

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION V

Report No. 50-133/78-13

Docket No. 50-133 License No. DPR-7 Safeguards Group _____

Licensee: Pacific Gas and Electric Company

77 Beale Street

San Francisco, California 94106

Facility Name: Humboldt Bay Unit 3

Inspection at: Eureka, California

Inspection Conducted: October 23-26, 1978

Inspectors: R. F. Fish 11/13/78
R. F. Fish, Radiation Specialist / Date Signed

Date Signed

Approved By: A. E. Book 11/17/78
John H. E. Book, Chief, Fuel Facility and Materials Safety Branch Date Signed

Summary:

Inspection on October 23-26, 1978 (Report No. 50-133/78-13)

Areas Inspected: Routine unannounced inspection of emergency planning, radiological environmental monitoring, respiratory protection program, radiation protection procedures, radiation protection training, radiation safety staffing, and observations. The inspection involved 26 hours of onsite time by one inspector.

Results: No items of noncompliance or deviations were identified in the seven (7) areas inspected.

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DETAILS

1. Persons Contacted

Pacific Gas & Electric (PG&E)

- *W. A. Raymond, Plant Superintendent
- *E. D. Weeks, Power Plant Engineer
- W. T. Rapp, Senior Power Production Engineer
- *R. C. Parker, Chemical and Radiation Protection Engineer
- R. Lund, Radiation and Process Monitor Foreman
- D. Clifton, Radiation Process Monitor
- D. Peterson, Radiation Process Monitor
- J. Kamberg, Foreman, Instrument Maintenance
- R. Skidmore, Control Technician
- C. Ramsey, Control Operator
- R. Nelson, Training Coordinator
- R. Twiddy, QC Engineer
- *R. Anderson, QA Supervisor

*Present during exit interview.

City Ambulance

F. Sundquist, Manager

Office of Emergency Services, Humboldt County

W. R. Shanahan, Analyst

Humboldt Fire District #1

Capt. T. L. Perrett

St. Joseph's Hospital

D. G. DeSantis, Associate Administrator

General Hospital

D. Hamacheck, Administrator (telephone call 11/6/78)

2. Emergency Planning

a. Procedures

There have been no changes in the Emergency Plan or Emergency Plan Implementing Procedure(s) (EPIP) since the January-February 1978 inspection. The minutes of the March 6, 1978,

meeting of the Plant Staff Review Committee showed that the two year review of the Emergency Plan had been completed and the only changes required involve updating the telephone list.

b. Training and Drills

During 1978, the training effort on the emergency plan and implementing procedures has been more formalized. A video tape covering organization and duties, including off-site agencies, classification of emergencies and implementing procedures has been incorporated into the training program. The tape is intended to be used for training operators, management and office staff, except for clerical personnel. The inspection confirmed that notices had been issued to personnel requesting they examine this video tape by October 31, 1978. Approximately 1 1/2 hours of training on the emergency plan was given to the maintenance personnel on April 14, 1978. A signature attendance sheet was used to confirm the April 14 training. Special training was given in connection with the October 23, 1978, change in the emergency signals. The emergency signal codes have been described in EPIP-4, which is in the process of being issued. A discussion of the new signals by group (i.e., maintenance, electrical, instrument) using EPIP-4 or individual reading of EPIP-4 was the method used to assure personnel had been informed of the new signal codes.

There have been no drills on the emergency plan to date in 1978. According to the licensee the two "plan required" annual drills, one announced and the other unannounced, will be conducted prior to the end of 1978.

c. Facilities and Equipment

There have been no significant changes in the facilities and equipment since the January 1978 inspection (NRC Inspection Report No. 50-133/78-02). During the inspection, the items contained in the emergency kit located in the Shift Foreman's office at the plant were examined and compared to the list contained in the emergency plan. The following three items were missing: Victoreen Radgun (Model AGBB-10KG-SR), Eberline Model PIC-6 portable ion chamber, smear pads. According to the attached tags, the two survey meters in the kit (a Sheperd Model PCP-4F and a Thyac II) were last calibrated in March 1978. The licensee stated that (1) the Victoreen Radgun was lost sometime during the present outage, (2) they are unable to calibrate the highest scale of the PIC-6 with their current calibration source,

and (3) the smear pads are kept in the warehouse. The absence of the two survey instruments from the kit was reported in a Nuclear Plant Problem Report dated September 21, 1978. This report is still active because the final corrective action has not been finalized. According to the licensee, they are considering modifying this kit contents and changing its location. The inspector did observe an extended range (0-5,000 R/hr) Cutie Pie instrument located in a locked enclosure at the entrance to the controlled area which is adjacent to the reactor control room. This extended range instrument is for use during emergency conditions.

