

U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-266/81-06; 50-301/81-05

Docket No. 50-266; 50-301

License No. DPR-24; DPR-27

Licensee: Wisconsin Electric Power Company  
231 West Michigan Avenue  
Milwaukee, WI 53201

Facility Name: Point Beach Nuclear Power Plant, Units 1 and 2

Inspection At: Point Beach Site, Two Creeks, WI

Inspection Conducted: March 25-27, 1981

*A. G. Januska*  
Inspectors: A. G. Januska

4/10/81

*M. Schumacher for*  
N. A. Nicholson

4/10/81

*M. Schumacher*  
Approved by: M. C. Schumacher, Acting Chief  
Independent Measurements and  
Environmental Protection Section

4/10/81

Inspection Summary:

Inspection March 25-27, 1981, (Report Nos. 50-266/81-06; 50-301/81-05)

Areas Inspected: Announced inspection of confirmatory measurements including collection of samples, analysis onsite with the RIII Measurements Van and discussion of results. The inspection involved thirty-two inspector-hours onsite by two NRC inspectors.

Results: No items of noncompliance or deviations were identified during the inspection.

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## DETAILS

### 1. Persons Contacted

\*J. Zach, Superintendent, Technical Services  
\*R. Link, Superintendent, Engineering Quality and Regulatory  
\*P. Skramstad, Radiochemist  
T. Slack, Nuclear Plant Specialist  
M. Pockat, Radiochemical Technician

\* Denotes those present at the exit interview.

### 2. Results of Comparative Analyses

Results of comparative analyses performed on samples split and analyzed in the Region III Measurements Van onsite during this inspection, as shown in Table I, were reviewed with the licensee. The criteria for comparing measurement results are given in Attachment 1.

For eight sample comparisons, the licensee's results yielded eight agreements or possible agreements. Radioactivity levels in the licensee's airborne release pathway were so low as to preclude comparison. A comparison was attempted using an air sample collected in containment. Only the air particulate results could be compared because Region III is not currently calibrated for the larger size charcoal adsorber used by the licensee to collect the containment sample. A radioiodine comparison using a Region III spiked adsorber was not possible because the licensee is not calibrated for a face loaded adsorber.

Only one nuclide was present in the liquid sample collected. The licensee will be supplied a spiked liquid sample and agreed to submit the results to Region III. Comparison of these results will be reported to the licensee as an addendum to this inspection report.

### 3. Exit Interview:

The inspectors met with licensee representatives (Denoted in Paragraph 1) at the conclusion of this inspection on March 27, 1981. The inspectors summarized the scope and findings of the inspection. The licensee agreed to analyze a spiked liquid sample and report the results to Region III for subsequent comparison.

#### Attachments:

1. Attachment 1, Criteria for Comparing Analytical Measurements
2. Table I, Confirmatory Measurements Program Results, 1st Quarter, 1981

TABLE I  
U S NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT  
CONFIRMATORY MEASUREMENTS PROGRAM  
FACILITY: POINT BEACH  
FOR THE 1 QUARTER OF 1981

SAMPLE	ISOTOPE	-----NRC-----		---LICENSEE---		---NRC:LICENSEE---		
		RESULT	ERROR	RESULT	ERROR	RATIO	RES	T
OFF GAS	XE 133	4.1E-05	1.4E-06	4.8E-05	0.0	1.2E+00	2.9E+01	A
	KR 85	1.6E-03	1.6E-04	1.2E-03	0.0	7.5E-01	1.0E+01	A
P FILTER	NA 24	8.9E-05	1.0E-05	1.1E-04	0.0	1.2E+00	8.9E+00	A
	I 131	3.0E-04	9.2E-06	4.1E-04	0.0	1.4E+00	3.3E+01	P
	I 132	4.7E-04	2.1E-05	4.3E-04	0.0	9.1E-01	2.2E+01	A
	I 133	1.0E-03	1.6E-05	1.1E-03	0.0	1.1E+00	6.2E+01	A
	I 135	1.2E-03	6.0E-05	1.2E-03	0.0	1.0E+00	2.0E+01	A
	CS 137	3.5E-05	7.6E-06	5.7E-05	0.0	1.6E+00	4.6E+00	A

T TEST RESULTS:

A=AGREEMENT

D=DISAGREEMENT

P=POSSIBLE AGREEMENT

N=NO COMPARISON

## ATTACHMENT 1

### CRITERIA FOR COMPARING ANALYTICAL MEASUREMENTS

This attachment provides criteria for comparing results of capability tests and verification measurements. The criteria are based on an empirical relationship which combines prior experience and the accuracy needs of this program.

In these criteria, the judgment limits are variable in relation to the comparison of the NRC Reference Laboratory's value to its associated one sigma uncertainty. As that ratio, referred to in this program as "Resolution", increases, the acceptability of a licensee's measurement should be more selective. Conversely, poorer agreement should be considered acceptable as the resolution decreases. The values in the ratio criteria may be rounded to fewer significant figures to maintain statistical consistency with the number of significant figures reported by the NRC Reference Laboratory, unless such rounding will result in a narrowed category of acceptance. The acceptance category reported will be the narrowest into which the ratio fits for the resolution being used.

#### RESOLUTION

#### RATIO = LICENSEE VALUE/NRC REFERENCE VALUE

	<u>Agreement</u>	<u>Possible Agreement "A"</u>	<u>Possible Agreeable "B"</u>
<3	No Comparison	No Comparison	No Comparison
>3 and <4	0.4 - 2.5	0.3 - 3.0	No Comparison
>4 and <8	0.5 - 2.0	0.4 - 2.5	0.3 - 3.0
>8 and <16	0.6 - 1.67	0.5 - 2.0	0.4 - 2.5
>16 and <51	0.75 - 1.33	0.6 - 1.67	0.5 - 2.0
>51 and <200	0.80 - 1.25	0.75 - 1.33	0.6 - 1.67
>200	0.85 - 1.18	0.80 - 1.25	0.75 - 1.33

"A" criteria are applied to the following analyses:

Gamma spectrometry, where principal gamma energy used for identification is greater than 250 keV.

Tritium analyses of liquid samples.

"B" criteria are applied to the following analyses:

Gamma spectrometry, where principal gamma energy used for identification is less than 250 keV.

Sr-89 and Sr-90 determinations.

Gross beta, where samples are counted on the same date using the same reference nuclide.