

APRIL 28 1983

DMB 016

Docket Nos. 50-321  
and 50-366

MEMORANDUM FOR: J. F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing

FROM: G. W. Rivenbark, Project Manager  
Operating Reactors Branch #4  
Division of Licensing

SUBJECT: SUMMARY OF MEETINGS ON FEBRUARY 23 AND 24, 1983 WITH  
GEORGIA POWER COMPANY (GPC) CONCERNING PROPOSED  
RADIOLOGICAL EFFLUENT TECHNICAL SPECIFICATIONS (RETS)

The subject meeting between the NRC staff and GPC was held at GPC's corporate offices in Atlanta, Georgia to discuss the NRC's questions related to its review of GPC's RETS submittal. A set of the questions discussed had been sent to GPC under the copy distribution of a November 23, 1982 letter from EG&G Idaho, Incorporated to C. Willis of the NRC staff.

GPC responded orally to each question during the two day meeting indicating for most items whether and how they would modify their final submittal of RETS for the item in question. GPC stated that it planned to make its next submittal of the RETS and the Offsite-Dose Calculation Manual (ODCM) in final form rather than in draft. GPC stated it would be meeting to discuss how it can schedule its final submittal and would advise the staff of its schedule. (GPC subsequently informed the staff by telephone that it would submit the RETS and the ODCM in final form by September 1, 1983.)

A copy of the list of questions discussed with GPC is attached as Enclosure 1. A list of meeting attendees is attached as Enclosure 2.

Original signed by

George W. Rivenbark, Project Manager  
Operating Reactors Branch #4  
Division of Licensing

Enclosures:  
As stated

8305040748 830422  
PDR ADCK 05000321  
P PDR

OFFICE	ORB#4:DR						
SURNAME	GRivenbark:dk						
DATE	4/2/83						

MEETING SUMMARY DISTRIBUTION

Licensee: Georgia Power Company

\*Copies also sent to those people on service (cc) list for subject plant(s).

Docket File  
NRC PDR  
L PDR  
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Project Manager -GRivenbark  
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NRC Meeting Participants:

CWillis  
JWray  
DEvans

## RADIOLOGICAL EFFLUENT TECHNICAL SPECIFICATIONS (RETS) REVIEW

### I. Purpose

The purpose of this document is to provide licensees with advance notice (i.e., prior to the in-plant review) of areas where further clarification is needed in the review of their RETS submittal and Off-site Dose Calculation Manual (ODCM). Some of the areas addressed are such that full compliance with the model RETS is necessary, however, in many cases a justified alternative that meets the intent will be considered in compliance. This document is being submitted to the NRC plant manager for review.

### II. Statements Not in Direct Compliance With the Model RETS

The Licensee statements where clarification is required are listed below in the order of the model RETS:

<u>No.</u>	<u>NUREG 0473</u>	<u>Hatch RETS</u>	<u>Comments</u>
1	1.0	1.0	It is necessary that the definition of channel calibration be provided for review purposes. The Licensee comments indicate that this definition is part of the technical specifications.
2	3.3.7.11	3.14.1 3.14.2	It is not stated that the alarm/trip setpoints will be determined in accordance with the ODCM.
3	3.3.7.11 Item b	3.14.1 Item b	The word ACTION has been used in the specifications, but is not defined in the definitions section.
4	3.3.7.11	3.14.1 Item c	This specification, 6.9.1.9(b) has not been listed in the submittal. In the standard technical specifications, this is a requirement for a 30-day written report in the event that plant operation is permitted by a LCO.
5	3.3.7.11 Action c	---	It is not clear that there would be no shutdown requirement for violation of a limiting condition of operation present in the Hatch technical specifications.
6	Table 3.3.7.11-1 Item 1, 3a	Table 3.14.1-1 Item 1, 3a	It is acceptable to allow the liquid radwaste effluent monitoring instrumentation to only be in operation when the radwaste discharge valves are not locked

