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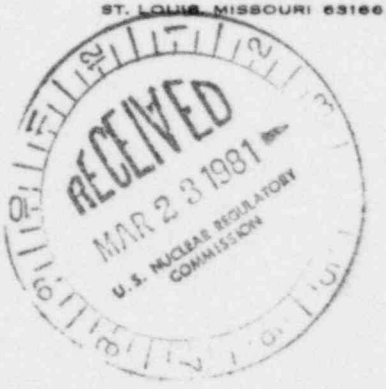
March 20, 1981



Mr. Harold R. Denton
Director of Nuclear Reactor Regulation
U.S. Nuclear Regultory Commission
Washington, D.C. 20555

ULNRC-426

ULNRC-

Dear Mr. Denton:

DOCKET NUMBER 50-483 AND 50-486
CALLAWAY PLANT, UNITS 1&2
FINAL SAFETY ANALYSIS REPORT

Reference: NRC Letter dated February 9, 1981 signed by R. L. Tedesco

The referenced letter requested additional information concerning the Callaway Plant FSAR. Transmitted herewith are responses to questions in the referenced letter. This information will be formally incorporated into the Callaway Plant FSAR in the next revision. This information is hereby incorporated into the Callaway Application.

Very truly yours,

John K. Bryan

John K. Bryan

DS/kml

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STATE OF MISSOURI)
) S S
CITY OF ST. LOUIS)

John K. Bryan, of lawful age, being first duly sworn upon oath says that he is Vice President-Nuclear and an officer of Union Electric Company; that he has read the foregoing document and knows the content thereof; that he has executed the same for and on behalf of said company with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By John K. Bryan
John K. Bryan
Vice President
Nuclear

SUBSCRIBED and sworn to before me this 20th day of March, 1981

Margaret S. Heida

MARGARET S. HEIDA
NOTARY PUBLIC—STATE OF MISSOURI
ST. LOUIS COUNTY
MY COMMISSION EXPIRES JANUARY 2, 1982

Item 331.1C (13.1.3.2) In accordance with the recommendations of Regulatory Guide 1.8, the Assistant Superintendent, Engineering - Radiochemistry does not qualify as a Radiation Protection Manager (RPM) since he does not presently have the three years of professional experience dealing with radiological problems in applied radiation protection encountered at an operating nuclear power station or equivalent. Therefore, please justify the selection of the individual delineated for this position based on his training and experience as shown in Section 13.1.3.2 and specify, as required, how he will achieve the aforementioned experience, prior to the plant being licensed, to qualify as the RPM.

Response: Refer to Section 13.1.3.2 of Revision 2 of the FSAR for the qualifications of the presently assigned individual. According to the definitions published in ANS 3.1, which are also endorsed by Regulatory Guide 1.8, the assigned individual has two and one half years of equivalent nuclear power plant experience in the area of health physics. He has also had four weeks experience in plant operations and hot functional testing at the Farley Nuclear Plant, Units 1 and 2. In addition to the qualifications stated, the Assistant Superintendent, Engineering - Radiochemistry will be participating in a refueling outage of a commercial nuclear power plant prior to Callaway's fuel load.

Item 331.2C (13.1.2.1) Based on information in the draft document "Criteria for Utility management and Technical Competence" it is our position that the Radition Protection Group be a separate organization from the Chemistry Group. Your station organization chart (Figure 13.1-3) shows these groups combined. Additionally, in accordance with Regulatory Guide 8.8, it is our position that the Radiation Protection Manager (RMP) should have access to the Assistant Plant Superintendent in radiation protection matters. In matters relating to radiological health and safety, the RPM has direct responsibility to both employees and management that can best be fulfilled if he is independent of station divisions, such as operations, maintenance or technical support, whose prime responsibility is continuity or improvement of station operability. Your FSAR and proposed Technical Specifications should be revised to reflect how your planned radiation protection program reflects this position.

Response: Figure 13.1-3 will be revised to show the Assistant Superinterdent, Engineering - Radiochemistry (RPM) to have direct access to the Plant Superintendent for any matter of radiological health and safety. This access should provide the needed independence from the operations, maintenance or technical support departments to ensure the Radiation Protection Manager can fulfill his responsibility to Callaway employees and management.

The Rad/Chem group as defined by Figure 13.1-3 is to have the responsibility for radiation protection, radiochemistry, radwaste, and chemistry. The personnel within this group will have the qualifications as specified by Sections 13.1.3.1.7, 13.1.3.1.8, 13.1.3.1.18, and 13.1.3.1.19. The Rad/Chem Technicians will have the qualifications required by USNRC Regulatory Guide 1.8 Revision 2 dated 2/79. The Rad/Chem Technicians receive on-site training in areas for which they are responsible. In addition to the formalized training, the Rad/Chem Technicians are required to qualify in each task required for their job functions. The Rad/Chem Technicians will be qualified for each task assigned. Specific training for personnel within the Rad/Chem group is detailed in Figure 13.2-1. Due to the qualification requirements for personnel within the Rad/Chem group, the training provided to these personnel, the task qualifications for job functions, and the access to a high level plant position assuring independence from operating pressures on the Rad/Chem group, it is our position that the radiation and chemistry functions can be handled effectively within the same organization.

We believe that the variety of work available to a Rad/Chem Technician will enhance their technical development and provide a positive attitude toward their job functions. In addition, rotation of job functions will result in better radiation protection management through the individual's awareness, accuracy, and attention to detail. When this attitude is combined with the aforementioned qualification program and qualification cards to ensure proficiency, a much better overall program should result. Moreover, the flexibility provided by an individual knowledgeable and responsible for both areas will eliminate potential communication problems, between these two areas of responsibility which must work together to minimize radiation exposure.

