

PSNH PUBLIC SERVICE
Company of New Hampshire

SEABROOK STATION

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November 9, 1982

SBN-357

T.F. B7.1.2

United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing

References: (a) Construction Permits CPPR-135 and CPPR-136, Docket Nos. 50-443 and 50-444
(b) USNRC Letter, dated August 13, 1982, "Draft Safety Evaluation Report (SER) for Seabrook Station," T. M. Novak to W. C. Tallman
(c) USNRC Memorandum, dated October 14, 1982, "Notice of Meeting Regarding Open Items in the Safety Review," L. L. Wheeler to J. D. Kerrigan

Subject: Draft SER Section 3.5.2

Dear Sir:

The following comment appears in the Draft SER Section 3.5.2, which was forwarded in Reference (b):

FSAR Section 3.5.2 indicates that all safety-related systems and components including outside air intakes and exhausts in safety-related structures and stored fuel are located within tornado-missile-protected structures or are provided with tornado-missile barriers or other protection or are oriented such that tornado missiles do not present a safety hazard. However, FSAR Section 6.4 indicates that the Control Room intakes are not protected from tornado missiles (see SER Section 9.1.4). We require that the applicant clarify this discrepancy.

As discussed at the referenced meeting [Reference (c)], the above open item is also applicable to FSAR Section 9.4.1.

In response to the above comments, we have revised FSAR Sections 6.4.2.2 and 9.4.1.2 to include tornado-missile protection for the Control Room air intakes.

The attached annotated FSAR pages (6.4-3, new figure 6.4-1, 9.4-4) which reflect the above commitment will be included in OL Application Amendment 48.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

J. DeVincentis
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Project Manager

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JDV/fsf

Boo!

6.4.2.1 Definition of Control Room Envelope

The control room occupies the entire 75'-0" level of the control building, and includes the main control room area, computer room, Technical Support Center, office, conference room and library, emergency storage room, HVAC equipment room, kitchen and sanitary facilities, as shown in Figure 1.2-32. All controls, equipment and materials to which the control room operator would require access during an emergency are contained within this envelope, except for the dual intake air fan discharge dampers, which would require manual positioning in the event of the failure of a vital bus, or to close the manual valve from a contaminated remote intake. The intake air fan discharge dampers and manual valves are located on elevation 50'-0" of the diesel generator building. The operation and details of the makeup air system are discussed in Section 9.4.1.

6.4.2.2 Ventilation System Design

Details of the control room complex ventilation and filtration systems are described in Section 9.4.1. An air flow diagram of the control room ventilation system which identifies equipment, ducting, dampers, instrumentation and air flow rates for both normal and emergency modes is shown in Figure 9.4-1; major components and their major design parameters are included in Table 9.4-1a.

Two remote air intakes (west and east) are available to furnish makeup air to both unit control rooms. The locations were selected so as to preclude both intakes being susceptible to accident-generated airborne radioactivity or toxic gases at the same time. The eastern makeup air intake, which is associated with Unit 1, but can be utilized by either or both Units 1 and 2 at any time, is located 350 feet northeast from the center of Unit 1 containment structure; the western makeup air intake, which is associated with Unit 2 but can also be utilized by both Units 1 and 2 at any time, is located 350 feet northwest of the center of Unit 2 containment structure (See Figure 1.2-1).

Following a LOCA, when meteorological information indicates that the wind direction is toward either the east or west intake, the affected intake can be manually isolated by the operator, or a high radiation signal will automatically shut down the makeup air intake fans and close their discharge dampers. Once isolated, the makeup air line from the isolated intake can be purged by operation of a unit fan drawing from the opposite intake. Controls for the four fans are located in the respective unit's control room.

