

AUG 27 1985

MEMORANDUM FOR:	Chairman Palladino Commissioner Roberts Commissioner Asselstine Commissioner Bernthal Commissioner Zech	Distribution NRC PDR ✓ AEOD CF AEOD SF EDO RF W. Dircks J. Heltemes E. Rossi J. Roe T. Rehm
FROM:	William J. Dircks Executive Director for Operations	
SUBJECT:	NRC DAVIS-BESSE TEAM COMMENTS ON EVENT FACT-FINDING METHODOLOGY	

Enclosed for your information are comments from Ernie Rossi, leader of the NRC Team for the Davis-Besse event. Dr. Rossi's comments are on the process and methodology and will serve to improve the instructions to the next NRC Team and will be factored into the development of the formal procedures for the Incident Investigation Program (IIP).

These comments are believed to be consistent with the concept and principles for the IIP as discussed in my June 10, 1985 paper to you (SECY-85-208). For the most part, they represent suggestions regarding the details of implementation.

In order to thoroughly understand all of the lessons from the investigation of the June 9 event as they apply to future investigations, I have asked that other NRC organizations involved also be solicited as to their views on the strengths and weaknesses of the procedures used at Davis-Besse. This inquiry is also enclosed for your information.

(Signed) William J. Dircks

William J. Dircks
Executive Director for Operations

Enclosures:
As Stated

cc w/enclosures:
SECY
OGC
OPE
ACRS

+AEOD:D
CJHeltemes:gt
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 20 1985

MEMORANDUM FOR: William J. Dircks
Executive Director for Operations

FROM: Charles E. Rossi
Leader of the NRC Team on
the Davis-Besse Event

SUBJECT: NRC DAVIS-BESSE TEAM COMMENTS ON EVENT FACT FINDING
METHODOLOGY

The team for the Davis-Besse event of June 9, 1985 was the first incident investigation under the staff-proposed Incident Investigation Program. This memorandum provides comments on the fact finding methodology for consideration in developing procedures for future team efforts.

The most important aspect of team fact finding efforts is that of collecting the information systematically with the development of a record of the team activities. In this regard, two techniques used by the team were particularly important and should be used for at least the more significant events by future teams. These are:

1. Formal interviews and meetings with transcribed records prepared by stenographers.
2. Quarantining of equipment that malfunctioned during the event with troubleshooting performed in accordance with guidelines similar to those in Appendix B of the team's report (NUREG-1154).

The use of stenographers for all interviews and meetings, in the team's judgment, improved the quality of information obtained and minimized the probability of later misunderstandings concerning information provided to the team. It also ensured a permanent record of information essential to a proper understanding of what happened and how equipment and personnel performed.

The troubleshooting guidelines ensured that the licensee would review and document pertinent past history with each piece of equipment that malfunctioned. Furthermore, the guidelines required analysis of the operation of the equipment during the event and the development of failure hypotheses before beginning any troubleshooting on the equipment. The preparation of an individual "action plan" for each piece of equipment that malfunctioned, as done during the Davis-Besse fact finding effort, ensured good documentation of information on the equipment which malfunctioned and, thus, provided permanent records on this aspect of the team efforts. The team further believes that tests to duplicate malfunctions and tests to demonstrate the effectiveness of corrective actions are critical in verifying root-causes. Documentation of the results of these activities is considered to be a good practice.


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The most significant problem experienced by the team was defining (and limiting) the scope of the fact finding efforts. For future teams, the scope of effort should be specifically limited to the event, the equipment which malfunctioned during the event, the operator performance related to the event, and the underlying cause or causes of the event. Plant design or licensee problems not related to the event should not be within the team's scope but; rather, should be handled by the responsible normal NRC organizations - the Region, NRR, IE, etc. Where troubleshooting efforts to determine root-causes of equipment malfunctions are going to extend over a time period of more than approximately two weeks, the team's scope should include only a review of the licensee's troubleshooting plans and root-cause hypotheses. The followup of licensee work to perform the troubleshooting and ultimately to identify the root-causes should be handled by the normal responsible NRC organizations. For events such as Davis-Besse, the goal should be to complete a report on a time scale of one to two months. The procedures to be prepared for future team efforts should clearly address these points.

