Florida Power & Light Company, 6501 S. Ocean Drive, Jensen Beach, FL 34957

March 29, 2007

L-2007-051
10 CFR 50.4
10 CFR 50.36

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

RE: St. Lucie Units 1 and 2
Docket Nos. 50-335 and 50-389
Annual Radiological Environmental
Operating Report for Calendar Year 2006

The attached report is being submitted pursuant to Technical Specification 6.9.1.8. The *Annual Radiological Environmental Operating Report* provides information summaries and analytical results of the Radiological Environmental Monitoring Program (REMP) for calendar year 2006.

Please contact us should there be any questions regarding this report.

Very truly yours,

Gordon L. Johnston
Site Vice President
St. Lucie Plant

Attachment

GLJ/tlt

IE25

2006

ANNUAL

RADIOLOGICAL ENVIRONMENTAL

OPERATING REPORT

ST. LUCIE PLANT

UNITS 1 & 2

LICENSE NOS. DPR-67, NPF-16

DOCKET NOS. 50-335, 50-389

Data Submitted by: Florida DOH

Prepared by: PETER G BERG

Reviewed by: J. V. Adams

2006
ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT
ST. LUCIE PLANT – UNITS 1 & 2

TABLE OF CONTENTS

2006
ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT
ST. LUCIE PLANT – UNITS 1 & 2

I. INTRODUCTION

This report is submitted pursuant to Specification 6.9.1.8 of St. Lucie Unit 1 and St. Lucie Unit 2 Technical Specifications. The Annual Radiological Environmental Operating Report provides information, summaries and analytical results pertaining to the radiological environmental monitoring program for the calendar year indicated. This report covers surveillance activities meeting the requirements of Unit 1 and Unit 2 Technical Specifications.

II. RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

A. Purpose

The purpose of the radiological environmental monitoring program is to provide representative measurements of radiation and of radioactive materials in those exposure pathways and for those radionuclides which lead to the highest potential radiation exposures to members of the public resulting from station operation. The radiological environmental monitoring program 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.

B. Program Description

The radiological environmental monitoring program (REMP) for the St. Lucie Plant is conducted pursuant to the St. Lucie Units 1 and 2 Offsite Dose Calculation Manual (ODCM) Section 3/4.12.1., Monitoring Program.

1. Sample Locations, Types and Frequencies:

   a. Direct radiation gamma exposure rate is monitored continuously at 27 locations by thermoluminescent dosimeters (TLDs). TLDs are collected and analyzed quarterly.

   b. Airborne radioiodine and particulate samplers are operated continuously at five locations. Samples are collected and analyzed weekly. Analyses include Iodine-131, gross beta, and gamma isotopic measurements.

   c. Surface water samples are collected from two locations. Samples are collected and analyzed weekly and monthly, respectively. Analyses include gamma isotopic and tritium measurements.

d. Shoreline sediment samples are collected from two locations coinciding with the locations for surface water samples. Samples are collected and analyzed semi-annually. Sediment samples are analyzed by gamma isotopic measurements.

e. Fish and invertebrate samples are collected from two locations. Samples are collected and analyzed semi-annually. Fish and invertebrate samples are analyzed by gamma isotopic measurements.

f. Broad leaf vegetation samples are collected from three locations. Samples are collected and analyzed monthly. Broad leaf vegetation samples are analyzed by gamma isotopic measurements.

g. Ground Water, NEI Initiative; there were no ground water sampling locations in the REMP for 2006

Attachment A provides specific information pertaining to sample locations, types and frequencies.

2. Analytical Responsibility:

Radiological environmental monitoring for the St. Lucie Plant is conducted by the State of Florida, Department of Health (DOH), Bureau of Radiation Control (BRC). Samples are collected and analyzed by DOH personnel.

Samples are analyzed at the DOH BRC Environmental Radiation Control Laboratory in Orlando, Florida.

C. Analytical Results

Table 1, Environmental Radiological Monitoring Program Annual Summary provides a summary for all specified samples collected during the referenced surveillance period. Deviations from the sample schedule or missing data, if any, are noted and explained in Table 1A. Samples not meeting the specified "A PRIORI" LLD, if any, are noted and explained in Table 1B. Analysis data for all specified samples analyzed during the surveillance period is provided in Attachment B.

D. Land Use Census

A land use census out to a distance of a five mile radius from the St. Lucie Plant is conducted annually to determine the location of the nearest milk animal, residence, and garden producing broad leaf vegetation, in each of the 16 meteorological sectors. A summary of the land use census for the surveillance year is provided in Table 2, Land Use Census Summary.

E. Interlaboratory Comparison Program

The intercomparison program consists of participating in the DOE Mixed Analyte Performance Evaluation Program (MAPEP).
This program provides similar testing (matrices, nuclides, and levels) as the former EPA Interlaboratory Comparison Program and is referred to as the Mixed Analyte Performance Evaluation Program (MAPEP).
The samples are analyzed using the methods applicable to the REMP (gamma spectroscopy, Gross Beta, and Tritium for water).
From the MAPEP handbook:
Acceptance criteria were developed from a review of precision and accuracy data compiled by other performance evaluation programs (PEPs), the analytical methods literature, from several MAPEP pilot studies, and from what is considered reasonable, acceptable, and achievable for routine analyses among the more experienced laboratories.
The results for nuclides associated with the REMP are listed in ATTACHMENT C, RESULTS FROM THE INTERLABORATORY COMPARISON PROGRAM.

III. DISCUSSION AND INTERPRETATION OF RESULTS

A. Reporting of Results

The Annual Radiological Environmental Operating Report contains the summaries, interpretations and information required by St. Lucie Plant ODCM. Table 1 provides a summary of the measurements made for the nuclides required by ODCM, Table 4.12-1, for all samples specified by Table 3.12-1. In addition, summaries are provided for other nuclides identified in the specified samples, including those not related to station operation. These include nuclides such as K-40, Th-232, Ra-226, and Be-7, which are common in the Florida environment.

B. Interpretation of Results

1. Direct Radiation:

The results of direct radiation monitoring are consistent with past measurements for the specified locations. The exposure rate data shows no indication of any trends attributed to effluents from the plant. The measured exposure rates are consistent with exposure rates that were observed during the pre-operational surveillance program. Direct radiation monitoring results are summarized in Table 1.

2. Air Particulates/Radioiodine:

The results for radioactive air particulate and radioiodine monitoring are consistent with past measurements and indicate no trends attributed to plant effluents. All samples for radioiodine yielded no detectable I-131. Gamma isotopic measurements yielded no indication of any nuclides attributed to station operation. The results for air particulate/radioiodine samples are consistent with measurements that were made during the pre-operational surveillance program. Air particulate and radioiodine monitoring results are summarized in Table 1.

