



Nuclear Information and Resource Service

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**Comments of Nuclear Information and Resource Service on
the United States Nuclear Regulatory Commission Davis-Besse Vessel Head
Degradation Lessons Learned Task Force Final Report**

Mr. Hackett and members of the task force:

Nuclear Information and Resource Service (NIRS) is providing the following comments on the U.S. Nuclear Regulatory Commission (NRC) Final Report of the Davis-Besse Vessel Head Degradation Lessons Learned Task Force dated September 30, 2002.

The Lack of Effective NRC Oversight and Enforcement at Davis-Besse Has Significantly Undermined Public Confidence and Trust in the Agency's Current Regulatory Decision Making Process

FirstEnergy not only ate a hole in the reactor vessel head at Davis-Besse, lack of effective NRC oversight and the agency's adherence to its regulatory responsibility ate a hole in the nation's reactor safety net and public confidence in the agency.

NRC is solely responsible for the oversight of public health and safety issues arising from the operation of nuclear power plants. While FirstEnergy and other nuclear power companies serve two masters, public safety and electricity service, the NRC is congressionally mandated to be solely responsible for the assurance of safe operation of the nuclear power station.

The Davis-Besse event provides the public with no confidence that the NRC is adequately performing its duties as a reactor safety regulator and an enforcement agency.

The NRC Regulatory Oversight Process has misguided the public concerned enough about Davis-Besse safety conditions to consult the agency's website.

Over a period of years, NRC wrongly assumed that Davis-Besse was reasonably doing its job with no significance safety risks. In fact, NRC inaccurately assessed the competence of FirstEnergy management to safely maintain and accurately report the material condition of the Davis-Besse nuclear power station.

While NRC represented to the public that Davis-Besse was in a “no findings” or “low safety significance” mode of operation in fact the agency had failed to identify severe and unprecedented degradation of FirstEnergy’s safety management culture, corrective action programs, maintenance performance and material condition of primary safety systems, structures and components.

NRC basically allowed FirstEnergy to place production ahead of public and worker safety.

In fact, FirstEnergy was operating Davis-Besse in violation of its technical specifications and Code of Federal Regulation. In fact, FirstEnergy management falsely reported the material condition of Davis-Besse to the agency over a period of years without enforcement consequence.

With more than nine months now elapsing since the discovery of the unprecedented damage, the NRC has yet to assign a safety significance rating of the vessel head damage under the agency’s Significance Determination Process.

Why should the public have any confidence in further NRC safety performance findings at Davis-Besse or any other nuclear power plant in the United States?

Why should the public believe the Reactor Oversight Process is nothing more than a protracted series of arbitrary and unenforceable negotiations between NRC and its licensees to keep up reactor production regardless of safety significance?

NRC Has Significantly Undermined Its Own Staff’s Confidence in the Current Regulatory Decision-Making Process

NRC’s failure to integrate known information into safety assessments of Davis-Besse and uphold its regulatory requirements has significantly undermined the integrity of the regulatory process and the confidence of its staff in the agency’s decision-making process.

One public revelation of this loss in agency confidence was demonstrated after the release of the task force Final Report. On October 30, 2002, Dr. George E. Apostolakis of the Massachusetts Institute of Technology and Chair of the U.S.N.R.C. Advisory Committee on Reactor Safeguards, provided comments in a presentation on “Uncertainties in Regulatory Judgments” to the NRC Nuclear Safety Research Conference in Washington, DC. Dr. Apostolakis characterized the NRC handling of the Davis-Besse as, “Recent events have shaken our confidence in our assumptions.” He raised numerous questions to the Davis-Besse issue including “Is this a ‘random’

occurrence?" And in conclusion he stated "What is the appropriate consideration of uncertainties in regulatory decisions? At this time, I don't know."

The Task Force Final Report Did Not Fully Address and Fulfill Its Charter

The Task Force Failed To Interview Appropriate External Stakeholders for all Germane Issues Related to the Lack of NRC Oversight and Enforcement Actions at Davis-Besse.

The NRC Task Force held one public meeting at NRC Headquarters in Rockville, Maryland on June 19, 2002 to review the task force's charter and its scope. The public meeting was publicized to have a telephone bridge to link public stakeholders into the meeting. The phone bridge was inoperable.

Despite of the significant loss of public confidence and trust in the NRC ability to effectively oversee reactor safety and enforce its regulations, the task force did not seek comment from appropriate public stakeholders in its lessons learned review. While task force stated that it held discussions with a number of external organizations, two principle public stakeholder organizations, NIRS and The Union of Concerned Scientists (UCS), were never contacted by a task force representative to identify and discuss any issues arising out of the agency's failures at Davis-Besse.

Failure to contact and interview these stakeholders constitutes a lesson ignored by the agency for the following reasons:

NIRS is responsible for the public release of NRC internal documents illuminating the agency's malpractice through the filing of Freedom of Information Act Requests 2002-0226, 2002-0229, and 20002-0345.

