

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 50-352/92-26
50-353/92-26

Docket Nos. 50-352
50-353

License Nos. NPR-39
NPR-85

Licensee: Philadelphia Electric Company
Correspondence Control Desk
P.O. Box 195
Wayne, PA 19087-0195

Facility Name: Limerick Nuclear Generating Station, Units 1 and 2

Inspection At: Limerick, Pennsylvania

Inspection Conducted: September 18, 22 and 29, 1992

Inspector: RL Nimitz 10/6/92
R. L. Nimitz, CHP, Senior Radiation Specialist date
W. Pasciak for SS 10-6-92
S. Sherbini, Ph.D., Senior Radiation Specialist date
Approved by: W. Pasciak 10-6-92
W. Pasciak, Chief, Facilities Radiation Protection date
Section

Areas Inspected: This inspection was a special, reactive inspection of work activities on July 7-9, 1992, that resulted in an unplanned radiation exposure to several individuals. The event involved external exposure of individuals working in the Unit-1 drywell, with the reactor at a low power level, to a concentrated beam of radiation emanating from a penetration in the biological shield.

Results : The inspector identified that unplanned radiation exposure to several individuals occurred due to their (unknowing) entry into a concentrated beam of radiation. Two apparent violations were identified. The violations, discussed in Section 3 of the report, involved failure to perform a radiation survey adequate to identify a beam of radiation emanating from the reactor biological shield and failure to adequately instruct workers to minimize exposure to comply with 10 CFR 20.201 and 10 CFR 19.12, respectively. The apparent violations resulted in a substantial potential for exposure in excess of regulatory requirements.

DETAILS

1.0 Individuals Contacted

J. Doering, Plant Manager^{1,2}
G. Roach, Superintendent, Plant Services^{1,2}
J. Phillabaum, Licensing Engineer^{1,2}
J. Fongheiser, Senior Health Physicist²
T. Mscisz, Assistant Senior Health Physicist
M. Gallager, Assistant Operations Engineer
K. Kemper, Planning and Scheduling Supervisor
R. Tomlinson, Supervisor Training Section
R. Massengill, Senior Health Physics Instructor

1.2 NRC Personnel

T. Kenney, Senior Resident Inspector
L. Scholl, NRC Resident Inspector, Limerick Station

The inspectors also contacted other licensee individuals during the course of this inspection (See Attachment I.)

¹ Denotes those individuals attending the exit meeting on September 22, 1992.

² Denotes those individuals attending the exit meeting on September 29, 1992.

2.0 Purpose and Scope of Inspection

This inspection was a special, reactive radiological controls inspection to review the circumstances, licensee evaluations, and corrective actions associated with work activities on July 7-9, 1992, that resulted in an unplanned radiation exposure of several individuals.

The exposures occurred when several individuals, involved in troubleshooting and repair of valve HV-041-1F084 (main steam line sample flow isolation valve) located on the 296 foot elevation of the drywell, unknowingly entered a concentrated beam of radiation emanating from a penetration (reactor water level instrumentation penetration X16- D) located in the drywell at azimuth 280 degrees. The radiation beam exhibited radiation levels of from about 3 R/hr gamma at the extremity of the work area to about 150 R/hr gamma and greater than 5 rem/hr neutron at the point the beam exited the penetration in the biological shield. Radiation dose rates attributable to the beam in the work area ranged from about 3 R/hr to about 25 R/hr, as compared to a maximum general area radiation dose rate of 1 R/hr gamma and 500 millirem/hr neutron. Figure 1 identifies the location of the penetration, the approximate path of the beam, and the work location on the 296' elevation of the Unit 1 drywell.

During the course of this inspection, the inspector reviewed applicable documentation, including radiation surveys, training records and radiation work permits. The inspector also discussed the circumstances with cognizant personnel, including radiological controls technicians, who accompanied various work groups that entered the drywell. The inspector also discussed the work activities with various members of work crews that entered the drywell to troubleshoot and repair the valve and performed limited time and motion studies to identify potential maximum personnel exposures.

The inspector also reviewed the licensee's Independent Safety Engineering Group's (ISEG) September 2, 1992, report of the unplanned exposure. The ISEG review was requested by the licensee's radiological controls group and was a root cause analysis of the unplanned exposure. The review identified a number of weaknesses including a significant potential for excessive unplanned personnel exposure and weaknesses in communications.

Because the exposure location was inaccessible to the inspector due to the reactor operating at full power, the inspector observed the approximate work area locations using a digital optical tour program (C-View) maintained by the licensee. The program depicted drywell locations in Unit 2, which were indicated by the licensee to be comparable with Unit 1.