Each of the air intakes consists of a vertical 12-inch diameter carbon steel pipe terminating in a tee-section to allow air to enter the pipe from two directions. Both openings are protected by 1/2-inch square stainless steel wire mesh welded to the inside diameter at both openings. Protection of the intakes against tornado missiles is provided by a reinforced concrete structure with a 2-foot thick overhanging reinforced concrete slab (see Figure 6.4-1). The structure is surrounded on four sides and top by a cyclone-type fence,

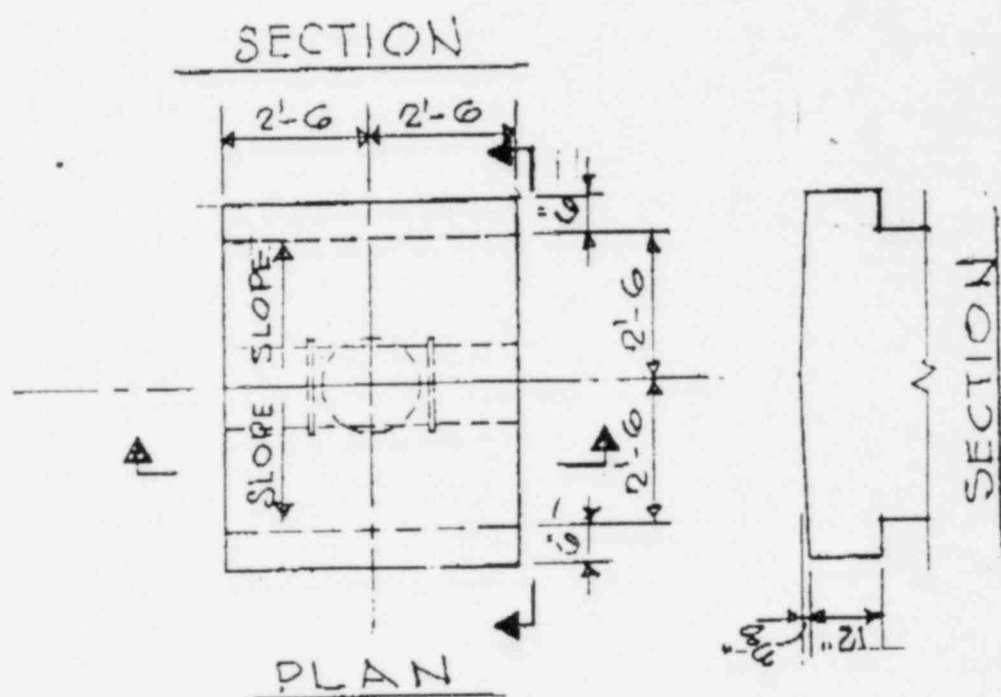
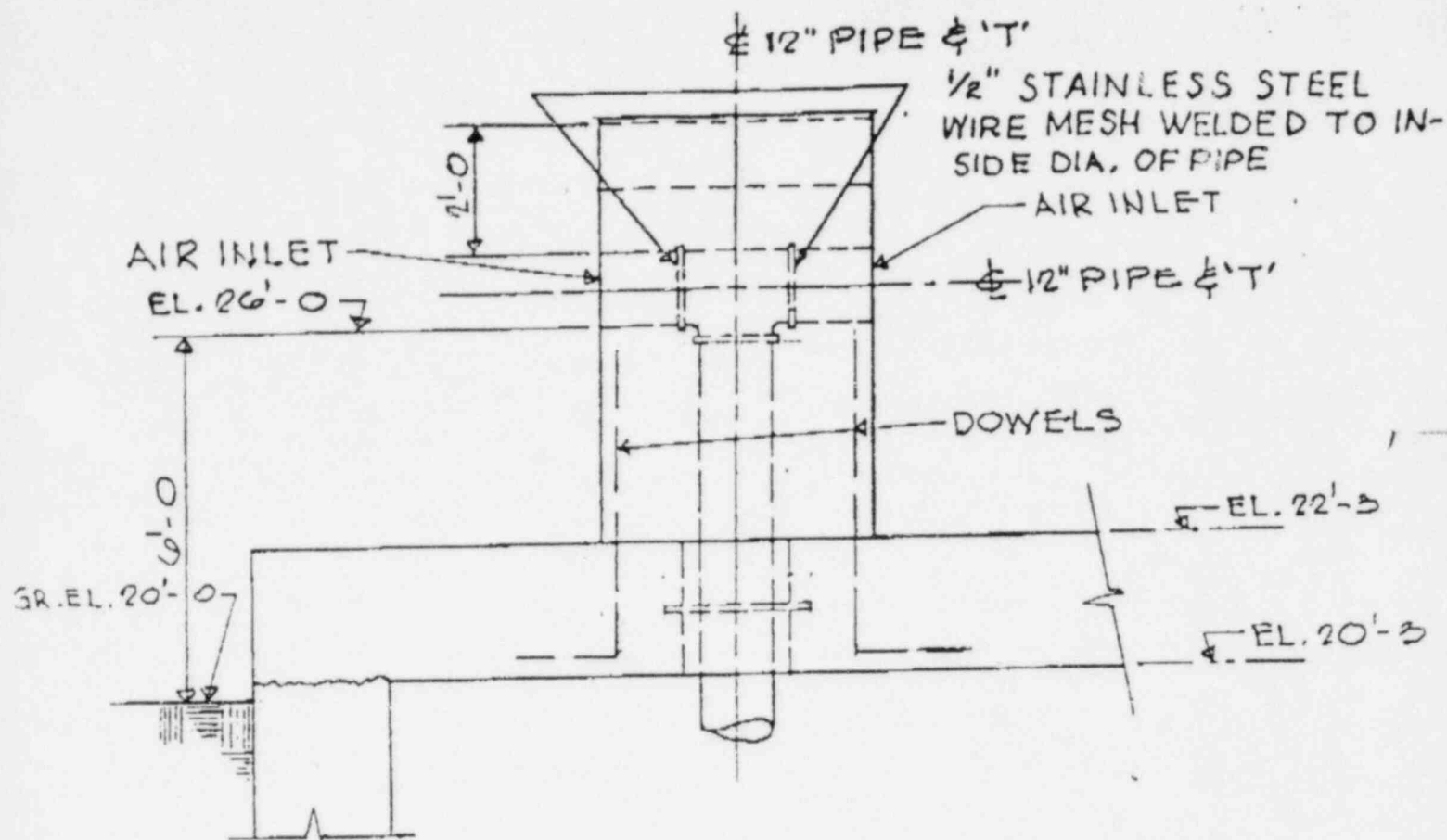