Finally, having staff members experienced in both disciplines will reduce the need to bring in temporary offsite employees for radiation management during outages, thus providing a higher level of protection since all such individuals will be qualified and trained on Callaway Plant.

Item 331.3C (13.1.2.1) Concurrent to the change request in 331.2 above. Figure 13.1-3 should also show that Helath Physics technicians and Chemistry technicians become separate groups, be qualified separately as Chemistry and Radition Protection Technicians, and each report directly to their respective Radiation Protection and Chemistry group managers. This change request is also in accordance with the aforementioned draft document.

Response: Refer to the response of question 331.2C.

Item 331.4C (13.1.2.1) Please describe your plan to provide backup coverage in the event of the absence of the RMP and outline the qualifications of the individual who will act as the backup. The December 1979 revision of ANSI 3.1 specifies that the temporary replacement for an RPM should have a BS degree in science or engineering, 2 years experience in radition protection, 1 year of which should be nuclear power plant experience, 6 months of which should be on-site.

Response: The responsibilities of the backup Radiation Protection Manager are to be assumed by the Assistant Superintendent Engineering. The qualifications of the Assistant Superintendent, Engineering are outlined in Section 13.1.2.3. In addition to the qualifications stated, the Assistant Superintendent, Engineering will be participating in a refueling outage at a commercial nuclear power plant prior to Callaway's fuel load.

Item 331.5C (13.1.2.3) Section 13.1.2.3 specifying shift crew composition does not state than an H.P. technician will be on-site at all times (e.g., including backshifts and weekends). NUREG-0654 "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparation in Support of Nuclear Power Plants" requires that a radiation protection technician, whose qualifications are described in ANSI 18.1, shall be on-site at all times. Section 13.1.2.3, as written, would allow a designated member of the shift crew (e.g., reactor operator) to act as a health physics technician if he is qualified to implement radiation protection procedures. It should be noted that this qualification is no longer acceptable to the staff after the reactor is at power. Only an assigned health physics technician will be acceptable based on new staff requirements. Therefore, Section 13.1.2.3 should be revised accordingly.

Response: Section 13.1.2.3 will be revised to reflect the commitment to a Rad/Chem Technician on-site at all times after the reactor is at power.

Item 331.6C (12.5.3.1.3) In accordance with Section 12.5.3.1.3 Airborne Radioactivity Surveys, please discuss your radiation protection provisions for installation of temporary flexible ducting and monitoring at the site of maintenance operation and repair activity, if a high potential for airborne radioactivity exists, to assure that 10 CFR Part 20 limits are not exceeded and that exposures are maintained as low as is reasonably achievable during the operation.

Response: Temporary flexible ducting will be utilized at those work sites where the potential exists for high levels of airborne radionuclides at the work site. HEPA filters will be used at the exhaust of this ducting.

The cartridge-filter assembly for air sampling will be at the site of maintenance operation and repair activity in a position that is representative of the atmosphere to which the worker is being exposed. With the use of temporary flexible tubing the air sampler can be at a distance away from the repair activity allowing the persons taking the air sample to maintain his radiation exposure as low as reasonably achievable. The frequency of air sampling at the repair activity will be based upon the potential for transient airborne radiological conditions at the repair site.

The above practices will be in addition to the respiratory requirements set forth in the applicable radiation work permits.

Item 331.7C (Table 12.5-2)

Although table 12.5-2 lists 4 portal monitors in the Health Physics instrument inventory, the table does not include monitoring devices for hands, shoes and self monitoring equipment normally used when leaving radiation areas. Please describe the monitoring equipment and procedure used for hands, shoes, clothing and skin (e.g., face) monitoring when leaving potentially contaminated areas and entering unrestricted areas.

Response:

Instrumentation for monitoring hands, feet, skin, clothing and the face when exiting into unrestricted areas will be accomplished by the use of monitoring stations with RM-14S monitors equipped with HP-210 probes or their equivalent. In areas of high background, shielded HP-210 probes will be used for personnel monitoring.

Portal monitors will be used in conjunction with monitoring stations at the controlled access point to a restricted area and security buildings.

Personnel monitoring procedures with detailed instructions for the use of the monitoring stations and proper methodology for "frisking" will be posted at each monitoring station. The personnel monitoring procedure describes the techniques for monitoring the different areas of the body, rate of movement of the probe, distance of probe from the body and the actions that are to be carried out in the event contamination is discovered.

Item 331.8C (12.5.3.1) In accordance with Section 12.5.3.1, the radiochemist section provides services normally provided for by health physics personnel. Please justify using chemists to perform this service as compared to qualified health physics technicians that are trained and experienced in their specialty in accordance with ANSI 3.1 (1978). Your response should be coordinated with question 331.3.

Response: Change "Radiochemistry" to "Radiation-Chemical".

The Assistant Radiation-Chemical Technicians and Radiation-Chemical Technicians are qualified in accordance with Reg. Guide 1.8 - Rev. 2 thus meeting ANSI 3.1. Consequently, references to Radiation-Chemical Technicians are references to either Assistant Radiation-Chemical Technicians or Radiation-Chemical Technicians.

Radiation surveys are performed by Radiation-Chemical Technicians under the guidance of Radiation-Chemical Foremen or Health Physicists.

In coordination with question 331.3 Radiation-Chemical Technicians are qualified in the following areas: 1) Area monitoring, 2) Selection and use of portable survey meters, 3) Determination of does rates, 4) ALARA principles and techniques, 5) Selection of and use of applicable shielding.