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			closed. The plant states that releases can only occur when the valves are open.
7	Table 3.3.7.11-1 Item 2	Table 3.14.1-1 Item 2	Are there no other potential in-leakage points to the service water system other than the component cooling water system? No method of determining radioactive leakage is present except during a degraded operational mode. (System drawings would be helpful for the review meeting.)
8	Table 3.3.7.11-1 Item 3a	Table 3.14.1-1 Item 3a	It is unclear whether pump curves are always used to estimate liquid radwaste flowrates. Also, the frequency of estimation is not listed. Use of pump curves is normally considered an action item in the event flow operation is inoperable.
9	Table 3.3.7.11-1 Item 3b	Table 3.14.1-1 Item 3b	It is not clear whether pump curves may be used as a substitute for monitoring the discharge canal. Also, it appears that the flowrate monitor must be in operation normally only during degraded operation modes.
10	Table 3.3.7.11-1 Item 4	---	No alarm/trip setpoints are based on radioactivity recorders based on Licensee comments dated 10/1/82.
11	Table 3.3.7.11-1 Item 5		The plant indicates that all permanent tanks are diked (letter dated 10/1/82).
12	Table 3.3.7.11-1	Table 3.14.1-1 Action 18	The method of analysis (i.e., the specification number) is not referenced.
13	Table 3.3.7.11-1 Notation 112	Table 3.14.1-1 Action 20	"MDC" is not defined or referenced in in this table.
14	---	Table 3.14.1-1 Action 22	"MCO" is not defined or referenced in this table.
15	Table 4.3.7.11-1 Item 1a	Table 4.14.1-1 Item 1	The plant comments (dated 10/1/82) indicate that no provision for source check exists for this instrument and that an adequate source check is the

<u>No.</u>	<u>NUREG</u> <u>0473</u>	<u>Hatch</u> <u>RETS</u>	<u>Comments</u>
			determination that the instrument is on scale. Also, Comment No. 9 indicates that existing calibration procedures will be used, but do these methods meet the listed RETS requirements? The definition of channel calibration is not present (Note: applicable also to the service water monitor).
16	---	Table 4.14.1-1 Item 4	It is not clear that a quarterly functional test would not be necessary for the differential pressure monitor for the function it is intended to perform.
17	---	Table 4.14.1-1 Notation	The comment "During liquid additions to the tank" denoted by two asterisks is not required in the table.
18	---	Table 4.14-1 Notation	It is unclear why the numbering system has been retained.
19	Table 3.3.7.12-1 Item 1	Table 3.14.2-1	The Licensee comments dated 10/1/82 indicate that the functions of the main condenser off-gas effluent monitoring system are performed by the stack effluent monitoring system.
20	Table 3.3.7.12-1 Item 2	Table 3.14.2-1 Item 2	The Licensee comments dated 10/1/82 indicate that the main condenser explosive gas system is designed for an explosion and only one hydrogen monitor is present. Also, from plant comment #14, it is unclear why this pathway cannot be totally secured as a result of building ventilation. Normally, automatic termination of explosive gas releases occurs prior to the addition of dilution air.
21	Table 3.3.7.12-1 Item 5-9	---	Are any other gaseous release pathways present? (Note: Drawings would be helpful at the plant review.)
22	Table 3.3.7.12-1 Item 10	---	Is there a condenser air ejector monitor present prior to the holdup system? This is a normal BWR plant system.

<u>No.</u>	<u>NUREG</u> <u>0473</u>	<u>Hatch</u> <u>RETS</u>	<u>Comments</u>
23	---	Table 3.14.2-1 Item 4	What is the purpose of monitoring this system? If it is a potential release pathway, a flow rate monitor should be present unless adequate justification for not monitoring the flowrate is present.
24	Table 3.3.7.12-1 Notation	Table 3.14.2-1 Notation	The purpose of the notation with three asterisks is unclear. It is not used in Table 3.14.2-1.
25	Table 3.3.7.12-1 Action 123	Table 3.14.2-1 Action 27	Eight hour grab samples are required on the ventilation release points rather than daily.
26	Table 3.3.7.12-1 Action 124	Table 3.14.2-1 Action 27	For the reactor building ventilation system Action 123 of the model is adequate. But, as the potential for larger releases is greater during a drywell purge, suspension of releases from the drywell is appropriate unless monitoring capability is present. The 30-day limitation is no longer a requirement.
27	Table 3.3.7.12-1 Action 125	Table 3.14.2-1 Action 29	The 28-day limitation on operation has been removed. Is there a calibration requirement for the temporary hydrogen analyzer.
29	Table 4.3.7.12.1 Item 3	Table 4.14.2-1 4.14.2-1 Item 3	Is there a reactor building isolation noble gas monitor that may require surveillance tests? The plant states that the vent monitoring system does not have a trip function.
30	Table 4.3.7.12-1	Table 4.14.2-1 Item 6	If an instrument, the recombiner building ventilation monitoring system, is listed in the instrumentation section as Item 4, the surveillance requirement should also be included numbered as Item 4 rather than 6.
31	Table 4.3.7.12-1	Table 4.14.2-1 Notation 1	If no automatic termination of release functions are present on the effluent pathways, this notation is not required.
32	3.11.1.1 Action a	3.15.1.1 Action a	The monthly operating report (Specification 6.9.1.10) requirement is not stated in the model RETS.