3.0 Description of Event and NRC Inspector Findings

General Description of Event and NRC Inspector Findings

During start-up of Unit 1 on July 7, 1992, following the fourth refueling outage, at about 6:47 a.m., a main steam line sample flow isolation valve (HV-041-1F084) failed to operate properly from the control room. Operations group personnel felt that troubleshooting was needed to ascertain the apparent problem with the valve. An action request was generated to troubleshoot the valve. The request was generated because it was at first believed that the valve needed to be repaired since it was an in-board primary containment isolation valve. The valve is located on the 303' elevation of the drywell (@ azimuth 280 degrees). The electrical junction box for the valve is located on the 296' elevation at about the same azimuth directly across the drywell from the reactor water level instrument line penetration (X16-D) in the biological shield. (See Figure 1.)

The troubleshooting and repair efforts for this valve resulted in six separate work crews entering and working in the drywell with the reactor operating at low power (maximum of about 10 % reactor power). Personnel wore standard protective clothing during the entries. No respiratory protective equipment was worn since there was no significant airborne radioactivity.

Following the decision on July 7, 1992, to troubleshoot the valve, an existing radiation work permit (RWP No. 92-07018, Revision 6), used for inspection of systems in the Unit 1 drywell, was revised (to Revision 7) to provide for the planned work activity. Revision 6 of the RWP provided for inspections, by personnel in the drywell, with reactor primary system pressure at 500 pounds per square inch (psi) and 1000 psi. The inspections, according to the licensee, are routinely performed following start-up from a refueling outage. The radiation surveys associated with these earlier drywell entries were used to brief personnel during the entries to troubleshoot and repair the valve.

The inspector noted that radiation survey data, obtained during shield surveys in 1985, showed radiation levels on contact with the penetration (X16-D) of about 18 R/hr gamma and greater than 5 rem/hr neutron. Radiation levels at 3 feet from the penetration were 1 R/hr gamma and 500 mR/hr neutron. This specific survey, made at 3% reactor power, was not discussed with members of any of the work crews that entered the area. However, work crews were provided instructions to stay away from penetrations because of possible radiation streaming from the penetrations.

Each of the six entries, including licensee planning and preparation for each entry, is described below with NRC Inspector Findings following the description of the licensee's activities.

3.1 Entry 1

The initial entry was made on the 303' elevation by a system engineer and a maintenance worker, accompanied by a radiological controls technician, on July 7, 1992, between about 11:50 a.m. and 12:50 p.m. The individuals worked in the area for about 30 minutes (based on neutron dose equivalent calculation work sheets). Maximum whole-body exposure received was about 115 millirem (40 millirem gamma and 75 millirem neutron). Preparation for the entry included ALARA briefings, signing of the radiation work permit by each member of the work crew, and discussion of expected radiological conditions. The work crew identified that the valve power leads apparently were shorted.

NRC Inspector Findings (Entry 1)

The inspector's review of documentation and interviews of personnel indicated that the work crew, during this entry, had a good understanding of expected general area radiological conditions in the area of the valve on the 303' elevation. Further, it was noted that the work location was above active fuel levels, and no penetrations were present which could result in direct gamma radiation shine from the reactor. Operations personnel indicated an entry was necessary to ascertain the problem with the valve prior to deciding what action would be taken for the problem.

3.2 Entry 2

A meeting was held on July 8, 1992, that included the Power Ascension Director, radiological controls personnel, maintenance and operations personnel. At this meeting, a decision was made to initiate corrective maintenance. Also on July 8, 1992, a system engineer was assigned to evaluate if the valve could be left in an "as-is" condition. Dynamic testing of other valves was on-going in the lower elevations of the drywell with the reactor at low power.

Planning was initiated to enter the drywell and repair the valve. The planning included review of previous survey information obtained during recent inspections at reactor primary pressure of 500 psi and 1000 psi a few days before, and discussions regarding the concerns associated with potential high exposure rates near biological shield penetrations. The licensee's radiological controls personnel also contacted other boiling water reactor radiological controls organizations to determine expected radiation fields at various reactor power levels.

The licensee had no prior experience doing repair work in the drywell at power. This was also the first time that the licensee had conducted the dynamic testing (VOTES testing) in the drywell at power.

The radiation work permit for the work activity required that work be performed in accordance with the ALARA pre-job evaluation. Regarding radiological controls periodic surveillance of personnel working in the area, the surveillance frequency was, according to the permit, the maximum allowable stay time. That is, once a work area was surveyed, the maximum stay time in that work area was to be calculated, based on radiation dose rates in the area, and this result (stay time) was to be entered on the RWP and used as the surveillance frequency (i.e., the period the workers could stay in the area before a radiological controls technician was required to return and resurvey the work area). In addition, the most recent survey data was to be reviewed prior to entering the area in order for personnel to become familiar with work area dose rates.

