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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 59 TO FACILITY OPERATING LICENSE NO. NPF-14 AND

AMENDMENT NO. 27 TO FACILITY OPERATING LICENSE NO. NPF-22

PENNSYLVANIA POWER & LIGHT COMPANY

SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2

DOCKET NOS. 50-387 AND 50-388

## 1.0 INTRODUCTION

By letter dated May 14, 1986, the licensee requested a change to the Unit 1 and Unit 2 Technical Specifications that would redefine secondary containment. At Susquehanna the design of the secondary containment is such that Zone III, the refueling floor, is common to both units. The secondary containment comprises the exterior structure of the reactor building and the interior walls and floors that separate the three ventilation zones. Zones I and II are the part of the reactor building below elevation 779'1" surrounding the Unit 1 and Unit 2 primary containments, respectively. Zone I and Zone II do not communicate with each other directly, but both communicate with Zone III directly. Zone III consists of the portion of the reactor building above elevation 779'1" with the exception of the HVAC equipment rooms and the electrical equipment room which are not part, of the secondary containment. The staff review of the licensee's request is provided below.

## 2.0 EVALUATION

This amendment allows secondary containment to be optionally defined as Zone III during condition "*" when operations with a potential for draining the reactor vessel (OPDRVs) are not being performed. At all other times, the affected unit must meet the existing requirements.

At Susquehanna Zone I and/or Zone II can be isolated from Zone III. The licensee initiated these amendment requests because the current restrictions on entry into secondary containment during a refueling outage hampers the work planning and implementation process. A unit is in condition "*" for a substantial portion of a typical refueling and inspection outage. Condition "*" is defined as "when irradiated fuel is being handled in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel", where CORE ALTERATIONS are defined as: "the addition, removal, relocation or movement of fuel, sources, or reactivity controls within the reactor pressure vessel with the vessel head removed and fuel in the vessel. Normal movement of the SRMs, IRMs, TIPs or special moveable detectors is not considered a CORE ALTERATION. Suspension of CORE

8608110227 860801
PDR ADOCK 05000387
P PDR

ALTERATIONS shall not preclude completion of the movement of a component to a safe conservative position." In order to perform work inside the Reactor Building and continue to maintain secondary containment integrity, airlocks and administratively controlled doors and hatches are provided. These control points are intended to serve as an effective means of protecting secondary containment integrity. Secondary containment integrity should be maintained as long as the safety analysis warrants it in a given operational condition. However, if these control points are unnecessary (i.e., secondary containment integrity is not relied upon from a safety standpoint), then these control points can become obstacles to efficiently performing outage related work. The licensee has previously had the experience of slowed work due to required use of airlocks, and due to the damaging of airlocks from equipment being transported through these doors. If a door is damaged, ingress and egress must wait for repairs to be completed.

The purpose of Secondary Containment is to minimize the ground level release of airborne radioactivity and to provide for the controlled, filtered release of the Reactor Building atmosphere. During condition "*", the source of the potential radioactivity (i.e., the fuel) is effectively contained within Zone III except where reactor coolant can leak through primary containment and into secondary containment. Previous to this amendment, Zone I integrity for Unit 1 and Zone II integrity for Unit 2 were only required during Operational Conditions 4 and 5 when condition "*" applied. The reason for this was to mitigate releases due to operations with a potential for draining the reactor vessel (OPDRVs). Therefore, the licensee has stated that if no OPDRVs are being performed, then Zone I and/or Zone II integrity should not be required. Furthermore, the licensee's previous analyses relied upon primary containment and Zone III only to mitigate the consequences of a fuel handling accident. The proposed change does not alter the staff's previous evaluation of such accidents since no credit was previously allowed for dilution of radiological releases due to mixing between the zones. The staff finds that the licensee has not relied upon Zone I and/or Zone II integrity for any analysis other than condition "*" with OPDRVs and, as a result, finds the proposed amendment to be acceptable.

The previous Technical Specification requirements for secondary containment during condition "*" reflected a need to contain any radioactivity resulting from a refueling or fuel handling accident within secondary containment. Since the vessel head is removed, any source due to such an accident will emanate into Zone III if CORE ALTERATIONS are in progress. Similarly, any source due to mishandling of irradiated fuel in secondary containment will be contained in Zone III and processed through the Standby Gas Treatment System without being released to Zones I or II. It is recognized that the reactor coolant activity may increase due to any fuel-handling accident, but as long as OPDRVs are not in progress, and the Zone associated with the unit in refueling (Zone I for Unit 1 and Zone II for Unit 2) is isolated from Zone III, pathways to the environment will be limited to insignificant volumes of normal leakage through valve packing, and other penetrations. Since this change only removes an operational restriction which was not relied upon to support the design basis or taken credit for in safety analysis other than those instances discussed above, the staff finds the change acceptable.

## 3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that these amendments involve no significant hazards consideration, and there has been no public comment on such finding. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement nor environmental assessment need be prepared in connection with the issuance of these amendments.

## 4.0 CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (51 FR 24260) on July 2, 1986, and consulted with the state of Pennsylvania. No public comments were received, and the state of Pennsylvania did not have any comments.

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security nor to the health and safety of the public.

Principal Contributors: Mari-Josette Campagnone, Project Directorate No. 3, DBL

Dated: August 1, 1986