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U S Nuclear Regulatory Commission
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PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket Nos. 50-282 License Nos. DPR-42
50-306 DPR-60

Reply to a Request for Information on Design Report for the Station Blackout/Electrical Safeguards Upgrade Project
(TAC Nos. M80659/80660)

References: 1) Letter from Thomas M Parker, Northern States Power Company, to U S Nuclear Regulatory Commission dated November 27, 1990 titled "Design Report for the Station Blackout/Electrical Safeguards Upgrade Project"

2) Letter from Thomas M Parker, Northern States Power Company, to U S Nuclear Regulatory Commission dated December 23, 1991 titled "Design Report for the Station Blackout/Electrical Safeguards Upgrade Project," Revision 1

On November 27, 1990 we submitted for NRC Staff review the Design Report (Reference 1) for our project to add two safeguards emergency diesel generators, to upgrade the safeguards electrical distribution system, and to upgrade the #121 cooling water pump to become a swing safeguards pump.

In response to various requests for additional information from the Staff, we submitted for NRC Staff review Revision 1 of the Design Report (Reference 2). On November 30, 1992, a conference call between NRC Staff and NSP personnel was held in order that the Plant Systems Branch reviewers might better understand our design. This letter provides a written response to the following request for information: Describe the HVAC system arrangements which prevent an "air contamination abnormality" associated with one diesel generator, such as a fire, from causing inoperability of the other diesel generator.

RESPONSE

The Project D5/D6 Building has been designed and arranged to preclude engine

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exhausts, a postulated fire exhaust, or other air contaminants emanating from one unit from causing an effect on the other unit. As described below, inlets are segregated from exhausts/outlets by both elevation and orientation to preclude air system contamination. See Design Report Figures 4-2, 4-6, 4-7, and 4-8.

D/G Electrical Building HVAC System

Fresh air inlet is on the north side of the D5 side of the D5/D6 Building and on the south side of the D6 side of the D5/D6 Building, both at the 735' elevation with the corresponding exhausts to the atmosphere at the 755' elevation.

D/G Engine Room HVAC System

Fresh air inlets for both D5 and D6 engine rooms are on the west side of the D5/D6 Building at the 711' elevation, which is 44 feet below the various ventilation system exhausts, with the corresponding exhausts to the atmosphere at the 755' elevation.

D/G Radiator Cooling

Fresh air inlets for the D5 engine radiators are on the west and north sides of the D5/D6 Building at the 718' elevation. Fresh air inlets for the D6 engine radiators are on the west and south side of the D5/D6 Building at the 718' elevation, which is 37 feet below the various ventilation system exhausts. The corresponding exhausts to the atmosphere are at the 755' elevation.

D/G Engine Combustion Air Inlets

Combustion air inlets to the engines for both D5 and D6 engines are located within the respective D5 or D6 radiator rooms. The combustion air inlets to the engines share the same source of air as described for the radiator cooling, so that the inlets are 37 feet below the various ventilation system exhausts.

D/G Engine Exhausts

Each engine exhausts through the exhaust piping routed through each engine room up to the exhaust stack at the 771' elevation. There is one exhaust stack for each engine for a total of four.

Repeating, the D5/D6 Building has been designed and arranged to preclude engine exhausts, a postulated fire exhaust, or other air contaminants emanating from one unit from causing an effect on the other unit. This clarification will be included in Revision 2 of the Design Report.

Please contact us if you have any questions related to this response.

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Director of Nuclear Licensing
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c: Regional Administrator - Region III, NRC
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