**Commonwealth Edison**
One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

October 27, 1980

Mr. B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: LaSalle County Station Units 1 and 2
Response to NRC Second Round Questions
(Q331.32 through 331.37)
NRC Docket Nos. 50-373/374

References (a): R. L. Tedesco letter to J. S. Abel dated September 10, 1980

(b): L. O. DelGeorge letter to B. J. Youngblood dated October 20, 1980

Dear Mr. Youngblood:

The purpose of this letter is to provide reference to the materials which respond to the subject NRC questions transmitted in Reference (a). In the case of Question 331.32 and 331.33 the LaSalle County response is documented in Sections L.18 and L.28 of Reference (b). Formal reference in the FSAR will be documented in a future amendment. In the case of Questions 331.34 through 331.37, the FSAR input which will be submitted in the next formal amendment is attached. In this regard, both FSAR text changes and formal question responses are provided.

If you have any furter questions in this regard, please direct them to this office. Ten (10) copies of this response are provided at this time to facilitate your review.

Very truly yours,

L. O. DelGeorge
Nuclear Licensing Administrator

cc: RIII Inspector - LSCS

Attachment

B001
S.1/1

7706A

331.34 Concerning item 2.1.8.c/111.D.3.3 (Improved In-Plant Iodine Instrumentation) of NUREG-0578, provide the following information:

1) the number and type of air samplers and portable SAM-2's available for accident use.

2) the type of air sampling cartridges (such as silver zeolite) used.

3) a description of training and procedures provided for plant personnel to be able to determine the presence of airborne radioiodine in plant areas following an accident.

In addition, specify the location of the low-background, low contamination area used for iodine analysis following an accident. Also describe how you intend to purge sample cartridges of entrapped noble gases prior to cartridge analysis

RESPONSE:

Refer to FSAR Section 12.5 which has been revised to include in-plant iodine instrumentation and monitoring following an accident condition.

331.35 The plant organizational chart in Figure 13.1-4 shows the Rad/Chem Supervisor reporting through the Technical Staff Supervisor to the Administrative Assistant. The Rad/Chem Supervisor is also shown reporting on a lower level than the Senior Operating Engineer (ANSI equivalent is Operations Manager). The draft document, "Criteria for Utility Management and Technical Competence", specifies that: 1) the Radiation Protection Manager (RPM) (equivalent to your Rad/Chem Supervisor) Should have a clear line of authority to the Plant Manager/Assistant Plant Manager (or Administrative Assistant in your organization); 2) the RPM should report at the same level as the Operations Manager (equivalent to your Senior Operating Engineer); 3) the RPM should be a member of PORC; and 4) the Radiation Protection Section should be separate from the Chemistry Section. It is our position that you make the above changes and revise your FSAR and proposed Technical Specifications accordingly.

RESPONSE:

1) Topical Report CE-1A, Revision 14, dated Sept. 9, 1980 delineates the line of authority from the Rad/Chem Supervisor (Radiation Protection Manager) to the Station Superintendent (Plant Manager). This Topical Report was submitted to the commission on September 18, 1980 and supercedes previous organizational information.

2) Topical Report CE-1A, Revision 14, dated Sept. 9, 1980 delineates the reporting level for the Rad/Chem Supervisor (Radiation Protection Manager). This Topical Report was submitted to the Commission on Sept. 18, 1980 and supercedes previous organizational information.

3) All Commonwealth Edison Nuclear Stations utilize similar on-site review programs, as delineated in Chapter 6 of their Technical Specifications. The plant on-site review of those areas that concern Chemistry/Radiation Protection will involve the selection of those individuals who have expertise in the area under review, as described in Technical Specifications.

4) The draft criteria "Criteria For Utility Management and Technical Competence" provides a representative plant organization chart. The criteria states that organizational arrangements can vary considerably to include the characteristics of the chart. All Commonwealth Edison Nuclear Stations currently utilize a common Chemistry/Radiation Protection Department, as described in Topical Report CE-1A. LaSalle County Station will conform to the organization as described in Topical Report CE-1A.

331.36 It is our position that the Rad/Chem Supervisor, H.P. Technical Support Personnel, and the Radiation Protection Foreman meet the minimum requirements of Regulatory Guide 1.3 (September 1975) "Personnel Selection and Training" which references ANSI 18.1 (1971). Provide updated resumes for the personnel who have been chosen to fill these positions with a breakdown of their qualifications corresponding to Regulatory Guide 1.8/ANSI 18.1 requirements (education, training, experience). The experience referenced for all above personnel must be in the individuals speciality, which in this case would be radiation protection.