There have been no changes in the methods of communications or alarm signals since the January 1978 inspection (Paragraph 5.c of IE Inspection Report No. 50-133/78-02). However, the emergency signal codes were changed on October 23, 1978. The emergency signal has been tested for operability once each week and the test results recorded on a form required by the test procedure (OTP). These records were examined during the inspection.

d. Medical

The company limits plant personnel involvement in medical emergencies to first aid actions. NRC licensed personnel review the first aid section of their manual about four times per year as part of their retraining requirements. Other plant employees have received approximately 1 1/2 hours of first aid instruction every other month starting in March 1978. This latter training has been given by persons who have satisfactorily completed an instructors course. The records showed who had attended each 1 1/2 hour session and, except for the most recent presentation, the topics covered. The missing topic information will be added to the record as soon as it is received.

e. Coordination with Off-site Agencies

During this inspection, the following organizations were visited: Office of Emergency Services, Humboldt County; City Ambulance; Humboldt Fire District #1; St. Joseph's Hospital; General Hospital. The ambulance company has an agreement with the PG&E Humboldt plant that was documented in February-March 1978. The Office of Emergency Services stated they were the County point of contact for PG&E with respect to emergencies involving off-site areas

and PG&E had cooperated fully with them. The Office of Emergency Services expects to conduct another exercise when Unit 3 returns to an operational status. Both the Fire District and St. Joseph's Hospital acknowledged their agreements with PG&E and indicated satisfactory relationships. The Fire District has been involved in training at the plant on an approximately quarterly frequency. Within the last week or two General Hospital moved to new facilities. Also, there is a new Administrator. The licensee stated that they intended to visit General Hospital in the next few weeks to re-examine the agreement, particularly with respect to the new facilities. On November 6, 1978, Mr. D. Hamachek, Administrator was contacted by phone. He stated that he recently assumed the position of Administrator and was not familiar with the agreement with PG&E. Mr. Hamachek said he would discuss this matter with his staff and inform the inspector of his findings in a subsequent telephone call. As of November 16, the inspector had not received the return call.

No items of noncompliance or deviations were identified.

3. Radiological Environmental Monitoring Program

The radiological environmental monitoring program has not changed since the January 1978 inspection (reference IE Inspection Report Nos. 50-133/78-02 and 50-133/76-20). This inspection included an examination of the PG&E Department of Engineering Research (DER) quarterly environmental monitoring reports for the period July 1 through December 31, 1977. These reports showed that milk, terrestrial and marine samples did not indicate any increase in environmental radioactivity of plant origin; however, because of improved instrumentation techniques, fallout isotopes were identified in algae samples for the first time. The stray radiation chamber data indicated a maximum radiation level of approximately 9.5 mR/year above background values for any specific environmental monitoring location. The film badge and TLD data showed no exposure above background radiation. The results of samples (milk, marine and terrestrial) split with an outside organization during the period covered by the reports examined, all showed "good agreement" with DER results.

On August 2, 1978, a meeting was held in the Region V office to discuss the effect of the environmental sampling program around the PG&E nuclear power plant sites at Humboldt Bay and Diablo Canyon on the State of California performance under a contract issued by the NRC. Representatives from DER, the California State

Bureau of Radiologic Health and NRC Region V were in attendance. Differences in the required analyses, timeliness of some samples, and the availability of year-end data were discussed. DER said that they would increase the size (if possible) of the sediment indicator organisms collected at Humboldt so that the portion sent to the State would be done in a more timely manner. It was acknowledged that in the past there had been times when the sample was limited due to availability. Samples of Humboldt oysters will also be provided the State in a more timely manner. DER offered to provide the year-end data to the State on an appropriate time scale with the proviso that the data might be subject to some later modification. The differences in analyses is not under the control of PG&E and no action by them is required.

No items of noncompliance or deviations were identified.

4. Respiratory Protection Program

The licensee's respiratory protection program has been established to meet NRC requirements and satisfy the PG&E Steam Generation Department's Radiation Control Standard No. 2, Internal Exposure Controls. The current revision of this standard (No. 2) was approved by the Plant Staff Review Committee and the Plant Superintendent in May 1978. The specifics of the program have been described in the following five procedures that were reviewed and properly approved: Respirator Training (B-251), Issuing and Returning Respirators (RCP-12A), Selection and Field-Fit of Respirators (RCP-12B), Face Fitting of Half-Masks and Full-Face Mask Respirators (RCP-12C), and Respirator Maintenance (RCP-13). All personnel approved to wear respiratory protective equipment have received a medical examination prior to first use. There is also an annual medical re-evaluation. The medical aspects of the program have been assigned to the Safety, Health and Claims Department who provides the Plant Superintendent with information regarding each individual's medical acceptability for wearing respiratory protective equipment. Such information is filed in the personnel files. The licensee's internal exposure control and survey program have been described in Paragraphs 3 and 4 of IE Inspection Report No. 50-133/78-09.

