recognizes that the Davis-Besse facility is shut down with a Confirmatory Action Letter in place and that the NRC is providing enhanced oversight at Davis-Besse through the NRC's Inspection Manual Chapter 0350 process. Petitioner also states his understanding that the plant will not return to service until the NRC approves a restart. However, Petitioner fails to acknowledge that, through this regulatory framework, the NRC is ensuring that its requirements are met.

The license requirements associated with the most significant equipment deficiencies identified require that the plant be shut down. Through the existing regulatory



framework the plant is being maintained shut down, which ensures that those license requirements are complied with, pending completion of the licensee's corrective actions. The NRC will not consider a restart of the Davis-Besse facility until the NRC is fully satisfied that FENOC is in compliance with NRC requirements, that there is reasonable assurance of adequate protection of the public health and safety, and that any restart issues associated with management of the facility and potential wrongdoing have been satisfactorily addressed.

With respect to Petitioner's desire to see FENOC held accountable, the Director's Decision states that the NRC's enforcement considerations for apparent violations are still ongoing and that these matters will be appropriately handled consistent with NRC policies for enforcement and for interfacing with the U.S. Department of Justice.

**d. The proposed Director's Decision misunderstands Petitioner's argument regarding shifting of burden**

Summary of Petitioner's comment

The proposed Director's Decision misunderstands the Petitioner's argument regarding shifting of burden. The Petitioner has laid out ample reasons for the NRC to revoke FENOC's license under NRC's rules and regulations. NRC should not trust FENOC to inspect itself. NRC should use the authority it has to revoke the Davis-Besse operating license. In pointing out that a license revocation would shift the burden of proof to FENOC, Petitioner was simply asserting the advantage of that path over the regulatory process that the NRC is using. "The petition never argues that shifting the burden is a reason unto itself for revoking an operating license."

NRC Staff's response

The statements that the NRC should not trust FENOC to inspect itself and that NRC should use its authority to revoke the Davis-Besse operating license are restatements of previous arguments. These issues have been addressed above and in the Director's Decision discussion of the NRC enforcement policy regarding when revocation of licenses may be appropriate.

With respect to the comment that the Director's Decision misunderstands Petitioner's argument regarding shifting of burden, the NRC staff understands the petitioner's argument and maintains that the Director's Decision accurately quotes and characterizes the argument made in the petition.

**e. The proposed Director's Decision does not address all events at Davis-Besse cumulatively**

(1) Petitioner's Comment

"The Petitioner is aware that the NRC reviews petitions for whether they have 'already been the subject of NRC staff review and evaluation either on that facility ... for which a resolution has been achieved, the issues have been resolved and the resolution is applicable to the facility in question.' This criteria is often reduced by the NRC to a

review for 'new information'.... Because no resolution has been achieved, petitioner meets the criteria outlined in the NRC handbook.”

#### NRC Staff's response

The review of a petition for “new information” is, in part, performed to ensure that any new information is properly captured and addressed within a formal NRC process such as an inspection or an allegation review, or is referred to the NRC Office of Investigations or the Inspector General if appropriate. The portion of the NRC Management Directive 8.11 cited by the Petitioner in this comment is guidance for determining whether or not a petition will be accepted for review under the NRC's 2.206 petition review process. It does not give the criteria for determining whether or not a petition, once accepted for review under 2.206, will be granted or denied. Since the petition was accepted for review under this process, the fact that Petitioner meets the criteria outlined in the management directive is not relevant.

#### (2) Summary of Petitioner's comment

The proposed Director's Decision used the shorthand criteria of “new information” to justify not directly addressing any of the factual information in the petition. The NRC has not sufficiently addressed, in a cumulative and complete fashion, all of the issues presented by FENOC in its behavior before, during, and after the discovery of the damaged reactor vessel head. The proposed Director's Decision addresses issues in a piecemeal and isolated fashion without taking into account the entire history of FENOC's behavior. The supplement to the petition raised concerns that the current oversight procedures will not adequately address latent problems and offered specific examples as support for why the current oversight procedures are not adequate and the Davis-Besse operating license should be revoked. The proposed Director's Decision looks at these issues in a vacuum, and concludes at the end its discussion of each isolated issue that the issue does not provide a sufficient basis to revoke the operating license. The issues are not meant to be addressed as isolated and individually sufficient reasons to revoke the operating license but to provide a narrative of a company that has not yet proven that it has corrected its misplaced priorities, and a company that has not yet been held accountable.