3. Surface Water:

Tritium was detected in 2 of 52 indicator location samples. The highest level seen was less than 12 percent of the Required LLD specified in ODCM Table 4.12-1. No other nuclides attributed to station operation were detected. Results for surface water samples are summarized in Table 1.

4. Waterborne Sediment and Food Products:

The results for radioactivity measurements in waterborne sediment, fish and crustacean samples are consistent with past measurements and with measurements made during the pre-operational surveillance program. There were no indications of any nuclides attributed to plant effluents. Results for the waterborne sediment, fish and crustacean samples are summarized in Table 1.

5. Broad Leaf Vegetation:

The results of radioactivity measurements in broad leaf vegetation are consistent with past measurements and with measurements made during the pre-operational surveillance program.
There were no indications of any nuclides attributed to plant effluents.
Results for the broad leaf vegetation samples are summarized in Table 1.

6. Land Use Census:

No locations yielding a calculated dose or dose commitment greater than the values currently being calculated were identified by the land use census. No locations yielding a calculated dose or dose commitment (via the same exposure pathway) 20 percent greater than locations currently being sampled in the radiological environmental monitoring program were identified by the land use census.

7. Interlaboratory Comparison Program:

The State laboratory participated in MAPEP 15 and 16.

In MAPEP 15, the results Air Filter, Water and Vegetation matrices for those nuclides associated with nuclear power plant operation and using analytical methods used in the REMP are Acceptable. The Soil matrix had one warning in response to over-estimated U-238 results.
There was one not acceptable result; the lab reported an extremely low value for Cs-134 when there was none in the sample. The lab reported a false positive.

In MAPEP 16, the results for all matrices were acceptable. The warning associated with Co-57 in vegetation resulted from the lab reporting a 'zero' without a confidence interval (e.g., zero ± .00x). The W flag was issued because the grading process did not get a response that fit the expected format. The evaluation process for a blank (i.e., un-spiked) expects some small number with a large error. The State lab reported just 0.00 (zero).
The results are listed in Attachment C.

C. Conclusions

The data obtained through the St. Lucie Plant radiological environmental monitoring program verifies that the levels of radiation and concentrations of radioactive materials in environmental samples, representing the highest potential exposure pathways to members of the public, are not being increased.

The measurements verify that the dose or dose commitment to members of the public, due to operation of St. Lucie Units 1 and 2, during the surveillance year, are well within "as low as reasonably achievable (ALARA)" criteria established by 10 CFR 50, Appendix I.

TABLE 1

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM ANNUAL SUMMARY
Name of Facility St. Lucie Units 1 & 2 , Docket No(s). 50-335 & 50-389
Location of Facility St. Lucie, Florida , Reporting Period January 1 - December 31, 2006
(County, State)

PATHWAY: DIRECT RADIATION
SAMPLES COLLECTED: TLD
UNITS: micro-R/hr

Type and Total Number of Analyses Performed	Lower Limit of Detection [a] (LLD)	All Indicator Locations Mean (f)[b] Range	Location with Highest Annual Mean: Name [c] Distance & Direction	Location with Highest Annual Mean: Mean (f)[b] Range	Control Locations Mean (f)[b] Range
Exposure Rate, 108[d]	---	4.9 (104/104) 3.8 - 6.5	NW-10 10 mi., NW	6.1 (4/4) 5.7 - 6.5	5.4 (4/4) 5.1 – 5.8

Number of Non-Routine Reported Measurements = 0

TABLE 1

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM ANNUAL SUMMARY
Name of Facility St. Lucie Units 1 & 2 , Docket No(s). 50-335 & 50-389
Location of Facility St. Lucie, Florida , Reporting Period January 1 - December 31, 2006
(County, State)

PATHWAY: AIRBORNE
SAMPLES COLLECTED: RADIOIODINE AND PARTICULATES
UNITS: PICO - Ci/M^3

Type and Total Number of Analyses Performed	Lower Limit of Detection [a] (LLD)	All Indicator Locations Mean (f)[b] Range	Location with Highest Annual Mean: Name [c] Distance & Direction	Location with Highest Annual Mean: Mean (f)[b] Range	Control Locations Mean (f)[b] Range
^{131}I, 260	0.024	<MDA	---	---	<MDA
Gross Beta, 260	0.0025	0.016 (208/208) 0.004 - 0.033	H-14 1 mile, SE	0.017 (52/52) 0.008 - 0.027	0.016 (52/52) 0.007 - 0.026
Composite Gamma Isotopic, 20					
^{7}Be	0.0052	0.1766 (10/16) 0.1083 - 0.2204	H-14 1 mile, SE	0.1825 (4/4) 0.1359 - 0.2204	0.1826 (4/4) 0.1594 - 0.2106
^{134}Cs	0.00069	<MDA	---	---	<MDA
^{137}Cs	0.00066	<MDA	---	---	<MDA
^{210}Pb	---	0.0285 (11/16) 0.0190 - 0.0359	H-34 0.5 mi., N	0.0333 (1/4)	0.0257 (2/4) 0.0218 - 0.0296

Number of Non-Routine Reported Measurements = 0

TABLE 1

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM ANNUAL SUMMARY
Name of Facility St. Lucie Units 1 & 2 , Docket No(s). 50-335 & 50-389
Location of Facility St. Lucie, Florida , Reporting Period January 1 - December 31, 2006
(County, State)

PATHWAY: WATERBORNE
SAMPLES COLLECTED: SURFACE WATER
UNITS: PICO - Ci/LITER

Type and Total Number of Analyses Performed	Lower Limit of Detection[a] (LLD)	All Indicator Locations Mean (f)[b] Range	Location with Highest Annual Mean: Name[c] Distance & Direction	Location with Highest Annual Mean: Mean (f)[b] Range	Control Locations Mean (f)[b] Range
Tritium, 64	230	207 (2/52) 83 - 330	H-15 <1 mi., ENE/E/ESE	207 (2/52) 83 - 330	<MDA
Gamma Isotopic, 64					
^{40}K	60	359 (52/52) 279 - 460	H-15 <1 mi., ENE/E/ESE	359 (52/52) 279 - 460	352 (12/12) 297 - 414
^{54}Mn	4	<MDA	---	---	<MDA
^{59}Fe	8	<MDA	---	---	<MDA
^{58}Co	4	<MDA	---	---	<MDA
^{60}Co	4	<MDA	---	---	<MDA
^{65}Zn	8	<MDA	---	---	<MDA
^{95}Zr-Nb	7	<MDA	---	---	<MDA
^{131}I	5	<MDA	---	---	<MDA
^{134}Cs	5	<MDA	---	---	<MDA
^{137}Cs	5	<MDA	---	---	<MDA
^{140}Ba-La	11	<MDA	---	---	<MDA

Number of Non-Routine Reported Measurements = 0

TABLE 1

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM ANNUAL SUMMARY
Name of Facility St. Lucie Units 1 & 2 , Docket No(s). 50-335 & 50-389
Location of Facility St. Lucie, Florida , Reporting Period January 1 - December 31, 2006
(County, State)