Based on NRC internal documents obtained through these FOIAs, NIRS and UCS authored a detailed white paper and a supplement identifying NRC mismanagement of the waiver to agency inspection and reporting requirements as outlined in Bulletin 2001-01. For example, internal documents revealed that NRC staff knew that there was a "highly likelihood" that Davis-Besse was leaking in violation of its technical specifications and regulatory requirements for zero tolerance of leakage of the reactor's primary pressure boundary as early as November 11, 2001. These same documents indicate that FirstEnergy's Vice President of Operations agreed with staff's risk assessment.

NIRS and UCS have been widely quoted on the subject of NRC oversight and the provision of a waiver to FirstEnergy's Davis-Besse nuclear power stations from the reporting requirements of Bulletin 2001-01. Statements made by NIRS and UCS repeatedly appeared in the Cleveland Plain Dealer, The Toledo Blade, The Akron Beacon Journal, Ohio Public Radio and the industry trade journal Inside NRC.

If the task force were truly interested in seeking out relevant all relevant issues related to NRC oversight, it stands to reason that the agency should have sought out the germane comments and analysis of all its recognized critics.

The Task Force Final Report Did Not Provide A Complete Review of All Significant Regulatory Issues

The Abandonment of Regulatory Guide 1.174

The task force was chartered to review all germane regulatory issues related to the Davis-Besse degradation. However, the task force Final Report fails to address how the agency justified abandoning its own analysis technique to improve safety decision-making under Regulatory Guide 1.174 "An Approach for Using Probabilistic Risk Assessment In Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis." This regulatory guide provides the guidance on the use of Probabilistic Risk Assessments (PRA) findings and risk insights for licensee requests for changes to the licensing basis. It provides the staff and the licensee with clearly established governing safety policies and procedures through a set of five principles.

- 1) The proposed change meets the current regulations.
- 2) The proposed change is consistent with the defense in depth philosophy.
- 3) The proposed change maintains sufficient safety margins.
- 4) When proposed changes result in an increase in core damage frequency or risk, the increases should be small and consistent with the intent of the Commission's Safety Goal Policy Statement.
- 5) The impact of the proposed change should be monitored using performance measurement strategies.

Regulatory Guide 1.174 was initially used by NRC staff to evaluate the safety risks associated with FirstEnergy's request for a deferral from reporting requirements in NRC Bulletin 2001-01 establishing December 31, 2001 as the deadline for inspection of vessel head nozzle penetrations. The acceptability of proposed changes was to be evaluated by the licensee in an integrated fashion that ensures that all principles are met.

Using the five principles of the regulatory guide, NRC staff concluded:

- 1) It is likely that, if inspections were performed, current regulations are not met with respect to technical specifications, requirements and the General Design Criteria in the Code of Federal Regulation
- 2) It is likely that one of three barriers is degraded.
- 3) It is likely that safety margins are reduced.
- 4) Operation in this condition could result in Delta Core Damage Frequency and Incremental Core Damage Probability values that are above the normally accepted guidelines of Regulatory Guide 1.174 and Regulatory Guide 1.182.
- 5) The risk measurement will not occur until the inspection is performed.

The staff concluded that Davis-Besse was not safe to operate beyond December 31, 2001. This was the basis for staff to draft an Order in September, 2001 requiring a December

31, 2001 shutdown of Davis-Besse for an inspection of the CRDM nozzles in the vessel head. These same findings were also part of the November 30, 2001 Staff Review of FirstEnergy's Bulletin 2001-01 Response for Davis-Besse.

NRC Staff Internal Communications Expressed No Confidence in FirstEnergy's "New Information" Used to Justify Reasonable Assurance That the Reactor Was Safe To Operate Until February 16, 2001

NRC senior managers have repeatedly stated, most recently at the November 13, 2002 IMC 0350 Panel Meeting in Oak Harbor, Ohio, that FirstEnergy provided NRC with "new information" at an agency meeting on November 28, 2001, that gave NRC the safety assurance for its final decision to allow FirstEnergy the waiver to operate until February 16, 2002. The agency accepted three compensatory actions from FirstEnergy that it states significantly reduced the risk that core damage would result if a Control Rod Drive Mechanism nozzle cracked triggering a Loss of Coolant Accident. Those criteria were: 1) deferral of On-line Maintenance on High and Low Pressure Injection systems, 2) reduction of Hot Leg Temperature and, 3) assigning a dedicated operator for Initiation of Low Pressure Recirculation.

A review of this "new information" as expressed in an email from NRC staffer Allen Hiser dated November 26, 2001 concluded that the reduction of the reactor head temperature would not significantly reduce the safety risks associated with crack growth rates predicated during the allotted time frame. The "dedicated operator" was not an additional operator at all, but a non-licensed operator assigned with other duties and out on rounds to be used as "another set of eyes". "I can't imagine this would result in a significant increase in safety" NRC staffer Garth Perry told Steven Long in an internal email dated December 13, 2001.

