UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

AUG 21 1992

Report Nos: 50-335/92-15 and 50-389/92-15

Licensee: Florida Power and Light Company
9250 West Flagler Street
Miami, FL 33102

Docket Nos.: 50-335 and 50-389 License Nos.: DPR-67 and NPF-16

Facility Name: St. Lucie 1 and 2

Inspection Conducted: July 20 - 24, 1992

Inspector: R. P. Carrion — 20 Aug '92
R. P. Carrion — Date Signed

Approved by: for T. R. Decker, Chief — 20 Aug 1992
T. R. Decker, Chief — Date Signed
Radiological Effluents and
Chemistry Section
Radiological Protection and Emergency
Preparedness Branch
Division of Radiation Safety and
Safeguards

SUMMARY

Scope:

This routine, unannounced inspection was conducted in the areas of the organization of the Chemistry Department and Radwaste Group, plant water chemistry, the Post Accident Sampling System (PASS), Confirmatory Measurements, Information Notice (IN) 92-34, the Semiannual Radioactive Effluent Release Report, the Annual Radiological Environmental Operating Report, the Annual (Non-Radiological) Environmental Operating Report, the emergency Control Room ventilation, the East Evaporation/Percolation (EP) Pond, radioactive waste processing and transportation, contingencies for long term storage of low level radioactive waste, and records for decommissioning planning.

Results:

The Chemistry Department and the Radwaste Group were staffed by knowledgeable, competent personnel. (Paragraph 2)

Plant water chemistry was maintained well within Technical Specification (TS) limits. (Paragraph 3)

An upgrade to the dissolved hydrogen analyzer had been made to the PASS of both units and was fully operational. (Paragraph 4)

The confirmatory measurements comparison showed good agreement between the results of the licensee and the NRC. (Paragraph 5)

Information Notice 92-34, "New Exposure Limits For Airborne Uranium and Thorium," was discussed with the licensee. (Paragraph 6)

The Semiannual Radioactive Effluent Release Report was well-written and satisfied the requirements of the Technical Specifications. (Paragraph 7)

The licensee had good programs in place to detect the effects of plant operations (both radiological and non-radiological). Those operations had caused minimum impact to the environment and virtually no dose to the general public. (Paragraphs 8 and 9)

Records of testing required by the TSs for the Control Room Emergency Ventilation System were adequate and well maintained. (Paragraph 10)

The licensee had initiated a program to analyze the activity remaining in the East Evaporation/Percolation Pond. (Paragraph 11)

Radwaste processing and shipping was conducted in a competent, professional manner. (Paragraph 12)

The licensee continued to evaluate contingencies for long-term storage of low level radioactive waste. (Paragraph 13)

The licensee will develop a system to identify and maintain events/incidents significant with respect to decommissioning planning. (Paragraph 14)

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*G. J. Boissy, Plant General Manager
*H. F. Buchanan, Health Physics Supervisor
*C. L. Burton, Operations Manager
*R. E. Cox, Chemistry Effluents Supervisor
D. H. Faulkner, Primary Chemistry Supervisor
*R. J. Frechette, Chemistry Supervisor
*J. W. Holt, Licensing Engineer
*G. R. Madden, Licensing Manager (Acting)
*H. Paduano, Engineering Technical Programs Manager
*T. E. Roberts, Engineering Manager
*D. A. Sager, Plant Vice President
*R. B. Somers, Radioactive Waste Supervisor
*J. A. West, Operations Superintendent
*D. M. Wolf, Site Engineering Supervisor

Other licensee employees contacted during this inspection included technicians and administrative personnel.

Nuclear Regulatory Commission

*S. Elrod, Senior Resident Inspector

*Attended exit interview

Acronyms and Initialisms used throughout this report are listed in the last paragraph.

2. Organization (84750 and 86750)

Technical Specification (TS) 6.2 describes the licensee's organization.

The inspector reviewed the licensee's organization, staffing levels, and lines of authority as they related to the Chemistry Department and Radioactive Waste Group to verify that the licensee had not made organizational changes which would adversely affect the ability to control radiation exposures or radioactive material.

Although there had been no personnel changes (i.e. the same twenty-five people were in the Chemistry Department) since the last inspection (Inspection 92-02, conducted in January 1992), a new position had been created, that of Plant Analyst in the Environmental Section. The Plant Analyst oversaw/directed the work of three technicians and reported directly to the Environmental Plant Supervisor. The

position was staffed with a technician who had previously worked in the Water Treatment Plant/Sewage Treatment Plant (WTP/STP) Group.

