

196

RELATED CORRESPONDENCE

RECEIVED

UCS 9/28/84

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

UCS-1 111

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of )  
METROPOLITAN EDISON COMPANY )  
(Three Mile Island Nuclear )  
Station, Unit No. 1) )

Docket No. 50-289 SP  
(Restart-Management Remand)

UNION OF CONCERNED SCIENTISTS' RESPONSE TO  
LICENSEE'S SECOND SET OF INTERROGATORIES TO UCS

U-29. In view of UCS' response to Licensee's Interrogatory U-4, please identify or provide UCS' definition or understand [sic] of the following standards:

- (1) the skills and knowledge that are necessary to operate the plant under accident or unusual conditions;

The skills and knowledge include those enumerated in 10 CFR 55.21, 55.22 and Appendix A to 10 CFR 55.

In addition, UCS believes that the operators should understand not only the mechanics of the plant design and procedures, but should also understand the implications of the design and understand why the procedures call for certain actions to be taken in certain situations. For example, operators should know not only what conditions constitute the HPI throttling criteria, but also why those conditions have been established.

8410020713 840928  
PDR ADOCK 05000289  
G PDR

DS03

U-29 (2) tests that are adequate to accurately evaluate whether the operators possess the necessary skills and knowledge;

Firstly, the scope of the examinations should be consistent with the scope of the skills, knowledge and abilities needed by the operators.

Secondly, in order to demonstrate that concepts have been learned and understood rather than simply rote words and phrases, the exams should include essay-type questions. If matching-type questions are used, the list of terms and answers should not be so unrelated that even a layman could guess the answer. UCS does not believe that multiple choice questions are an effective way to measure understanding. Thirdly, the tests should be at a level of difficulty commensurate with the skills and knowledge needed by the operators.

U-29 (3) when memorization constitutes too great a role in the training and testing programs;

Memorization plays too great a role in the training and testing programs when it is used in training and testing to a degree that is out of proportion or unrelated to the actual skills, knowledge and abilities needed by the operators. For example, an analysis of the skills, knowledge and abilities needed for the job of mail sorter would probably show that ability to memorize is very important. The test for job applicants would, in that case, stress the ability to memorize. For the job of nuclear plant operator, other skills, knowledge and abilities are paramount. (See 10 CFR Part 55 and Appendix A and the response to U-29 (1).

In UCS's view, over-reliance on memorization in the training and testing of operators obscures whether the knowledge has been learned and concepts understood because the ability to retain key words or phrases over the short-term is not a reliable indicator of understanding or knowledge.

U-29 (4) the specific "plant procedures and design" about with which UCS is concerned that the licensed operator training and tests conform;

See letter from Deborah B. Bauser to Ellyn R. Weiss, September 24, 1984, p.1.

U-29 (5) what constitutes a proper test review for difficulty and validity;

UCS believes that validity includes (a) the correlation between the tests and the skills, knowledge and abilities needed by the operators and (b) the correlation between test results and on-the-job performance. In other words, one measure of the validity of a test is the degree to which "good" operators do well and less satisfactory operators do less well. Also, a test is valid to the extent that it measures the skills, knowledge and abilities needed by an operator. "Difficulty" is used in its common-sense understanding.

UCS believes that the validity and difficulty of an examination can be assessed not only by comparing its scope and depth to the pre-determined necessary skills, knowledge and abilities and comparing test results to on-the-job performance, but also by assessing the results on a question by question basis. For example, if persons who did well in the test overall consistently gave the wrong answer to a particular question, and persons who did poorly overall gave the correct answer to that question, that would indicate that the question has poor "validity," probably because it is misleading or inaccurate. Similarly, if a large number of examinees get a particular question either right or wrong, that would indicate that the question is either too easy or too difficult. Such "validity" and "difficulty" analyses also provide insight into the effectiveness of the training program and instructors.

U-29 (6) the "appropriate attitude" in the training and operations staff;

The "appropriate attitude" encompasses integrity, accountability and thorough respect for the requirements of safety. In addition, instructors should be well-prepared and completely familiar with the substantive material, should disseminate full and complete information, should promptly find the answer to any question they cannot answer, should stress the importance of safe operation as opposed to just passing an examination, and should generally be the most intelligent and qualified operators in the organization.

U-29 (7) what constitutes "proper implementation of the licensed operator training program;

Implementation refers to whether the program is actually being delivered in a manner consistent with written objectives and procedures. It encompasses items 1-6 of the response to U-4.

U-29 (8) what constitutes adequate first-hand knowledge and observation by the Reconstituted OARP Review Committee; and

First-hand knowledge and observation are adequate when they provide the opinion-giver with sufficient personal factual basis to reliably form the opinions being offered. This includes knowledge of both the positive and negative information relevant to the question being addressed by the opinion-giver. Whether first-hand knowledge and observation are in fact sufficient in any particular case is not subject to mathematical calculation but is a matter for argument and judgment.

