

April 22, 1970

Karl Kniel, PWR #1, DRL
THRU: ^{15/}D. Thompson, Chief, OSB, DRL

DRAFT MATERIAL FOR ACRS REPORT FOR CONSOLIDATED EDISON COMPANY,
INDIAN POINT NUCLEAR UNIT NO. 2, DOCKET NO. 50-247

- Ref: (a) Draft Questions for Consolidated Edison, Indian Point No. 2
from F. R. Allenspach to K. Kniel, dated April 8, 1969.
(b) Draft Questions for Consolidated Edison, Indian Point No. 2
from F. R. Allenspach to K. Kniel, dated January 28, 1970.

We have reviewed the Indian Point Nuclear Unit No. 2 FFDSAR and its
amendments. Attached for your use is our evaluation of the information
issued to date.

^{15/}F. R. Allenspach
Operational Safety Branch, DRL

cc: D. J. Skovholt, DRL
D. Muller, DRL
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Draft Material for Consolidated Edison

Indian Point Unit No. 2

10.0 Conduct of Operations

10.1 Technical Qualifications

A. Responsibilities and Staffing

The Indian Point Unit No. 2 was designed and is being built by the Westinghouse Electric Corporation as prime contractor for Consolidated Edison. Preoperational testing of equipment and systems at the site and initial plant operation will be performed by Consolidated Edison personnel under the technical direction of Westinghouse Electric Corporation.

The applicant's organization for the Indian Point Station Units 1 & 2 consists of three main groups under the direction of the General Superintendent: the Operations group (with a separate Superintendent for each unit); the Performance group (which has the responsibility for station chemistry, licensed personnel training and surveillance of station performance); and a Supervisor Engineer for Health Physics who has the responsibility for station health physics and instrumentation). An Assistant Superintendent for Maintenance, and Production Engineers (responsible for providing staff support for the Operations Superintendents in the areas of training, development and implementation of test procedures and evaluation of test results) report to the two Superintendents for Operation. The

Reactor Engineer reports directly to the General Superintendent. The proposed shift complement for dual-unit operation consists of one General Watch Foreman (SRO), one Watch Foreman (SRO) for each unit, one Control Operator A (RO) for each unit, one unlicensed Control Room Operator B shared by both units, one Control Operator B for Unit 1 Chemical Systems Building, six Operating Mechanics (two of whom are assigned to Unit No. 2), one shift chemist, and one shift health physics technician.

The shift composition for Unit No. 2 when Unit No. 1 is shutdown for any reason is the General Foreman, one Watch Foreman, one Control Operator A and two Operating Mechanics. In addition, the Control Room Operator B may be available a substantial portion of his time.

B. Experience and Training

The training program is formulated on the fact that the station organization for dual unit operation is fundamentally an expansion of Nuclear Unit No. 1 organization. The General Superintendent, Unit No. 2 operations Superintendent, Assistant Superintendent and Station Reactor Engineer have had nuclear experience on Unit No. 1 and hold or have held a Senior Reactor Operator License for that Unit. One of the prerequisites for Unit No. 2 startup Watch Foreman is that they must hold a Senior Reactor Operator License on Unit No. 1 and the startup Control Operators must hold a Reactor Operator License on Unit No. 1.

Based on this experience, educational background and job responsibilities, the training program has been fitted to individual needs. It included Westinghouse off-site training for key supervisory personnel including the Watch Foremen, and extensive formal on-site training program taught by both Consolidated Edison and Westinghouse personnel.

C. Operating Procedures

Written procedures covering overall plant operations, individual system operations, and emergency procedures will be prepared as part of the overall training effort. These procedures will be reviewed within the group preparing them and then submitted to the General Superintendent and Nuclear Facilities Safety Committee for final approval.

D. Safety Review and Audit

As a means for the continuing review and evaluation of plant operational safety the applicant proposed to expand the responsibilities of the Nuclear Facilities Safety Committee currently functioning for Unit No. 1 to include Unit No. 2. The six man committees responsibilities are to review facility operation, including equipment performance, to determine adherence to license requirements, review any proposed change in the facility, procedures, tests or experiments to be conducted therein, when requested by the General Superintendent of the facility, to reach a determination whether such proposed changes, tests or

experiments involve an unreviewed safety question; make other such studies and analyses of station organization, questions and procedures as may be requested by the General Superintendent or other corporate officers.