The ALARA pre-job evaluations for Revision 6 of RWP No. 92-07018 were used for the entry. The pre-job evaluations indicated that personnel should maximize their distance from all vessel penetrations during power entries. Radiation surveys associated with these previous entries, performed at about 5%, 6%, and 7% power, were used for work area dose rate familiarization. These were general area surveys and did not identify the presence of the beam or streaming around penetrations. Personnel signed the radiation work permit and ALARA briefing sheets.

A survey performed by a radiation protection technician who escorted a work crew on July 7, 1992, (the survey was included with the ALARA pre-job package) showed general area radiation levels on the 296' elevation of 300-2500 millirem/hr gamma and 200-1500 millirem/hr neutron.

The second entry occurred on July 8, 1992, between 5:15 p.m. and 5:40 p.m. The work party consisted of two maintenance personnel and a radiological controls individual who escorted the workers. Maximum time in the area was about 30 minutes (based on neutron dose equivalent calculation sheets). Maximum exposure for any one individual was about 130 millirem (30 millirem gamma and 100 millirem neutron).

NRC Inspector Findings Entry 2

The inspector's discussion with one of the maintenance workers indicated work activities principally centered around work on the 303' elevation. Personnel appeared to have been provided an adequate description of radiological conditions (similar to Entry 1). Because of the unavailability of other personnel who had made the entry, the inspector was unable to confirm whether or not personnel entered onto the 296' elevation.

The following observations were made:

- Plant staff later determined that repair of the valve was not necessary because the sample point associated with the valve does not support a license-required function, was apparently seldom used, and could remain closed (isolated) for the entire cycle. This conclusion was apparently reached on about July 9, 1992, but maintenance activities on the valve had already commenced and personnel associated with the repair efforts were not made aware of the conclusion.
- This entry (Entry 2) was not discussed and not evaluated in the licensee's internal investigation of this event. The reason for the failure to evaluate this entry was not determined by the inspector as the inspection focused on the entries rather than the licensee's internal investigation.

3.3 Entry 3

The third entry was made into the drywell on July 8, 1992, between 9:10 p.m. and 10:00 p.m. The four person work crew consisted of two maintenance personnel, a quality verification (QV) individual and a senior radiological controls technician. All four individuals wore high and low range dosimeters and an integrating alarming dosimeter. The senior radiological controls technician performed radiation surveys of the areas on the 303' elevation entered by the work crew prior to them entering. No such surveys were performed on the 296' elevation.

Because of uncertainties regarding the level of neutron dose rates that would be encountered, the licensee's radiological controls personnel conservatively set the alarm on the alarming, integrating dosimeters at 60 millirem. This requirement was included in the radiation work permit.

The work crew initially focused their attention on the 303' elevation of the drywell at the location of the valve. The troubleshooting identified apparent electrical shorting problems necessitating replacement of control lines from the valve electrical junction box, located on elevation 296' (azimuth 280 degrees) in the drywell (directly under the valve), to the valve at elevation 303'.

Two of the workers, the QV individual and a maintenance individual, climbed down pipes and structural members from the 303' elevation to the 296' elevation to remove the cable. The QV individual apparently passed (unknowingly) through the beam of radiation at least twice. The cable was removed and taken to a maintenance shop outside the drywell.

Because of heat stress concerns, the work group spent a short period of time in the drywell and exited. Neutron dose equivalent calculation sheets for these individuals indicated a maximum time in the drywell of about 30 minutes. Maximum whole-body radiation doses received by any one individual were about 85 millirem gamma and 100 millirem neutron, exclusive of the beam.

NRC Inspector Findings (Entry 3)

The licensee provided adequate control of radiological work on the 303' elevation, similar to Entries 1 and 2. However, the following matter was identified:

- The inspector's discussion with a member of the work crew indicated that the work crew had discussed the scope of the work and that there was a clear understanding of planned work activities among the work crew personnel. The workers' understanding was that activities were to include work on the 303' elevation and the 296' elevation. However, it appears that radiation controls personnel believed that work was only to take place on the 303' elevation. It appears that there were weaknesses in communications between the two groups of individuals, as discussed below.

To support the work for Entry 3, the radiological controls technician surveyed the planned work areas at the 303' elevation, informed the workers of dose rates, exited the drywell, and placed a stay time on the radiation work permit based on radiation dose rates measured on the 303' elevation. The RWP was annotated by the radiological controls technician to read as follows:

" Max allowable stay time is 1 hr based on 50 mR/hr [gamma] and 200 mRem/hr [neutron]"

Note: The NRC Inspector added [gamma] and [neutron] above to clarify the units.