UCS's second and third sets of interrogatories to GPU go through the Special Report in detail, seeking the basis in personal knowledge and observation for a variety of statements made and opinions expressed therein. Those are the areas where UCS currently questions the basis for the statement and opinions.

U-29 (9) when instructors are "qualified and effective."

Instructors are qualified and effective when they are in command of the substantive material being taught, when they have demonstrated superior knowledge and/or experience, when they effectively impart that substantive material to trainees, when they instill an attitude of personal integrity and accountability and respect for safety requirements as opposed to just test-taking skills, and when they are respected by the trainees for their superior knowledge, experience and attitude.

U-30. For each item (1) through (9) identified in response to Interrogatory U-29, provide the basis on which UCS' identification, definition, or understanding is based, including but not limited to (a) the individuals on which opinions the answers are based; (b) all documents relied upon; (c) any criteria that form the basis for UCS, answers.

No specific documents or materials are relied upon other than 10 CFR Part 55 and those previously cited in UCS's response to question U-5. These answers have been prepared by Ellyn R. Weiss and Robert D. Pollard.

U-31. Identify all of the specific changes in plant procedures to which UCS refers generally in its answer (subpart 4) to Licensee's Interrogatory U-5.

U-32. For each change identified in response to Interrogatory U-31, identify all of the documents on which you rely in determining that it constitutes a procedural change.

See letter from Deborah B. Bauser to Ellyn R. Weiss, September 24, 1984, p. 1.

U-33. Identify the specific page or pages of the "Speaker Report" on which UCS relies in its answer to Licensee's Interrogatory U-5, subpart 6.

UCS relies on the Report as a totality, not on specific pages. UCS's views on the "Speaker Report" are spelled out in length in "Union of Concerned



Scientists Comments on "Investigation of W and O Incident," July 21, 1983. A copy was previously served on GPU.

U-34. Identify the specific factors which constitute the "combination" to which UCS refers in its answer to Licensee's Interrogatory U-5, subpart 7.

This question is identical with one raised in Licensee's "Motion to Compel Discovery on Licensee's First Set of Interrogatories and First Request for Production of Documents to UCS," September 14, 1984, p.4. It was discussed between counsel and has been withdrawn.

U-35. Identify the specific "exams as described on the evidentiary record" to which UCS refers in its answer to Licensee's Interrogatory U-19.

The Licensee's "exams as described on the evidentiary record" referred to in the answer to U-19 includes the "Kelly examination" including Category T described at 15 NRC 1014, weekly examinations or quizzes used for candidates who had failed the Category T portion of the Kelly examination (Id.), the make-up Category T examinations described at 15 NRC 1017 and the fourth make-up for Category T given on November 2 and 6, 1981, described at 15 NRC 1019.

U-36. Explain the basis for your statement, in response to Licensee Interrogatory U-28, that "UCS questions whether the qualifications of the committee members are adequate to permit them as a committee to reach many of the conclusions contained in Chapter V."

UCS compared the brief descriptions of the members of the Committee against the conclusions offered in Chapter V of The Special Report. We noted in particular that no member of the Committee appears from these descriptions to have personal knowledge of the particular design of TMI-1, of the TMI-1

operating and emergency procedures or of the demands placed upon the operators during accidents or unusual situations. Furthermore with the possible exception of Dr. Uhrig, none appears from the descriptions to have general knowledge of reactor design and operation.

U-37. Identify all of the specific qualifications that you believe are lacking among the Reconstituted OARP Committee members.

On the basis of our current knowledge, the qualifications lacking are those listed in the answer to U-36.

U-38. Identify all of the statements or conclusions in Chapter V which form the basis for UCS' questioning of the qualifications of the Reconstituted OARP Committee members.

On the basis of our current knowledge, UCS questions whether the qualifications of the Committee are adequate to enable them to reliably reach conclusions 1, 2, 3, 4, and 10.

U-39. Identify by name and/or title all individuals in GPUNC that UCS believes the Reconstituted OARP Committee members should contact in order to assess the adequacy of the current licensed operator training program.

UCS believes that, at a minimum, a reasonable sampling of RO's, SRO's and trainees should be questioned through written questionnaires with their confidentiality protected, eliciting their views on the substance and quality of instruction in the training program, such as whether it incorporates actual plant occurrences, whether it is current, and the effect on training of the repeated changes in plant design and procedures which have occurred.

In addition, some independent person or persons with the appropriate qualifications should conduct a "mini-oral exam" of a sampling of operators and senior operators to test their knowledge and understanding.

