



November 26, 1980

Trojan Nuclear Plant Docket 50-344 License NPF-1

Mr. R. H. Engelken, Director U. S. Nuclear Regulatory Commission Region V Suite 202, Walnut Creek Plaza 1990 N. California Blvd. Walnut Creek, CA 94596

Dear Mr. Engelken:

Your letter dated October 31, 1980 and received by us on November 6, 1980 forwarded the results of the NRC Health Physics Appraisal of the Trojan Nuclear Plant conducted on July 7-18, 1980. Your letter identified the Significant Appraisal Findings and two items of noncompliance.

Attachments 1 and 2 contain PGE's responses to the Significant Appraisal Findings and the Notice of Violation, respectively.

Sincerely,

Bart D. Withers Vice President Nuclear

Attachments

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c: Mr. Lynn Frank, Director State of Oregon Department of Energy

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ATTACHMENT 1

RESPONSE TO SIGNIFICANT APPRAISAL FINDINGS

tem IA: Personnel Selection, Qualification and Training

The existing Radiation Protection training program failed to place the relative biological risk of exposure to radiation in the proper perspective for the layman participant in the general employee training program, and further requested that same layman to certify to the receipt of training to a standard which was neither supplied nor explained.

Response to Item 1A:

The general employee Radiation Protection training program was revised on October 8, 1980 to address the relative biological risk of radiation exposure.

The general employee training program will be revised by January 1, 1981 to include a discussion of the requirements of ANSI Standard N18.1, Section 5.4. Trainees will be provided with a copy of the pertinent section of the standard and given the opportunity to ask questions following the training.

Item 18: Personnel Selection, Qualification and Training

The existing Radiation Protection training program failed to implement and document the training program described in the existing procedure for the Chemical and Radiation Protection (C&RP) Technician. In addition, a specialized training, retraining and replacement training program in Radiation Protection appropriate for each discipline had not been established, implemented, maintained and documented for the Plant Staff.

Response to item 18:

A new position of Radiation Protection Training Specialist, reporting to the Training Supervisor, was established on July 1, 1980. A prime responsibility of this individual is to ensure that the training requirements for C&RP Technicians are implemented and documented. The following additional actions have also been taken to ensure full implementation of the C&RP training program.

- A weekly 4-hr. period has been designated as the regularly scheduled training time for C&RP Technicians. This training period can only be cancelled by the Radiation Protection Supervisor or Chemistry Supervisor if Plant conditions demand the presence of C&RP Technicians in the Plant.
- 2. An examination to evaluate C&RP Technician knowledge was administered during the fall of 1980. The results of the examination have been utilized to identify special areas where additional training is required. Future training sessions will address these specific areas.

Historically, training for specific tasks beyond general employee training has been performed. Examples of this training include steam generator mockup training, filter handling training, spent fuel rack replacement training, and training for other potential high exposure jobs. However, in the past, this training has not been effectively documented.

Future training of this nature will be incorporated as a portion of the task or discipline specific training which will be required by the ALARA implementation program (please see response to Item 4 below). Inclusion of this specialized training into the ALARA program will result in more meaningful training than if it was conducted in the manner of the present general employee training. The ALARA procedures will require documentation of this training.

Item 2: Exposure Controls - Surveillance Program

The available air sampling equipment and methods of use did not provide for worker breathing zone sampling or for continued sampling during the performance of work with a potential for generation of airborne radioactive materials.

Response to Item 2:

The present air sampling program is defined in Radiation Protection Procedure RP-119, "Airborne Radioactivity Sampling and Analysis". This procedure requires monitoring for (1) jobs requiring a job specific RWP in highly contaminated areas, (2) jobs requiring the opening of a contaminated system, (3) jobs requiring respirator use, or (4) jobs resulting in activities which might cause contamination to become airborne, such as grinding, vacuuming or welding.

