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PETITION FOR EMERGENCY RELIEF

RE: Primary Containment Leak Rate at LaSalle Units 1 and 2

DOCKETS NO. 50-373 and 50-374

Honorable James Keppler
Director, Region 3
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn IL 60137

Dear Mr. Keppler:

I am writing to notify you of an extremely serious and unsafe condition which now exists at LaSalle Unit 1 with regard to the ability of the primary containment of that reactor to fulfill its design function and provide the level of containment of reactor fission products mandated by law and the reactor's technical specifications.

There exists strong evidence that the Integrated Leak Rate Testing (ILRT) done at LaSalle Unit 1 in Spring, 1982, provides no assurance whatever that the containment leak rate is within the required limit.

Besides being a clear and present danger, this situation represents a gross violation of the requirements of the Atomic Energy Act and 10 CFR Part 50.

Description of the situation:

1. There are severe errors, defects, and loopholes in "American National Standard N45.4-1972, Leakage Rate Testing of Containment Structures for Nuclear Reactors", which Appendix J of 10 CFR Part 50 requires that containment leak rate tests be conducted in accordance with. As a result, ILRT's are conducted in accordance with modified versions of this standard which have not been endorsed.
2. Most of these errors, defects, and loopholes stand uncorrected in the document "ANSI/ANS-56.8-1981: American National Standard Containment System Testing Requirements", which the American Nuclear Society is proposing as a standard to replace the N45.4 standard, and which was basically followed during the 1982 LaSalle test.

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3. The defects in these documents include:

- a. The equation used to calculate the containment air mass at any given time is wrong. This error is the result of an obvious and glaring mistake made during the derivation of this equation. This error was reported as early as 1969 (see References 1 and 2). ~~... resulting from the use of the wrong equation may become significant when temperature gradients throughout a containment are not small.~~

Not true
LaSalle Unit
1 $\Delta T = 0.3^\circ R$
~ 0.05%
ERROR

A lack of any prohibition on a wide variety of ways in which the final calculated leak rate may be fudged. These include, but are not limited to:

- | | | |
|------|-------------------------------|----------------------------------|
| i. | ... the mass curve | 56.8 |
| ii. | ... | 56.8 |
| iii. | ... | NYS-41 |
| iv. | ... | 56.8 |
| v. | ... | N/A addition |
| vi. | ... | N/A is consequence |
| vii. | ... | NAIVE
SACRIFICY
OF TESTING |

Appendix
B

NO EXAMPLE
OF ACTUAL
TEST DATA

To sum up, the ILRT methodology now in use offers no guarantee that actual leak rates are acceptably low. We simply do not know what the actual leak rates are. This is precisely the case with LaSalle Unit 1.

This unacceptable situation represents a fundamental violation of the requirements of 10 CFR Part 50, which requires that reactor containment leak rates be demonstrated to be within certain values for a reactor to obtain and keep an operating license.

Specific problems with LaSalle Unit 1 ILRT:

In July of this year, I filed with the NRC a Freedom of Information Act Request (FOIA-83-384), asking for copies of any and all documents in the NRC's possession regarding Integrated Leak Rate Testing at the LaSalle 1 and 2 and D.C. Cook 1 and 2 reactors, including any and all information on flaws or errors in these tests. The NRC responded, after a very significant delay, by placing various documents regarding LaSalle in the LaSalle Public Document Room, at which I was able to peruse and photocopy them. I have submitted these materials for review to Dr. Zinovy Reytblatt, a specialist on containment leak rate testing.

Dr. Reytblatt informs me that these materials, which pertain to the spring 1982 ILRT conducted at LaSalle 1, are:

- a. insufficient to justify the reported leak rate;
- b. insufficient to prove that the kind of unjustifiable fudging of the data described above was not done; and
- c. insufficient to permit a meaningful review of this test.

did not look at all data

*data review done
onsite during
SIT and ILRT
bybass leakage
test*

Necessary data not provided include:

*procedure
site data
and containment
walk down*

*procedure
site witness*

- Precise location of temperature and pressure instruments;
- Compartment subvolume recalculations;
- Individual sensor weighting factors. It appears that the testing organization simply used temperature averaging over individual compartments; *YES, NOT A PROBLEM*
- Individual temperature sensor readings;
- Back-up pressure gauge readings; and
- Containment ventilation and cooling conditions in effect during the test.

No complete review can be done without such information.

There is strong evidence, however, that the real leak rate may be in excess of the reported value simply because the local temperature range within the containment during the test was at times greater than 40 degrees F. Another adverse factor is a possibility of actual weighting factors being in excess of 1, which violates even the faulty standard.

*65
already
recalculated
T and T*

In addition, the materials received were fragmentary, disordered, and in many cases illegible.

In conclusion, there appears to be no justification for the conclusion that LaSalle Unit 1's containment leak rate is within acceptable limits. It appears that the NRC has never received from Commonwealth Edison any materials which can justify any such conclusion.

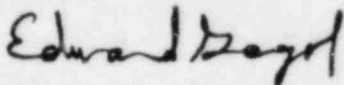
Relief requested:

I therefore request that you immediately order:

1. that LaSalle Unit 1 be placed in cold shutdown until Commonwealth Edison (CECO) can provide valid proof that its containment leak rate is within the limit mandated by law;
2. that CECO assemble and submit to the NRC all ILR test reports and supporting documents or computer media containing such supporting materials (including material relating to points a-f above) pertaining to LaSalle Units 1 and 2 and Byron Units 1 and 2, including such documents or media which contain the actual raw test data;
3. that the NRC immediately release copies of all this material to me so that an independent review can be done;
4. that the NRC immediately commence its own review of these tests; and
5. that Commonwealth Edison be ordered to conduct no further Integrated Leak Rate Testing until all errors and defects in the test methodology have been corrected.

The public interest, as well as 10 CFR Part 50, demands that this extremely serious situation be corrected. I shall expect to hear from you immediately.

Sincerely,



Edward M. Gogol

cc. Congressman Sidney Yates

References:

1. See pages 33-34 of:
BNWL-1028, UC-80, Reactor Technology: Air Leakage Rate Studies on the C.S.E. Containment Vessel.
by M.E. Witherspoon and G.J. Rogers, Reactor Engineering Department,
Physics and Engineering Division,
Battelle Memorial Institute, Pacific Northwest Laboratories.
September 1969.
2. Report 0183: Critique of Containment System Test Requirements
By Z. Reytblatt, Extran Inc., POB 2849, Chicago IL 60690