PATHWAY: WATERBORNE
SAMPLES COLLECTED: SHORELINE SEDIMENT
UNITS: PICO - Ci/Kg, DRY

Type and Total Number of Analyses Performed	Lower Limit of Detection[a] (LLD)	All Indicator Locations Mean (f)[b] Range	Location with Highest Annual Mean: Name[c] Distance & Direction	Location with Highest Annual Mean: Mean (f)[b] Range	Control Locations Mean (f)[b] Range
Gamma Isotopic, 4					
^{40}K	140	474 (2/2) 398 - 549	H-15 <1 mi, ENE/E/ESE	474 (2/2) 398 - 549	365 (2/2) 350 - 380
^{210}Pb	---	< MDA	---	---	<MDA
^{226}Ra	49	374 (2/2) 320 - 428	H-15 <1 mi., ENE/E/ESE	374 (2/2) 320 - 428	470 (2/2) 360 - 579
^{232}Th	---	136 (2/2) 74 - 199	H-15 <1 mi., ENE/E/ESE	136 (2/2) 74 - 199	73 (1/2)
^{238}U	---	<MDA	---	---	<MDA
^{58}Co	9	<MDA	---	---	<MDA
^{60}Co	12	<MDA	---	---	<MDA
^{134}Cs	14	<MDA	---	---	<MDA
^{137}Cs	12	<MDA	---	---	<MDA

Number of Non-Routine Reported Measurements = 0

TABLE 1

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM ANNUAL SUMMARY
Name of Facility St. Lucie Units 1 & 2 , Docket No(s). 50-335 & 50-389
Location of Facility St. Lucie, Florida , Reporting Period January 1 - December 31, 2006
(County, State)

PATHWAY: INGESTION
SAMPLES COLLECTED: CRUSTACEA
UNITS: PICO - Ci/Kg, WET

Type and Total Number of Analyses Performed	Lower Limit of Detection[a] (LLD)	All Indicator Locations Mean (f)[b] Range	Location with Highest Annual Mean: Name[c] Distance & Direction	Location with Highest Annual Mean: Mean (f)[b] Range	Control Locations Mean (f)[b] Range
Gamma Isotopic, 4					
^{40}K	130	2064 (2/2) 1805 – 2322	H-15 <1 mi., ENE/E/ESE	2064 (2/2) 1805 – 2322	1823 (2/2) 1602 - 2204
^{226}Ra	---	< MDA	---	---	920 (2/2) 792 - 1049
^{228}Ra	---	94 (1/2)	H-15 <1 mi., ENE/E/ESE	94 (1/2)	<MDA
^{54}Mn	9	<MDA	---	---	<MDA
^{59}Fe	16	<MDA	---	---	<MDA
^{58}Co	9	<MDA	---	---	<MDA
^{60}Co	19	<MDA	---	---	<MDA
^{65}Zn	17	<MDA	---	---	<MDA
^{134}Cs	9	<MDA	---	---	<MDA
^{137}Cs	9	<MDA	---	---	<MDA

Number of Non-Routine Reported Measurements = 0

TABLE 1

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM ANNUAL SUMMARY
Name of Facility St. Lucie Units 1 & 2 , Docket No(s). 50-335 & 50-389
Location of Facility St. Lucie, Florida , Reporting Period January 1 - December 31, 2006
(County, State)

PATHWAY: INGESTION
SAMPLES COLLECTED: FISH
UNITS: PICO - Ci/Kg, WET

Type and Total Number of Analyses Performed	Lower Limit of Detection[a] (LLD)	All Indicator Locations Mean (f)[b] Range	Location with Highest Annual Mean		Control Locations Mean (f)[b] Range
			Name[c] Distance & Direction	Mean (f)[b] Range	
Gamma Isotopic, 4					
^{40}K	130	2862 (2/2) 2785 - 2938	H-15 <1 mi., ENE/E/ESE	2862 (2/2) 2785 - 2938	2548 (2/2) 2469 - 2628
^{54}Mn	9	<MDA	---	---	<MDA
^{59}Fe	16	<MDA	---	---	<MDA
^{58}Co	9	<MDA	---	---	<MDA
^{60}Co	10	<MDA	---	---	<MDA
^{65}Zn	17	<MDA	---	---	<MDA
^{134}Cs	9	<MDA	---	---	<MDA
^{137}Cs	9	<MDA	---	---	<MDA

Number of Non-Routine Reported Measurements = 0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM ANNUAL SUMMARY
Name of Facility St. Lucie Units 1 & 2 , Docket No(s). 50-335 & 50-389
Location of Facility St. Lucie, Florida , Reporting Period January 1 - December 31, 2006
(County, State)

PATHWAY: INGESTION
SAMPLES COLLECTED: BROAD LEAF VEGETATION
UNITS: PICO - Ci/Kg, WET

Type and Total Number of Analyses Performed	Lower Limit of Detection[a] (LLD)	All Indicator Locations Mean (f)[b] Range	Location with Highest Annual Mean Name[c] Distance & Direction	Location with Highest Annual Mean Mean (f)[b] Range	Control Locations Mean (f)[b] Range
Gamma Isotopic, 36					
^{7}Be	71	820 (24/24) 520 - 1481	H-51 1 mi., N/NNW	857 (12/12) 520 - 1481	974 (12/12) 641 - 1553
^{40}K	100	4261 (24/24) 2343 - 5848	H-52 1 mi. , S/SSE	4499 (12/12) 2963 - 5848	2959 (12/12) 1661 - 4058
^{58}Co	6	<MDA	---	---	<MDA
^{60}Co	8	<MDA	---	---	< MDA
^{131}I	9	<MDA	---	---	<MDA
^{134}Cs	8	<MDA	---	---	<MDA
^{137}Cs	8	<MDA	---	---	<MDA
^{210}Pb	---	<MDA	---	---	<MDA
^{212}Pb	---	<MDA	---	---	26 (1/12)
^{226}Ra	---	438 (7/24) 279 - 746	H-51 1 mi., N/NNW	478 (4/12) 279 - 746	475 (2/12) 422 - 527

Number of Non-Routine Reported Measurements = 0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM ANNUAL SUMMARY
Name of Facility St. Lucie Units 1 & 2 , Docket No(s). 50-335 & 50-389
Location of Facility St. Lucie, Florida , Reporting Period January 1 - December 31, 2006
(County, State)

NOTES

a. The LLD is an "a priori" lower limit of detection which establishes the smallest concentration of radioactive material in a sample that will yield a net count above system background that will be detected with 95% probability with only 5% probability of falsely concluding that a blank observation represents a real signal.

