

June 25, 1981

Docket No. 50-213 A01452

Director of Nuclear Reactor Regulation Attn: Mr. Dennis M. Crutchfield, Chief Operating Reactors Branch #5 U. S. Nuclear Regulatory Commission Washington, D.C. 20555

References: (1) D. G. Eisenhut letter to SEP Plant Licensees, dated January 14, 1981.

(2) W. G. Counsil letter to D. G. Eisenhut, dated February 27, 1981.

Gentlemen:

# Haddam Neck Plant

SEP Topic III-4.D, Site Proximity Missiles (including aircraft)

As part of the redirection of the Systematic Evaluation Program, Reference (1), Connecticut Yankee Atomic Power Company (CYAPCO) committed to develop Safety Assessment Reports (SAR's) for certain SEP topics which would be submitted for Staff review. CTAPCO detailed this commitment and provided a schedule for submittal of SAR's in Reference (2). In accordance with this commitment, CYAPCO hereby provides the Safety Assessment Report for SEP Topic III-4.D, Site Proximity Missiles (including aircraft), which is included as Attachment 1.

We trust the Staff will appropriately use this information to develop a Safety Evaluation Report for this SEP topic.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY

Counsi

Senior Vice President

""tachment 1

Safety Assessment Report

SEP Topic III-4.D, Site Proximity Missiles (Including Aircraft)

June, 1981

## Haddam Neck Plant

#### SEP Safety Assessment Report

## Topic 111-4.D Site Proximity Missiles

## 1.0 INTRODUCTION

The objective of this topic is to assure that the integrity of safetyrelated structures, systems, and comports will not be impaired and that they will perform their safety f tions in the event of a site proximity missile.

### 2.0 CRITERIA

Standard review plan section 3.5.1.5 states that:

The plant is considered adequately designed against site provimity missiles if the resulting probability of a missile affecting the safety-related features of the plan. is within the guidelines established in section 11 of standard review plan 2.2.3.

Section 11 of standard review plan 2.2.3 states:

The identification of design basis events resulting from the presence of hazardous materials or activities in the vicinity of the plant is acceptable if the design basis events include each postulated type of accident for which the expected rate of occurrence of potential exposures in excess of the 10 CFR Part 100 guidelines is estimated to exceed the NRC staff objective of approximately 10<sup>-7</sup> per year. Because of the difficulty of assigning accurate numerical values to the expected rate of unprecedented hazards generally considered in this review plan, judgment must be used as to the acceptability of the overall risk presented.

## 3.0 DISCUSSION

The potential for hazardous activities in the vicinity of the Haddam Neck site will be addressed under SEP Topic 11-1.C. Except for screral small towns and villages and a portion of Middletown, the area within a ten mile radius is predominantly rural. About 80 percent of this area is wooded with the remaining open area devoted to general farming, resort, and some minor industry. The distances to the nearest land transportation routes are such that the risk associated with potential missiles from transportation accidents does not present a credible missile hazard. No pipelines, railroad tracks, or military facilities or activities exist near the plant which could create a missile hazard. Goodspeed Airport in East Haddam is a general aviation facility with one runway located approximately three miles from the plant. The airport is used primarily by light single engine aircraft aviation activities such as business and pleasure flying. The location of the airport physically prohibits significant expansion. Operation of the airport does not constitute a significant hazard due to size and the nature of traffic.

Traffic along the Connecticut River that passes by the plant consists of commercial and recreational shipping and boating. Oil bagges pass within 1,000 feet of the site. The potential for a missile hazard resulting from this traffic will be developed under Topic 11-1.C. Ovientation and layout of the plant inherently would provide missile protection from this source. All plant components required for safe shutdown located within plant structures would be sufficiently protected as a result of the structural design criteria originally used. (Reference: SEP Topics 111-2, 111-4.A, and 111-7.B). All safe shutdown required plant components located outside of plant structures are located to the east of the site and are protected from the river by the surrounding structures. Pending completion of Topic 11-1.C, the missile hazard postulated from transportation along the Connecticut River is not considered to affect the safe shutdown capability of the plant.

## 3.1 ASSOCIATED SEP TOPICS

 o 11-1.C Potential hazards to nearby industrial, transporation, and military facilities.

## 4.0 CONCLUSIONS

Pending resolution of SEP Topic 11-1.C and based on this review, CYAPCO concludes that operation of the Haddam Neck Plant does not present an undue risk to the health and safety of the public as a result of aircraft and site proximity missile hazards.

#### 5.0 REFERENCES

- 1. Regulatory Guide 1.91, Evaluation of Explosions Postulated to Occur on Transportation Routes Near Nuclear Power Sites.
- 2. Standard review plan sections:
  - 2.2.3 Evaluation of Potential Accidents
  - 2.5.1.5 Site Proximity Missiles (except aircraft)
  - 3.5.1.6 Aircraft Hazards