#### NRC Staff's Response

Because the supporting information in the main petition is largely from other publicly available NRC documents (or newspaper articles that used NRC documents as sources), treating the supporting information in the petition specifically would be redundant to NRC reviews of this information that already exist in the other NRC documents. Additionally, because the supporting information in the main petition is used by the Petitioner to advance general arguments for why the Davis-Besse operating license must be revoked, it is appropriate for the NRC staff's evaluation of the petition to evaluate and address the general arguments.

The NRC staff's treatment of the supplement to the petition differs from the way in which the main petition was addressed because the nature of the Petitioner's reasoning in the supplement is different from that of the main petition. Unlike the main petition, which uses the supporting information to advance general arguments for revocation, the

supplement to the petition raises specific concerns regarding the material condition of the plant and licensee performance that the Petitioner believes have not been, or are not being, adequately addressed. It is thus appropriate that the NRC staff response address these specific concerns on an individual basis. The NRC staff's evaluation of the petition supplement shows that several of the concerns raised are not valid or not relevant to the issue of revocation of the Davis-Besse operating license. Combination of an invalid or an irrelevant concern with any other concerns cannot cure invalidity or irrelevancy with respect to providing a basis for revocation of a license. Those concerns that are valid are already being addressed through the NRC's ongoing oversight and inspection activities, which provide input to the NRC enforcement process. Hence, as is explicitly stated in Section B.6 of the decision, the issues raised in the supplement do not individually, collectively, or in combination with the original petition concerns warrant revocation of the Davis-Besse operating license.

With regard to the staff evaluation of the main petition, the Petitioner faults the NRC staff evaluation of the general arguments on an individual basis rather than in the aggregate. If correct, any one of the Petitioner's general arguments in the main petition would provide a sufficient basis for revocation of the license without need of any support from other arguments. The Director's Decision explains the basis for the NRC staff's conclusions that the individual arguments do not provide a basis for revoking the Davis-Besse operating license. Combination of these arguments cannot provide a basis for revoking the Davis-Besse operating license

### (3) Summary of Petitioner's comment

Petitioner is concerned that the NRC is responding to issues at Davis-Besse regarding the damaged reactor vessel head, alleged willful violations, and continuing safety culture problems by being overly concerned with FENOC's financial well-being instead of acting in the best interests of the health and safety of the public.

#### NRC Staff's response

The Petitioner offers no evidence to support his assertion that the NRC is being overly concerned with FENOC's financial well-being.

The NRC's response to the discovery of the damaged reactor vessel head at Davis-Besse and the NRC's enhanced oversight process have not been based on considerations of the licensee's financial well-being. The NRC's oversight of Davis-Besse's corrective actions are being conducted in accordance with NRC Inspection Manual Chapter 0350, and is extensively documented in publicly available documents such as NRC inspection reports and transcripts of public meetings held by the NRC's Davis-Besse oversight panel. The NRC's oversight of FENOC's corrective actions at Davis-Besse has not even considered, let alone focused on, the licensee's financial well-being.

(4) Summary of Petitioner's comment

The NRC seems more concerned with requiring absolute proof before acting. There is more than adequate proof in publicly available documents that FENOC deliberately deceived the NRC, and yet the NRC refuses to act on the information and has not yet completed an investigation that would provide the proof the NRC states that it needs to act. There is also more than adequate proof that FENOC is showing an unwillingness or inability to comply with NRC requirements, but the NRC chooses not to define it as such.

NRC Staff's Response

As discussed in responses to previous comments, the NRC *has* acted by issuing a confirmatory action letter and instituting enhanced monitoring of Davis-Besse through the NRC's Inspection Manual Chapter 0350 process. Furthermore, the NRC continues to act through its ongoing enhanced oversight of the Davis-Besse facility. The Davis-Besse plant is shut down and will remain so until the NRC is fully satisfied that there is reasonable assurance of adequate protection of the public health and safety and that any restart issues associated with management of the facility and potential wrongdoing have been satisfactorily addressed. Additionally, as noted in the Director's Decision, other NRC enforcement considerations are still ongoing and will be conducted consistent with the NRC policies for enforcement and interface with the U.S. Department of Justice.

The NRC staff disagrees with the Petitioner's assertion that FENOC is showing an unwillingness or inability to comply with NRC requirements. The Director's Decision discusses the scope of the corrective actions being undertaken by the licensee. These are extensive and are structured to ensure that NRC requirements are met.

**C. Miscellaneous comment**

Summary of Petitioner's comment

Petitioner commented in a footnote that the proposed Director's Decision suggests that the Petitioner referenced an out-of-date version of the NRC enforcement policy. Petitioner states that, "May 13, 1998, was the last time the NRC printed a comprehensive revised version of its enforcement action rules."