There had been no changes in the Radwaste Group since the last time this area was reviewed. (Refer to Inspection Report (IR) 50-335,389/92-02, Paragraph 2.)

The inspector concluded that the licensee's organization in the areas of Chemistry and Radioactive Waste continued to be staffed with competent personnel, who continued to carry out their duties and responsibilities in a professional manner.

No violations or deviations were identified.

3. Plant Water Chemistry (84750)

At the beginning of the inspection, St. Lucie Units 1 and 2 were operating at 100 percent and 0 percent power, respectively. By the end of the inspection, Unit 2 had been brought back on line and was operating at near 100 percent capacity. Unit 1 was in its eleventh fuel cycle and Unit 2 was in its seventh fuel cycle. Refueling outages were scheduled to begin Spring 1993 (for Unit 1) and Autumn 1993 (for Unit 2).

The inspector reviewed the plant chemistry controls and operational controls affecting plant water chemistry since the last inspection in this area. TS 3.4.7 specifies that the concentrations of dissolved oxygen (DO), chloride, and fluoride in the Reactor Coolant System (RCS) be maintained below 0.10 parts per million (ppm), 0.15 ppm, and 0.15 ppm, respectively. TS 3.4.8 specifies that the specific activity of the primary coolant be limited to less than or equal to 1.0 microcuries/gram (μCi/g) dose equivalent iodine (DEI).

These parameters are related to corrosion resistance and fuel integrity. The oxygen parameter is established to maintain levels sufficiently low to prevent general and localized corrosion. The chloride and fluoride parameters are based on providing protection from halide stress corrosion. The activity parameter is based on minimizing personnel radiation exposure during operation and maintenance.

Pursuant to these requirements, the inspector reviewed tabular daily summaries which correlated reactor power output to chloride, fluoride, and dissolved oxygen concentrations, and DEI of the reactor coolant for the period of April 1, 1992 through June 30, 1992 and determined that all of the parameters were maintained well below TS limits. Typical values for DO, chloride, and fluoride were

less than 0.005 ppm, less than 0.005 ppm, and less than 0.006 ppm, respectively, for both units. Typical DEI values were 9.0E-3 μCi/g (with a maximum of 3.16E-1 μCi/g) for Unit 1 and 9.0E-3 μCi/g (with a maximum of 2.53E-1 μCi/g) for Unit 2.

There was no evidence of leaking fuel rods in either unit.

The inspector concluded that the Plant Water Chemistry was being maintained well within the TS requirements.

No violations or deviations were identified.

4. Post Accident Sampling System (PASS) (84750)

NUREG-0737 requires that the licensee be able to obtain a sample of the reactor coolant and containment atmosphere. Furthermore, the sample must be promptly obtained and analyzed (within three hours total) under accident conditions without incurring a radiation exposure to any individual in excess of 3 and 18 3/4 rem to the whole body and/or extremities, respectively.

TS 6.8.4.e requires that a program be established, implemented, and maintained to ensure the capability to obtain and analyze, under accident conditions, reactor coolant, radioactive iodides and particulates in plant gaseous effluents, and containment atmosphere samples. The PASS should provide these capabilities and should enable the licensee to obtain information critical to the efforts to assess and control the course and effects of an accident.

The inspector reviewed the most recent PASS operability log sheets for both units and discussed the results with the Primary Chemistry Supervisor. The status of the dissolved hydrogen analyzer installation, referenced in IRs 90-21 and 92-02 was also discussed. An upgrade to the dissolved hydrogen analyzer had been made to the PASS of both units and the analyzers were fully operational at the time of this inspection. The operability tests had been performed within the required six-month time limits. A comparison of six parameters (pH, boron, dissolved oxygen, and dissolved hydrogen concentrations, gross activity, and I-131 activity) of the daily-analyzed RCS sample to the readings taken from the PASS satisfied the acceptance criteria.

The inspector concluded that the PASS was capable of fulfilling its intended sampling function.

No violations of deviations were identified.

