

OAK RIDGE NATIONAL LABORATORY

OPERATED BY

UNION CARBIDE CORPORATION
NUCLEAR DIVISION



POST OFFICE BOX Y
OAK RIDGE, TENNESSEE 37830

August 26, 1982

Mr. E. G. Arndt
Division of Engineering Technology
Office of Nuclear Regulatory Research
Washington, DC 20555

Dear Gunter:

Enclosed is the monthly progress report for "Containment Leak Rate Testing" (Fin No. B0489). The report covers the work performed during August 1982. Also enclosed is the final version of the 189 for this project.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jim".

James R. Dougan

JRD:spf
Enclosures

cc: F. J. Homan
D. J. Naus
G. D. Whitman

FOIA-85-143

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CONTAINMENT LEAK RATE TESTING

(FIN No. B0489)

J. R. Dougan
D. J. Naus

The remaining leak rate testing reports recommended by the NRC were received, bringing the total number of reports received to 67. Thirty containments are represented, and testing dates range from December 9, 1970 to June 29, 1982. These reports will be used to develop a history of leak rate testing for comparison with regulatory guidelines and other standards. The majority of the reports contain sufficient data to allow the evaluations of leak rate testing pressure, duration, and frequency. A list of these reports is attached. The list indicates the docket number, containment name and unit number, the docket sequence number or accession number, and the report date or submittal date.

A computer program has been developed to aid in the analysis of the leak rate testing data. Time, temperature, and pressure data are input into the program along with the containment volume. The data may then be analyzed by the mass-plot, total time, or point-to-point technique. In addition, plots of the containment air mass, temperature, and pressure history during the leak rate test can be generated, as well as plots of the total time and point-to-point leak rates. In this manner the data analysis techniques can be compared for a large number of data sets with varying conditions. In addition, trends in the data with respect to containment types can be more readily observed.

CONTAINMENT LEAK RATE TEST REPORTS

DOCKET	CONTAINMENT	NUMBER	DATE
50010	DRESDEN UNIT 1	241	3/19/74
50237	DRESDEN UNIT 2	115	12/9/70
		139	1/25/71
		173	5/28/71
		1092	8/16/76
50245	MILLSTONE UNIT 1	212	4/27/73
		232	6/12/73
		934	11/76
50247	INDIAN POINT UNIT 2	811	12/1/76
		8002050528	1/29/80
50249	DRESDEN UNIT 3	59	2/11/71
		491	9/3/74
50255	PALISADES	327	7/16/74
50280	SURRY UNIT 1		8/11/72
		517	1/15/76
		623	7/1/76
		8111040104	6/81
50281	SURRY UNIT 2	126	7/3/73
		8009170321	9/16/80
		8203240369	12/81
50282	PRAIRIE ISLAND UNIT 1	166	10/4/73
		249	6/6/74
		749	4/77
		8101050262	12/22/80
50285	FORT CALHOUN UNIT 1	105	6/73
		733	75
		734	12/9/76
		952	2/16/78
50286	INDIAN POINT UNIT 3	241	3/19/75
		252	5/12/75
		7811080111	6/19/78
50298	COOPER	134	3/4/74
		767	2/10/77
		8009190478	5/23/80
50305	KEWAUNEE		8/24/73
		180	4/18/74
		427	5/20/76
		633	6/29/77
			8/10/78
			6/29/82
50306	PRAIRIE ISLAND UNIT 2	232	1/31/75
			12/77
50313	ARKANSAS UNIT 1	147	3/8/74
		176	5/10/74
50315	D. C. COOK UNIT 1		2/26/75
		7811210260	11/14/78
		8109150432	9/10/81
50316	D. C. COOK UNIT 2		6/26/78
50317	CALVERT CLIFFS UNIT 1	169	3/8/74
		222	6/27/74
			4/24/78
50322	SHOREHAM		
50324	BRUNSWICK UNIT 2	1368	3/15/78
			12/18/74
50325	BRUNSWICK UNIT 1	8111040306	10/29/81
		405	11/29/76
50327	SEQUOYAH UNIT 1		
50328	SEQUOYAH UNIT 2	8105270060	5/19/81
50335	ST. LUCIE	216	10/20/75
		7908100466	8/7/79
50336	MILLSTONE UNIT 2	237	7/16/75
		7908200369	8/10/79
50338	NORTH ANNA UNIT 1		
50368	ARKANSAS UNIT 2	551	12/15/77
50369	MCGUIRE UNIT 1	8001090377	1/3/80
50373	LASALLE UNIT 1		
50416	GRAND GULF	8204160752	4/14/82

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APPENDIX J - ORNL

1. ACRS (Siess): reliability study recommended	08/08/79
2. Reiff to Butler: NRR User Request (incl. Contain. Liner Channel Boxes)	10/10/80
3. ETEC-Energy Systems Group: Schedule 189a	07/15/81
4. Arndt notes on 12/8-10/81 IE/NRR/RES mtg	01/06/82
5. Naus (ORNL) to Ashar: Interested in App. J work	03/03/82
6. NRC Form 173 to ORNL, Std Order for DOE Work	04/09/82
7. Arndt to Pasedag, Glynn: Proposed ORNL Contract Addendum	04/27/82
8. Arndt to Naus: Copy of missing material	05/05/82
9. Statement of Work	04/09/82
10. FY 1982 Program Brief	04/--/82
11. FY 1983 Program Assumption	04/--/82
12. Work Statement Addendum	04/27/82
13. Contract Summary	12/17/81
14. Draft Form 189 from ORNL	06/01/82
15. Availability of Type A, B & C Test Reports	06/03/82
16. Memo, Arndt to Shapaker, et. al. (reports for ORNL)	08/18/82
17. Work Statement Addendum	07/29/82
18. Comments on ANS 56.8 fwd'd to ORNL	08/17/82
19. Background mat'l fwd'd to ORNL	08/23/82
20. Dougan to O'Reilly: Witnessing of tests	10/01/82
21. List of FRC reports sent to ORNL	
22. Copy of ORNL/Reyblatt agreement	01/14/83
23. ORNL comments to Quadrex	01/28/83
24. File Note	04/22/83

25. Dougan ANS/ROD paper	04/25/83
26. Working Paper B of RG on ANSI/ANS 56.8 to J. Dougan	05/17/83
27. Draft Form 189 (FY 83-84)	06/29/83
28. Lotts to Arlotto (same as #27)	08/08/83
29. Status reports for G. Arlotto	12/02/82 & 01/13/83
30. Preliminary report outline	08/15/83
31. Transmittal of first draft of report (draft report filed separately)	10/04/83
32. Revised pg. 12 of draft report	11/28/83
33. ORNL organizational change	12/07/83
34. File Note: Quadrex subcontract	01/17/84
35. Arndt to Naus	02/21/84
36. NRC Form 173: Additional FY84 work (no \$) (3mtg days + 10 NRR:CSB diurnal questions)	05/10/84
37. Arndt note to Shapaker	10/15/84
38. Arndt note to J. Richardson, thru J. Burns: # status	01/15/85
39. File Note: Quadrex subcontract rejected	02/28/85

624-0657

~~624-0650~~

① Mr. Dan Naus / Jim ~~Dougan~~ —

J.D. left ORNL for TVA
12/5/83

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