*recombiner  
bldg*

<u>No.</u>	<u>NUREG 0473</u>	<u>Hatch RETS</u>	<u>Comments</u>
33	4.11.1.1.1	4.15.1.1.1	The Licensee comments dated 10/1/82 state that the sampling requirement do not apply to process streams. How does this effect the monitoring of plant effluents?
34	Table 4.11-1	Table 4.15.1-1	The plant prefers the term "minimum detectable concentration (MDC)" rather than "lower limit of detection (LLD)" as the measured values are in terms of concentration.
35	Table 4.11-1	Table 4.15.1-1	The plant finds a MDC of $1.0 \times 10^{-6}$ for Fe-55 difficult to measure and prefers an acceptable alternative of $2.0 \times 10^{-6}$ .
36	Table 4.11-1 Item b	---	The Licensee comment dated 10/1/82 states that the plant has no continuous liquid release pathways. Are there potential pathways that could be contaminated release points?
37	Table 4.11-1 Notation a	Table 4.15.1-1 Notation a	The definition of MDC referenced does not refer to the MDC as an "a priori" value. This is helpful for clarity. Also, for plant samples the $\Delta t$ has not been defined as the elapsed period between the midpoint of sample collection and time of counting.  Further, Footnote "a" is not referenced in Table 4.15.1-1.
38	Table 4.11-1 Notation d	Table 4.15.1-1 Notation e	The definition should include the statement that "Prior to sampling for analyses, each batch shall be isolated, and then thoroughly mixed to assure representative sampling."
39	3.11.1.2 3.11.1.3 3.11.2.2 3.11.2.3 Action a	3.15.1.2 3.15.1.3 3.15.2.2 3.15.2.3 Action a	The current requirements are that the report to be filed is a special report pursuant to Section 6.9.2 in lieu of an LER. The sections listed specify reporting in the monthly operating report.
40	3.11.1.2 Action a	3.15.1.2 Action a	If drinking water is taken from the receiving water within three miles of the plant discharge, the special

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			report must include the results of radiological analyses of the drinking water source and the radiological impact on finished drinking water.
41	3.11.1.3	3.15.1.3	The operability requirements listed in the submittal are listed for a quarterly basis rather than monthly as required by the model. Also, the quarterly limits listed are higher than required for a summed three month period. The monthly requirement is expressed in RETS as 1/48 of the annual dose.
42	3.11.1.4	3.15.1.4	The plant indicates that outside temporary tanks will be limited to less than or equal to 10 curies, but that disposable liners may contain more activity. It is expected that the potential for release from these liners is very low.
43	3.11.1.4	3.15.1.4	It is suggested that if the 10 curie limit is exceeded, the events leading to these conditions should be described in the Semiannual Report. The current Specification 6.9.1.12 requires a prompt notification if the limit is exceeded for more than 48 hours.
44	4.11.1.4	4.15.1.4	The Licensee specifies that a sample will be analyzed of each batch prior to release to the temporary tank. Is this as conservative as a sample every seven days when additions are being made?
45	3.11.2.1 Item b	3.15.2.1 Item b	The current requirements specify the following words, "for iodine-131, iodine-133, for tritium, and for all radionuclides in particulate form with half lives greater than 8 days."
46	4.11.2.1.1 4.11.2.1.2	4.15.2.1.1 4.15.2.1.2	It is not stated that the dose rates will be determined to be within the



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			above limits in accordance with the ODCM. It is unclear that the wording listed in the model produces a conflict with the liquid system calculations as stated by the Licensee.
47	Table 4.11-2 Item A	Table 4.15.2-1 Item A	The waste gas storage tank system is considered a portion of RETS due to the potential for high level releases.
48	Table 4.11-2 Item B	Table 4.15.2-1	The Licensee comments indicate that containment releases are vented through the standby gas treatment system to the main stack. Justify that this would reduce the potential of exceeding 10 CFR 20 instantaneous release limits as would a prerelease grab sample.
49	Table 4.11-2 Item D	Table 4.15.2-1 Item C	It is not indicated that the gross alpha and strontium analyses would be done on composite samples.
50	Table 4.11-2 Item D	Table 4.15.2-1	A noble gas monitoring system has not been included in the specification.
51	Table 4.11-2 Notation b, d	Table 4.15.2-1 Item c, e	It is indicated that analyses will be performed at >15 percent power whenever a change in the radionuclide mix could occur. This appears very restrictive and the model specifications prefer analyses following startup, shutdown, and 15 percent power changes within hour unless (1) analysis shows the dose equivalent I-131 concentration in coolant has not increased by a factor of 3 and (2) the noble gas activity monitor shows that effluent activity has not increased by a factor of three.
52	Table 4.11-2 Notation d	Table 4.15.2-1 Notation e	It is not indicated that 7 day samples for particulates and charcoal will be taken and analyzed within 48 hours.
53	Table 4.11-2 Notation e.	Table 4.15.2-1	The Licensee notes dated 10/1/82 indicate that the spent fuel pool vents to the reactor building stack and a monthly grab sample is taken at this vent. This is an acceptable