Administrative support for the team's efforts was adequate. However, an administrative assistant or project manager assigned full-time to the team would have been valuable. Work space available for future teams should include a relatively separate work place for each team member with a telephone. Difficulty in promptly obtaining additional travel advance money when it became evident that the initial site visit would be longer than originally planned was a significant problem for two members of the team.

Enclosure 1 contains a suggested list of topics which should be covered by procedures for incident investigation teams. Where appropriate, comments have been provided. Enclosure 2 contains a list of items provided by Jim Lieberman and Steve Burns of OELD which should be considered when procedures for future teams are developed.

I would like to note that Region III personnel were very cooperative throughout the team effort. They participated in meetings with the team and licensee, kept the team informed of their activities, and provided the team with clerical support.


Charles E. Rossi
Leader of the NRC Team on
the Davis-Besse Event

Enclosures: As stated

cc: H. Denton, NRR
J. Taylor, IE
C. Heltemes, Jr., AEOD
Regional Administrators

Topics Which Should Be Covered by Procedures
For Incident Investigation Teams

1. Guidelines for determining those events which warrant dispatching a team.
2. Selection of team members.

In general, team members should have a broad understanding of reactor safety and reactor transient behavior. The procedure for selection of team members should, however, address the need for expertise in areas such as human factors and specific equipment hardware design. The advantages of including a member on the team having direct reactor operating experience as a licensed operator should be considered.

3. Scope of investigation.
4. Handling of quarantined equipment.
5. Handling of transcripts.

The procedures should include provisions for overnight transcript preparation and cover access, review and release of transcripts. The procedures developed for the transcripts related to the Davis-Besse event (see Enclosure 2) appeared to work well and should be considered for use by future teams.

6. Team interface with normal NRC organizational elements.

Information feedback from the team to the normal NRC organizational elements should be from the Team Leader to one single point of contact within headquarters senior management and one single point of contact within the Region. The Region contact should be an individual selected by the Region who is available at the site for liaison with the team.

A preliminary sequence of events should be developed and made available to other NRC organizational elements within the first week of team effort.

7. Report Format.

The level of detail to be included in the report should be defined.

8. Collection and listing of pertinent documentation.

The need for working copies of documents for team members as well as the maintenance of a record copy should be addressed.

9. Responsibilities of Team Leader.

10. Administrative Matters.

The need for an experienced administrative assistant assigned full-time to the team should be addressed. Secretarial, public affairs, legal, and editorial support should be addressed.

11. Provisions for rapidly obtaining contract technical assistance support.

Analysis support as well as on-site equipment expertise should be addressed.

12. Training.

Team members need training on interviewing techniques and evaluating information obtained from interviews.

13. Information Release Regarding an Event.

The source of factual information related directly to an event should be the team. Presentations that are not made by the team on the specifics of an event should be limited to only that information provided by the team. Such information should include the sequence of events and periodic progress reports on the team's efforts.

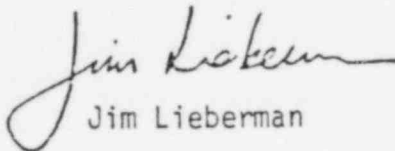
July 25, 1985

Note to Ernie Rossi, IE:

LESSONS LEARNED FROM DAVIS-BESSE INVESTIGATION

As I mentioned yesterday, Steve Burns and I have discussed lessons learned from Steve's involvement with your team. I have enclosed a note to files that we have prepared on this issue which may be of assistance to you.

Please call me if I can provide any further assistance.


