

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

CENTRAL FILES

JAN 10 1977

Consumers Power Company
ATTN: Mr. R. B. DeWitt
Manager of Nuclear
Plant Operations
212 West Michigan Avenue
Jackson, Michigan 49201

Docket No. 50-155

Gentlemen:

As discussed in my letter of September 1, 1976, the NRC has conducted the Confirmatory Measurements Program with the operating nuclear power facilities in Region III since 1973. My staff has completed a review of your Confirmatory Measurements results at the Big Rock Point Nuclear Power Plant from 1974 through September 15, 1976. Please find enclosed a summary of your performance history. This information is provided to assist you in assessing your program for identification and quantification of radionuclides in effluents.

Your Confirmatory Measurements results to date show a substantial number of unacceptable comparisons. Based on these comparisons it is indicative that you may be underestimating radionuclide concentrations in effluents. While this has not led to exceeding your Technical Specifications, the potential for doing so exists. Please advise this office within twenty (20) days of this letter of the steps you have taken to improve the accuracy of your effluent radioanalyses.

Enclosures to this letter are: Table 1, Figure 1 and Confirmatory Measurements Program Performance History for Big Rock Point Nuclear Power Plant which includes the key for symbols used in Table 1.

We appreciate your continued cooperation and will gladly discuss any questions regarding this matter.

Sincerely yours,

James G. Keppler
James G. Keppler
Regional Director

Enclosures:
As Stated

cc w/encls;
Mr. C. J. Hartman,
Plant Superintendent
Central Files
Reproduction Unit NRC 20b
Anthony Rosiman, Esq.,
Attorney

PDR
Local PDR
NSIC
TIC
Ronald Callen, Michigan
Public Service Commission



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TABLE 1
COMPUTER DATA ANALYSIS SYSTEM

Facility: Big Rock Point

Number of Inspections: 5

Number of Comparisons: 106

Analyze Results:

U		LLD		A		P		D		N	
No.	Pct	No.	Pct	No.	Pct	No.	Pct	No.	Pct	No.	Pct
26	24.5	16	15.1	28	26.4	4	3.8	23	21.7	9	8.5

Invalidated Samples:

The following sample comparisons were not considered for Acceptable/Unacceptable calculations:

Xe133m	-	4U	(gas)
K40	-	1U	(charcoal adsorber)
Co60	-	1U	(charcoal adsorber)
Cs134	-	1U, 1A	(charcoal adsorber)
Cs137	-	1A, 2U	(charcoal adsorber)
Ba140	-	2U	(charcoal adsorber)
La140	-	1D	(liquid)
La140	-	2U	(particulate filter)
La140	-	2U	(charcoal adsorber)
Beta	-	1U	(particulate filter)

Number/Percent Acceptable: 30/48.4%

Number/Percent Unacceptable: 52/51.6%

Unacceptable Comparisons:

Liquid	-	Sr89 (1 of 3), Sr90 (2 of 4), Beta (2 of 4), H3 (3 of 3), Fe59 (1 of 1), Co58 (1 of 1), Co60 (2 of 5), Zn65 (3 of 5), Sb124 (1 of 1), Cs134 (3 of 5), Cs137 (3 of 5), Ba140 (1 of 1)
Gas	-	Xe133 (2 of 4)
P Filter	-	Cs134 (2 of 3), Cs137 (1 of 4), Ba140 (1 of 1)
C Filter	-	I131 (2 of 5)
F Spiked	-	Sr90 (1 of 1)