LLDs in this column are at time of measurement. The MDAs reported in Attachment B for the individual samples have been corrected to the time of sample collection.

b. Mean and range based upon detectable measurements only. Fraction of detectable measurements at specified locations is indicated in parentheses (f).

c. Specific identifying information for each sample location is provided in Attachment A.

d. Results were based upon the average net response of three elements in a TLD (thermoluminescent dosimeter).

MDA refers to minimum detectable activity.

2006
ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT
ST. LUCIE PLANT - UNITS 1 & 2

TABLE 1A

DEVIATIONS / MISSING DATA

There were neither deviations from the sampling program nor missing data for the 2006 REMP year

2006
ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT
ST. LUCIE PLANT - UNITS 1 & 2

TABLE 1B

ANALYSIS WITH LLDs ABOVE THE REQUIRED DETECTION CAPABILITIES
(LLDs) Listed in ODCM TABLE 4.12-1
1/1/2006 – 12/31/2006

The values specified in ODCM Table 4.12-1, Detection Capabilities, were achieved for all samples.

2006
ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT
ST. LUCIE PLANT - UNITS 1 & 2

TABLE 2

LAND USE CENSUS
(Page 1 of 2)

Distance to Nearest (a, b)

Sector	7/06 – 8/06 Milk (c) Animal	7/06 – 8/06 Residence	7/06 – 8/06 Garden (d)
N	O (e)	O	O
NNE	O	O	O
NE	O	O	O
ENE	O	O	O
E	O	O	O
ESE	O	O	O
SE	O	1.5/142 (g)	O
SSE	L (f)	3.3/152 (g)	L
S	L	3.3/190	L
SSW	L	2.2/212	L
SW	L	1.9/235	L
WSW	L (i)	1.9/240	3.4/248 (h)
W	L	1.9/260	L
WNW	L	2.2/281	L
NW	L	3.5/304	L
NNW	L	3.4/342 (g)	L

TABLE 2

LAND USE CENSUS
(Page 2 of 2)

NOTES

a. All categories surveyed out to a 5-mile radius from the St. Lucie Plant.

b. The following format is used to denote the location:

distance (miles)/bearing (degrees)

For example, a residence located in the southeast sector at a distance of 1.5 miles bearing 142 degrees is recorded as 1.5/142.

c. Potential milk animal locations.

d. Gardens with an estimated growing area of 500 square feet or more.

e. O denotes that the sector area is predominantly an ocean area.

f. L denotes that the sector area is predominantly a land area unoccupied by the category type.

g. Non-residential occupied buildings in these sectors include the following:

Sector	Distance	Description
SSE	1.8/147	Fire Station
NNW	2.8/348	A new community is being developed. At the current time, there are no houses available for occupancy.

h. The garden is just 500 square feet; it is a herb garden in a residence's backyard. The owner is unwilling to provide a sample; field sampling technician feels garden is incapable of supplying sufficient sample to satisfy LLD requirements. It is not included in the REMP program.

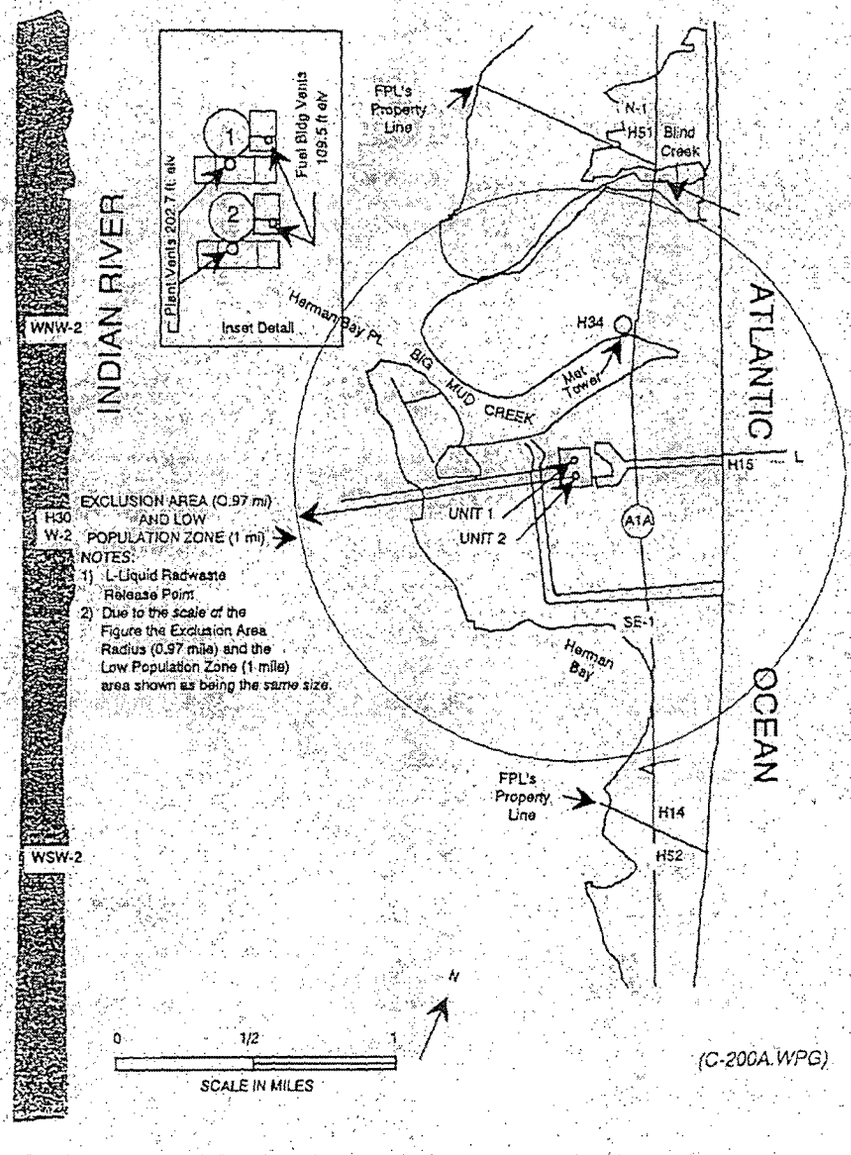
i. A milk animal, a pet goat, does exist in this sector at the same location as the garden. However, the animal is not fresh (not producing milk).