However, based on interviews conducted by the inspector, unknown to the radiological controls technician covering the job (he had left the drywell after escorting the crew in), two of the three workers (a QV inspector and a maintenance worker) climbed down various pipes and structural members from the 303' elevation to the 296' elevation to remove the cable from the junction box, and worked directly in the path of the subsequently identified radiation beam.

In addition, radiological conditions at the 296' elevation were significantly different than those at the 303' elevation, in that general area gamma radiation fields (exclusive of the radiation beam) ranged from 200 to 800 mR/hr and neutron radiation fields were about 500 millirem/hr, resulting in a total whole body exposure dose rate at the 296' elevation of 1300 millirem/hr as compared to a total dose rate of 300 millirem/hr at the 303' elevation work area (50 millirem/hr gamma and 250 millirem/hr neutron).

The inspector's discussion with the QV individual who climbed down from the 303' elevation to the 296' elevation revealed that he was not told that he was not permitted to enter the 296' elevation and that he was not informed of any difference in radiation fields in the work location on the 296' elevation. However, the worker believed that it was clear to personnel involved with the work, including the radiological controls technician, that an entry to the 296' elevation would be made.

The inspector noted that 10 CFR 19.12 specifies that workers are to be instructed in the precautions or procedures to minimize exposure and they are to be kept informed as to the presence of radiation. The inspector noted that, due to apparent communications weaknesses, the workers appear not to have been told to remain in the area on the 303' elevation and contact radiological controls personnel prior to moving to other locations. This guidance was to ensure that the workers were provided appropriate information regarding the presence of radiation in their new work area. As a result, the workers entered and worked in general area radiation fields at least 6 times that which were present at their original work location. The inspector indicated that this was an apparent violation of 10 CFR 19.12 and the RWP, which required that a radiological controls technician escort workers into the drywell work areas. (50-352/92-26-01)

The inspector noted that, as of September 28, 1992, the licensee's radiation protection management was unaware that the two individuals had improperly entered the 296' elevation during Entry 3.

The licensee had not performed a detailed dose assessment for the two individuals that entered the 296' elevation. Inspector discussions with the QV individual indicated he had not been contacted regarding a dose assessment to determine his exact locations relative to the location of the radiation beam. This was considered a significant weakness in the licensee's dose assessment.

3.4 Entry 4

On July 9, 1992, between about 7:15 a.m. and 7:55 a.m., a fourth work crew entered the drywell to restore the valve control cable. The crew consisted of two maintenance electricians, a quality verification individual and a senior radiological controls technician. One maintenance electrician went to work at the valve location on the 303' elevation, the second maintenance electrician worked at the junction box on the 296' elevation and the radiological controls technician and quality verification individual apparently stood on either side of the beam (unknown to them) on the catwalk near the low pressure core injection (LPCI) piping (see Figure 1). Beam intensity in the area where the radiological controls technician and QV individual stood was later found to be about 25 R/hr. Both the QV individual and the maintenance electrician working at the junction box unknowingly passed through the beam. However, discussions with the radiological controls individual after the location of the beam was identified indicated that no individual worked or stood for a significant time directly in the beam.

Neutron dose equivalent calculation sheets for these individuals indicated a maximum stay time of about 40 minutes. The maximum whole body radiation exposure received by any one individual on this work team was 65 millirem gamma and 167 millirem neutron, exclusive of the beam.

Because the work crew began to experience heat stress, they remained in the drywell only a short period of time (10-15 minutes).

NRC Inspector Findings (Entry 4)

The inspector's review determined that personnel entered and passed through a narrow beam of radiation that apparently was present during this entry. However, personnel who were part of the Entry 4 work team reportedly did not stand or work in the direct path of the beam for a significant time. The beam was not detected by the licensee's survey techniques.

3.5 Entry 5

At about 8:15 a.m. on July 9, 1992, a fifth crew entered the drywell to complete restoration of valve HV-041-1F084. This crew consisted of two maintenance electricians, a senior radiological controls technician, and a QV individual. One maintenance electrician worked at the 303' elevation, one maintenance electrician worked at the junction box on the 296' elevation, and the senior radiological controls technician and QV individual stood on the catwalk on either side of the beam (unknowingly) at the 296' elevation.

Some time during the work activity, the maintenance electrician working at the junction box positioned himself in such a manner that the beam, emanating from the drywell penetration X16-D, struck his alarming dosimeter. The senior radiological controls technician noted that a beeping noise had started and the maintenance electrician indicated to the technician that he believed it may be his alarming dosimeter.