The licensee uses a variety of respiratory protective equipment. The half-mask air purifying respirators have been obtained from four manufacturers in order to accommodate the variety of facial features. The full facepiece air purifying equipment have been obtained from two manufacturers. The licensee also has half-mask air supplied respirators and self-contained breathing apparatuses (SCBA). The licensee possesses five SCBA of which two are at the

access control area and three are assigned to the emergency kits (two in the Shift Foreman's office and one at Myrtle Avenue). The licensee prefers to use full facepiece air purifying equipment rather than half-mask air purifiers. All equipment has been maintained in accordance with the approved procedures. The SCBA has been checked on a monthly frequency. The use of this equipment has been greatly reduced in the last several months.

No items of noncompliance or deviations were identified.

5. Radiation Protection Procedures

During this inspection, the Radiation Control Standards and Radiation Control Procedures were examined to identify additions and revisions made since the January 1978 inspection. This examination identified three standards that had been changed during this period (Internal Exposure Control, Medical-surveillance, Control of Radioactive Materials). Six procedures were identified as being new or modified in 1978. The new procedures covered the shipping of radioactive materials, the quarterly roof ventilation exhaust air samples, and the selection and field fit of respirators. The new procedures and modifications to the standards and other procedures that were examined during this inspection have resulted in some improvement in the radiation safety program and no changes degraded it. The examination disclosed that all of these modifications and additions had been reviewed by the Plant Staff Review Committee and approved by the Committee and Plant Superintendent.

No items of noncompliance or deviations were identified.

6. Radiation Protection Training

The licensee's radiation safety training has undergone a significant modification since the January-February 1978 inspection. Some of the changes have been implemented and others are still in the development stage. The training coordinator has overall responsibility for this effort; however, the Chemical and Radiation Protection Engineer is responsible for the training of the radiation and process monitors (RPM), except for the initial preliminary training by the training coordinator.

The training of the RPMs has continued, since the January 1978 inspection, to consist of topical discussions. According to the records and interviews, the following topics have been covered since February 1: respiratory protection program, calculation of

airborne radioactive materials, use of the multichannel analyzer and calibration of the X-Y recorder, QA implementation into the Chemistry Laboratory, Radiation Control Standard 2 (Internal Exposure Controls), air sampling. The newest member of the RPM staff has continued to receive on-the-job-training with documented daily accomplishments being placed in a file maintained by the training coordinator.

The initial and retraining radiation safety program for all persons except licensed operators, radiation safety staff and supervisory personnel consists of seven (7) video tapes. The tapes cover the following subjects: What is radiation, biological effects of radiation, radiation protection, measuring radiation, administrative requirements, entering and exiting the controlled area, respiratory protection program. The tape includes a series of questions at the end. The training coordinator corrects examinations and provides any necessary discussion resulting from the tape viewing. The initial trainees are also given instructions and participate in all activities associated with the entering and leaving the controlled area. These initial trainees also take a tour of the controlled area. According to the licensee, they intend to have all unlicensed operators view these tapes before the end of the year. Retraining of nonoperating personnel, excluding the radiation safety staff, has also taken the form of presentations during the regular safety meetings. The following topics have been covered in this manner since February 1, 1978: procedure changes, respiratory protection program, incidents and accidents, constant monitoring during jobs, and radiation and the limits. The licensee has documented these training efforts.

The supervisory and engineering staffs received approximately two (2) hours of radiation safety training in August and September 1978. The following topics were presented: bases for exposure limits; external limits; procedures for SWP's, PWP's and access log; MPC's and internal dose limits; 10 CFR Part 20; respiratory protection program; ventilation; shipping of radioactive materials. The licensee has also documented this training.

The administrative procedure covering the radiation safety training program is in the process of being modified to reflect the improved program, some of which is already in effect.

No items of noncompliance or deviations were identified.

7. Radiation Safety Staff

The present plant radiation safety staff consists of five persons - a Chemical and Radiation Protection Engineer, a Radiation and Process Monitor Foreman, and three Radiation and Process Monitors. The second Chemical and Radiation Protection Engineer terminated his employment in June 1978. The newest monitor joined the staff in May 1978; however, he had been a RPM at Humboldt prior to his previous assignment at Diablo Canyon.

No items of noncompliance or deviations were identified.

8. Observations

During this inspection, two observations were made in connection with normal plant activities. The video tape on radiation protection was seen. This tape covered such items as the use of time, shielding and distance for control of external exposure, the controlling of areas, the posting of areas and the basic company policy of keeping exposures as low as reasonably achievable. The questions at the end of the tape were addressed to the significant information presented. The collection of water samples from the discharge canal, as well as other water samples collected for non-radiological analyses, was observed. The water sample from the canal that was to be analyzed for activity appeared to a representative sample.

No items of noncompliance or deviations were identified.

9. Exit Interview

At the conclusion of the October 23-26, 1978, visit, the inspector met with those persons identified in Paragraph 1 of the report. The scope of the inspection and the findings were described. The licensee was informed that there were no apparent items of noncompliance. No other items of significance were discussed.