5. Confirmatory Measurements (84750)

10 CFR 20.201(b) requires the licensee to perform surveys as necessary to evaluate the extent of radiation hazards. In an effort to evaluate the licensee's analytical capabilities, the licensee was provided spiked liquid samples for analysis pursuant to the NRC Confirmatory Measurements Program. The licensee was requested to re-analyze a batch of samples for iron-55, strontium-89, and strontium-90 when there was no agreement of some of an earlier batch of samples. The licensee reported the analytical results of this batch on January 31, 1992. As indicated in Attachment 1, the licensee's analytical results were in agreement with the prepared concentrations for the three isotopes identified. Attachment 2 provides the criteria for assessing the agreement between the licensee's analytical results and the prepared concentrations.

No violations or deviations were identified.

6. Discussion of Information Notice (IN) 92-34

The inspector discussed IN 92-34, "New Exposure Limits For Airborne Uranium and Thorium," with the Chemistry Supervisor to be sure that he and his staff were cognizant of it and its implications. The IN emphasizes the two changes due to the NRC's adoption of the dose-assessment methodology recommended by the International Commission on Radiation Protection (ICRP) 26 and 30 in the new 10 CFR 20. These are significant changes in occupational exposure limits and equivalence of internal and external dose and could have great impact on licensees that experience airborne concentrations of uranium and thorium compounds.

7. Semiannual Radioactive Effluent Release Report (84750)

TS 6.9.1.7 requires the licensee to submit a Semiannual Radiological Effluent Release Report within specified time periods covering the operation of the facility during the previous six months of operation.

The inspector reviewed the semiannual radioactive effluent release report for the second half of 1991. This review included an examination of the liquid and gaseous effluents for that period as compared to those of full years 1989 and 1990 and first-half 1991 results. The data for each of the whole years are summarized on the following page.

St. Lucie Radioactive Effluent Release Summary

Activity Released (curies)		1989	1990	1991
a.	Liquid			
	1. Fission and Activation Products	5.09E-1	1.59E+0	1.28E+0
	2. Tritium	8.30E+2	5.67E+2	1.25E+3
	3. Gross Alpha	8.81E-5	5.22E-5	3.10E-5
b.	Gaseous			
	1. Fission and Activation Products	6.75E+3	1.15E+3	4.24E+3
	2. Iodines	1.40E-2	1.41E-2	1.43E-2
	3. Particulates	8.32E-5	8.05E-5	2.96E-4
	4. Tritium	3.87E+2	1.06E+2	1.74E+2

A comparison of the listed data for 1989, 1990, and 1991 showed no significant changes.

For the second half of 1991, St. Lucie liquid, gaseous, and particulate effluents were well within TS, 10 CFR 20, and 10 CFR 50 effluent limitations.

No Unplanned Releases were identified in the Report.

No revisions were made to the Offsite Dose Calculation Manual (ODCM) or Process Control Program (PCP) during the second half of 1991.

The following table summarizes solid radwaste shipments for burial or disposal for the previous three years. These shipments typically include spent resins, filter sludges, dry compressible waste, and contaminated equipment.

St. Lucie Solid Radwaste Shipments

	1989	1990	1991
Number of Waste Disposal Shipments	72	58	23
Volume (cubic meters)	317.8	222.8	182.1
Activity (curies)	168.8	5886.4	825.7

For solid radwaste, the only noted trend was that the total number of shipments and volume shipped decreased for the three-year period reviewed. Also, the inspector noted that the spike in activity recorded in 1990 was due to the shipment of irradiated components.

The inspector concluded that the Semiannual Radioactive Effluent Release Report was complete and satisfied TS requirements.

No violations or deviations were identified.

8. Annual Radiological Environmental Operating Report (84750)

TS 6.9.1.8 requires that the Annual Report be submitted prior to May 1 of the following year. TS 6.9.1.8 also states format and content requirements for the Report.

a. 1991 Annual Radiological Environmental Operating Report

1. Environmental Monitoring Program

The St. Lucie Nuclear Plant Environmental Monitoring Program is designed to detect the effects, if any, of plant operation on environmental radiation levels by monitoring airborne, waterborne, ingestion, and direct radiation pathways in the area surrounding the plant site. It also supplements the Radiological Effluent Monitoring Program by verifying that the measurable concentrations of radioactive materials and levels of radiation are not higher than expected on the basis of the effluent measurements and the modeling of the environmental exposure pathways. Indicator sampling stations are located where detection of the radiological effects of the plant's operation would be most likely, where the samples collected should provide a significant indication of potential dose to man, and where an adequate comparison of predicted radiological levels might be made with measured levels. Control stations are located where radiological levels are not expected to be significantly influenced by plant operation, i.e., at background locations. An environmental impact assessment of plant operation is made from the radiological measurements of the sampling stations.