Despite numerous examples of no confidence expressed by NRC staff in FirstEnergy's "new information" the Order was abandoned and the waiver was approved. The task force Final Report did not address these inconsistencies between NRC management and staff regarding the veracity and adequacy of FirstEnergy's compensatory actions.

The Task Force Fails To Address the Agency's Avoidance of Regulatory Management Changes and the Omission of Future Agency Oversight as Necessary Lessons To Be Learned

In an appendix to the Lessons Learned Task Force report, the NRC staff identified three prior task force efforts: South Texas Project in 1995, Millstone in 1997, and Indian Point 2 in 2000. In those three cases and in the current case at Davis-Besse, there were numerous utility management changes made to accelerate the pace of corrective actions. These management changes contrast sharply with the very limited, if any, management changes within NRC due to these cases. If corporate management changes are an integral, essential part of the overall reforms at troubled nuclear power plants, what basis does the task force have for believing, and the public have for accepting, the notion that NO management changes are warranted as part of the regulators' reforms?

The 0350 Panel chaired by Jack Grobe is the process intended by the NRC to ensure that all necessary reforms have been implemented by FirstEnergy at Davis-Besse before the reactor restarts. Given the fact that the Lessons Learned Task Force made dozens of recommendations for regulatory reforms, what process will be used by the Congress and/or the NRC to ensure that all applicable reforms have been implemented prior to the restart of Davis-Besse? In other words, what assurance do the people living around the plant have that if safety margins are once again compromised at Davis-Besse, the NRC will not repeat its dismal oversight performance?

Without providing recommendations for a vehicle to assess and demonstrate agency compliance with proposed regulatory reforms, the task force has failed to address how public confidence and trust will legitimately be restored in the agency's regulatory decision-making process on the proposed Davis-Besse restart and future safety issues at nuclear power stations.

The Task Force Report Does Not Address NRC's Role in Placing Production of Electricity At Davis-Besse Over of Public Safety Requirements

In its Management and Human Performance Root Cause Analysis FirstEnergy admitted that it placed production ahead of public safety. However, internal documents obtained through FOIA illuminate a NRC management bias to protect the economic interests of FirstEnergy's over emerging public safety issues.

As stated earlier, NRC staff and senior managers were aware of a "high likelihood" that Davis-Besse's primary pressure boundary was leaking in violation of its technical specifications and Code of Federal Regulation. Davis-Besse's Updated Final Safety Analysis Report requires that the plant begin shutdown within six hours of a determination of leakage to the primary pressure boundary.

In an email from NRC manager Brian Sheron dated November 15, 2001, to the Commission, Dr. Sheron states "As Larry Chandler and Sam [Collins] also said, we could have made an argument for immediate shutdown, but we are exercising discretion in allowing them to go to December 31st, but not beyond."

In an email from NRC manager John Zwolinski dated November 16, 2001, in comments regarding the Order to shutdown Davis-Besse on December 31, 2001, Mr Zwolinski stated: "I said we can justify today to shut these plants down however we are exercising discretion noting it would clearly be punitive to immediately shut a plant down and they sit there for a month waiting to obtain the correct inspection equipment etc..."

The public continues to be alarmed by NRC's bias towards these economic considerations of its licenses over public safety regulations.

As recent as November 5, 2002 an editorial appearing in Central Ohio newspapers expressed concerns to their readership over this NRC bias and lack of resolve to uphold the letter of its safety laws. The editorials read "To think that the NRC would have

considered allowing Davis-Besse to continue operating with such significant damage to the reactor head is scary. This is what Sheron should have said: 'If we knew then what we know now, we would have ordered the immediate shutdown of the plant and not waited until Dec. 31.' Anything else is an abrogation of the NRC's duty to protect the public. The agency is on the hot seat right now, and rightly so. Statements like this can only reinforce the notion that the NRC cares more about the health of the nuclear industry than the safety of the public."

These public concerns go unaddressed in the task force Final Report.

Conclusion

The task force report has done little to repair the hole in the agency's reactor safety net and in public trust. For the above stated reasons, NIRS contends that the Final Report of the Davis-Besse Vessel Head Degradation Lessons Learned Task Force is significantly deficient.

In order to restore any public confidence issues relating to inadequate regulatory oversight and enforcement must be addressed before allowing the Davis-Besse nuclear power station to restart.

Given FirstEnergy's failure to heed safety requirements of its operation license over a period of years combined with providing materially false statements and documents to the regulator, all of this should lead to a proceeding to revoke FirstEnergy's license to operate Davis-Besse not its restart.

The Nuclear Regulatory Commission's lack of willingness to enforce its own safety regulations in light of these blatant and serious violations is in fact an abrogation of the agency's mandate to protect public health and safety. In fact, the NRC proceeding to restart DB raises just concern that it is a continuation of this same policy of regulatory mismanagement and malpractice. NRC should learn a lesson from the dissolution of its predecessor, the Atomic Energy Commission, rather than continue to violate its charter by shielding and promoting the nuclear power over the public's health and safety.

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