



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

NOV 4 1982

Docket Nos. 50-373/374

MEMORANDUM FOR: Thomas M. Novak, Assistant Director for Licensing, Division of Licensing, NRR

FROM: L. S. Rubenstein, Assistant Director for Core and Plant Systems, Division of Systems Integration, NRR

SUBJECT: SAFETY EVALUATION REPORT INPUT - HEATING, VENTILATING, AND AIR CONDITIONING SYSTEM INDEPENDENT DESIGN REVIEW, LASALLE COUNTY STATION, UNITS 1 AND 2 (TAC 48876)

As requested, the Auxiliary Systems Branch has reviewed the final report by C. F. Braun and Co. concerning the independent heating, ventilating, and air conditioning (HVAC) design review for the LaSalle County Station for those areas for which ASB is responsible. The report is entitled "Independent HVAC Review, Final Report, Project 6356-N" and was submitted by Braun in their letter dated October 27, 1982. Our evaluation is enclosed.

Based on our review of the report, we have no further concerns and consider the independent review of the LaSalle HVAC System to have acceptably verified the functional adequacy of the HVAC system.

L. S. Rubenstein, Assistant Director  
for Core and Plant Systems  
Division of Systems Integration

Enclosure:  
As Stated

cc w/enclosure:

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XA Copy Has Been Sent to PDR

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SAFETY EVALUATION REPORT INPUT  
INDEPENDENT DESIGN REVIEW OF  
THE HEATING, VENTILATING, AND AIR  
CONDITIONING (HVAC) SYSTEM  
LASALLE COUNTY STATION, UNITS 1 AND 2  
AUXILIARY SYSTEMS BRANCH

By letter dated October 27, 1982, C. F. Braun & Co. submitted a report entitled "Independent HVAC Review, Final Report, Project 6356-N." This report presents the results of Braun's independent evaluation of the adequacy of the HVAC system at LaSalle County Station as requested by us.

ASB has overall responsibility for design adequacy of ventilation systems at the plant. For this reason, we have reviewed the Braun report to verify that the original scope was accomplished. However, our review of the specific Braun findings concentrated on those relating to verification of functional adequacy of the HVAC system, including operability of associated mechanical equipment, cooling capability, and field testing, as these concerns are within ASB's areas of responsibility. Review of those findings relating to quality assurance, materials structural adequacy, should be included in the evaluation provided by the Quality Assurance Branch, Materials and Testing Engineering Branch and Mechanical Engineering Branch

I. Independent HVAC Review Work Plan Accomplishment:

The C. F. Braun & Co. final report delineates the work undertaken by Braun to perform the independent HVAC system review. The review included all LaSalle Unit 1 and common safety-related HVAC systems and those <sup>non-safety</sup> non-safety related HVAC systems which are seismically supported. In order to verify that the HVAC installation by Zack Co. is in accordance with the Sargent and Lundy design, Braun performed the following reviews:

1. Comparison of Zack Co. fabrication and erection drawings and QA and procurement procedures to the Sargent and Lundy design documents to verify proper interpretation and installation. Included in the review was an inspection of the physical installation to confirm agreement of the as-built installation with the design drawings and identify physical deficiencies.
2. Review of leak rate, air balance, and pre-operational test results to verify conformance with design requirements.
3. Review of nonconformance reports to verify that proper disposition and corrective action has been taken.

Observations/findings were developed as necessary based on the results of the Braun inspections in the above reviews. A system classification and resolution of any identified deficiencies was established and followed throughout the course of the review.

We have compared the work plan accomplished during the Braun independent review to the initially established work scope. Based on this review, we conclude that the Braun review has satisfactorily demonstrated the adequacy of the HVAC system. Further, we conclude that our comments identified in our memorandum of September 1, 1982 have been properly considered in the final report.

## II. Verification of Functional Adequacy of HVAC System

We have reviewed those portions of the final report that deal specifically with reviews to verify the functional adequacy of the HVAC system. These reviews included inspections of leak rate, air balance and preoperating test results and component operability verifications.

Braun's review of leak rate and air balance test results, against the design documents concluded that leakage and air

flow was within acceptable limits for the various HVAC subsystems with some exceptions. The air balance test results were not within design limits for certain plant areas; however, Braun indicated satisfactory resolution had been provided by Sargent and Lundy for the lower flow rates in those areas.

Braun's survey of the preoperational tests indicated that major discrepancies had been identified for some subsystems but were satisfactorily resolved by Commonwealth Edison. Certain minor discrepancies were still unresolved but were not significant to the proper operation of the system. The preoperational testing of the refrigerant piping system was also reviewed and satisfactory results were confirmed by Braun.

Braun also inspected HVAC system components and verified acceptable equipment operation. Braun's inspections uncovered no observations/findings of a potential safety concern involving the functional capability of the HVAC system.

Based on these inspections and the satisfactory conclusions from the review of the leak rate, air balance, and preoperational testing, Braun determined that no further HVAC system testing was necessary.

We have evaluated the Braun independent HVAC review of those aspects concerning verification of proper functional capability. Based on this review, we conclude that the independent review has provided reasonable assurance that the capability of the HVAC system for performing its intended safety functions is, in accordance with the original design and is, therefore, acceptable. Further, our conclusions on the acceptability of the HVAC system in the LaSalle safety evaluation report are not affected by the results of the Braun independent review.