

- c. (Closed) Open Item (50-456/88017-03; 50-457/88817-03): The licensee to split and analyze a radwaste liquid sample for gross beta, H-3, Sr-89, Sr-90 and Fe-55 and report the results to the Region III office for comparison to those from RESL. The results of the analyses are given in Table 2 ("Split Radwaste"). The gross beta and H-3 results are in agreement based on the acceptance criteria in Attachment 1, while the Sr-89 and Sr-90 results were not compared due to poor statistics; the Fe-55 value is a disagreement. The problem appeared to be due to the low concentrations of the nuclides in the sample which was exacerbated by the submission of too little sample to the contractor laboratory. Subsequently, the NRC submitted a spiked sample to the licensee for analysis. The results in the second group in Table 2, resulted in agreements in the Sr-89 and Sr-90, but still a disagreement for the Fe-55 value. However, the licensee vendor reanalyzed the Fe-55 in the radwaste split sample and obtained an agreement (Liquid Radwaste rerun) shown as the last item of Table 2.

3. Management Controls, Organization, and Training (IP 84750)

The management structure of the Chemistry Group was substantially modified since the previous inspection in this area,¹ and is still in a state of flux. The most significant recent event has been the dropping of the rotation of the Rad-Chem Technicians (RCT) between health physics and chemistry and the permanent assignment of 21 of them to Chemistry Technicians (CT) to the chemistry laboratory. Currently 13 are qualified as technicians under ANSI N18.1, 1971. Further, the Chemistry Department staff is also being reorganized. At present, the Station Chemist position has been replaced by the newly-appointed Assistant Rad-Chem Supervisor who reports to the Rad-Chem Supervisor and is supported by four Chemists, four Engineering Assistants (EA) and three chemistry foremen. They are planning a division into two groups, Operations and Analytical under the Chemistry Supervisor.

The inspectors looked into the qualifications of the new supervisor for Chemistry. He has a Bachelors degree in biology with a minor in chemistry, and has been with the company in various capacities since 1974 in environmental affairs and the last three years as the Radwaste Planner (Coordinator). He has good supervisory experience in the related field of radwaste, and will have the support of experienced Chemists and EAs, including that of the former Station Chemist. He noted that until he has had more experience with chemistry (for about a year), he will not make any decisions without help from the staff. Most of the signoffs on data and decisions are made by the staff members, in any case. It appears that he should be able to supervise the department satisfactorily. The separation of the technicians should result in improved technician proficiency, laboratory continuity and a reduction in the burden on the laboratory supervisors to continually train and track the proficiencies of a large number of technicians.

¹Region III Inspection Report Nos. (50-456/87046; 50-457/87047).

Table 2

U. S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Confirmatory Measurements Program

Facility: Braidwood

Date: January 25, 1989

Sample	Nuclide	NRC value	NRC SD	Lic. value	Lic. SD	Ratio	Resol.	Result
Liquid	H-3	5.26E-3	5.00E-5	5.21E-3	2.50E-4	0.99	105	A
radwaste	Sr-89	1.20E-8	1.30E-8	<4.90E-7		-	0.9	N
	Sr-90	2.00E-9	3.00E-9	<1.1E-7		-	0.7	N
	Fe-55	1.52E-5	2.00E-7	<2.5E-6		-	76.0	D
	Gross B	2.89E-6	1.20E-7	2.30E-6		0.80	24.1	A
Liquid	Sr-89	5.17E-4	1.50E-5	5.18E-4	5.20E-5	1.00	34.5	A
Spike	Sr-90	3.11E-5	1.20E-6	2.39E-5	2.39E-6	0.77	25.9	A
	Fe-55	6.74E-5	1.30E-6	1.66E-5	1.66E-6	0.25	51.8	D
Liquid	Fe-55	1.52E-5	2.00E-7	1.51E-5		0.99	76.0	A
radwaste								
(rerun)								

Comparison

- A = Agreement
- D = Disagreement
- N = No Comparison