RESPONSE:

Resumes for personnel holding positions of Rad/Chem Supervisor, Health Physics Technical Support personnel, and Radiation Protection Foremen are included in the revised FSAR section 13.2.

331.37 Based on information contained in the draft document "Criteria for Utility Management and Technical Competence", it is our position that your organization chain contain a qualified health physicist to provide backup in the event of the absence of the Rad/Chem Supervisor. The December 1979 revision of ANSI 3.1 specifies that individuals temporarily filling the RPM position should have a B.S. degree in science or engineering, 2 years experience in radiation protection, 1 year of which should be nuclear power plant experience, 6 months of which should be on-site. It is our position that such experience be professional experience. Provide an outline of the qualifications of the individual who will act as the backup for the RPM in his absence.

RESPONSE:

The LaSalle Station organization currently provides a qualified health physicist backup in the event of the absence of the Rad/Chem Supervisor. The qualifications of this individual are in accordance with the December 1979 draft ANSI 3.1. It is noted that Section 4.1, paragraph 2 of Qualifications, ANSI 3.1, December 1979 draft provides that "Individuals who do not possess the formal educational requirements specified in this section shall not be automatically eliminated where other factors provide sufficient demonstration of their abilities."

12.5.3.3.1 Personnel Internal Exposure Program During Accident Conditions

Five (5) Eberline Instrument Corporation PING-3 (2A special) Particulate, Iodine, and Nobel Gas Air Monitoring System(s) are provided for air sampling plant areas where personnel may be present during accident conditions. The systems are cart mounted with battery powered back-up.

Grab samples are obtained using the equipment specified in LSCS-FSAR Table 12.5-2. During accident conditions Silver Zeolite cartridges will be used for radio-iodine analysis in conjunction with one (1) Eberline Instrument Corporation SAM-2.

Station procedures are provided for obtaining and evaluating both routine and non-routine air samples. In addition to initial training provided for Radiation/Chemistry personnel, periodic drills are conducted in accordance with Generating Stations Emergency Plan (GSEP) Section 8.3 (Refer to FSAR Chapter 13.3).

Analysis of iodine cartridges will be performed in a low background, low contamination area. During accident conditions an area such as the lower Storeroom elevating of the Service Building or the Rad Waste Control Room can be used for this purpose. Prior to analysis, cartridges will be purged using station service air or bottled nitrogen which is stored on-site.

13.A.25 RAD/CHEM SUPERVISOR

NAME: Francis R. Lawless
CITIZENSHIP: U.S.A.
AGE: 46
Prior AEC or NRC License Held: None
FORMAL EDUCATION: B.S., Chemistry
St. Procopius College (Ill. Bendictine),
Lisle, Illinois, 1959

TRAINING: General Electric "Fundamentals of BWR Operation"
(1 Week) (1978)

LaSalle County Station Systems Description
(5 Weeks) (1977)

Gamma-Ray Spectrometry Instrumentation,
(6 Weeks) (1976)

Short Course on "Radiation Protection" University
of Michigan (2 Weeks) (1980)

WORK EXPERIENCE:

6/59-6/71 - Scientific Assistant, Chemistry Division, Argonne National Laboratory.
Responsible for radiochemical analysis service work. Duties also included original research work for radiochemical separations; search for promethium in nature, identification and characterization of Gd-162; operation and maintenance of a radiochemistry hot cell for fuel burnup work; chemical group separation of Apollo 11 lunar soil in the search for the quark; Great Lakes water chemistry environmental work. Performed radiation surveys on samples containing radioactivity and was responsible for adequate shielding for these samples.

6/71-4/73 - Scientific Assistant, Chemical Engineering Division, Argonne National Laboratory. Duties included chemical separation and analysis of metallic sodium for the breeder reactor project; analytical work for the storage battery program.

4/73-11/75 - Unit Chemist, Quad Cities Nuclear Power Station. Responsible for chemistry and radiochemistry of Unit 2 and chemistry systems in the plant.

11/75-4/76 - Lead Chemist, Quad Cities Nuclear Power Station. Responsible for development, implementation, and supervision of chemistry and radiochemistry activities.

4/76-3/79 - Lead Chemist, LaSalle County Station Responsible for development, implementation, and supervision of chemistry and radiochemistry activities. Routinely substituted for the Rad/Chem Supervisor during prolonged absences from the station for training purposes. Supervised other professional Health Physicists, Chemists, and Technicians.

3/79 - Present - Rad/Chem Supervisor, LaSalle County Station Responsible for Supervision and development of Health Physics, Chemistry, and Radiochemistry Activities and procedures. Currently supervises 11 management personnel and 19 technicians. Initiated and directed the implementation of the qualification program for the Rad/Chem Technicians.