ATTACHMENT A

KEY TO SAMPLE LOCATIONS

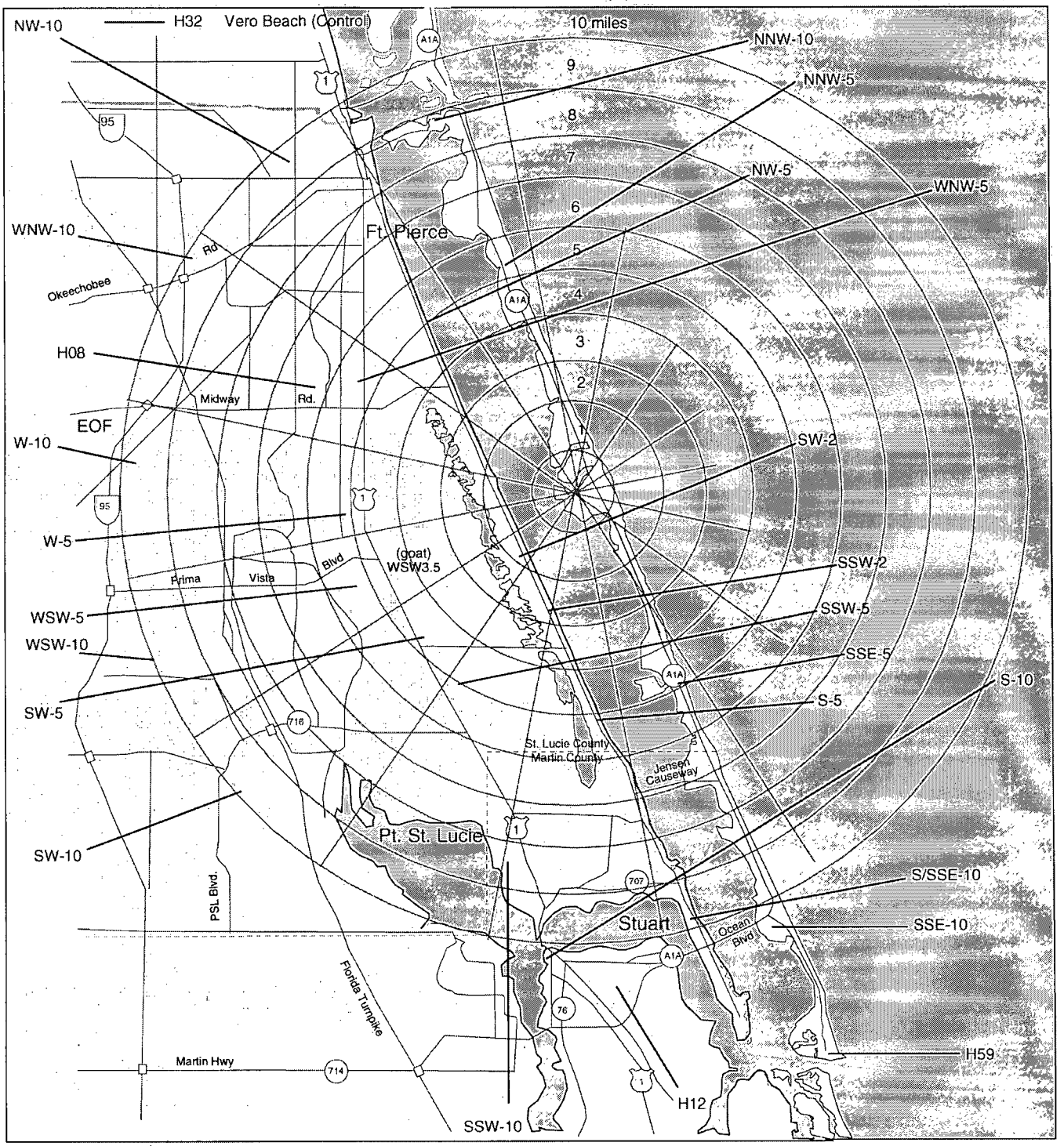
2006
ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT
ST. LUCIE PLANT - UNITS 1 & 2

SITE AREA MAP & ENVIRONMENTAL SAMPLE LOCATIONS



2006
ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT
ST. LUCIE PLANT - UNITS 1 & 2

ENVIRONMENTAL SAMPLE LOCATIONS (10 MILES)



(P/CHEM/C-200B-F2-R0)

ATTACHMENT A

PATHWAY: DIRECT RADIATION
SAMPLES COLLECTED: TLD
SAMPLE COLLECTION FREQUENCY: QUARTERLY

Location Name	Direction Sector	Approximate Distance (miles)	Description
N-1	N	1	A1A, North of Blind Creek
NNW-5	NNW	5	South of Pete Stone Creek
NNW-10	NNW	9	Coast Guard Station
NW-5	NW	6	Indian River Dr., at Rio Vista Dr.
NW-10	NW	10	S.R. 68 at S.R. 607
WNW-2	WNW	3	Cemetery South of 7107 Indian River Dr.
WNW-5	WNW	5	U.S. 1 at S.R. 712
WNW-10	WNW	10	S.R. 70, West of Turnpike
W-2	W	2	7609 Indian River Drive
W-5	W	5	Oleander and Sager Street
W-10	W	9	Interstate 95 at S.R. 709
WSW-2	WSW	2	8503 Indian River Dr.
WSW-5	WSW	5	Prima Vista at Yacht Club
WSW-10	WSW	10	Del Rio at Davis Street
SW-2	SW	2	9207 Indian River Drive
SW-5	SW	5	U.S. 1 at Village Green Dr.
SW-10	SW	10	Port St. Lucie Blvd. at Cairo Rd.
SSW-2	SSW	3	10307 Indian River Drive
SSW-5	SSW	6	U.S. 1 at Port St. Lucie Blvd.
SSW-10	SSW	8	Pine Valley at Westmoreland Rd.
S-5	S	5	13179 Indian River Drive
S-10	S	10	U.S. 1 at S.R. 714
S/SSE-10	SSE	10	Indian River Dr. at Quail Run Lane
SSE-5	SSE	5	Entrance to Nettles Island
SSE-10	SSE	10	Elliot Museum
SE-1	SE	1	South of Cooling Canal
Control:			
H-32	NNW	19	University of Florida IFAS Vero Beach

ATTACHMENT A

PATHWAY: AIRBORNE
SAMPLES COLLECTED: RADIOIODINE AND PARTICULATES
SAMPLE COLLECTION FREQUENCY: WEEKLY

Location Name	Direction Sector	Approximate Distance (miles)	Description
H-08	WNW	6	FPL Substation, Weatherbee Rd.
H-14	SE	1	On-Site, Near South Property Line
H-30	W	2	Power Line, 7609 Indian River Drive
H-34	N	0.5	On-Site at Meteorology Tower
Control:			
H-12	S	12	FPL Substation, SR-76 Stuart

ATTACHMENT A

PATHWAY: WATERBORNE
SAMPLES COLLECTED: SURFACE WATER (OCEAN)
SAMPLE COLLECTION FREQUENCY: H-15 WEEKLY, H-59 MONTHLY

Location Name	Direction Sector	Approximate Distance (miles)	Description
H-15	ENE/E/SSE	<1	Atlantic Ocean, Public Beaches East Side A1A
Control:			
H-59	S/SSE	10-20	South End, Hutchinson Island

