



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

September 4, 1984

Docket No. 50-412

MEMORANDUM FOR: Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

FROM: Dennis M. Crutchfield, Assistant Director
for Safety Assessment
Division of Licensing

SUBJECT: PROPOSED LICENSE CONDITION AND SAFEGUARDS SER INPUT -
BEAVER VALLEY, UNIT 2

Enclosed are a proposed license condition and a safeguards SER input resulting from the review of the Physical Security Plan, Safeguards Contingency Plan and Training and Qualification Plan submitted by the Duquesne Light Company for Beaver Valley Power Station, Unit 2. A copy of the protected SER appendix, which contains Safeguards Information, may be obtained from Jane Gibson in Room 338. This protected appendix is being withheld from public disclosure. Also enclosed for your use is the SALP evaluation input.

Dennis M. Crutchfield
Dennis M. Crutchfield, Assistant Director
for Safety Assessment
Division of Licensing

- Enclosures:
1. Proposed License Condition
 2. SER Input
 3. SALP Evaluation Input

cc: w/enclosures
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SSPB - Standardization
& Special
Project Group

C/29
H/29

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PROPOSED IMPLEMENTING LICENSE CONDITION

The licensee shall fully implement and maintain in effect all provisions of the Commission approved physical security, guard training and qualification, and safeguards contingency plans, including amendments made pursuant to the authority of 10 CFR 50.54(p). The approved plans, which contain Safeguards Information as described in 10 CFR 73.21, are entitled "Duquesne Light Company, Beaver Valley Power Station Physical Security Plan" Revision 0 transmitted by letter dated July 28, 1983, Revision 1 transmitted by letters dated November 11, 1983, December 21, 1983 and January 24, 1983, Revision 2 transmitted by letter dated May 4, 1984; "Safeguards Contingency Plan" Revision 0 transmitted by letter dated July 28, 1983; and "Training and Qualification Plan" Revision 0 transmitted by letter dated July 28, 1983.

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ENCLOSURE 2

SAFEGUARDS SAFETY EVALUATION REPORT

BEAVER VALLEY POWER STATION

1.0. Introduction

The Duquesne Light Company originally filed with the Nuclear Regulatory Commission for the Beaver Valley Power Station the following security program plans which have since been revised and amended:

"Beaver Valley Power Station Physical Security Plan, Safeguards Contingency Plan, and Training and Qualification Plan" Revision D transmitted by letter dated July 28, 1983.

This Safety Evaluation Report (SER) summarizes how the licensee has provided for meeting the requirements of 10 CFR Part 73. The SER is composed of a basic analysis that is available for public review, and a protected Appendix.

2.0 Physical Security Organization

To satisfy the requirements of 10 CFR 73.55(b) the Duquesne Light Company has provided a physical security organization that includes a Shift Security Supervisor who is onsite at all times with the authority to direct the physical protection activities. To implement the commitments made in the physical security plan, training and qualification plan, and the safeguards contingency plan, written security procedures specifying the duties of the security organization members have been developed and are available for inspection.

The training program and critical security tasks and duties for the security organization personnel are defined in the "Beaver Valley Power Station Training and Qualification Plan" which meets the requirements of 10 CFR Part 73, Appendix B for the training, equipping and requalification of the security organization members. The physical security plan and the training program provide commitments that preclude the assignment of any individual to a security related duty or task prior to the individual being trained, equipped and qualified to perform the assigned duty in accordance with the approved guard training and qualification plan.

3.0 Physical Barriers

In meeting the requirements of 10 CFR 73.55(c) the applicant has provided a protected area barrier which meets the definition in 10 CFR 73.2(f)(1). A 20 foot wide isolation zone, to permit observation of activities at the perimeter, is provided (except for the locations listed in the Appendix) along both sides of barrier.

The staff has reviewed those locations and determined that the security measures in place are satisfactory and continue to meet the requirements of 10 CFR 73.55(c).

Illumination of 0.2 foot-candles is maintained for the isolation zones, protected area barriers, and external portions of the protected area.

4.0 Identification of Vital Areas

The Appendix contains a discussion of the applicant's vital area program and identifies those areas and items of equipment determined to be vital for protection purposes. Vital equipment is located within vital areas which are located within the protected area and which require passage through at least two barriers, as defined in 10 CFR 73.2(f)(1) and (2), to gain access to the vital equipment. Vital area barriers are separated from the protected area barrier.

The control room and central alarm station are provided with bullet-resistant walls, doors, ceilings, floors, and windows. Based on these findings and the analysis set forth in paragraph C of the Appendix (except as noted therein), the staff has concluded that the applicant's program for identification and protection of vital equipment satisfies the regulatory intent. However, this program is subject to onsite validation by the staff in the future, and to subsequent changes if found to be necessary.

5.0 Access Requirements

In accordance with 10 CFR 73.55(d) all points of personnel and vehicle access to the protected area are controlled. The individual responsible for controlling the final point of access into the protected area is located in a bullet-resistant structure. As part of the access control program, vehicles (except under emergency conditions), personnel, packages, and materials entering the protected area are searched for

explosives, firearms and incendiary devices by electronic search equipment and/or physical search.

Vehicles admitted to the protected area, except licensee designated vehicles, are controlled by escorts when in operation. Licensee designated vehicles are limited to on-site station functions and remain in the protected area except for operational maintenance, repair, security and emergency purposes. Positive control over the vehicles is maintained by personnel authorized to use the vehicles or by the escort personnel. A picture badge/key card system, utilizing encoded information, identifies individuals that are authorized unescorted access to protected and vital areas, and is used to control access to these areas. Individuals not authorized unescorted access are issued non-picture badges that indicate an escort is required. Access authorizations are limited to those individuals who have a need for access to perform their duties.

