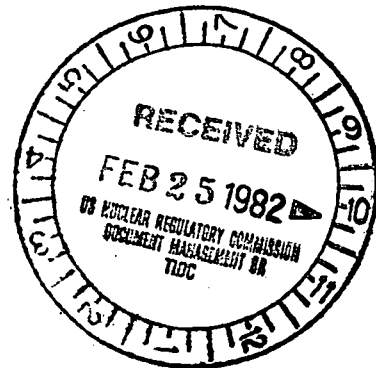


February 22, 1982

Docket No. 50-237
LS05-82 -02-104



Mr. L. DelGeorge
Director of Nuclear Licensing
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

Dear Mr. DelGeorge:

SUBJECT: SEP TOPIC III-4.D, SITE PROXIMITY MISSILES
(INCLUDING AIRCRAFT) - DRESDEN 2

Enclosed is our final evaluation of SEP Topic III-4.D for Dresden Unit 2. This evaluation is based on the safety analysis provided in your letter dated December 8, 1981. This evaluation compares your facility with the criteria currently used for licensing new facilities. We have concluded that Dresden Unit 2 is considered acceptably safe against site proximity missiles.

This evaluation will be a basic input to the integrated safety assessment for your facility unless you identify changes needed to reflect the as-built conditions at your facility. This assessment may be revised in the future if your facility design is changed or if NRC criteria relating to this subject are modified before the integrated assessment is completed.

Sincerely,

Paul O'Connor, Project Manager
Operating Reactors Branch No. 5
Division of Licensing

Enclosure:
As stated

cc w/enclosure:
See next page

SEO4
S/1

DSU USE EX(16)

OFFICE	SEP B:DL	SEP B:DL	ORB#5:PM	ORB#5:BC	AD:SA:DL		
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DATE	2/19/82	2/19/82	2/19/82	2/19/82	2/19/82		

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USGPO: 1981-335-960

Mr. L. DelGeorge

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SYSTEMATIC EVALUATION PROGRAM

III-4.D

DRESDEN 2

TOPIC: III-4.D, Site Proximity Missiles (Including Aircraft)

I. INTRODUCTION

The safety objective of this topic is to ensure that the integrity of the safety-related structures, systems and components would not be jeopardized due to the potential for a site proximity missile.

II. REVIEW CRITERIA

General Design Criterion 4, "Environmental and Missile Design Basis," of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50, "Licensing of Production and Utilization Facilities," requires that nuclear power plant structures, systems and components important to safety be appropriately protected against events and conditions that may occur outside the nuclear power plant.

III. RELATED SAFETY TOPICS

Topic II-1.C, "Potential Hazards or Changes in Potential Hazards Due to Transportation, Institutional, Industrial and Military Facilities" provides a description of the potential missile hazards.

IV. REVIEW GUIDELINES

The review was conducted in accordance with the guidance given in Standard Review Plan (SRP) Section 2.2.3, "Evaluation of Potential Accidents," 3.5.1.5, "Site Proximity Missiles (except Aircraft)," and 3.5.1.6, "Aircraft Hazards."

V. EVALUATION

The potential for hazardous accidents in the vicinity of the Dresden 2 station due to industrial, transportation, and military facilities is addressed in a report under SEP Topic II-1.C (Ref. 1). In that report, 12 sources of hazard have been identified. Table 1 lists these sources of hazard. The possibility of missiles resulting from these sources is as follows:

- a) It is concluded in Ref. 1 that explosions as a result of the first five cases listed in Table 1 do not constitute design basis events, since the safe distance criterion of R.G. 1.91 with regard to blast overpressure is met. Therefore, per R.G. 1.91, hazards from missile generation from sources 1 through 5 need not be considered. For cases 2 through 5, this conclusion is based on complete information. Data is still being collected for case 1; the conclusion is based on the information available at the present time.

- b) The explosions resulting from sources 6 and 7 may give rise to over-pressure levels at the site in excess of 1 psi; however, missile generation from these explosions is not possible, since the hazard is due to travelling clouds and no direct missile is expected from an explosion in the cloud.
- c) Sources 8 through 10 in Table 1 do not clearly relate to missile generating events; they have been included in the table to provide ease in cross referencing information in this report with that in Ref. 1.
- d) Sources 11 and 12 in Table 1 relate to aircraft crashes of safety-related structures. The frequency of such occurrences, based on conservative assumptions, is calculated to be 1.06×10^{-7} per year (Ref. 1). The data from low-altitude airways is currently being collected. When this data is evaluated, the total risk from sources 11 and 12 will be obtained and compared to the guidelines given in SRP 2.2.3.

VI. CONCLUSION

The conclusions of this report are summarized in Table 1. Based on the available information, the Dresden 2 Nuclear Generating Station is considered acceptably safe against site proximity missiles, including aircraft. Additional data is being collected to rule out two possible sources of hazard; these are identified as such in Table 1.

VII. REFERENCE

Commonwealth Edison Company, "SEP Topic II-1.C, Potential Hazards Due to Nearby Industrial, Transportation, and Military Facilities," dated December 1981.

TABLE 1
SOURCES OF HAZARD IDENTIFIED FOR SEP TOPIC II-1.C,
AND THEIR IMPLICATIONS FOR SITE PROXIMITY MISSILES

CASE	SOURCE OF POTENTIAL HAZARD	IMPLICATION FOR SITE PROXIMITY MISSILES
1	Explosion from: industrial facilities	Questionnaire has been sent to the local industries. Based on present information, missile hazard has been ruled out on the basis of acceptable (RG 1.91) stand-off distance.
2 3 4 5	highway transportation railway transportation waterway transportation military facilities	Ruled out on the basis of the RG 1.91 stand-off distance.
6 7	Pipeline Vapor cloud explosion from waterway transportation	Ruled out because explosion would occur in the air.
8 9 10	Toxic chemicals Collision with intake structures Liquid spills	Not related to missile generation.
11 12	Aircraft impact from: airports airways	Ruled out on the basis of low probability. Data has been requested from the FAA. Will be considered on probability basis along with case 11.