NRC Staff's response

The last complete revision of the NRC's enforcement policy was issued as a NUREG series publication (NUREG-1600) on May 1, 2000. A current version of the policy may be obtained through the NRC's public Internet Web site at [www.nrc.gov](http://www.nrc.gov). Use the pull-down "What we do" menu and select the "Enforcement" menu item. Follow the link to the "Enforcement Policy."

## II Licensee's Comments

The licensee replied by letter dated July 7, 2003. The licensee's comments and the staff responses are summarized below.

### 1. Licensee's Comment

"Pursuant to your request, FENOC reviewed the proposed Decision and did not note any such errors or issues. In short, FENOC agrees with the Staff's findings and conclusions, as stated. The Petition presents no new facts or issues, and all cited issues are already known to the NRC and have been, or are being, considered in one or more of its inspections, investigations, or technical reviews. And as to those facts and issues, they are not grounds for the relief requested in the Petition."

#### NRC Staff's Response

No response required.

### 2. Summary of Licensee's Comment

The licensee took the opportunity to rebut comments contained in a letter dated June 6, 2003, submitted by an attorney representing a former FENOC employee. The June 6 letter from the attorney and the licensee's related rebuttal in its July 7 letter essentially continued the ongoing dispute between the two parties regarding the former FENOC employee's allegation of wrongful termination.

#### NRC Staff's Response

As discussed in the Director's Decision, the NRC 2.206 process is not the appropriate forum for addressing wrongful termination claims of a former employee. Therefore, the NRC staff will not respond here to the attorney's or the licensee's comments on this matter.

### III. Other Stakeholder's Comments

#### A. Attorney representing a former FENOC employee

A letter dated June 6, 2003, submitted by an attorney representing a former FENOC employee also provided comments. These comments and the NRC staff's responses are summarized below.

##### 1. Comment

"I submit to you that FENOC is an 'old school' Licensee whose approach to employee concerns, disputes and disagreements will continue the 'chilling effect' in existence at Davis Besse."

##### NRC Staff's response

As discussed in the Director's Decision, the ongoing NRC inspection efforts at Davis-Besse include activities to assess the effectiveness of FENOC's efforts to improve the safety conscious work environment at the plant. These activities are being conducted with the support of two outside industry experts. While issues related to the safety culture and safety conscious work environments must be satisfactorily addressed before the NRC will consider a plant restart, they does not provide a basis for revoking the plant operating license.

##### 2. Comment

"This letter also raises a concern about the [NRC Davis-Besse Oversight Panel's] potentially improper involvement in influencing FENOC's actions leading to [the former FENOC employee's] termination, and requests a review of this concern by the Office of the Inspector General as part of their ongoing review of the Davis-Besse matters."

##### NRC Staff's response

The NRC Office of the Inspector General has been provided a copy of this request for review and action as they deem appropriate.

##### 3. Comment

"While I agree with the Staff's statement that the NRC's 2.206 process is not an appropriate forum to address wrongful termination claims, it is the forum to [address] whether the Licensee has established a safety culture that supports plant restart."

##### NRC Staff's response

The petition (and its supplement) and the NRC's staff's response contained in the Director's Decision pertain to the question of whether FENOC's operating license for the Davis-Besse facility should be revoked. The NRC staff's evaluation related to this petition is not an assessment of whether FENOC has satisfied any or all of the issues that must be satisfactorily addressed before the NRC will consider a restart of the facility. The question of whether FENOC has adequately improved the safety culture at Davis-Besse to support plant restart will be addressed under the NRC's ongoing enhanced oversight process.

4. Summary of comment

“... in your evaluation of the 2.206 request it is crucial for you to consider the entire performance history of the licensee. That history does not start with the issuance of IB 2001-01, as has been assumed in the Staff’s consideration of this event, but must be evaluated against the entire history of this Licensee’s performance.” To support this position, the commentor provided information related to NRC inspections and performance assessments for Davis-Besse from the 1983–1985 timeframe as well as information related to a June 1985, total-loss-of-feedwater event at Davis-Besse.