2. Annual Report for 1991

The inspector reviewed the Annual Radiological Environmental Operating Report for calendar year 1991 to verify compliance with the TSs. The Report had been submitted in compliance with TS 6.9.1.8 on April 8, 1992, and the format and contents were as prescribed by the TS. There were no changes to the environmental monitoring network during 1991. The reported measurements verified

that the dose to members of the public was well within the limits established by 10 CFR 50, Appendix I. The inspector determined that the Report was in compliance with the TSs.

b. Analytical Comparison of 1990 Report

Radiological environmental monitoring for the St. Lucie Plant is conducted by the State of Florida, Department of Health and Rehabilitative Services (DHRS). Samples are collected and analyzed by DHRS personnel at the DHRS Environmental Radiation Control Laboratory in Orlando, Florida.

The NRC contracts with the Radiological and Environmental Sciences Laboratory (RESL) to analyze samples split between the State of Florida and the NRC. The NRC compares the RESL results to those of the State of Florida for analysis confirmation.

The inspector compared a random selection of analytical results for gross beta in air particulates at Sample Station H-14, as reported in the 1990 Annual Report. After adjusting for the different units used by the different laboratories to report the results, the inspector determined that the reported results compared favorably with those of RESL. Typical values for gross beta in the air particulates were 0.010 pCi/m^3.

The inspector discussed his findings with the Chemistry Supervisor and concluded that the State of Florida was capable of analyzing environmental samples as required for the Annual Radiological Environmental Operating Report.

The inspector concluded that the licensee had a good program in place to detect the effects of radiological effluents, direct radiation, etc. due to plant operations and that those operations had caused minimum impact to the environment and virtually no dose to the general public.

No violations or deviations were identified.

9. Annual Environmental Operating Report for 1991 (84750)

Section 5.4.1 of the St. Lucie Unit 2 Environmental Protection Plan (EPP) requires the submittal of an annual report for various activities at the plant site related to Federal and State environmental permits and certifications.

A report on aquatic and terrestrial sea turtle monitoring

programs as required by EPP Subsections 4.2.1 (Beach Nesting Surveys), 4.2.3 (Studies to Evaluate and/or Mitigate Intake Canal Mortality), and 4.2.5 (Capture and Release Program) was submitted on April 23, 1992. (The NRC is considered to be the lead federal agency relative to the Endangered Species Act and, therefore, has jurisdiction for the sea turtle studies.) The inspector reviewed the report to verify compliance with the referenced regulation. The report was thorough, detailing methods utilized to capture and release turtles found in the intake canal, to determine the sex of immature turtles, to analyze nesting data, etc. In addition, it included a listing of non-routine reports submitted to the NRC in 1991 in accordance with the EPP, such as incidents involving manatees in the plant's cooling water intake canal, the mortality of two Least Terns, and a fishkill in the plant's cooling water intake canal. No non-compliances under EPP Section 5.4.1.(a), as determined by the licensee, were identified.

The inspector concluded that the report was well written and complied with applicable regulations.

No violations or deviations were identified.

10. Control Room Emergency Ventilation System (84750)

Per 10 CFR 50, Appendix A, Criterion 19, licensees shall assure that adequate radiation protection be provided to permit access to and occupancy of the control room under accident conditions and for the duration of the accident. Specifically, operability of the control room emergency ventilation system ensures that 1) the ambient air temperature does not exceed the allowable temperature for continuous duty rating for the equipment and instrumentation cooled by this system and 2) the control room remains habitable for operations personnel during and following all credible accident conditions such that the radiation exposure to personnel occupying the control room is limited to 5 rem or less whole body, or its equivalent.

TS 3.7.7 defines operability requirements for the control room emergency air cleanup systems under the various design scenarios. TS 4.7.7 sets the surveillance requirements for the system.

The inspector reviewed the latest test results for the charcoal and HEPA filters of the Unit 2 system to verify compliance with TS requirements. The test was conducted on April 16, 1992 and the filters performed satisfactorily. The inspector also reviewed the Certificate of Qualification of the technician who conducted the tests. No irregularities were noted. The Certificate of Calibration

and Testing of the air velocity meter was also reviewed by the inspector who noted that the certification was NIST-traceable.