FIG. 6.4-1

MAKE-UP AIR
INTAKE PROTECTION

return air registers into the plenum above the ceiling. The return air is then drawn through the plenum and passes through the return air openings in the wall between the plenum and the mechanical equipment room. The return air, together with the makeup ventilation air, is drawn through the air conditioning unit for recirculation.

b. Computer Room Air Conditioning Subsystem

The computer room air conditioning subsystem has a recirculating air system which consists of two air handling units of equal capacity located on elevation 75'-0" of the control building, two independent refrigeration compressor, and two air-cooled condensers located on elevation 51'-6" of the diesel generator building. The air handling units with their associated refrigeration equipment are designed to produce 9.2 tons of refrigeration each, which is more than adequate to meet the normal design conditions requiring 17.7 tons of refrigeration.

The computer room is supplied with conditioned air by a sheet metal supply and return duct system that is seismic Category I supported. The computer room ductwork contains manually-positioned supply and return air dampers which permit utilization of the control room air conditioning capacity should the computer room air conditioning system be unavailable.

c. Control Room Makeup Ventilation Supply and Exhaust Subsystem

At all times, the source of makeup ventilation air to the control room complex is obtained from either or both of the two remote air intakes located on opposite sides of the plant, such that at least one of the intakes will provide makeup air free from objectionable contaminants at all times. During normal operation, at least 30 cfm of filtered outside air is provided for each of the occupants, and exhaust air is withdrawn from the control room complex by the toilet room fan. The control room complex is maintained at a positive pressure with respect to outside areas by static pressure controls which control the amount of air being exhausted by the toilet room fan. Recirculated air and outside air is filtered prior to cooling and introduction into the control room supply ductwork. The recirculated air and outside air filter has 75 percent minimum average arrestance based on ASHRAE Standard 52-68 for synthetic dust. When both intakes are providing suitable makeup air, one of the two fans at each unit will be operated and will take air from its associated remote intake. Should one of the two intakes, for any reason, become temporarily unsuitable, the intake fans for both units would be stopped and the fan discharge dampers closed. After isolation of the unsuitable intake, one intake fan at each control room will be manually started. Then, a percentage of the air from the other intake, which takes air from the opposite remote point, would be automatically fed to each of the two control room complexes (see Subsection 6.4.2.2 for further discussion on the makeup air system).

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Each of the air intakes is protected against tornado missiles by a reinforced concrete structure (see Figure 6.4-1)