The senior radiological controls technician checked the alarming dosimeter and noted a reading of about 70 millirem. The senior radiological controls technician performed a detailed radiation survey in the individual's work location and identified a narrow, elevated radiation field of unknown origin. The senior radiological controls technician ordered evacuation of the drywell.

Based on initial dosimeter readings, the maximum whole body radiation dose received by any one individual during this entry was estimated to be 210 millirem gamma and 150 millirem neutron. Other workers' dosimeters indicated a maximum whole body exposure of 130 millirem gamma. Neutron dose equivalent calculation sheets for these individuals indicated a maximum stay time of about 30 minutes for the fifth entry.

The 210 millirem gamma was received by the worker whose dosimeter was struck by the beam. A dose calculation for this individual was performed by the licensee to estimate the amount of radiation exposure, attributable to contact with the beam, that the individual may have received. The licensee bounded the upper value of radiation exposure that could have been received based on the amount of time that the individual was estimated to have remained in contact with the beam. This estimate resulted in an additional 90 millirem being credited to the individual's exposure. The total whole body exposure received by this individual was estimated to be 300 millirem. At the time of the inspection no additional exposure was assigned to those individuals who were thought to have passed momentarily through the beam.

NRC Inspector Findings (Entry 5)

The inspector determined that the licensee failed through radiation survey techniques to identify a narrow intense beam of radiation that was present in the work location.

The inspector's review indicated that the Entry 5 work group entered and worked in the Unit 1 drywell, with the reactor at power, on July 9, 1992, apparently without an adequate evaluation of radiological conditions in their work area. Specifically, an intense beam of radiation was present in portions of the work area, and personnel could have received significant personnel exposure from the beam, possibly in excess of NRC requirements.

The narrow beam was readily accessible to personnel and exhibited radiation levels of between about 3 R/hr gamma and 25 R/hr gamma as compared to general area radiation levels of about 1 R/hr gamma and 500 millirem/hr neutron. This is an apparent violation of 10 CFR 20.201 (b), which requires that licensees make surveys as may be necessary and reasonable for the licensee to comply with the requirements in 10 CFR 20. 10 CFR 20.201 (a) defines a survey as an evaluation of radiation hazards (50-352/92-26-02).

The apparent inadequate survey resulted in a substantial potential for personnel radiation exposures in excess of limits specified in 10 CFR 20.101.

The licensee informed the inspector that it was believed that necessary and reasonable surveys of the radiological conditions were made in the work areas and that the presence of the radiation beam was completely unexpected. The licensee's radiological controls personnel indicated that current radiation survey techniques were not very effective in identifying such beams.

3.6 Entry 6

After the Entry 5 work crew left the drywell, a senior radiological controls technician entered the drywell and performed a detailed radiation survey of the area and radiation beam. A discussion was held to determine if a sixth crew needed to enter the drywell to complete the work activity. The discussion, between operations personnel and maintenance personnel concluded that the work needed to be completed. The Station Manager was informed about the presence of the beam and went to the Unit 1 drywell entry point area. A sixth crew entered the drywell at about 9:00 a.m. on July 9, 1992, to complete the work activity. The work crew, accompanied by a senior radiological controls technician, who was aware of the position and dose rates associated with the radiation beam, completed the work activity while remaining out of the direct beam line. Neutron dose equivalent calculation work sheets indicated a maximum stay time in the area of about 30 minutes.

NRC Inspector Findings (Entry 6)

The inspector's review indicated that the licensee took appropriate precautions when re-entering to work in the area on the 296' elevation where the narrow beam had been identified. Personnel were informed of the beam and its location. However, it was not apparent that the licensee's survey methodology was adequate to detect any other beams that may have existed along the route traversed to the intended 296' elevation work location. This issue is unresolved (50-352/92-26-03).

4.0 NRC Inspector Observations and Conclusions (General)

The following observations and conclusions were made:

- The licensee's radiological controls personnel concluded that no apparent unplanned exposure in excess of regulatory limits occurred. However, at the time of this inspection, the licensee was not able to provide a written dose evaluation for all individuals who may have entered the beam. In addition, based on interviews conducted by the inspector, each individual who may have entered the radiation beam was not contacted to obtain information needed to ascertain his/her exposure. This item is unresolved (50-352/92-26-04). The licensee informed the inspector that a contractor had been hired to perform a detailed dose evaluation of the individuals who may have entered the beam.
- Radiological controls technicians, who provided radiological oversight of the drywell entries, were qualified and trained for such activities in accordance with the licensee's training and qualification program.