ORGANIZATIONS: Member of the Midwest Chapter, Health Physics Society.

| Review of Qualifications vs. Regulatory Guide 1.8. | |
|---|---|
| The RPM should have a bachelor's degree or the equivalent in a science or engineering subject, including some formal training in radiation protection. | B.S., Chemistry 1959<br>ST. Procopius College (Ill. Benedictine), Lisle, IL<br><br>Gamma Ray Spectrometry, CECo. Tech Center 6 Wks. 1976<br><br>Radiation Protection, U of Michigan 2 wks. 1980 |
| The RPM should have at least five years of professional experience in applied radiation protection. (A master's degree may be considered equivalent to one year of professional experience, and a doctor's degree may be considered equivalent to two years of professional experience where course work related to radiation protection is involved.) | 21 years of experience in nuclear industry. Duties at Argonne included provision of monitoring for hot cell work on fuel burnup. Duties at CECo Nuclear Stations included Radiological effluent monitoring and calibration and operation of all Radiological Counting Room Equipment. Other CECo duties included assignments to Radiological Environmental Monitoring Team positions as part of Generating Stations Emergency Plan. Spent 3 years at operating 2 Unit BWR Facility (Quad Cities) and 4 years at LSCS under construction. |
| At least three years of this professional experience should be in applied radiation protection work in a nuclear facility dealing with radiological problems similar to those encountered in nuclear power stations, preferably in an actual nuclear power station. | " |

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|---|---|
| The Radiation Protection Manager (RPM) should be an experienced professional in applied radiation protection at nuclear facilities with radiation protection problems and programs similar to those at nuclear power stations. | 21 years of experience in Nuclear Industry. Duties at Argonne included provision of monitoring for Hot Cell Work on Fuel Burnup. Duties at CECo. Nuclear Stations included radiological effluent monitoring and calibration and operation of all radiological counting room equipment. Other CECo. duties included assignments to Radiological Environmental Monitoring Team positions as part of Generating Stations Emergency Plan. Spent 3 years at Operating 2 Unit BWR Facility (Quad Cities) and 4 years at LSCS under construction. |
| The RPM should be familiar with the design features and operations of nuclear power stations that affect the potential for exposures of persons to radiation. | Attended 5 week Systems Description Class at LaSalle covering design features & operations of LSCS. 3 years at Operating 2 Unit BWR Facility (Quad Cities) and 4 years at LSCS under construction. |
| The RPM should have the technical competence to establish radiation protection programs and the supervisory capability to direct the work of professionals, technicians, and journeymen required to implement the radiation protection programs. | Recently directed preparation and implementation of Qualification Card Program for Rad Chem Technicians at LSCS. Currently supervises 11 management personnel (including other Professional Health Physicists, Chemists, Radiochemists, and Support Personnel) and approximately 20 Technicians. |

13.A.26 Health Physics Coordinator

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| NAME: | Joseph G. Lewis Jr. |
| CITIZENSHIP: | U.S.A. |
| AGE: | 32 |
| FORMAL EDUCATION: | Graduated Graylake Comm. High School, Grayslake, Ill 1965 |
| ATTENDED: | Blackhawk Comm. College<br>Mathematics Calculus. |
| | U.S. Navy Nuclear Power School<br>(49 Weeks) 1966-67 |
| | LaSalle County Station System Description<br>(5 Weeks) 1977 |
| | Federal Emergency Management Agency - Staff College<br>Radiological Emergency Response Planning (1 Week) 1979 |
| | University of Michigan Short Course on Radiation Protection<br>(2 Weeks) 1980 |
| WORK EXPERIENCE: | Commonwealth Edison Company |

1. 10/67 - 10/68 Plant Operator - Instructor at Knolls Atmoic Power Laboratory 53G Power Plant Prototype. Responsible for verification of trainee qualification for mechanical systems.

2. 10/68-8/71 Qualified as Emergency Room Supervisor and Member of Radiation Emergency/Casualty Team aboard USS George C. Marshall SBB(N) 654.

3. 5/71-5/77 Radiation Protectionman/Radiation Chemistry Technician at Quad-Cities Nuclear Power Station. Responsible for the performance of radiation protection, chemistry, and radio-chemistry duties.

4. 5/77-5/80 Laboratory Foreman at LaSalle County Station. Responsible for coordination of Radiation Protection and Laboratory activities. Startup Test Engineer for Reactor Water Cleanup System.

5. 5/80-Present Health Physics Coordinator LaSalle Company Station. Responsible for implementation, coordination, and development of the Station Health Physics Program.