SAMPLES COLLECTED: SHORELINE SEDIMENT
SAMPLE COLLECTION FREQUENCY: SEMI-ANNUALLY

Location Name	Direction Sector	Approximate Distance (miles)	Description
H-15	ENE/E/ESE	<1	Atlantic Ocean, Public Beaches East Side A1A
Control:			
H-59	S/SSE	10-20	South End, Hutchinson Island

ATTACHMENT A

PATHWAY: INGESTION
SAMPLES COLLECTED: CRUSTACEA AND FISH
SAMPLE COLLECTION FREQUENCY: SEMI-ANNUALLY

Location Name	Direction Sector	Approximate Distance (miles)	Description
H-15	ENE/E/ESE	<1	Ocean Side, Vicinity of St. Lucie Plant
Control:			
H-59	S/SSE	10-20	South End, Hutchinson Island

SAMPLES COLLECTED: BROAD LEAF VEGETATION
SAMPLE COLLECTION FREQUENCY: MONTHLY

Location Name	Direction Sector	Approximate Distance (miles)	Description
H-51	N/NNW	1	Off-Site Near North Property Line
H-52	S/SSE	1	Off-Site Near South Property Line
Control:			
H-59	S/SSE	10-20	South End, Hutchinson Island

2006
ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT
ST. LUCIE PLANT - UNITS 1 & 2

ATTACHMENT B

RADIOLOGICAL SURVEILLANCE OF

FLORIDA POWER AND LIGHT COMPANY

ST. LUCIE SITE

2006

First Quarter 2006

Second Quarter 2006

Third Quarter 2006

Fourth Quarter 2006

ST. LUCIE SITE

Offsite Dose Calculation Manual Sampling

First Quarter, 2006

Sample Type	Collection Frequency	Locations Sampled	Number of Samples
1. Direct Radiation	Quarterly	27	27
2. Airborne			
2.a. Air Iodines	Weekly	5	65
2.b. Air Particulates	Weekly	5	65
3. Waterborne			
3.a. Surface Water	Weekly	1	13
	Monthly	1	3
3.b. Shoreline Sediment	Semiannually	2	2
4. Ingestion			
4.a. Fish and Invertebrates			
4.a.1. Crustacea	Semiannually	2	2
4.a.2. Fish	Semiannually	2	2
4.b. Broadleaf Vegetation	Monthly	3	9
			Total: 188

NOTE: Measurement results having magnitudes that are significantly above the background of the measurement system are reported as net values plus or minus a one-standard-deviation error term. Measurement results that are not significantly above background are reported as less than a Lower Limit of Detection (<LLD), which is an estimated upper limit (with at least 95% confidence) for the true activity in the sample.

The marine fauna listed in this report were collected in part, under Florida FWC SAL030.

1. DIRECT RADIATION - TLDs - (µR/hour)

Sample Site	Deployment 06-Dec-05 Collection 08-Mar-06	Sample Site	Deployment 06-Dec-05 Collection 08-Mar-06
N-1	4.7 ± 0.2	SW-2	4.7 ± 0.1
NNW-5	4.9 ± 0.3	SW-5	5.8 ± 0.3
NNW-10	5.1 ± 0.2	SW-10	5.2 ± 0.2
NW-5	4.9 ± 0.2	SSW-2	4.7 ± 0.2
NW-10	6.5 ± 0.2	SSW-5	5.4 ± 0.2
		SSW-10	5.4 ± 0.1
WNW-2	4.9 ± 0.2		
WNW-5	4.7 ± 0.1	S-5	5.0 ± 0.3
WNW-10	5.6 ± 0.2	S-10	5.3 ± 0.1
		S/SSE-10	4.8 ± 0.2
W-2	4.7 ± 0.1		
W-5	5.2 ± 0.2	SSE-5	4.5 ± 0.3
W-10	4.9 ± 0.2	SSE-10	5.4 ± 0.2
WSW-2	5.0 ± 0.2	SE-1	4.7 ± 0.3
WSW-5	4.9 ± 0.1		
WSW-10	4.5 ± 0.2	H-32	5.8 ± 0.2

2.a. IODINE-131 IN WEEKLY AIR CARTRIDGES - (pCi/ m^3)

Collection Date	H08	H12	H14	H30	H34
05-Jan-06	<0.01	<0.01	<0.01	<0.01	<0.01
11-Jan-06	<0.02	<0.02	<0.02	<0.02	<0.02
18-Jan-06	<0.02	<0.02	<0.02	<0.02	<0.02
25-Jan-06	<0.01	<0.01	<0.01	<0.01	<0.01
31-Jan-06	<0.02	<0.02	<0.02	<0.02	<0.02
09-Feb-06	<0.01	<0.01	<0.01	<0.01	<0.01
15-Feb-06	<0.02	<0.02	<0.02	<0.02	<0.02
20-Feb-06	<0.02	<0.02	<0.02	<0.02	<0.02
27-Feb-06	<0.02	<0.02	<0.02	<0.02	<0.02
08-Mar-06	<0.01	<0.01	<0.01	<0.01	<0.01
14-Mar-06	<0.02	<0.02	<0.02	<0.02	<0.02
20-Mar-06	<0.02	<0.02	<0.02	<0.02	<0.02
29-Mar-06	<0.01	<0.01	<0.01	<0.01	<0.01

2.b.1. AIR PARTICULATES - GROSS BETA - (pCi/m³)

Collection Date	Sample Sites H08	H12	H14	H30	H34
05-Jan-06	0.020 ± 0.002	0.022 ± 0.002	0.022 ± 0.002	0.022 ± 0.002	0.023 ± 0.002
11-Jan-06	0.013 ± 0.002	0.017 ± 0.002	0.017 ± 0.002	0.017 ± 0.002	0.022 ± 0.003
18-Jan-06	0.009 ± 0.002	0.009 ± 0.002	0.015 ± 0.002	0.013 ± 0.002	0.017 ± 0.002
25-Jan-06	0.008 ± 0.002	0.014 ± 0.002	0.010 ± 0.002	0.009 ± 0.002	0.013 ± 0.002
31-Jan-06	0.016 ± 0.002	0.012 ± 0.002	0.015 ± 0.002	0.009 ± 0.002	0.012 ± 0.002
09-Feb-06	0.010 ± 0.002	0.010 ± 0.002	0.013 ± 0.002	0.013 ± 0.002	0.014 ± 0.002
15-Feb-06	0.020 ± 0.003	0.018 ± 0.003	0.020 ± 0.003	0.016 ± 0.003	0.021 ± 0.003
20-Feb-06	0.013 ± 0.003	0.017 ± 0.003	0.015 ± 0.003	0.011 ± 0.002	0.009 ± 0.002
27-Feb-06	0.010 ± 0.002	0.016 ± 0.002	0.015 ± 0.002	0.013 ± 0.002	0.018 ± 0.002
08-Mar-06	0.025 ± 0.002	0.022 ± 0.002	0.025 ± 0.002	0.022 ± 0.002	0.023 ± 0.002
14-Mar-06	0.018 ± 0.002	0.021 ± 0.002	0.017 ± 0.002	0.016 ± 0.002	0.015 ± 0.002
20-Mar-06	0.020 ± 0.003	0.012 ± 0.002	0.023 ± 0.003	0.020 ± 0.003	0.024 ± 0.003
29-Mar-06	0.009 ± 0.002	0.016 ± 0.002	0.018 ± 0.002	0.016 ± 0.002	0.016 ± 0.002
Average:	0.015 ± 0.001	0.016 ± 0.001	0.017 ± 0.001	0.015 ± 0.001	0.017 ± 0.001