- Workers were provided briefings of expected radiological conditions in their work areas, however communications regarding adherence to radiation protection procedures, specifically the radiation work permit, involving the requirement for escort when moving to new work locations were not effective.
- The licensee stated that a number of corrective actions were planned to improve control of drywell work activities performed at power. These included approval by the station manager prior to working in the drywell at power and development of a special radiological controls procedure for drywell entry at power.
- Information provided to the inspector by the licensee indicated that reactor power remained stable while workers were in the drywell. However, power levels were increased between entries. The power level during the six entries ranged from about 6 to 10 %. Radiological controls personnel escorted the work crews after power increases.
- Inspector discussions with training personnel indicated that lesson plans for training radiological controls personnel about drywell entry at power did not contain information relative to concerns associated with streaming. The potential for narrow (collimated) beams also was not discussed. However, the general survey technique training received by all radiological controls technicians did contain information relative to streaming and the need to survey for it. The inspector's discussions with radiological controls personnel indicated that streaming was understood to mean a type of radiation "leakage" from an area that resulted in high contact radiation dose rates from the leakage point (e.g., a penetration in a biological shield) and that generally resulted in an increase in general area radiation levels. The narrow concentrated beam, which could be characterized as a "ray" and traverse large distances without diverging, was unexpected by radiological controls personnel.
- On July 9, 1992, testing of the valve determined that it did not meet Technical Specification stroke time and was declared inoperable. The valve was blocked closed and scheduled for repair during the next outage. As noted in Section 3.2, the licensee concluded on about July 9 that the valve did not need to be repaired to support safe operation of the reactor.

5.0 Exit Meeting

The inspector met with licensee representatives denoted in Section 1 of this report on September 22, 1992. The inspector summarized the purpose, scope and findings of the inspection. The inspector also met with licensee representatives on September 29, 1992, to discuss additional findings associated with additional inspection effort performed on September 29, 1992. Findings of the inspection were reviewed with the Limecock Vice President by NRC Management on October 2, 1992.