RP-119 further states that air particulate samples will be taken (1) before the job begins to establish initial conditions, (2) during the activity most likely to cause airborne activity, (3) at least every 4 hr., (4) whe a respirator is warranted to demonstrate that the selective respirator has the proper protection factor, and (5) after the work is completed to ensure that airborne levels are acceptable for the area to be released for unrestricted use.

RP-119 also specifies when iodine air samples are to be taken and addresses the utilization of continuous air monitors.

RP-119 specifically addresses breathing zone sampling by requiring the C&RP Technician to "place the sampler in the location of the work in the breathing zone...".

Furthermore, additional portable air monitors (Eberline AMS-2 or equivalent) are being purchased to augment the airborne radioactivity monitoring program. These monitors which are scheduled to be onsite by before July 1981 will provide increased capabilities for continuous air monitoring during work activities with higher probability of airborne radioactivity.

The C&RP Technicians will be specifically instructed prior to December 1, 1980 to locate the sample line for the continuous monitors in a manner to assure representative samples are obtained of the air inhaled by individuals in the work area. This instruction will be incorporated into the C&RP Technician training program.

These requirements should ensure air samples are representative of the air inhaled by individuals in the work area.

Review of internal radioactivity monitoring records demonstrates that there has been a minimal if not negligible uptake of radioactive material at Trojan. Based on these results and the existing air sampling program, extensive use of lapel air samplers as suggested during the appraisal is not considered warranted. However, to ensure this conclusion is sound, a small number of lapel air samplers (approximately five) will be purchased. An evaluation of the present grab and continuous air sample program versus the use of lapel air samplers will be completed by July 1, 1981. The results of this evaluation will be utilized to determine if changes to the current air sampling program are necessary.

Item 3A: Radioactive Waste Management

The failure to review and document changes in the facility as described in the Safety Aualysis Report causes the team to express concern. In once instance, the required review was not performed. In another instance, records which included a written safety evaluation had not been maintained.

Response to Item 3A:

PGE's Response to Notice of Violation, Item A, addresses this matter.

The written safety evaluation which was not maintained as discussed in Item JA above was reconstructed and is maintained in the Plant records.

Item 38: Radioactive Waste Management

The existing program failed to assure in all cases that shipments of radioactive materials were made only after appropriate determination that all conditions of the receiver's license and the transportation regulations were satisfied.

Response to Item 3B

During the appraisal, the adequacy of one shipment of steam generator blowdown resin to the burial ground was questioned. The transfer of this resin into the shipping container was performed in accordance with Plant Procedure OI-T-23. This procedure did not specifically discuss minimum sit times or pump run times during the dewatering of the resin. The Plant's practice, however, was to dewater the resin during the transfer, running the pump until no water flow was evident in the discharge line. The pump was then stopped and the liner was allowed to sit for at least 4 hr. The pump was then restarted and allowed to run again until no water flow was evident in the discharge line. This process was repeated until the Radiation Protection Supervisor was reasonably assured that the liner had been fully dewatered. The Radiation Protection Supervisor's experience with tests conducted at his previous employer's plant was utilized in making the judgement that the resin had been dewatered. As noted in the NRC report, the validity of this judgement was supported during the special test performed during the appraisal to demonstrate that the shipment in question did not violate transportation regulations or the condition of the receiver's license.

OI-T-23 will be revised by January 1, 1981 to require verification of the dewater probe location and to specify dewater pump run times and sit times.

Other waste materials packaged onsite which could contain liquid (powdex resin and compacted and noncompacted trash) are packaged in accordance with Radiation Protection Procedure TRP-003. This procedure contains specific criteria and checkpoints to assure that waste is packaged in compliance with the burial ground requirements.

On October 29, 1980, a Memorandum of Understanding was executed between PGE, the Oregon Depäitment of Energy and the Public Utility Commissioner of Oregon. This Memorandum of Understanding provides for notification of the Oregon Department of Energy of most radioactive material shipments and provides for the opportunity for inspection of these shipments by representatives of the Public Utility Commission and Oregon Department of Energy.

