

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-312/82-30

Docket No. 50-312 Licensee No. DPR-54 Safeguards Group \_\_\_\_\_

Licensee: Sacramento Municipal Utility District

P. O. Box 15830

Sacramento, California 95813

Facility Name: Rancho Seco

Inspection at: Clay Station and Sacramento, California

Inspection conducted: June 22-25, 1982

Inspectors: R. F. Fish 8/2/82  
R. F. Fish, Emergency Preparedness Analyst-Team Leader Date Signed

J. O'Brien for 8/2/82  
J. O'Brien, Resident Inspector Date Signed

Other Team Members:

- D. Perrotti, Emergency Preparedness Analyst, NRC
- E. Hickey, Senior Research Scientist  
Pacific Northwest Laboratories
- G. Martin, Research Scientist  
Pacific Northwest Laboratories
- A. Robinson, Research Scientist  
Pacific Northwest Laboratories
- T. Earle, Research Scientist  
Pacific Northwest Laboratories

Approved by: F. A. Wenslawski 8/2/82  
F. A. Wenslawski, Chief, Reactor Radiation Protection Section Date Signed

Approved by: H. E. Book 8/2/82  
H. E. Book, Chief, Radiological Safety Branch Date Signed

Summary:

Inspection on June 22-25, 1982 (Report No. 50-312/82-30)

Areas Inspected: Announced inspection of the emergency plan exercise and associated critiques. The inspection involved about 138 hours onsite time by seven (7) NRC inspectors and observers.

Results: No items of noncompliance or deviations were identified.

## DETAILS

### 1. Persons Contacted

- W. Latham, Assistant General Manager for Operations
- \*R. Rodriguez, Manager, Nuclear Operations
- \*R. P. Oubre, Plant Superintendent
- R. Colombo, Nuclear Plant Analyst
- D. Blachly, Supervisor, Nuclear Operations
- \*R. Miller, Chemistry and Radiation Supervisor
- F. Kellie, Assistant Chemistry and Radiation Supervisor
- J. Reese, Health Physicist
- D. Bird, Health Physicist (ALARA)
- D. Gouker, Shift Supervisor
- J. King, Shift Supervisor
- J. Nichols, Senior Control Operator
- J. Ridgeway, Control Operator
- M. Cooper, Control Operator
- \*R. Bowser, Senior Chemistry and Radiation Assistant
- \*J. Bowser, Chemistry and Radiation Assistant
- W. Bingham, Chemistry and Radiation Assistant
- S. Stinson, Chemistry and Radiation Assistant
- D. Anderson, Chemistry and Radiation Assistant
- J. Benches, Chemistry and Radiation Assistant
- S. Manofsky, Chemistry and Radiation Assistant
- R. Williams, Chemistry and Radiation Assistant
- \*E. Bradley, Supervising, Environmental Specialist and Emergency Planning Coordinator
  
- D. Elliott, Quality Assurance Engineer
- H. Heckert, Quality Assurance Engineer
- \*N. Midkiff, Director, Radiological Services, General Physics Corporation

\*Denotes those present at June 24 exit interview.

### 2. Emergency Exercise Planning

The Emergency Planning Coordinator has the responsibility for planning, scheduling and coordinating the emergency planning exercise. The Sacramento Municipal Utility District (SMUD) issued a contract to General Physics Corporation (GPC) covering the development of the scenario for the June 23, 1982 exercise, control and observation of the exercise and provisions for an exercise critique, including a written report. The exercise plan was developed in concert with the several participating offsite jurisdictions and the Federal Emergency Management Agency (FEMA). NRC Region V also participated in the exercise planning. The plan document included exercise objectives, the exercise scenario (including initial plant conditions), controller messages, data sheets and exercise observer criteria and evaluation sheets. The plan document was controlled by SMUD/GPC and distribution was limited to persons having a specific need, participating local agencies and members of the Federal organizations (NRC and FEMA) evaluating the exercise. This emergency plan exercise satisfied the annual exercise requirement, contained in IV.F.1.a of Appendix E (10 CFR Part 50), as amended by the June 10, 1982 NRC letter to SMUD (Eisenhut to Mattimoe).

### 3. Exercise Scenario

The scenario was to start at 5:30 a.m. on June 23, 1982 with a "Notification of an Unusual Event" caused by a simulated unidentified three (3) gallon per minute leakage from the reactor coolant system. This was followed by a fire in the decay heat removal pump controller that was classified as an "ALERT". A series of events then followed that escalated the situation into a "Site Area Emergency" and ultimately to a "General Emergency". These events included loss of all AC power, loss of core cooling, failure of a spare reactor building penetration and a planned release of airborne activity to the atmosphere. The meteorological conditions were changed during the scenario so as to allow all three counties (Sacramento, Amador and San Joaquin) to exercise the major portions of their emergency plans. The scenario also included two injured and contaminated employees that were sent to a hospital for treatment.