NRC Staff’s Response

The NRC’s current regulatory approach for enhanced oversight of Davis-Besse and enforcement of NRC requirements is consistent with NRC policies for oversight and enforcement and is also consistent with the NRC’s regulatory approach for other licensees that have displayed similar performance deficiencies. The pertinent issue is the readiness of the current organization to operate and maintain the plant in conformance with NRC requirements. Past findings or problems have been addressed, or are being addressed, through the extensive corrective actions that the licensee is currently undertaking to identify and address issues concerning the material condition of the plant, compliance with NRC requirements, conformance to the Davis-Besse design and licensing bases, and human performance and safety culture improvements at Davis-Besse. While serious violations did occur at the Davis-Besse facility, the violations in and of themselves do not warrant revocation of the license. The Davis-Besse facility is currently shut down, and will remain so until the NRC is fully satisfied that there is reasonable assurance of adequate protection of the public health and safety and that any restart issues associated with management of the facility and potential wrongdoing have been satisfactorily addressed. In its oversight of the licensee’s corrective actions for the apparent violations, the NRC has not observed an inability or unwillingness on the part of FENOC to achieve compliance with NRC regulations, the Davis-Besse operating license, or the Davis-Besse design and licensing bases.

5. Comment

“The company has chosen its ‘new’ management approach to deal with those who raise concerns or challenges - attack, humiliate, defame, and try to destroy. The impact of that management decision and the behaviors being exhibited by the company are very serious to the restart of Davis-Besse.”

NRC Staff’s Response

See responses to Comments III.A.1 and III.A.3 above.

B. Ulrich Witte

Comments were also received from a concerned citizen, Mr. Ulrich Witte, in a letter dated July 6, 2003. Mr. Witte sought to support the Petitioner's arguments for revocation of the Davis-Besse operating license.

The commentor asserts that FENOC has a long history of improper maintenance and unsafe operation of Davis-Besse and suggests that the answers to "three fundamental questions" support a conclusion that the Davis-Besse operating license should be revoked. These are summarized and addressed below:

1. Summary of comment

Had a loss-of-coolant accident actually occurred due to the damaged reactor vessel head, together with the all of the safety equipment found to be inoperable, the consequences would have been loss of life, contamination of considerable land area, and severe harm to the nuclear industry. The commentor stated that the following system or equipment deficiencies would have contributed to the consequences of the accident:

- a. The loss of reactor vessel integrity
- b. The lack of operability of the emergency sumps
- c. The lack of operability of the high pressure injection system, caused by (1) clogging of emergency sumps, (2) debris deposited in the pumps and a second design deficiency causing lack of pump cooling due under low flow conditions associated with high pressure oscillations of the reactor coolant.
- d. The lack of operability of containment spray system, required to mitigate the LOCA due to emergency sump clogging.
- e. The lack of operability of the recirculation pumps required to mitigate the LOCA due to emergency sump clogging.
- f. The lack of operability of three of four reactor coolant pumps - due to seal leakage of primary coolant.
- g. The lack of operability of low pressure injection system
- h. Leaking and cracked Control Rod Drive Mechanism nozzles - The plant operated for many years, instead of the six hours permitted by the plant's Technical Specifications.
- i. Service water system inoperable due to an 8-inch service water relief valve incorrectly set for years leading to loss of cooling water needed for emergency systems.
- j. Containment Air Coolers, and subsequently CAC Service Water Tree damaged, and bellows assembly damaged.
- k. Vital service water system was determined to be inoperable due to air-operated valves design deficiencies.



### NRC Staff's response

The NRC staff reviewed the plant deficiencies listed by the commentor. Several of the listed deficiencies, such as "lack of operability of emergency sumps," "lack of operability of containment spray system ... due to emergency sump clogging," "lack of operability of the recirculation pumps ... due to emergency sump clogging," and "lack of operability of low pressure injection system," are actually the same issue. Additionally, the asserted inoperability of the reactor coolant pumps due to gasket leakage is not a valid issue, and the final two issues listed by the commentor did not exist while the plant was operating (these issues arose, and were corrected, during the current plant extended outage). Nevertheless, the NRC staff recognizes that there was an accumulation of equipment deficiencies that could have resulted in increased severity of consequences if a loss-of-coolant accident had occurred.

However, there is no need to revoke the Davis-Besse operating license in order to address these issues and ensure adequate protection of the public health and safety. That is because the Davis-Besse facility is currently shut down and FENOC has extensive corrective actions ongoing to address the noted deficiencies. Furthermore, the NRC Davis-Besse Oversight Panel's Restart Checklist still has open items regarding the adequacy of safety-significant structures, systems, and components and adequacy of safety-significant programs. These must be satisfactorily addressed before the NRC will consider allowing plant restart.