2.b.2. AIR PARTICULATES GAMMA ANALYSIS OF QUARTERLY COMPOSITES (pCi/m³)

Sample Site	First Quarter, 2006 Be-7	K-40	Cs-134	Cs-137	Pb-210
H08	0.1895 ± 0.0122	<0.0236	<0.0011	<0.0010	0.0198 ± 0.0038
H12	0.1929 ± 0.0155	<0.0196	<0.0016	<0.0008	<0.0485
H14	0.2204 ± 0.0139	<0.0216	<0.0013	<0.0011	0.0359 ± 0.0046
H30	0.2145 ± 0.0132	<0.0243	<0.0013	<0.0008	0.0273 ± 0.0040
H34	0.1997 ± 0.0196	<0.0271	<0.0020	<0.0015	<0.0694

3.a. SURFACE WATER - (pCi/L)

Sample Site	Collection Date	H-3	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Zr-95 Nb-95 (A)	I-131	Cs-134	Cs-137	Ba-140 La-140 (B)
H15	05-Jan-06	<144	322 ± 24	<2	<2	<5	<3	<6	<4	<3	<3	<3	<3
	11-Jan-06	<144	279 ± 31	<2	<3	<6	<3	<5	<5	<4	<3	<3	<7
	18-Jan-06	<144	333 ± 23	<2	<2	<5	<3	<5	<4	<3	<3	<2	<5
	25-Jan-06	<144	377 ± 26	<3	<2	<5	<3	<6	<4	<3	<3	<2	<5
	31-Jan-06	<144	335 ± 38	<3	<3	<7	<4	<7	<5	<4	<4	<4	<6
	09-Feb-06	330 ± 31	349 ± 31	<4	<4	<8	<4	<8	<7	<5	<4	<4	<3
	15-Feb-06	<155	460 ± 36	<3	<3	<4	<5	<9	<7	<4	<4	<4	<12
	20-Feb-06	<154	363 ± 37	<3	<4	<9	<4	<7	<6	<4	<4	<3	<6
	27-Feb-06	<154	364 ± 35	<2	<3	<7	<4	<8	<6	<4	<3	<4	<6
	07-Mar-06	<154	345 ± 38	<4	<4	<7	<4	<7	<7	<4	<4	<3	<7
	14-Mar-06	<154	331 ± 30	<3	<3	<8	<3	<9	<7	<5	<5	<4	<7
	20-Mar-06	<154	343 ± 23	<2	<2	<5	<3	<6	<4	<3	<3	<3	<6
	29-Mar-06	<150	343 ± 32	<3	<3	<6	<4	<7	<6	<4	<4	<3	<9
H59	05-Jan-06	<144	340 ± 49	<5	<6	<10	<7	<11	<9	<7	<8	<5	<7
	09-Feb-06	<155	336 ± 33	<4	<3	<8	<4	<10	<5	<5	<5	<4	<5
	07-Mar-06	<154	297 ± 34	<4	<4	<9	<4	<8	<7	<5	<5	<4	<7

(A) These tabulated LLD values for Zr/Nb-95 are the higher of the individual parent or daughter LLDs.

(B) These tabulated LLD values are for Ba-140, either based on direct measurement of Ba-140 or based on ingrowth of La-140, whichever method yields the greater sensitivity for a given sample.

3.b. SHORELINE SEDIMENT - (pCi/kg, dry weight)

Sample Site	Collection Date	Be-7	K-40	Co-58	Co-60	Cs-134	Cs-137	Pb-210	Ra-226	Th-232	U-238
H15	21-Feb-06	<98	398 ± 93	<12	<12	<15	<12	<956	320 ± 134	74 ± 15	<776
H59	20-Feb-06	<82	380 ± 53	<9	<9	<10	<9	<456	360 ± 139	73 ± 11	<303

4.a.1. CRUSTACEA - Blue Crab - (pCi/kg, wet weight)

Sample Site	Collection Date	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Cs-134	Cs-137	Ra-226	Ra-228
H15	29-Mar-06	2322 ± 256	<33	<23	<61	<29	<63	<37	<27	<601	<152
H59	29-Mar-06	1602 ± 233	<23	<30	<46	<29	<65	<39	<33	792 ± 240	<176

4.a.2. FISH - Mixed Fish - (pCi/kg, wet weight)

Sample Site	Collection Date	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Cs-134	Cs-137	Ra-226	Ra-228
H15	29-Mar-06	2939 ± 213	<18	<16	<40	<22	<39	<25	<23	<318	<77
H59	30-Mar-06	2628 ± 136	<12	<10	<23	<13	<26	<13	<12	<190	<49

4.b. BROADLEAF VEGETATION - Brazilian Pepper - (pCi/kg, wet weight)

Sample Site	Collection Date	Be-7	K-40	I-131	Cs-134	Cs-137	Pb-210	Ra-226
H51	05-Jan-06	555 ± 31	4629 ± 110	<7	<9	<7	<1111	276 ± 76
	09-Feb-06	895 ± 87	4968 ± 245	<20	<20	<18	<2307	<353
	07-Mar-06	1063 ± 96	4052 ± 214	<12	<16	<15	<2096	414 ± 147
H52	05-Jan-06	667 ± 76	4688 ± 178	<12	<15	<10	<745	<272
	09-Feb-06	1217 ± 88	4446 ± 226	<20	<19	<17	<2431	<367
	07-Mar-06	995 ± 76	4516 ± 174	<10	<12	<12	<779	<236
H59	05-Jan-06	895 ± 53	3451 ± 146	<9	<11	<10	<650	<235
	09-Feb-06	1553 ± 98	3322 ± 235	<17	<22	<20	<2866	<495
	07-Mar-06	914 ± 85	2731 ± 172	<14	<14	<16	<2149	<320

ST. LUCIE SITE

Offsite Dose Calculation Manual Specifications Sampling

Second Quarter, 2006

Sample Type	Collection Frequency	Locations Sampled	Number of Samples
1. Direct Radiation	Quarterly	27	27
2. Airborne			
2.a. Air Iodines	Weekly	5	65
2.b. Air Particulates	Weekly	5	65
3. Waterborne			
3.a. Surface Water	Weekly	1	13
	Monthly	1	3
3.b. Shoreline Sediment	Semiannually	0	0
4. Ingestion			
4.a. Fish and Invertebrates			
4.a.1. Crustacea	Semiannually	0	0
4.a.2. Fish	Semiannually	0	0
4.b. Broadleaf Vegetation	Monthly	3	9
			Total: 182

NOTE: Measurement results having magnitudes that are significantly above the background of the measurement system are reported as net values plus or minus a one-standard-deviation error term. Measurement results that are not significantly above background are reported as less than a Lower Limit of Detection (<LLD), which is an estimated upper limit (with at least 95% confidence) for the true activity in the sample.