During the exercise a number of scenario related problems, including actions or lack of actions by the controllers, occurred. There were some instances where the controllers had to prevent plant staff actions because they were in advance of the scenario plan and would have prevented or significantly reduced the severity of subsequent conditions. Shortly after 9:00 a.m. an imposed delay of about one (1) hour was placed on the plant staff with respect to declaring a "General Emergency" because of a reported mismatch between the plant and the EOF/offsite activities. The initial offsite release was to occur as the result of reactivating the auxiliary building fan when the power was restored to the plant; however, the controller was not able to impose his required input at the appropriate time and normal operating information was passed by the plant staff that made such a release impossible. There were some problems related to providing simulated data to the appropriate plant staff caused by the location of such information or the need to generate such information because of the plant staff inquiries. The final changes to the scenario, recommended by the advisory committee that included representatives from the NRC and FEMA, resulted in modification to the times of some events which caused the conditions for core damage to be negated and thus eliminated the source of the activity released into the auxiliary building. The sum of these problems had a significant impact on the responses of the plant staff during the exercise. The EOF and offsite agencies responses were significantly impacted by these problems also because the plant provides most of their initiating data and information.

### 4. Observers

The exercise was observed and evaluated by several organizations. The licensee, including GPC, provided observers for all onsite areas where exercise activities took place. SMUD/GPC also observed the operations at the EOF and the activities performed by SMUD personnel in near site environmental monitoring and transportation of the injured to the hospital. GPC provided controllers/observers for some offsite locations evaluated by FEMA. Provisions were made for controlling any changes made during the course of the exercise. Most of the participating offsite jurisdictions provided observers for their portions of the exercise.

Observers from the NRC and FEMA Region IX were also present during the exercise. The FEMA team of observers were evaluating the portions of the exercise that involved local, state and federal agencies as well as the interface occurring at the EOF. The NRC observed activities in the Control Room, Technical Support Center, Operations Support Center/Assembly Point, and the Emergency Operations Facility. The NRC also observed the activities of teams dispatched into the plant to respond to the fire and injured employees and take actions to evaluate or mitigate the conditions related to the exercise situation.

On June 22, 1982 GPC held two briefings for the observers and controllers, one for SMUD response activities and the other for the offsite jurisdictions. Copies of the exercise plan document were made available to those who had not receive one. Also observer packets, containing relative materials, were distributed. The meetings provided an opportunity for discussion of the schedule of events, the role of the observers/controllers, telephone numbers for controller communications and other related matters. Reference was also made to the evaluation sheets that were to be completed by the observers and controllers. The attendees were given an opportunity to raise questions.

#### 5. Exercise

The exercise started at about 5:35 a.m. on June 23 and continued until about 1:45 p.m. The exercise involved the following locations described in the Rancho Seco Nuclear Generating Station Emergency Plan: Control Room, Technical Support Center, Operations Support Center, Assembly Point and Emergency Operations Facility. Offsite areas, including the EOF, that were observed by the FEMA team will be described in a report issued by that agency. The exercise included sending teams into the plant to: (1) respond to the fire, (2) respond to the injured employees, (3) simulate evaluation and repair activities and (4) obtain airborne and liquid samples, including a reactor coolant sample. The SMUD vehicle was used to transport the injured persons to the hospital because the Gault ambulance that was to be used was not available due to responding to a real accident which occurred near the Rancho Seco facility at about 7:30 a.m.. Radiation monitoring activities around the site as well as in plant were also conducted as part of the exercise.

#### 6. Critiques

In the morning of June 24, SMUD held a preliminary critique to review the results and findings of the exercise. A number of items were identified as needing improvement. Several scenario related difficulties were identified (e.g. controller delay in plant declaration of general emergency, failure to provide timely controller input concerning initial release of activity from the facility and termination of the exercise prior to the final event which was a planned release of activity from the facility). The flow of information to the TSC and from the TSC to the EOF needs to be improved. A limitation on the extent of participation in the assigned activities by the Unified Dose Assessment Center Director should be considered. The Assembly Point needs attention in the areas

of coordination and flow of information to and from it. The accountability of plant personnel appeared to take longer than it should have and there was an expression that the site evacuation was slow. Some deficiencies in equipment availability and a need for improvement in health physics procedures were identified in connection with the medical response. A lack of coordination was noted with respect to media releases and excessive noise levels in the EOF were also noted. Considerable improvement in the EOF operations, as compared to the previous drills, was acknowledged.