We conclude that the applicant's organization is acceptably staffed and technically qualified to perform their normal operational duties, subject to receipt of satisfactory personnel resumes for the Superintendent Performance, Supervisor Engineering (Health Physics), Assistant Superintendent (Maintenance), Assistant Supervisor Engineering (Nuclear Plant Instrumentation, Health Physics and Conventional Plant Instrumentation), proposed number of Health Physics, Instrumentation, production and mechanical technicians, and satisfactory completion of licensing examinations of personnel requiring licenses.

10.2 Emergency Planning

The site emergency plan for the Indian Point Nuclear Generating Facility describes in general the emergency organization and their responsibilities, the scope of the plan including local contingency, site contingency and general (off-site) contingency, implementation levels for each contingency, notification channels, the support provided by civil authorities, protective measures for each contingency, communications facilities, and training drills. While not incorporated in the plan, per se, the applicant has extensively described his medical support.

We conclude that the applicant's Emergency Preparedness Plan is acceptable for the Indian Point Nuclear Generation Facility.

10.3 Plant Security

The immediate plant area (restricted area), including Unit No. 1 which is now enclosed, will be enclosed by a fence. Access to the restricted area for all personnel will be through manned gate houses or locked gates which are under direct control of the station security forces. In addition to gate control access the security guards make routine patrols of all properties within the site boundary but outside the restricted area and are required to make hourly reports to the Central Control Room. The security force is provided by a private detective agency.

The controlled area of Unit No. 2 will include the containment, the fuel storage building, the primary auxiliary building and the emergency diesel generator building. Normal access to these areas is through the existing security room for Unit No. 1. All other doors and hatches leading into the controlled area will be locked and will be supervised by means of door switches connected to the open-door alarm board in the Security Room, and the category alarm board on the Unit No. 1 Central Control Room. The containment personnel hatch doors have remote indicating lights and annunciators situated in the control room which indicate the door operational status.

Off-site Consolidated Edison employees and Consolidated Edison Technicians and Engineers must identify themselves at the main gate, prior to admission to the restricted area, receive approval for entry from the General Superintendent or his designated representative and sign in on a Report on Admission Sheet. If access into the controlled area is further approved they must be accompanied by a qualified guide.

We are presently discussing with the applicant the advisability of his present policy of escorted tours of the general public to view Central Control Room operations through a glass enclosed booth which projects into the west end of the control room.

We conclude that the applicant has taken reasonable measures to provide for the security of the facility, subject to the resolution of our concerns regarding the tours into the central control room area by the general public.

10.4 Pre-operational Testing and Startup Organization

Preloading tests will consist of 27 system tests. The acceptance criteria for each is that the test objectives are met within the design specifications limits and within the applicable Technical Specifications. Satisfactory completion of zero power tests to verify that the basic static and kinetic characteristics of the core are as expected and that the values of kinetic coefficients assumed in the safeguards analysis are conservative. Zero power tests will be followed by a series of 25 post loading tests.

All tests and test procedures will be under the control of the General Superintendent. Westinghouse will provide technical direction for these tests.

Test procedures are written and approved by both Westinghouse and Consolidated Edison prior to plant testing. Post core load test procedures are prepared by Westinghouse and are reviewed by Consolidated Edison through the Nuclear Facilities Safety Committee.

The applicant's startup organization provides additional Consolidated Edison technical support, WEPDCO on-shift technical support coordinated through a Consolidated Edison Test Coordinator and a WEDCO Test Coordinator. We have reviewed this organization and the personnel resumes for these WEDCO positions of the startup organization to which personnel have been assigned.

We conclude that the applicant's preoperational and start-up test program, and start-up organization is acceptable, subject to the delineation of the number and type of AEC Licensed Operators per shift, the assignment of persons with acceptable qualifications to those WEDCO positions not presently staffed, and the delineation of responsibilities for analyzing and approval of test results.

The inspection program for Class I pumps, valves, and heat exchangers required independent review of the physical and chemical test data for pressure boundary materials as well as independent review of radiographs of valve bodies, valve bonnets and pump casings and of penetrant examinations of heat exchanger tubes and welds.

These requirements result in a fabrication and inspection program which contains the essential elements of the Codes and proposed Codes for nuclear pumps and valves. We find these programs acceptable.