A new position of Radioactive Waste Supervisor reporting to the Radiation Protection Supervisor has been approved for 1981. This individual will be responsible for radioactive waste packaging and shipping. It is anticipated that this position will be filled by about January 1, 1981. Following the assignment of this new position, it is anticipated that the Trojan radioactive material shipping procedures will be revised to provide further assurance that all Department of Transportation, NRC and burial ground requirements are fully complied with.

The above actions should provide a high degree of assurance that future radioactive material shipments will be made in full compliance with all applicable regulations.

Item 3C: Radioactive Waste Management

The existing gaseous waste handling program failed to assure that errors, omissions and inconsistencies in the documentation of effluent releases were identified and corrected.

Response to Item 3C:

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A new position of Effluent Analyst reporting to the Chemistry Supervisor was filled in October 1980. One of the principal duties of the Effluent Analyst is to provide a careful and timely review of all discharge permits. The Effluent Analyst also provides feedback to the responsible C&RP Technicians of any mistakes or omissions that were found during the review. Training for the C&RP Technicians is schedule in January 1981 on liquid and gaseous discharge permit procedures. Additional training on these procedures will be periodically rescheduled to ensure completed technician familiarity with the discharge permit procedures. These additional reviews will result in a complete and accurate documentation of radioactive effluent releases.

Item 4: ALARA Program

The procedures necessary to implement, maintain and evaluate the effectiveness of an acceptable ALARA program had not been developed.

Response to Item 4:

ALARA implementing procedures are currently being developed. These procedures are expected to be completed and implemented by May 1, 1981.

Basic elements of an ALARA program presently exist at Trojan and are strongly supported by PGE management. Radiation exposures were estimated for the more significant retueling and maintenance tasks prior to the 1980 outage. Routine reports were made comparing actual exposures received versus estimated exposure. These reports also contained the reasons for the difference in exposure and identified actions, if necessary.

The process of estimating exposures and planning for high exposure activities (both in dose rate and total exposures) will be a significant aspect of the ALARA procedure development. The program will also identify specialized training which will be conducted to ensure exposures are ALARA.

Item 5: Facilities and Equipment - Facility Ventilation

Engineered systems designed to protect individuals from possible exposures to airborne radioactive materials failed to provide the air flows necessary to meet industry standards and possibly to protect individuals from unnecessary exposure.

Response to Item 5:

During the 1980 refueling outage, a modification to the heating ventilation and air-conditioning (NVAC) system which supplies the hot chemistry laboratory and counting room was completed. Acceptance testing of these modifications was conducted in September 1980. The new flow configuration establishes a 300 fpm flow velocity for the primary sink exhauster. The north fumehood has a face velocity of 150 fpm when set at an opening of 11 in. and the south hood has a face velocity of 150 fpm when set at an opening of 12 in. The other ducts within the hot chemistry laboratory and counting room were balanced at 150 to 200 fpm.

A modification to the cold chemistry laboratory ventilation system is awaiting completion of the Control Building modifications at which time the cold chemistry laboratory will be enlarged. Modifications to the HVAC system which supply the decontamination shop are under review to correct inadequacies in the present system and are expected to be completed by startup of Cycle 4.

Item 6: Emergency Response Capabilities

The ability to respond to an emergency was limited by the failure of the emergency response training program to revise and upgrade training as required by changing conditions or requirements and to incorporate into procedures specific guidance in such as area as emergency response team training. In addition, existing procedures failed to provide for effective inventory and control of emergency equipment.

Response to Item 6:

The deficiencies specifically identified during the appraisal were corrected prior to August 1, 1980. These actions included additional training of the C&RP Technicians on the Eberline SAM-II i rument and the deficiencies in the inventory of emergency equipment.