The inspector concluded that the licensee had implemented a good program to maintain its control room emergency ventilation system within TS requirements.

No violations or deviations were identified.

11. East Evaporation/Percolation (EP) Pond (84750)

In April 1977, water containing approximately 3.5 curies composed of cobalt-60, cesium-134, and cesium-137 was discharged into the East EP Pond. During the current inspection, FPL was in the process of sampling and evaluating the soil below and around the pond to determine residual isotopes and their respective activities. The licensee had engaged the services of a consultant to obtain samples in late June, 1992. Eleven locations were chosen for the collection of soil/sediment samples, including five in the pond, four in the side walls of the pond, one upgradient of the pond, and one downgradient of the pond. A total of forty-five samples were collected: five from the upgradient location (Location "A"); five from the downgradient location (Location "B"); eighteen from the pond side wall locations (Locations "C" through "F"); and seventeen from the pond bottom locations (Locations "G" through "K"). All samples were collected utilizing a three-inch diameter six-foot long split spoon sampler either driven with a 140-pound slide hammer or hydraulically pushed. However, the sample analytical geometry used by FPL required that a volume of four liters (0.141 cubic feet) of sample be placed in the Marinelli sample containers. This necessitated taking approximately three samples and mixing them to obtain a single composite representative sample for a given station location and depth.

Preliminary results indicated no detectable activity from the referenced isotopes at the upgradient and downgradient stations. On the pond banks, detectable activity was identified as deep as two feet at three of the four stations and as deep as six feet at the other. Activities were greatest in the first foot and decreased at lower depths. Typical activity values in the first foot were: Cs-137, 7.3E-7 μCi/g; Cs-134, 5.8E-8 μCi/g; and Co-60, 2.5E-7 μCi/g. No detectable activity was identified deeper than two feet except for Location "E", at which 7.09E-8 μCi/g of Cs-137 was identified between four and six feet. No activity was identified in bottom sediment from the center of the pond at Location "G" but the other four locations from which bottom sediment was collected identified typical activities in the

top three feet of: Cs-137, 1.5E-6 μCi/g and Co-60, 2.4E-6 μCi/g. At Locations "H" and "I" only, activity from Cs-134 was identified in the top three feet of sediment and it averaged 6.1E-8 μCi/g. The maximum activities at a depth greater than three feet were identified at Location "K" and were determined to be 7.51E-8 μCi/g of Cs-137 and 2.56E-8 μCi/g of Co-60. No Cs-134 activity was identified at a sediment depth greater than three feet.

As a precautionary measure, the licensee had roped off and posted the pond as a Radiation Area. Upon completion of the area chracterization, the licensee plans to evaluate remedial options.

No violations or deviations were identified.

12. Radwaste Processing and Transportation (86750)

10 CFR 71.5 (a) requires each licensee who transfers licensed material outside of the confines of its plant or other place of use, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the regulations appropriate to the mode of transport of DOT in 49 CFR, Parts 170 through 189.

Pursuant to these requirements, the inspectors reviewed the licensee's activities affiliated with these requirements, to determine whether the licensee effectively packages, stores, and ships radioactive solid materials.

The licensee's program for the packaging and transportation of radioactive materials, including solid radwaste, was conducted by the Radioactive Waste Group within the Health Physics (HP) Department. Radwaste was processed and packaged (including the preparation of shipping documentation) by the Radwaste Group, with the assistance of Radiation Protection Men (RPM) on loan from the Health Physics Operations Department to complete specific tasks, such as loading a shipment or compacting contaminated material.

a. Radioactive Material Shipping Documentation Packages

Forty-eight shipments of radioactive materials had been made as of July 23, 1992 for the calendar year. The inspector reviewed documentation packages for four radioactive material shipments made since Inspection 92-02. They were Radioactive Material Shipment Nos. 92-07, 92-15, 92-28, and 92-35, and included three Low Specific Activity (LSA), Type A shipments, destined for decontamination facilities and/or incineration or compaction before final

disposal, and one Limited Quantity shipment to a laboratory for analysis. The packages contained thorough documentation about the shipments and included items such as unique shipment and shipping container numbers, waste content and volume, total activity, analytical summary and breakdown of isotopes with a half-life greater than five years, special comments, etc. The radiation and contamination survey results were within the 49 CFR requirements and the shipping documents were being maintained as required.