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			alternative if changes in the fuel pool release rates are not normally expected.
54	Table 4.11-2 Notation g	Table 4.15.2-1 Notation h, b	The Licensee specifies that if higher than required MDC's are listed, the reasons will be documented in the Semiannual Report. Also, a calculation is shown for increasing the MDC based on the gamma yield. This is an acceptable method of correction for low gamma yield, or low energies.
55	3.11.2.2	3.15.2.2	The requirement for reducing the dose design objectives based on public occupancy within the site boundary has been removed.
56	3.11.2.3	3.15.2.3	The proper terminology is "I-131, I-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days." The action statement also requires revision.
57	3.11.2.3 Item a, b	3.15.2.3 Item a, b	The doses are not stated as being "to any organ." Also, in Comment 80, the plant states that dose design objectives do not apply to operating plants. This needs to be clarified.
58	4.11.2.3	4.15.2.3.1	The statement that the dose calculations will be performed for "the total time period" is unclear.
59	3.11.2.4	3.15.2.4	The doses listed for operation of the gaseous radwaste treatment system do not meet the 1/48 of the annual dose requirements for the ventilation exhaust system. The submittal appears to confuse the gaseous radwaste treatment system which must be in operation when the condenser air ejector is operating with the ventilation exhaust treatment system. The limits for the gaseous radwaste treatment system, 0.2 mrad gamma and 0.4 mrad beta during 31 days. The ventilation exhaust limit is 0.3 mrem to any organ in a 31 day period.

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60	3.11.2.7	3.15.2.7	Is 240,000 $\mu\text{Ci}/\text{sec}$ equivalent to 100 $\mu\text{Ci}/\text{sec}/\text{MW}_t$ ? Also, is the location of the pretreatment monitor system downstream of the delay line?
61	3.11.2.7 Action a	3.15.2.7 Action a	What is the definition of operational condition 2?
62	4.11.2.7.1	---	It is not indicated that the radioactivity rate of noble gases at the main condenser air ejector will be continuously monitored.
63	3.11.2.8	---	The plant indicates that this specification is not necessary as the purge and vent system is hard-piped to the standby gas treatment system (letter dated 10/2/82).
64	3.11.3 4.11.3	3.15.3.1 4.1.5.3.1	The Process Control Program (PCP) has not been addressed. The surveillance requirements on sampling of solid waste have not been addressed although a PCP is noted.
65	3.11.4	3.15.2.5 Action a	Only the liquid effluent release limits (3.15.1.2) have been addressed in the action item and the surveillance requirement. Direct radiation should be included. Also, all elements of the special report as listed in the model have not been included.
66	3.12.1 Action a	3.16.1 Action a	"Significant deviations" from the environmental monitoring program are not defined.
67	3.12.1 Action b	3.16.1 Action b	The reporting requirements are based on the annual dose projection rather than the quarterly dose limits.
68	3.12.1 Action c	3.16.1 Action c	The plant indicates that vegetation samples may be unavailable outside the growing season and may not be taken. Also, it is indicated that milk sample locations may not be replaced as few milk animals are located in the vicinity (letter dated 10/2/82).