The Radiological Emergency Response Plan is undergoing a major revision in response to the new emergency planning requirements of 10 CFR 50. New implementing procedures, including training, are also being prepared. At this time, it is anticipated that the new emergency plan and implementing procedures will be adopted prior to January 1, 1981.

The new emergency plan and procedure specifies the emergency equipment location and quantities. In addition, a Licensing Document Change Request will be processed prior to January 1, 1981 to make the required inventories of emergency equipment in the Final Safety Analysis Report consistent with the revised emergency plan.

These actions should ensure an appropriate ability to respond to an emergency.

ATTACHMENT 2

RESPONSE TO NOTICE OF VIOLATION

Item A

10 CFR 50.59, "Changes, Tests and Experiments", authorizes the licensee to make changes in the facility and procedures described in the safety analysis report, and to conduct tests or experiments not described in the safety analysis report without prior Commission approval, unless the proposed change, test or experiment involves a change in the Technical Specifications incorporated in the license or an unreviewed safety question. The licensee must maintain a record of such a change, test or experiment that includes a written safety evaluation which provides the basis for the determination that the change, test or experiment does not involve an unreviewed safety question. Final Safety Analysis Report Section 5.1.3.3 states in part: "If the RCS is to be opened during the shutdown, the hydrogen and fission gas in the reactor coolant is reduced by degassing the coolant in the volume control tank."

Contrary to this requirement, from April 11 to April 14, 1980, the Reactor Coolant System (RCS) was degassed by venting the pressurizer vapor space via a jumper to the coolant volume control system holdup tank and an evaluation was not made of this change, test or experiment to determine that it did not involve an unreviewed safety question. (Section 5.2.2)

Response to Item A:

The jumper between pressurizer vapor space and the CVCS holdup tanks was disconnected and completely removed on July 18, 1980. The individuals involved in the installation and use of that jumper were counseled and advised of the impropriety of their actions and provided directions to prevent a recurrence of this nature. A Request for Design Change (RDC), 80-067, was submitted to provide a permanent control path for degassing the pressurizer vapor space directly to the CVCS holdup tanks. This RDC will undergo the appropriate reviews and approvals, including a 10 CFR 50.59 review and associated documentation, to ensure that an unreviewed safety question does not exist prior to the permanent installation of piping for this purpose. In addition, upon completion of this modification, the appropriate operating istructions will be changed.

Additionally, a review of the appropriate Plant procedures concerning modifications, bypassing of Plant safety functions, and temporary installations will be performed. Revisions will be made where appropriate to ensure that no work or changes to Plant procedures or systems are code unless properly described by an RDC/DCP (Detailed Construction Package), existing Plant procedure, or the necessary safety evaluation (10 CFR 50.59 evaluation) has been performed. Furthermore, procedures will be revised to ensure that 10 CFR 50.59 safety evaluations are properly performed, reviewed, and controlled to ensure their retention in accordance with appropriate requirements. All personnel on the Plant operating staff will be informed of these changes to Plant operating procedures and the need to ensure that appropriate safety evaluations have been performed prior to making changes to procedures, equipment or systems or performing Plant tests or experiments. It is expected that this work will be complete by February 1, 1981.

Item B

10 CFR 19.12, "Instructions to Workers" stated in part, that all individuals working in or frequenting any portion of a restricted area shall be instructed in the appropriate response to warnings made in the event of an unusual occurrence or malfunction that may involve exposure to radiation or radioactive material.

Contrary to this requirement, on July 7, 1980, three individuals were granted unescorted access to portions of the restricted area including areas posted "CAUTION: EVACUATION, ALARM CR PAGING SYSTEM CANNOT BE HEARD" and were not instructed in the administrative controls necessary to permit an appropriate response to warnings made in the event of an unusual occurrence or malfunction that may involve exposure to radiation or radioactive material.

Response to Item B:

On July 30, 1980, the Plant general employee training program was revised to include instruction on the administrative controls required for access to areas where the evacuation or paging system cannot be heard.