Unoccupied vital areas are locked and alarmed. During periods of refueling or major maintenance, access to the reactor containment(s) is positively controlled by a member of the security organization to assure that only authorized individuals and materials are permitted to enter. In addition, all doors and personnel/equipment hatches into the reactor containment(s) are locked and alarmed. Keys, locks,

combinations and related equipment are changed on an annual basis. In addition, when an individual's access authorization has been terminated due to the lack of reliability or trustworthiness, or for poor work performance, the keys, locks, combinations and related equipment to which that person had access are changed.

6.0 Detection Aids

In satisfying the requirements of 10 CFR 73.55(e) the applicant has installed intrusion detection systems at the protected area barrier, at entrances to vital areas, and at all emergency exits. Alarms from the intrusion detection system annunciate within the continuously manned central alarm station and a secondary alarm station located within the protected area. The central alarm station is located such that the interior of the station is not visible from outside the perimeter of the protected area. In addition, the central station is constructed so that walls, floors, ceilings, doors, and windows are bullet-resistant. The alarm stations are located and designed in such a manner so a single act cannot interdict the capability of calling for assistance or responding to alarms. The central alarm station contains no other functions or duties that would interfere with its alarm response function. The intrusion detection system transmission lines and associated alarm

annunciation hardware are self-checking and tamper-indicating. Alarm annunciators indicate the type of alarm and its location when activated. An automatic indication of when the alarm system is on standby power is provided in the central alarm station.

7.0 Communications

As required in 10 CFR 73.55(f) the applicant has provided for the capability of continuous communications between the central and secondary alarm station operators, guards, watchmen, and armed response personnel through the use of a conventional telephone system, and a security radio system. In addition, direct communication with the local law enforcement authorities is maintained through the use of a conventional telephone system and two-way VHF radio links. All non-portable communication links, except the conventional telephone system, are provided with an uninterruptable emergency power source.

8.0 Test and Maintenance Requirements

In meeting the requirements of 10 CFR 73.55(g) the applicant has established a program for the testing and maintenance of all intrusion alarms, emergency alarms, communication equipment, physical barriers and other security related devices and equipment. Equipment or devices that do not meet the design performance criteria or have failed to otherwise operate will be compensated for by appropriate compensatory measures as defined in the "Beaver Valley Power Station Physical Security Plan" and in site procedures. The compensatory measures

defined in these plans will assure that the effectiveness of the security system is not reduced by failures or other contingencies affecting the operation of the security related equipment or structures. Intrusion detection systems are tested for proper performance at the beginning and end of any period that they are used for security. Such testing will be conducted at least once every seven days.

Communication systems for onsite communications are tested at the beginning of each security shift. Offsite communications are tested at least once each day.

Audits of the security program are conducted once every 12 months by personnel independent of site security management and supervision. The audits, focusing on the effectiveness of the physical protection provided by the onsite security organization implementing the approved security program plans, include, but are not limited to: a review of the security procedures and practices; system testing and maintenance programs; and local law enforcement assistance agreements. A report is prepared documenting audit findings and recommendations and is submitted to the plant management.

9.0 Response Requirements

In meeting the requirements of 10 CFR 73.55(h) the applicant has provided for armed responders immediately available for response duties on all shifts consistent with the requirements of the regulations. Considerations used in support of this

number are attached (see Appendix). In addition, liaison with local law enforcement authorities to provide additional response support in the event of security events has been established and documented.

The applicant's safeguards contingency plan for dealing with thefts, threats and radiological sabotage events satisfies the requirements of 10 CFR Part 73, Appendix C. The plan identifies appropriate security events which could initiate a radiological sabotage event and identifies the applicant's preplanning, response resources, safeguards contingency participants and coordination activities for each identified event. Through this plan, upon the detection of abnormal presence or activities within the protected or vital areas, response activities using the available resources would be initiated. The response activities and objectives include the neutralization of the existing threat by requiring the response force members to interpose themselves between the adversary and their objective, instructions to use force commensurate with that used by the adversary, and authority to request sufficient assistance from the local law enforcement authorities to maintain control over the situation.

To assist in the assessment/response activities a closed circuit television system, providing the capability to observe the entire protected area perimeter, isolation

zones and a majority of the protected area, is provided to the security organization.

10.0 Employee Screening Program

In meeting the requirements of 10 CFR 73.55(a) to protect against the design basis threat as stated in 10 CFR 73.1 (a)(1)(ii), the Duquesne Light Company has provided an employee screening program. Personnel who successfully complete the employee screening program or its equivalent may be granted unescorted access to protected and vital areas at the Beaver Valley site. All other personnel requiring access to the site are escorted by persons authorized and trained for escort duties and who have successfully completed the employee screening program. The employee screening program is based upon accepted industry standards and includes a background investigation, a psychological evaluation, and a continuing observation program. In addition, the applicant may recognize the screening program of other nuclear utilities or contractors based upon a comparability review conducted by the Duquesne Light Company. The plan also provides for a "grandfather clause" exclusion which allows recognition of a certain period of trustworthy service with the utility or contractor, as being equivalent to the overall employee screening program. The staff has reviewed the applicant's screening program against the accepted industry standards (ANSI N18.17 1973) and has determined that the program is acceptable.