b. Observation of Radioactive Material Shipment

The inspector observed the loading of a radioactive material shipment (Shipment No. 92-44) and its associated activities to evaluate the effectiveness of training, activities and attitudes of personnel, adequacy of procedures, etc. The shipment was a High Integrity Container (HIC) of dewatered bead resin destined for burial at the disposal facility at Barnwell, South Carolina. The inspector observed the empty cask before the loading procedures began to verify its physical condition and reviewed the cask's Certificate of Compliance. No irregularities were noted. The inspector also attended the task briefing conducted by HP to review the work to be done, to assure that each member of the work detail thoroughly understood his function, to review probable radiation levels during the work evolution, to review required HP controls/postings, etc. Furthermore, the inspector reviewed Procedure HP-40, Rev. 37, "Shipment of Radioactive Material," approved March 30, 1992. Its purpose was to provide procedural guidance in the handling and loading of radioactive material to ensure compliance of such shipments with all applicable regulations and requirements. In addition, two licensee-approved vendor procedures were utilized, Pacific Nuclear Procedures OM-46-NS, Rev. 5, "Handling, Shipping, and Storage of NUPAC 14/190 and 14/210 14-Drum Casks Shielded Shipping Container" and OM-048-NS, Rev. 0, "Operating Procedure for Pacific Nuclear." These two procedures were approved by FRG #92-70 on May 12, 1992. The work proceeded well; each member handled his responsibilities in an efficient, professional manner. The HIC was loaded into the cask and the cask was capped. The technicians proceeded to take a radiation survey at the surface of the cask to assure compliance with regulatory requirements.

Before the truck left the site, the inspector reviewed the final survey records of the shipment and conducted a "spot check" of several of the survey points. The

inspector found that the survey points checked were in agreement. The inspector concluded that the survey was properly done and well documented.

The inspector concluded that the licensee's program for processing and transporting radioactive materials was adequate to satisfy regulatory requirements.

No violations or deviations were identified.

13. Low Level Radwaste (LLW) Storage (84760)

The inspector requested an update on the contingencies being pursued by the St. Lucie management with respect to LLW long-term on-site storage.

a. Disposal Site Status

The governor of South Carolina, the South Carolina Budget and Control Board, and the South Carolina Department of Health and Environmental Control recommended keeping the Barnwell disposal facility open to regional and non-regional radwaste generators. However, legislative action by the South Carolina General Assembly was required to extend the license and determine under what conditions and cost.

In late May, the General Assembly voted to extend the operating license for the disposal facility until December 31, 1995. During that period, the next host of the Southeast Compact will prepare a replacement facility.

b. Status of St. Lucie Contingencies

The inspector discussed the status of the plant's long-term LLW storage contingencies and plans, especially how they may have been affected by the extension of the operation permit of the disposal site, with the Radioactive Waste Supervisor.

The study commissioned by the licensee to review alternative storage plans continued to be evaluated. (Refer to IR 50-335,389/92-02).

Corporate management was expected to make a determination in the near future about the issue.

The inspector concluded that the contingencies were appropriate and that the licensee's management was proceeding in a prudent manner.

No violations or deviations were identified.

14. Decommissioning Planning Records (84750)

10 CFR 50.75(g) requires that licensees maintain "records of information important to the safe and effective decommissioning of the facility in an identified location until the license is terminated by the Commission." Furthermore, information considered important by the Commission for decommissioning is identified as "records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site" and that the records "must include any known information on identification of involved nuclides, quantities, forms, and concentrations." Also identified are "as-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination."

The inspector requested the licensee's decommissioning records to verify compliance with the regulations. Discussions with the licensee's HP Supervisor and Engineering Manager determined that the subject information was in the licensee's document control area, in the form of microfiche and drawings. However, the records were not segregated into one readily identifiable area nor was a listing identifying such documents available. The licensee stated that the requested information was available in the form of Radiological Event Reports (RERs) and Radiation Incident Reports (RIRs) but that they had not been categorized in such a manner so as to readily identify pertinent information for decommissioning planning. Discussions with the inspector concluded with a verbal agreement by the licensee to revise Health Physics Procedure HP-101, "Identification and Reporting of Radiological Events," to modify the form used for RIRs to indicate whether the report is significant for decommissioning planning. Previously written RERs and RIRs would be reviewed to determine if they were applicable. Furthermore, the licensee would review the possibility of listing this information as an attachment to a periodic financial study, which was conducted by a consultant to determine if adequate funding had been allocated to date for decommissioning activities. Currently, drawings of affected plant systems are listed in the report.