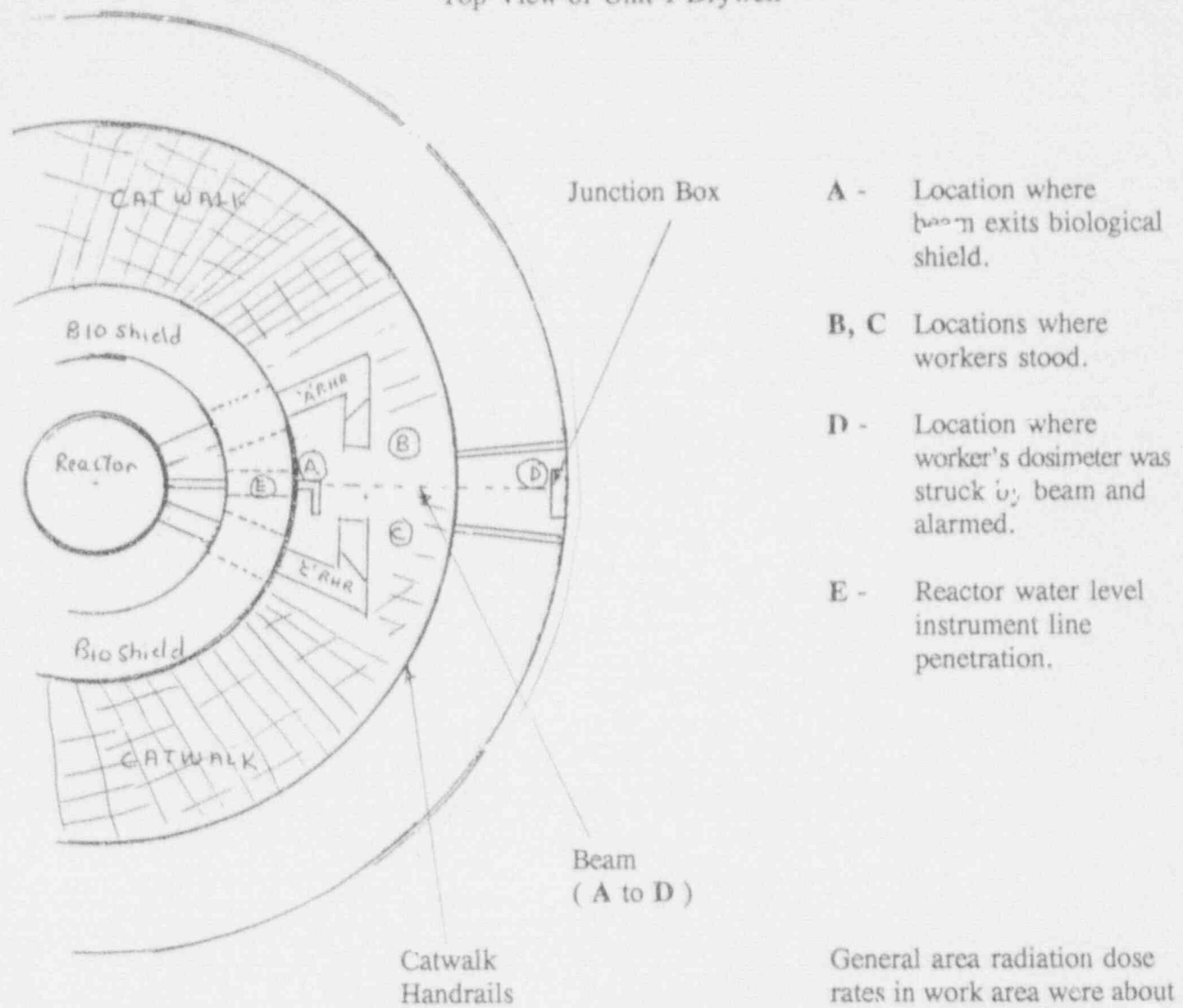
Attachment 1

Additional Individuals Contacted

(NRC Combined Inspection Report No. 50-352/92-26; 50-353/92-26)

M. Bilinsky, Health Physics Shift Supervisor
D. Haas, Duty Health Physics Supervisor
A. Reyes, Radiological Controls Technician
J. Daily, Radiological Controls Technician
D. Clark, Radiological Controls Technician
R. Schellinger, Instructor
J. Flanagan, Radiological Engineer
W. Harris, Radiological Engineer
J. Shutt, QV Technician
T. Carr, Maintenance Mechanic
P. Welch, QV Technician
M. Rapone, Maintenance Helper
K. Kemper, Planning and Scheduling Supervisor
R. Tomlinson, Supervisor, Training
R. Massengill, Senior Health Physics Instructor

Figure 1
Top View of Unit-1 Drywell



Beam radiation dose rates:

- Radiation dose rates at A were about 150 R/hr gamma and greater than 5 rem/hr neutron.
- Radiation dose rates at locations between A, B, and C were a maximum of about 25 R/hr.
- Distance from locations A to D was about 15 feet.
- Drawing not to scale.

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ADDRESSES: Send comments to: The Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555. ATTN: Docketing and Service Branch.

Hand deliver comments to: One White Flint North, 11555 Rockville Pike, Rockville, MD between 7:45 a.m. to 4:15 p.m., Federal workdays.

Copies of comments may be examined at the NRC Public Document Room, 2120 L Street, NW, (Lower Level), Washington, DC

FOR FURTHER INFORMATION CONTACT: James Lieberman, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555 (301-504-2741).

SUPPLEMENTARY INFORMATION:

Background

The NRC's current policy on enforcement conferences is addressed in Section V of the latest revision to the "General Statement of Policy and Procedure for Enforcement Actions," (Enforcement Policy) 10 CFR part 2, appendix C that was published on February 18, 1992 (57 FR 5791). The Enforcement Policy states that, "enforcement conferences will not normally be open to the public." However, the Commission has decided to implement a trial program to determine whether to maintain the current policy with regard to enforcement conferences or to adopt a new policy that would allow most enforcement conferences to be open to attendance by all members of the public.

Policy Statement

Position

The NRC is implementing a two-year trial program to allow public observation of selected enforcement conferences. The NRC will monitor the program and determine whether to establish a permanent policy for conducting open enforcement conferences based on an assessment of the following criteria:

- (1) Whether the fact that the conference was open impacted the NRC's ability to conduct a meaningful conference and/or implement the NRC's enforcement program;
- (2) Whether the open conference impacted the licensee's participation in the conference;
- (3) Whether the NRC expended a significant amount of resources in making the conference public; and
- (4) The extent of public interest in opening the enforcement conference.

Two-Year Trial Program for Conducting Open Enforcement Conferences, Policy Statement

AGENCY: Nuclear Regulatory Commission

ACTION: Policy statement.

SUMMARY: The Nuclear Regulatory Commission (NRC) is issuing this policy statement on the implementation of a two-year trial program to allow selected enforcement conferences to be open to attendance by all members of the general public. This policy statement describes the two-year trial program and informs the public of how to get information on upcoming open enforcement conferences.

DATES: This trial program is effective on July 10, 1992, while comments on the program are being received. Submit comments on or before the completion of the trial program scheduled for July 11, 1992. Comments received after this date will be considered if it is practical to do so, but the Commission is able to assure consideration only for comments received on or before this date.