<u>No.</u>	<u>NUREG 0473</u>	<u>Hatch RETS</u>	<u>Comments</u>
69	Table 3.12-1 Item 1	Table 3.16.1-1 Item 1	The radioiodine canister should have an analysis frequency of every 7 days. The plant comments state that the analysis frequency is governed by collection frequency and detection levels.  For beta analysis of composites, the period is specified as "approximately 91 days." This is an acceptable alternative to 92 days.
70	Table 3.12-1 Item 2	Table 3.16.1-1 Item 2	The normal number of radiation dosimeters is 40 rather than 35. Also the analysis frequency is not specified as quarterly.
71	Table 3.12-1 Item 3b	Table 3.16-1 Item 3b	The plant prefers not to do a gamma isotopic analysis on ground water samples as no positive identifications have been made in the previous ten years (letter dated 10/2/82).
72	Table 3.12-1 Item 3c	---	The plant indicates that the river water is not used for drinking purposes and they do not perform the required analyses.
73	Table 3.12-1 Item 3d	Table 3.16-1 Item 3c	The comments dated 10/2/82 state that the sampling location is only uncovered for half the year, therefore, they obtain only an annual sample.
74	Table 3.12-1 Item 4b	Table 3.16-1 Item 4b	The plant comments state that only one fish (shad) type is available in the immediate area.
75	Table 3.12-1 Item 4c	Table 3.16-1 Item 4c	The only vegetation apparently available for analysis is grass and two sample locations are provided with monthly samples.
76	Table 4.12-1	Table 4.16-1	The LLD for a gross beta analysis of water is not specified.
77	Table 4.12-1	Table 4.16-1	All values have been rounded to one place.
78	Table 4.12-1	Table 4.16-1	The LLD for I-131 is not specified as being for drinking water.

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79	Table 4.12-1	Table 4.16-1	The exponents have not been added for LLD's for airborne particulates or gases.
80	Table 4.12-1	Table 4.16-1	The value for Cs-134 for fish was incorrectly reported.
81	3.12.2	3.16.2	It is not indicated that the survey will include the nearest garden greater than 500 feet. It is also indicated that an elevated release is present as the survey includes all milk animals within three miles.
82	3.12.2 Action a, b	3.16.2 Action a, b	The reports should be filed in the Semiannual Effluent Report.
83	3.12.2 Action b	3.16.2 Action b	The plant indicates that any sample location with a greater dose commitment than current locations will be added to the sampling program if samples are available.
84	3.12.2 Action b	3.16.2 Action b	It is not clear what sampling location can be removed from the monitoring program.
85	4.12.2	4.16.2	The plant indicates that no date limitations are necessary for the survey as cows are on pasture year around.
86	BASES Total dose	BASES	All elements of the bases statement on total dose are not present.
87	BASES Environmental Monitoring	BASES	The discussion of "a priori" LLD's has not been included.
88	6.5.1.6.k	6.5.1.6.k	The plant has put quantitative limitations on values that they must report.
89	6.5.1.6.1	6.5.1.6.1	Review of radwaste treatment system changes have not been included.
90	6.5.2.8	6.5.2.8	The audits of the ODCM and PCP have not been addressed.
91	6.5.2.8.0	6.5.2.8.1	What is the reference for the quality

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			assurance program noted? The review should be annually.
92	6.8.1.i	6.8.1	Procedures for the quality assurance program have not been addressed.
93	6.9.1.7	6.9.1.7	The report does not include requirements for (1) a summary description of the environmental monitoring program (2) two legible maps covering sample locations and keyed from the centerline of the reactor (3) discussions of deviations from the sampling schedule and (4) discussion of when LLD's were not achievable.
94	6.9.1.9	6.9.1.9	The assessment of radiation doses on members of the public and the assumptions used have not been included.
95	6.9.1.9	6.9.1.9	The elements of the report to be submitted 60 days after January 1 have not been included.
96	6.9.1.9	6.9.1.9	Quantitative limits have been placed on the report of unplanned releases.
97	6.9.1.9	6.9.1.9	Changes to the ODCM have been moved from the monthly report to the semiannual.
98	6.9.1.12	6.9.1.12	Prompt notification requirements have been removed from the model.
99	6.9.1.13	6.9.1.13	Thirty day written reporting requirements have been removed.
100	6.13 6.14	6.15 6.16	The plant considers the PCP and ODCM as plant procedures available for audit.
101	6.15	6.17	The technical specification on major changes to radioactive waste treatment systems has not been included.

LIST OF ATTENDEES  
FEBRUARY 23 AND 24, 1983 MEETING WITH  
GEORGIA POWER COMPANY ON  
RETS

<u>NAME</u>	<u>ORGANIZATION</u>
George Rivenbark	NRC/DL
Charles A. Willis	NRC/DSI
Douglas W. Akers	EG&G
Bill Serrano	EG&G
John Wray	NRC/Region II
Don Evans	NRC/Region II
Michael Blackwood	GPC/Licensing
Jean M. Diluzio	GPC/Power Generation H.P.
Steve Ewald	Power Generation Engr. GPC
R. D. Baker	GPC/Nuclear Regulatory Engr. Mgr.
J. T. Ponder*	GPC/Hatch Site
T. L. Elten	GPC/Hatch Site
William Ollinger	GPC/GD
James N. McCloud	SCS/NSLD
R. C. Hand	Lab Supervisor Plant Hatch

\* Attended 2/23/83 meeting only.