Similarly, the instructors should be questioned concerning such topics as a) how they determine the scope of lesson plans, b) how LERs and other plant occurrences are factored into training, c) how they determine areas needing special emphasis, d) their knowledge of the substantive subjects in question, e) how they decide what questions to put on exams, and f) the methods used to determine the validity and difficulty of exam questions.

U-40. With respect to each individual identified in response to Interrogatory U-39, explain why, in UCS' view, it is necessary that the committee contact the individual.

UCS believes that this is necessary to provide the Committee with important first hand knowledge of the effectiveness and implementation of the training and testing program.

The Committee has thus far apparently sought the views of or interviewed only persons whose own job performance or judgment would be called into question if those persons were to seriously criticize the training program, i.e., managers and members of the training department. If one were attempting to perform an independent and unbiased assessment of the implementation of the training program and its relationship to the skills needed by operators, one would hardly confine one's inquiry to discussions with those responsible for its design and implementation.

U-41. Identify all expert consultants on whom UCS has or will rely in preparing a case on cross-examination of Licensee's witnesses.

U-42. For each individual identified in Interrogatory U-41 above, identify the specific subject area or areas of expertise of the individual on which UCS is relying.

Objection. According to the rules of discovery, a party may obtain identification of those expert witnesses to testify at trial, the subject matter of their testimony, the substance of the facts and opinions to which



they will testify and a summary of the grounds for each opinion. Beyond that, a party may discover facts or opinions held by experts specially retained in preparation for trial but not be called as witnesses only upon a showing of exceptional circumstances. Federal Rules of Civil Procedure, Rule 26(b)(4). This rule also protects against disclosure of identity of non-witness experts. Ager v. Jane C. Stormont Hospital, 622 F.2d 49 (C.A. Kan. 1980). In addition, there is no discovery against experts informally consulted in preparation for trial but not retained or specially employed for that purpose. Notes of Advisory Committee on Rules, 28 U.S.C.A., Rules 24-33, 1972, p. 161.

GPU has made no showing of exceptional circumstances and is not entitled to the information sought.

- U-43. Identify all persons UCS intends to call as a witness on the remanded issue of training, including individuals UCS may seek to subpoena. For each person identified above, identify the following:
- (a) the nature or substance of his testimony;
  - (b) his qualification, access to information, or other reason that he is being asked to testify as to the information identified in response to subpart (a) above;
  - (c) his position or relationship to UCS at any time, including but not limited to any contracts, consulting arrangements, advisory positions or other relationships with UCS he has held or holds currently;
  - (d) all technical documents he has reviewed or will review to prepare his testimony;
  - (e) all persons (aside from counsel) whom he has consulted or will consult to prepare his testimony;
  - (f) the nature and substance of any discussions, conversations, communications, and other contacts he has had or will have with the persons identified in response to subpart (e) above;
  - (g) all documents he intends to rely on or use in support of any opinions, evaluations, conclusions, or recommendations he makes in his testimony;
  - (h) the current location and custodian of all documents identified in response to subparts (d) and (g) above.

UCS does not yet know who it will call as witnesses but will supplement its response as soon as possible. At this point, we expect to subpoena some licensed operators and senior operators. We have not yet identified who.

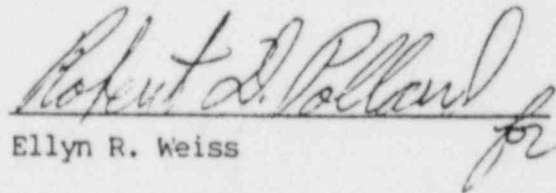
U-44. Identify and produce all documents which UCS intends to introduce in the hearing or through prefiled testimony on the remanded issue of training.

UCS does not yet know what documents it intends to introduce through prefiled testimony but will supplement its response as soon as possible, if this information is known prior to filing of the direct testimony.

UCS objects to the interrogatory insofar as it request all documents we may seek to introduce during cross-examination. The request intrudes upon the work-product "zone of privacy" afforded an attorney within which to think, plan, weigh facts and evidence, evaluate the case and prepare legal theories. Coastal States Gas Corp. v. D.O.E., 617 F.2d 854 (D.C. Cir. 1980); in re Grand Jury Investigation, 599 F.2d 1224 (C.A. Pa. 1979). Disclosure of such material would divulge the thought-processes and theories of counsel.

Futhermore, UCS does not know what documents it will seek to introduce through cross-examination until it sees the direct testimony of the Staff and GPU.

Respectfully submitted,

  
Ellyn R. Weiss

HARMON, WEISS & JORDAN  
2001 S Street, N.W.  
Suite 430  
Washington, D.C. 20009  
(202) 328-3500

Counsel for UCS

Dated: September 28, 1984