Jim Lieberman

Enclosure: as stated

cc: J. Heltemes

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July 25, 1985

Note to files

DAVIS-BESSE INCIDENT INVESTIGATION - "LESSONS LEARNED"

The following list is meant to highlight some of the legal procedural, and administrative problems that occurred during the NRC Fact Finding Team's inquiry into the June 1985 Davis-Besse loss-of-feedwater transient. These issues do not necessarily reflect matters that actually arose during the Team's efforts from my vantage point, but represent issues that arose or I saw as potentially arising during similar task force efforts. Some of the issues may require the establishment of specific policy guidance and implementing procedures; others may require training of Team members; others may just need to be planned for to support the Team's efforts:

1. Transcription of interviews and meetings

- whether to take transcripts (the D-B Team found it useful)
- availability of transcripts to interviewees, licensee, and the public (note attached procedure developed for the D-B effort)
- handling of transcript corrections
- turnaround time from reporting service for transcripts (whether to order overnight vs. 2-day service)
- should individuals be permitted to tape record interviews or meetings?

2. Attendance of third parties at interviews

- what policy should be followed? Is the new OI policy a good starting point?
- what steps should be taken to deal with a multiple representation issue (i.e., company counsel who also purports to represent individual operators)?
- what steps should be taken to dissuade individuals from having company counsel or company management accompany them in an interview?
- what should be established "on the record" about the presence of third parties at an interview?
- the representational relation between the third party and the interviewee should be established

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3. Collection of documents

- procedures for tracking and "logging in" data and documents should be established
- instructions should be developed to assist Team members in identifying documents "on the record" during the transcribed interviews and including them as "exhibits" to the interview
- guidance should be developed on sharing documentation with the licensee (i.e., whether to follow the policy guidance on draft inspection reports or whether to permit sharing of working documents so long as they are preserved.)

4. Powers of the IIT

- should the IIT be given subpoena power, power to administer oaths and affirmations, confirmatory action letters, or orders and, if so, should form documents be prepared in advance?
- a freeze on plant equipment and documentation should be established as well as the rules for its relaxation
- if the Team does not have such powers, what standing arrangements should be made to ensure the prompt availability of compulsory process such as identified above?

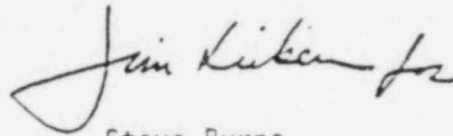
5. Interface with other NRC organizations

- arrangements for dealing with press inquiries need to be made; the responsibility shifted in D-B from the Region to headquarters
- interface with headquarters program offices need to be established - a single point of contact would appear preferable
- interface with regional inspectors efforts needs to be established as well as the guidelines as to the extent to which the Team will share information with the Region or rely on the Region for its development
- provisions need to be made for additional technical and administrative assistance for the Team. The job of assimilating information and reaching conclusions about its significance may be too much for the four Team members to accomplish by themselves in a week or two. Administrative support was provided to D-B through the Region; and administrative assistant to handle clerical and administrative matters would be useful.

- what legal support should be provided on-site? Until Team members feel comfortable with handling the formal interview process, the procedural and legal ramifications concerning the handling of the interviews, and the like, legal support at the site may be useful.
- arrangements to inform OI and obtain OI support should be established.

6. Interface With the Licensee and Other Industry Organizations

- a main point of contact with the Licensee should be established for arranging meeting times and obtaining documents, etc.
- contacts with vendor representatives and INPO


Steve Burns

Attachment: Review and Availability
of Transcripts

REVIEW AND AVAILABILITY OF TRANSCRIPTS

The NRC Fact Finding Team has had interviews and meetings transcribed to assist the Team in conducting its review of the June 9, 1985, transient at the Davis-Besse Nuclear Power Station. The Team intends to make transcripts of interviews and meetings available for review under the following guidelines:

