



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

November 15, 1999

MEMORANDUM TO: A. Randolph Blough, Director  
Division of Reactor Projects  
Region I

FROM: Suzanne C. Black, Deputy Director *Suzanne C. Black*  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

REFERENCE: Oyster Creek Safety Determination and 50.59 Review  
(SE-945100-269-Revision 0), Reduction of the Site Boundary Including  
the Sale of Property and Equipment in the Exclusion Area, dated August  
24, 1999.

SUBJECT: RESPONSE TO TASK INTERFACE AGREEMENT (TIA) REGARDING  
THE ACCEPTABILITY OF GPUN, INC., PROPOSED AGREEMENT  
WITH COMBUSTION TURBINES BUYER FOR AVAILABILITY OF  
STATION BLACKOUT POWER, AND OTHER ISSUES (TAC NO.  
MA6381)

On September 15, 1999, you sent us a Task Interface Agreement (TIA) requesting assistance in the following three areas:

1. Determine whether the subject document's proposed agreements between GPUN and the potential buyer for availability of the switch yard and gas turbine station blackout (SBO) power constitute a change to the current licensing basis of Oyster Creek, and whether there is a need for license amendments to ensure that the commitments are legally enforceable.

We have evaluated the SBO issues associated with the combustion turbines at Oyster Creek and concluded that Oyster Creek will be in compliance with 50.63, "Alternate Source of Alternating Current Power," as long as the Schedule 6.13 of the 50.59 report, SE-945100-269-Revision 0, remains unchanged. Our determination is based on the following:

In the past, we have accepted Vermont Yankee's selection of Vernon Hydroelectric Station as an alternate ac (AAC) Power Source. Vernon Hydroelectric Station is owned and operated by New England Power Company (NEPCo). A contractual agreement is in place obligating Green Mountain Power/NEPCo to supply AAC power to Vermont Yankee from the Vernon Hydroelectric Station. Additionally, Vermont Yankee's relationship with NEPCo regarding the Vernon tie line is documented.

Forked River Combustion Turbines are used as an AAC power source for Oyster Creek. As described, Oyster Creek's AAC Power Source will be similar to Vermont Yankee's AAC Power Source after the sale of the combustion turbines to a third party. The 50.59 report included all the requirements of maintaining the combustion turbines as an AAC Power Source as outlined in RG 1.155 and NUMARC 8700, Rev. 1. Schedule 6.13, "Additional

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Forked River Covenants," on page 36 to 40 of 116, provided a comprehensive set of commitments to maintain the combustion turbines as an AAC Power Source to meet the SBO Rule.

The staff will have no problem with the sale of the combustion turbines as long as Schedule 6.13 remains unchanged.

The Final Safety Analysis Report (FSAR) Update, Section 8.3.4, described Oyster Creek's commitment to meet the SBO rule by using an AAC power source owned by Jersey Central Power and Light (JCP&L). This section will require a change when JCP&L sells the combustion turbines. There were no technical specification requirements for an AAC power source.

We concluded that the proposed agreement (as indicated in the 50.59 report) between GPUN and the potential buyer for availability of the switchyard and the gas turbine SBO power constitutes no change to the current licensing basis of Oyster Creek.

We note the following typographical errors in the licensee's 50.59 report:

- 1) Section 3.2.4.3.3 on page 15 of 116, "blackout start" should be changed to "black start."
- 2) Schedule 6.13 on page 36 of 116, "10 CFR 60.53" should be changed to "10 CFR 50.63."

2. Review the effect on routine doses as a result of the reduction in the site boundary.

The licensee addressed the effect of the proposed reduced site boundary on doses to members of the public from routine gaseous and liquid effluents. However, the evaluation was in a qualitative not a quantitative manner.

For radioactive liquid effluents, there will be no change to the calculated doses because the release point does not change with the new site boundary. Historical data show that the doses from radioactive effluents are within the design objectives of Appendix I of 10 CFR Part 50.

For radioactive gaseous effluents, the licensee has made general assumptions about the predominant wind direction being away from the proposed reduced site boundary, the lofting effect of the elevated stack releases, and impact of elevated and ground level releases to the maximum individual calculated doses. From these general assumptions, the licensee estimates that doses may increase no more than a factor of two. Even with this projected increase, the doses are expected to remain well within those required by Technical Specifications (TSs) and the regulatory requirements of 10 CFR Part 20 and Appendix I of 10 CFR Part 50.

