



BROOKHAVEN NATIONAL LABORATORY
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Department of Nuclear Energy

March 10, 1980

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LSE-05
LSE-05

Mr. Robert L. Ferguson
Plant Systems Branch
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

RE: Dresden 2-3, Fire Protection Review, Item 3.1.12

Dear Bob:

As you know, we completed our input on the items on hand that we were asked to review on February 28, 1980. On March 7, 1980 we were requested by Leo Derderian to review item 3.1.12, Portable Ventilation Equipment.

Attached is this Brookhaven National Laboratory input.

Respectfully yours,

Robert E. Hall, Group Leader
Reactor Engineering Analysis

REH:EAM:sd
attachment

- cc.: L. Derderian
- D. Eisenhut
- W. Kato
- M. Levine
- E. MacDougall
- V. Panciera
- E. Sylvester

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Fire Protection Review

Item 3.1.12 - Portable Ventilation Equipment

The SER states that portable ventilation equipment will be provided and procedures will be developed for its use by the fire brigade such that smoke can be vented from enclosed areas to permit access for manual fire fighting.

The licensee responded on September 28, 1978 and stated that two Super Vac Smoke Ejectors Model No. P-1645E are being obtained from the Super Vacuum Manufacturing Co., Inc. The units are 16" in diameter, four-bladed models rated at 5200 C.F.M. and are equipped with 115/230V 60 cy AC explosion-proof motors. Also being provided is 150 feet of 16" x 25' ducting. Procedures will be developed when the equipment is received and the fire brigade will be trained in its proper use.

We have concluded that the best way to ventilate smoke from a plant is by a properly designed fixed ventilation system with smoke removal as one of its prime design parameters. However, we have found from field experience that this is not obtainable without extensive plant modification. Therefore, we typically recommend portable ventilation with a minimum of 3 portable smoke ejectors with a combined 17,500 CFM capacity.

The manual fire protection consultant assigned to review the facility visited the plant on October 18, 1977. After his visit he wrote a report, dated October 27, 1977 and recommended portable smoke ejectors with a combined capacity of 18,000 - 20,000 CFM, based on fire fighting experience.

We recommend that the staff accept the type of smoke ejectors and ducting proposed and accept their statement on procedures and training. However, we also recommend that the staff request the licensee to have portable smoke ejectors with a combined capacity of at least 17,500 CFM, or to justify their proposal of a reduced volumetric flow rate analysis.