1. A copy of the transcript will be made available initially for review only to individuals who have been interviewed. Individuals may read only their transcript, make notes, and consult with others while reviewing the transcript. However, they may not make copies of the transcript and will not be permitted to keep the transcript until a later time.
2. Individuals may make corrections or suggest clarifications to their answers which will be attached to the official transcript. Corrections or clarifications should be made on the correction sheets that will be provided rather than on the transcript itself. If anyone wishes to speak further with the Fact Finding Team, the Team will be available to conduct further interviews. Further interviews will also be transcribed.
3. The Fact Finding Team intends to give each individual interviewed a copy of the transcript of his interview for his personal retention and use after the conclusion of all the interviews and after each individual has had an opportunity to correct his transcript.
4. At the same time that those interviewed are provided a copy of their transcripts, the Team intends to make the transcript available to the public and steps will be taken to transmit the transcripts to the NRC's Public Document Rooms.
5. Transcripts of meetings between the Fact Finding Team and Toledo Edison Company will be available to NRC personnel (including Region III) and Toledo Edison Company personnel for review. Toledo Edison Company may suggest corrections or clarifications, if appropriate, which will be included with the official transcript. Corrections or clarifications should be made on the correction sheets that will be provided rather than on the transcript itself.
6. Copies of the meeting transcripts will be released to Toledo Edison Company for its retention after the Team has substantially concluded its efforts at the site. The transcripts will be made available to the public unless the licensee has made a request for protection of proprietary information in the transcripts in accordance with NRC regulations.

DIRECTIONS FOR MAKING CORRECTIONS

If you have any corrections that you wish to make on your transcript, please do so on the following page in the following fashion:

Indicate the page of the correction, the line number, and then the change to be made and the reason for making the change. Date and sign all correction pages that correspond with your transcript.

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

August 22, 1985

MEMORANDUM FOR: Harold R. Denton, Director, NRR
James M. Taylor, Director, IE
Robert B. Minogue, Director, RES
John G. Davis, Director, NMSS
Regional Administrators

FROM: C. J. Heltemes, Jr., Director
Office for Analysis and Evaluation
of Operational Data

SUBJECT: LESSONS FROM THE DAVIS-BESSE INVESTIGATION EFFORT

The purpose of this memo is to solicit your views and suggestions on how the Incident Investigation Program (IIP), as used for the Davis-Besse event, can be improved for future Team efforts. In this regard, the leader of the NRC Team on the Davis-Besse event, Ernie Rossi, recently identified to the EDO a number of comments for consideration in developing procedures for future Team efforts (see enclosure). These comments also include a number of comments and considerations by Steve Burns, the ELD advisor to the Team.

The NRC Davis-Besse Team served a valuable function in helping to structure and define the investigative process, approach and methodology. Thus, I request your comments on whether the next Team should:

1. Have basically the same scope and charter, and the resulting report be similar in terms of schedule, coverage, and depth.
2. Follow the same basic practices of: (a) interviewing key personnel; (b) developing a detailed sequence of events; and (c) analyzing and evaluating what happened to identify root cause hypotheses.
3. Develop a record of the Team's activities through transcribed interviews and meetings and by use of cameras and recorders. The control and correction of transcripts could follow the same procedures.

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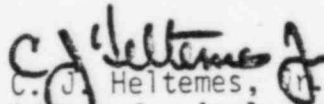
4. Agree on the quarantine equipment that malfunctioned during the event and monitor licensee activities on troubleshooting this equipment using similar guidelines to those developed for the Davis-Besse event.
5. Disband following completion of the report and pertinent briefings. Follow-on actions would be defined in a similar manner used for Davis-Besse, and implementation would be by the normal responsible NRC organizations using standard procedures.

Other actions which you may want to consider in addition to those noted by Ernie Rossi include such items as:

1. Improving the information flow by asking the NRC Team to issue a daily PN and by holding periodic conference calls.
2. Providing an individual trained in human factors to each Team in addition to individuals skilled in operations, systems, and components.
3. Increasing the number of court reporters to two in order to allow parallel interviews and to complete this phase more quickly. The sequence of events could then be issued more quickly.

Your comments and suggestions on the strengths and weaknesses of the process for fact-finding, as used at Davis-Besse, will be factored into the instructions and procedures for the next Team.

Please let me know if I can provide any additional information or assistance.


C. J. Heltemes, Jr., Director
Office for Analysis and Evaluation
of Operational Data

Enclosure:
As Stated