13.A.27 Health Physicist

NAME: Lary R. Aldrich
CITIZENSHIP: U.S.A.
AGE: 23

Prior AEC or NRC License Held: None

FORMAL EDUCATION: School of Science
Syracuse University
Syracuse, New York
(Sept. 1974 - May 1975)

B.S. in Environmental Health/Health Physics
Prudue University
West Lafayette, Indiana
(Sept. 1975 - May 1978)

TRAINING: LaSalle County Station System Description Course
(5 Weeks) (1978)

WORK EXPERIENCE:

1/78-5/78 Health Physics Technician (part-time), Radiological Services Dept., Purdue University. Responsible for: Waste Disposal, Instrument Calibration, Laboratory Survey and Decontamination.

6/78-9/78 Health Physicist, Commonwealth Edison Co., Corporate Headquarters, Chicago, Illinois.
Responsible for: Review and Analysis of Operating Nuclear Station Radiation Monitoring Data, Set-up of Environmental Radiation Monitoring for Byron Nuclear Power Station, Byron, Illinois, and Procedure Writing for the Computerized Radiation Dosimetry Program.

9/78-Present Health Physicist, Commonwealth Edison Co., LaSalle County Nuclear Station, Marseilles, Illinois.
Responsible for: Contamination Control, Radwaste, Shipping/Receiving, Internal Exposure, External Exposure, and Dosimetry Programs along with Preoperational Testing of the Area Radiation Monitoring System and the Post Accident Containment Monitoring System

ORGANIZATION: ETA Sigma Gamma Honorary for Environmental Health
Midwest Chapter of the Health Physics Society.

13.A.28 LABORATORY FOREMAN

NAME: Bruce H. Nelson
CITIZENSHIP: U.S.A.
AGE: 41

Prior AEC or NRC License Held: None

FORMAL EDUCATION:

ATTENDED: University of Rhode Island, 1961

Joliet Junior College
Joliet, Illinois, 1963-1965

TRAINING: Introduction to Nuclear Power
(6 Weeks) (1968)

Radiation Protection Training Dresden Station
(8 Weeks) (1969)

LaSalle County Station Systems Description
(5 Weeks) (1977)

Radiation Chemistry Technician Training LaSalle Station
(16 Weeks) (1978)

General Electric "Fundamentals of BWR Operation"
(1 Week) (1979)

WORK EXPERIENCE: 1/68-9/68 - Stationman, Dresden Station
General Station Work.

9/68-12/68 - Auxiliary Operator, Dresden Station.
On the job training for "B" Operator and Helper Assisting in "B" type work.

12/68-7/69 "B" Operator, Dresden Station. Worked on shift operating Radwaste, Heating Boilers, Make-Up & Condensate Demineralizers, all types of work in the fuel building and start-up operations on Dresden 2&3.

7/69-5/77 Radiation Chemical Technician, Dresden Station. Working in the areas of chemical analysis for plant operations and radiation protection.

5/77-Present - Radiation Chemical Foreman.
LaSalle Station.

13.A.29 LABORATORY FOREMAN

NAME: Toby D. Hodges
CITIZENSHIP: U.S.A.
AGE: 31
Prior AEC or NRC License Held: None

FORMAL EDUCATION:

University of Wisconsin - Platteville
Platteville Wisconsin '67-'68

Sauk Valley College '68-'69
Dixon, Illinois

University of Wisconsin - Platteville
Platteville, Wisconsin '71-'72

TRAINING: Steam and Mechanical Fundamentals

Introduction to Nuclear Power (6 Weeks) (1977)

Instrumentation Training School
CECo. Program (16 Weeks) (1976)

Electrical Blueprint Reading (8 Weeks) (1976)

LaSalle County Station Systems Description
(5 Weeks) (1978)

LaSalle County Station Radiation -
Chemistry Technician Training.
(1978) (16 Weeks)

WORK EXPERIENCE: 10/74 - 5/75 Stationman, Dixon Generating Station.

5/75 - 11/76 Assistant Laboratory Tester, Dixon Station. Responsible for Water Chemistry Analysis, Chemical additions necessary to Boilers, Condensers, Coal Samples.

11/76 - 5/78 Instrument Mechanic "A". Responsible for calibration and Maintenance of Station Instruments and Controls. Continued Water Analysis, precipitator performance, testing of pulverizers.

5/78 - 5/80 Radiation Chemistry Technician. Trained in Radiation Chemistry. Worked as R.C.T. performing Water Chemistry Analysis and Radiation Surveys.

5/80 - Present Radiation Chemistry Foreman. Assign and and assist R.C.T.'s on various responsibilities. Revised GSEP Procedures.