### 2. Summary of comment

The commentor posed his second "fundamental question: Are we confident that the licensee will abide by regulatory rules and comply [with] all licensing conditions?" The commentor then opines that recent licensee performance demonstrates that the licensee will not comply with NRC requirements and cites an attempt by the licensee to credit non-safety-related pumps for a safety related function and a recent comment made by a FENOC senior official as pertinent examples.

### NRC Staff's response

See response to Comment # 3 below.

### 3. Summary of comment

The commentor posed his third "fundamental question: Are we confident that the licensee will safely operate, inspect, and maintain the plant in the future?" The commentor then opines that, "the answer to this is partly centered with whether the public and the NRC believe that the FENOC management team is now accountable and accepts responsibility for its actions." The commentor suggests that FENOC's April 11, 2003, response to the petition supplement demonstrates that the licensee management is not accountable, does not accept responsibility, and the letter will have a chilling effect on the willingness of FENOC employees to raise safety concerns.

### NRC Staff's response

For all practical purposes, the commentor's second and third "fundamental questions" are the same issue. NRC regulatory requirements, including the license requirements, are conservatively established such that safety is presumptively assured by compliance with the

NRC requirements. Although commentor phrases this issue somewhat differently, it duplicates the Petitioner's concern raised in the petition and repeated in the Petitioner's comments on the proposed Director's Decision. The Director's Decision explains that the NRC's enhanced oversight of the Davis-Besse facility is structured to assess the "fundamental questions" posed by the commentor. The NRC will not consider a restart of the facility until the NRC is satisfied that there is reasonable assurance of adequate protection of the public health and safety and that restart issues associated with management of the facility have been adequately addressed.

To the extent that there are aspects of safety, such as safety-conscious work environment issues, that are not covered by NRC regulation, the commentor's concern duplicates concerns voiced by the Petitioner in the petition, the petition supplement, and comments on the proposed Director's Decision. The NRC's response to the safety culture and safety-conscious work environment aspects of the licensee's performance is discussed in detail in the Director's Decision and in the previous section addressing the Petitioner's comments.

#### 4. Comment

"It is inconceivable that the Director of [the NRC Office of Nuclear Reactor Regulation] could reject a 2.206 petition from a U.S. Congressman, partially based on [the April 11, 2003,] letter from the President of [FENOC] to the NRC allegedly containing inaccurate, misleading, and possibly false information. These allegations have been provided to the NRC and acknowledged in a letter dated June 17, 2003. ... Until these allegations are fully investigated, any rejection of this petition would be inappropriate."

#### NRC Staff's response

The NRC staff did not simply take information offered by the licensee in its responses to the Petitioner's submittals at face value. That information was independently evaluated and, hence, the quality of the information presented by the licensee did not affect the conclusions reached by the NRC staff in the Director's Decision.

In this comment, the commentor is assuming that the portions of FENOC's response that the NRC staff partially relied on for its review of the petition are the same portions of FENOC's response that have been called in to question in the allegations that the commentor refers to. The portions of the FENOC letter that were called in to question dealt with a dispute over facts surrounding the termination of an employee, and with FENOC's discussion of the plant's leak detection capabilities—specifically, the sensitivities of the containment radiation monitors.

The Director's Decision explicitly states that the 2.206 petition process is not an appropriate forum to resolve wrongful termination disputes and, therefore, the NRC staff did not address those issues in the Director's Decision. Hence, the Director's Decision is not affected by the quality of statements made by FENOC regarding the ongoing dispute between FENOC and the former employee.

For the second area of concern, regarding the sensitivities of the containment radiation monitors and Davis-Besse's leak detection capability, the NRC staff reviewed the allegation and determined that the Director's Decision was not affected by the quality of FENOC's statements about the Davis-Besse leak detection systems. The Director's Decision explains in detail the basis for the NRC staff's conclusion on this issue. That discussion clearly indicates that the staff's conclusion does not hinge on the abilities of the radiation monitors.

5. Summary of comment

The commentator opines that the status quo in the nuclear industry is “short term thinking with the belief that toleration of violating regulatory requirements and rules would yield short term fiscal gains.” He then goes on to suggest that complacency by the NRC and the NRC’s adoption of risk-based regulation have contributed to an industry-wide malaise with respect to safety.

NRC Staff’s response

The 2.206 petition submitted by Congressman Kucinich requested that a specific enforcement action be taken against one specific licensee for a specific set of apparent violations and alleged wrongdoing. An asserted need for improvements in the NRC oversight of the nuclear industry, or a single licensee, is not a basis for revoking a facility operating license since the existence of a flawless NRC oversight program is not a prerequisite for a licensee to be granted or to retain a facility operating license.