The written reports (evaluation sheets) submitted by the SMUD/GPC observers/controllers will represent the primary effort to evaluate (critique) the exercise. These reports will be examined and evaluated by GPC who will prepare an exercise summary document for submission to SMUD. This summary document will be used by the Plant Review Committee and the Emergency Planning Coordinator in accomplishing their assigned responsibility to review (and revise) the Emergency Plan and "incorporate significant changes or modifications brought to light during... exercises."

A second critique was held on June 24 to review the results and findings of the exercise. This critique was moderated by SMUD with the assistance of GPC. The offsite jurisdictions, including representatives from some of the State organizations, were the participants of this critique. Several of the items discussed during the morning critique were also covered during the afternoon session. Some matters needing coordinated corrective actions by SMUD and the offsite jurisdictions were identified.

7. Exercise Summary

On June 25 a summary of the exercise results was presented at the Beverly Garland Hotel in Sacramento, California. Most of the organizations who participated in the exercise presented a summary of the results from their standpoint. Representatives from FEMA Region IX and the NRC also presented a summary of their findings. This session was followed by a presentation on the exercise findings provided specifically for members of the public and media. The following organizations were the primary participants in this latter presentation: SMUD, Sacramento County, State of California, FEMA Region IX and NRC. A period for questions and answers was included.

8. Exit Interview

On June 24, preceding the afternoon critique, an exit interview was held to discuss the NRC findings. SMUD and their contractor personnel attending this meeting have been identified in paragraph 1. In addition, the following SMUD personnel were also present: D. Raasch, Manager of Generation Engineering; W. Hammond, Assistant General Manager-Services; R. Moore, Director of Corporate Security; R. Dieterick, Senior Nuclear Engineer; B. Thomas, Public Information Specialist. The NRC was represented by the following persons: R. Fish, Team Leader; H. Canter, Senior Resident Inspector; J. O'Brien, Resident Inspector and Team Member; S. Ramos, HQ Division of Emergency Preparedness; D. Perrotti,

HQ Division of Emergency Preparedness and Team Member; K. Scown, Region V Emergency Preparedness Coordinator; Four Team Members from Pacific Northwest Laboratories. The licensee was informed that no items of noncompliance or deviations were identified. The following NRC observations, none of which are considered significant, were discussed during this meeting.

- a. The scenario related problems had a significant impact on the exercise and its results. Specific problems, which have been described in paragraph 3 above, were identified. Observations of some of the controllers gave the appearance that insufficient information or data had been included in the scenario or they needed additional training or briefing to perform their duty. During the critiques SMUD/GPC had identified the more significant scenario problems.
- b. Several communications problems were identified. Some of these had been identified during the critiques. It was noted that a lack of keeping the offsite monitoring team(s) informed may have resulted in their waiting directly in the plume for additional instructions. Also a rearrangement of the phones in the TSC might improve the use of space in the facility as well as improve communications.
- c. The problems associated with space in the interim TSC were acknowledged. This may also contribute to the apparent organizational problems (e.g. flow of information) related to the health physics (radiation safety) efforts in the TSC.
- d. With respect to the fire response, it appeared that a request for offsite assistance was made prior to evaluating the situation. Also there was an impression that the Fire Team Leader did not put on protective clothing or a self contained breathing apparatus. It was also noted that two(2) extra breathing air bottles were taken to the area of the fire; however, there were four (4) persons in the team responding to the fire.
- e. Contamination control related to the medical emergency response needs improving. Such control should not interfere with or delay first aid activities, but could occur during waiting periods or after the injured have been moved. Also there did not appear to be any action to protect the SMUD vehicle from becoming contaminated or control contamination when removing the injured at the hospital. Directions for getting to the hospital were not readily available.
- f. Some areas needing improvement were identified at the Assembly Area. Processing large numbers of persons was slow, particularly because of the personnel contamination surveys. There appeared to be a problem with the accountability of personnel. The flow of information to and from the Assembly Point could be improved.

- g. The team dispatched to collect an inplant liquid sample from inside the controlled area of the plant had to hand carry all of the equipment. Consideration should be given to providing a container for conveniently carrying such equipment.
- h. Observations at the EOF disclose some items needing improvement. The present status of the facility was recognized as the reason for some of the items. There appeared to be some difficulty in obtaining information from the TSC. The "public information" board reflected a "General Emergency" status for the plant prior to its being announced in the EOF. Some status boards were not maintained in a timely manner. The Unified Dose Assessment Center suffered from a lack of information and there appeared to be a need to modify its organization. This exercise did not provide an adequate testing of the Unified Dose Assessment Center capabilities. The noise level was excessive at times.
- i. A lack of coordination among the various organizations in the area of the public information function was observed in the EOF. Proposed press releases, apparently containing EOF briefing information, did not appear to receive the required technical review and approval prior to transmission to the Media Center. The failure of the recently installed hard copy facsimile system during the exercise appeared to have a negative impact on the public information function. The problems in the public information area had been identified during the afternoon critique.