The inspector concluded that relevant decommissioning planning information was available in the form of RERs and drawings. However, timely retrieval and proper classification of existing documentation was less than

certain. This issue will be revisited during a future inspection.

No violations or deviations were identified.

15. Exit Interview

The inspection scope and results were summarized on July 24, 1992, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed the inspection results, including likely informational content of the inspection report with regard to documents and/or processes reviewed during the inspection.. The licensee did not identify any such documents or processes as proprietary. Dissenting comments were not received from the licensee.

16. Acronyms and Initialisms

CFR - Code of Federal Regulations
Ci - curie
DEI - Dose Equivalent Iodine
DHRS - Department of Health and Rehabilitative Control
DO - Dissolved Oxygen
EP - Evaporation/Percolation
EPP - Environmental Protection Plan
FPL - Florida Power and Light
FRG - Facility Review Group
g - gram
HEPA - High Efficiency Particulate Air
HIC - High Integrity Container
HP - Health Physics
ICRP - International Commission on Radiological Protection
IN - Information Notice
IR - Inspection Report
LLW - Low Level Radwaste
LSA - Low Specific Activity
m - meter
μCi - micro-Curie (1.0E-6 Ci)
NIST - National Institute of Standards and Technology
No. - Number
NRC - Nuclear Regulatory Commission
ODCM - Off-site Dose Calculation Manual
PASS - Post Accident Sampling System
pCi - pico-Curie (1.0E-12 Ci)
PCP - Process Control Program
ppm - parts per million
RCS - Reactor Coolant System
RER - Radiation Event Report
RESL - Radiological and Environmental Sciences Laboratory
RIR - Radiation Incident Report
RPM - Radiation Protection Man

STP - Sewage Treatment Plant
TS - Technical Specification
WTP - Water Treatment Plant

ATTACHMENT 1

COMPARISON OF NRC AND SAINT LUCIE ANALYTICAL RESULTS
REPORTED JANUARY 31, 1992

Type of Sample: Unknown NRC Spikes
Units: μCi/ml

Radio-nuclide	Licensee's Value	NRC Value	Reso-lution	Ratio	Compar-ison
Fe-55	5.5 E-6	(4.43 +/- 0.22)E-6	20	1.24	Agree
Sr-89	6.0 E-5	(5.11 +/- 0.26)E-5	20	1.17	Agree
Sr-90	8.2 E-6	(8.11 +/- 0.41)E-6	20	1.01	Agree

ATTACHMENT 2

CRITERIA FOR COMPARISONS OF ANALYTICAL MEASUREMENTS

This attachment provides criteria for the comparison of results of analytical radioactivity measurements. These criteria are based on empirical relationships which combine prior experience in comparing radioactivity emission, and the accuracy needs of this program.

In these criteria, the "Comparison Ratio Limits"[1] denoting agreement or disagreement between licensee and NRC results are variable. This variability is a function of the ratio of the NRC's analytical value relative to its associated statistical and analytical uncertainty, referred to in this program as "Resolution".[2]

For comparison purposes, a ratio between the licensee's analytical value and the NRC's analytical value is computed for each radionuclide present in a given sample. The computed ratios are then evaluated for agreement of disagreement bases on "Resolution." The corresponding values for "Resolution" and the "Comparison Ratio Limits" are listed in the Table below. Ratio values which are either above or below the "Comparison Ratio Limits" are considered to be in disagreement, while ratio values within or encompassed by the "Comparison Ratio Limits" are considered to be in agreement.

TABLE

NRC Confirmatory Measurements Acceptance Criteria
Resolution vs.Comparison Ratio Limits

Resolution	Comparison Ratio Limits for Agreement
< 4	0.4 - 2.5
4 - 7	0.5 - 2.0
8 - 15	0.6 - 1.66
16 - 50	0.75 - 1.33
51 - 200	0.80 - 1.25
> 200	0.85 - 1.18

[1]Comparison Ratio = $\frac{\text{Licensee Value}}{\text{NRC Reference Value}}$

[2]Resolution = $\frac{\text{NRC Reference Value}}{\text{Associated Uncertainty}}$