I. Criteria For Selecting Open Enforcement Conferences

Enforcement conferences will not be open to the public if the enforcement action being contemplated—

- (1) Would be taken against an individual, or if the action, though not taken against an individual, turns on whether an individual has committed wrongdoing;
- (2) Involves significant personnel failures where the NRC has requested that the individual(s) involved be present at the conference;
- (3) Is based on the findings of an NRC Office of Investigations (OI) report; or
- (4) Involves safeguards information, Privacy Act information, or other information which could be considered proprietary.

Enforcement conferences involving medical misadministrations or overexposures will be open assuming the conference can be conducted without disclosing the exposed individual's name. In addition, enforcement conferences will not be open to the public if the conference will be conducted by telephone or the conference will be conducted at a relatively small licensee's facility. Finally, with the approval of the Executive Director for Operations, enforcement conferences will not be open to the public in special cases where good cause has been shown after balancing the benefit of public observation against the potential impact on the agency's enforcement action in a particular case.

The NRC will strive to conduct open enforcement conferences during the two-year trial program in accordance with the following three goals:

- (1) Approximately 25 percent of all eligible enforcement conferences conducted by the NRC will be open for public observation;
- (2) At least one open enforcement conference will be conducted in each of the regional offices; and
- (3) Open enforcement conferences will be conducted with a variety of the types of licensees.

To avoid potential bias in the selection process and to attempt to meet the three goals stated above, every fourth eligible enforcement conference involving one of three categories of licensees will normally be open to the public during the trial program. However, in cases where there is an ongoing adjudicatory proceeding with one or more intervenors, enforcement conferences involving issues related to the subject matter of the ongoing adjudication may also be opened. For the purposes of this trial program, the

three categories of licensees will be commercial operating reactors, hospitals, and other licensees, which will consist of the remaining types of licensees.

II. Announcing Open Enforcement Conferences

As soon as it is determined that an enforcement conference will be open to public observation, the NRC will orally notify the licensee that the enforcement conference will be open to public observation as part of the agency's trial program and send the licensee a copy of this Federal Register notice that outlines the program. Licensees will be asked to estimate the number of participants it will bring to the enforcement conference so that the NRC can schedule an appropriately sized conference room. The NRC will also notify appropriate State liaison officers that an enforcement conference has been scheduled and that it is open to public observation.

The NRC intends to announce open enforcement conferences to the public normally at least 10 working days in advance of the enforcement conference through the following mechanisms:

- (1) Notices posted in the Public Document Room;
- (2) Toll-free telephone messages; and
- (3) Toll-free electronic bulletin board messages.

Pending establishment of the toll-free message systems, the public may call (301) 462-6732 to obtain a recording of upcoming open enforcement conferences. The NRC will issue another Federal Register notice after the toll-free message systems are established.

To assist the NRC in making appropriate arrangements to support public observation of enforcement conferences, individuals interested in attending a particular enforcement conference should notify the individual identified in the meeting notice announcing the open enforcement conference no later than five business days prior to the enforcement conference.

III. Conduct of Open Enforcement Conferences

In accordance with current practice, enforcement conferences will continue to normally be held at the NRC regional offices. Members of the public will be allowed access to the NRC regional offices to attend open enforcement conferences in accordance with the "Standard Operating Procedures For Providing Security Support For NRC Hearings And Meetings" published November 1, 1991 (56 FR 58251). These procedures provide that visitors may be

subject to personnel screening, that signs, banners, posters, etc., not larger than 18" be permitted, and that disruptive persons may be removed.

Each regional office will continue to conduct the enforcement conference proceedings in accordance with regional practice. The enforcement conference will continue to be a meeting between the NRC and the licensee. While the enforcement conference is open for public observation, it is not open for public participation.

Persons attending open enforcement conferences are reminded that (1) the apparent violations discussed at open enforcement conferences are subject to further review and may be subject to change prior to any resulting enforcement action and (2) the statements of views or expressions of opinion made by NRC employees at open enforcement conferences or the lack thereof, are not intended to represent final determinations or beliefs.

In addition to providing comments on the agency's trial program in accordance with the guidance in this notice, persons attending open enforcement conferences will be provided an opportunity to submit written comments anonymously to the regional office. These comments will subsequently be forwarded to the Director of the Office of Enforcement for review and consideration.

Dated at Rockville, MD, this 7th day of July 1992.

For the Nuclear Regulatory Commission,
Samuel J. Chilk,

Secretary of the Commission.

(FR Doc. 92-16233 Filed 7-9-92; 8:45 a.m.)

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Corrections

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NUCLEAR REGULATORY COMMISSION

Two-Year Trial Program for Conducting Open Enforcement Conferences; Policy Statement

Correction

In notice document 92-16233 beginning on page 30752 in the issue of Friday, July 10, 1992, on page 30762, in the second column, under DATE, beginning in the fifth line, "July 11, 1992" should read "July 11, 1994".

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