The licensee recalculated the dose from routine gaseous effluents using NRC requirements for doses to the general population which includes the nearest resident and doses from the food pathway. To qualitatively demonstrate the validity of these assessments, the licensee recalculated the site boundary doses using a new value of 200 meters, and a residence and a vegetable garden at 250 meters, in the six sectors from the south, southwest sector to the north,

northwest sector. The licensee used the data from 1997 (which at the time of the calculation was the latest year for which full data were available) to recalculate the doses to members of the public with the revised parameters. The licensee reported that the gamma and beta air doses as well as the whole body and skin plume doses were unchanged. The maximally exposed individual dose increased about 10 percent, but was still well within regulatory requirements.

While the licensee's evaluation is based on a qualitative analysis of past data using the proposed reduced site boundary, because of the effluent control program's historical compliance with regulatory requirements, it does show that continued regulatory compliance is likely. The licensee has adequately addressed the potential changes to the doses to members of the public from routine radioactive gaseous and liquid effluent releases.

The licensee must maintain its radioactive effluent control program in accordance with its TSs, 10 CFR Part 20, and the design objectives of Appendix I to 10 CFR Part 50. The licensee is responsible for revising the dose calculation methodology contained in its offsite dose calculation manual (ODCM) to reflect the revised site boundary. Thus, regardless of what the licensee has evaluated and calculated for the proposed reduced site boundary, the licensee must comply with its license conditions and regulatory requirements. The NRC will document the licensee's compliance through periodic inspection.

A regulatory requirement the licensee has not specifically addressed in its evaluation is its projected compliance with the U.S. Environmental Protection Agency's 40 CFR Part 190, "Environmental Radiation Protection Standards for Nuclear Power Operations." This requirement is incorporated in NRC's Part 20, "Standards for Protection Against Radiation," in 10 CFR 20.1301(d). The licensee is required to ensure that direct radiation, i.e., any source such as a radioactive waste storage building, in addition to that from routine radioactive gaseous and liquid effluents, complies with the dose criteria in 40 CFR Part 190. The issue will need to be documented during a future NRC inspection.

The licensee has performed an adequate evaluation of the impact of a reduced site boundary on the dose to members of the public from routine radioactive gaseous and liquid effluents. However, the licensee will be required to update its ODCM to reflect the revised site boundary and ensure that its radiological effluent control program complies with the TSs and regulatory requirements.

3. Review the agreements between GPUN and the potential buyer to ensure compliance with 10 CFR Part 100 limits under accident scenarios and to maintain sufficient control of all current and future activities in the exclusion area.

We have reviewed the licensee's 50.59 and many of the supporting references. Below we discuss the results of our review.

We have reviewed the impact on the design basis accident (DBA) dose consequences at the Oyster Creek exclusion area boundary (EAB). Our assessment is based on information provided by GPUN in its "Safety Determination and 50.59 Review." In its 50.59 review submittal, the licensee states that, as a result of the sale, the site boundary would be changed, but the size and definition of the EAB would remain unchanged. We have not reviewed the

licensee's submittal to determine if the EAB would be changed by the sale of land or the licensee's ability to maintain adequate control of the land within the EAB. We recommend that Region I confirm this issue. DBA dose requirements specified in 10 CFR Part 100 are based upon the EAB, not the site boundary. Thus, assuming that the EAB would remain as currently defined and the combustion turbines are sold, the Oyster Creek DBA dose calculations for the EAB would not be affected.

Because of the quick developing issues of this area, we have been communicating with you almost daily by telephone and e-mails. During the course of our interactions, we conveyed to you the results of our evaluation, and therefore, our conclusions. This memo consolidates our conclusions on your TIA. With our verbal communications, we consider that we have satisfied your request date. If you have any questions, please contact Helen N. Pastis, the Oyster Creek Senior Project Manager, at (301) 415-1261.

Docket No. 50-219

cc: L. Plisco, RII  
G. Grant, RIII  
K. Brockman, RIV

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