9/15/76

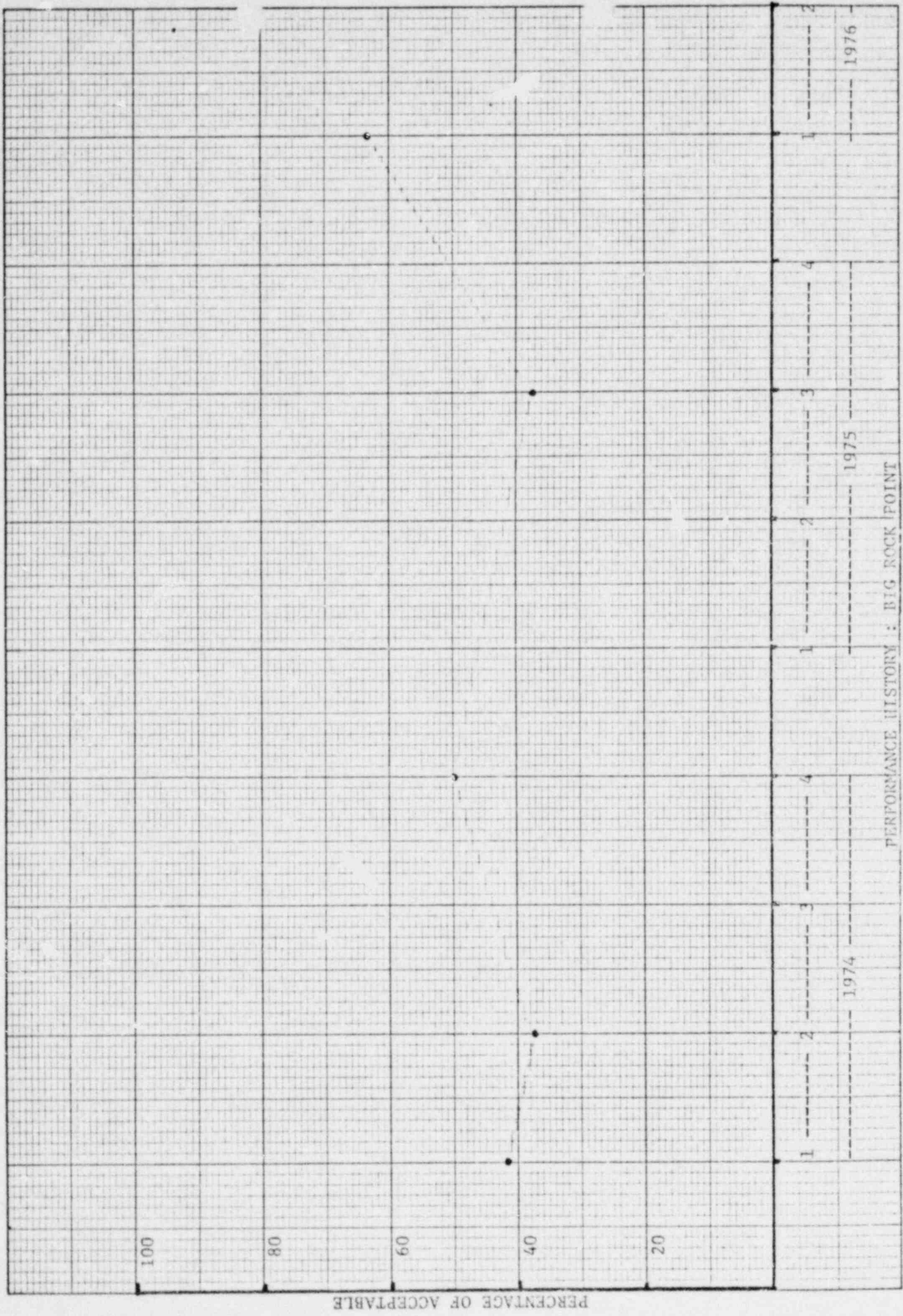


Figure 1

CONFIRMATORY MEASUREMENTS PROGRAM PERFORMANCE HISTORY FOR BIG ROCK
POINT NUCLEAR PLANT

I. Introduction

The following information has been compiled for the information of licensees in NRC Region III to assist in developing their laboratory capability in the NRC Confirmatory Measurements Program. Data utilized in the analyses have been discussed in the following IE Inspection Reports:

050-155/76-20

050-155/76-06

050-155/75-01

050-155/74-07

Additional results reported by the licensee to the NRC have been incorporated into the evaluation analyses.

II. Confirmatory Measurements Program

A description of all parameters and criteria utilized in the Confirmatory Measurements Program is presented in the attachment "Confirmatory Measurements Program," to the letter from Mr. J. G. Keppler, Director, USNRC, Region III, to Consumers Power Company dated September 1, 1976.

In addition, the following definitions are utilized in the performance history evaluation:

- Unreported (U) - results reported for radionuclides by HSL which were above the LD requirements, but the licensee did not report the radionuclide as being present in the sample. U results are considered in disagreement.
- LLD - results reported by HSL which are less than the LD criteria. These results are omitted from future consideration.
- Analyze Results - The results obtained by the NRC Computer Data Analysis System which divide the Confirmatory Measurements results into the U, LLD, A, P, D, and N categories.

Invalidated Samples - those results which were not considered for Acceptable/Unacceptable calculations due to differences in laboratory methods, sampling integrity compromises, or Confirmatory Measurement Program discrepancies. The following isotopic identifications are considered invalidated (in addition to compromised samples):

Xe 133m (gas)
Kr 85 (gas)
La 140 (all media)
Isotopes on charcoal adsorbers
other than I-131

Number/Percent
Acceptable - the number and associated percentage of results identified in the Analyze Results under A and P which were not subsequently invalidated.

Number/Percent
Unacceptable - the number and associated percentage of results identified in the Analyze Results under U and D which were not subsequently invalidated.

Unacceptable
Comparisons - the sample, isotope, and number of unacceptable comparisons of the total comparisons identified in Number/Percent Unacceptable.

III. Historical Performance

The results of the Confirmatory Measurements Program were reviewed using the NRC Computer Data Analysis System. The summary results of these analyses are presented in Table 1. Figure 1 presents performance results as a function of time (trend analysis) for each inspection sample collection period.

A discussion of the licensee's unacceptable comparisons and the licensee's proposed corrective action is presented in the previously referenced IE inspection reports.