The marine fauna listed in this report were collected in part, under Florida FWC SAL030.

1. DIRECT RADIATION - TLDs - (µR/hour)

Sample Site	Deployment 08-Mar-06 Collection 15-Jun-06	Sample Site	Deployment 08-Mar-06 Collection 15-Jun-06
N-1	5.0 ± 0.2	SW-2	4.3 ± 0.2
NNW-5	4.9 ± 0.3	SW-5	5.3 ± 0.3
NNW-10	5.2 ± 0.3	SW-10	4.7 ± 0.2
NW-5	4.5 ± 0.2	SSW-2	4.6 ± 0.3
NW-10	6.3 ± 0.6	SSW-5	5.8 ± 0.3
WNW-2	5.0 ± 0.3	SSW-10	5.2 ± 0.3
WNW-5	5.0 ± 0.2	S-5	4.7 ± 0.3
WNW-10	5.7 ± 0.5	S-10	4.9 ± 0.2
W-2	4.6 ± 0.3	S/SSE-10	4.9 ± 0.4
W-5	5.1 ± 0.3	SSE-5	4.5 ± 0.2
W-10	4.8 ± 0.2	SSE-10	5.5 ± 0.4
WSW-2	4.7 ± 0.2	SE-1	5.0 ± 0.3
WSW-5	4.5 ± 0.3	H-32	5.4 ± 0.3
WSW-10	4.2 ± 0.3		

2.a. IODINE-131 IN WEEKLY AIR CARTRIDGES - (pCi/ m³)

Collection Date	H08	H12	H14	H30	H34
03-Apr-06	<0.03	<0.03	<0.03	<0.03	<0.03
12-Apr-06	<0.02	<0.01	<0.02	<0.02	<0.01
17-Apr-06	<0.02	<0.02	<0.02	<0.02	<0.02
24-Apr-06	<0.01	<0.01	<0.01	<0.01	<0.01
01-May-06	<0.01	<0.01	<0.02	<0.01	<0.01
11-May-06	<0.01	<0.01	<0.01	<0.01	<0.01
18-May-06	<0.02	<0.02	<0.02	<0.02	<0.02
25-May-06	<0.01	<0.01	<0.01	<0.01	<0.01
01-Jun-06	<0.02	<0.02	<0.02	<0.02	<0.02
07-Jun-06	<0.01	<0.01	<0.01	<0.01	<0.01
14-Jun-06	<0.02	<0.02	<0.02	<0.02	<0.02
21-Jun-06	<0.02	<0.02	<0.02	<0.02	<0.02
27-Jun-06	<0.02	<0.01	<0.02	<0.01	<0.02

2.b.1. AIR PARTICULATES - GROSS BETA - (pCi/m³)

Collection Date	Sample Site H08	H12	H14	H30	H34
03-Apr-06	0.021 ± 0.003	0.021 ± 0.003	0.021 ± 0.003	0.016 ± 0.003	0.018 ± 0.003
12-Apr-06	0.019 ± 0.002	0.022 ± 0.002	0.014 ± 0.002	0.017 ± 0.002	0.019 ± 0.002
17-Apr-06	0.018 ± 0.003	0.015 ± 0.003	0.018 ± 0.003	0.015 ± 0.003	0.023 ± 0.003
24-Apr-06	0.012 ± 0.002	0.019 ± 0.002	0.013 ± 0.002	0.016 ± 0.002	0.012 ± 0.002
01-May-06	0.017 ± 0.002	0.017 ± 0.002	0.014 ± 0.002	0.020 ± 0.002	0.018 ± 0.002
11-May-06	0.019 ± 0.002	0.024 ± 0.002	0.027 ± 0.002	0.021 ± 0.002	0.022 ± 0.002
18-May-06	0.012 ± 0.002	0.022 ± 0.002	0.018 ± 0.002	0.015 ± 0.002	0.018 ± 0.002
25-May-06	0.017 ± 0.002	0.024 ± 0.003	0.024 ± 0.003	0.016 ± 0.002	0.018 ± 0.002
01-Jun-06	0.016 ± 0.002	0.012 ± 0.002	0.015 ± 0.002	0.015 ± 0.002	0.014 ± 0.002
07-Jun-06	0.014 ± 0.002	0.016 ± 0.002	0.018 ± 0.002	0.018 ± 0.002	0.015 ± 0.002
14-Jun-06	0.018 ± 0.002	0.020 ± 0.002	0.021 ± 0.002	0.013 ± 0.002	0.017 ± 0.002
21-Jun-06	0.009 ± 0.002	0.017 ± 0.002	0.012 ± 0.002	0.013 ± 0.002	0.017 ± 0.002
27-Jun-06	0.008 ± 0.002	0.007 ± 0.002	0.008 ± 0.002	0.008 ± 0.002	0.007 ± 0.002
Average:	0.015 ± 0.001	0.018 ± 0.001	0.017 ± 0.001	0.016 ± 0.001	0.017 ± 0.001

2.b.2. AIR PARTICULATES GAMMA ANALYSIS OF QUARTERLY COMPOSITES (pCi/m³)

Second Quarter, 2006

Sample Site	Be-7	K-40	Cs-134	Cs-137	Pb-210
H08	0.1650 ± 0.0114	<0.0186	<0.0011	<0.0008	0.0321 ± 0.0049
H12	0.2106 ± 0.0155	<0.0254	<0.0013	<0.0015	<0.0606
H14	0.1991 ± 0.0120	<0.0240	<0.0011	<0.0008	0.0190 ± 0.0050
H30	0.1728 ± 0.0123	<0.0180	<0.0013	<0.0007	0.0312 ± 0.0039
H34	0.2059 ± 0.0151	<0.0190	<0.0020	<0.0013	<0.0640

3.a. SURFACE WATER - (pCi/L)

Sample Site	Collection Date	H-3	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Zr-95 Nb-95 (A)	I-131	Cs-134	Cs-137	Ba-140 La-140 (B)
H15	03-Apr-06	<150	406 ± 36	<4	<3	<8	<4	<8	<6	<5	<4	<4	<6
	12-Apr-06	<146	314 ± 26	<3	<2	<6	<3	<5	<4	<3	<3	<2	<5
	17-Apr-06	<145	371 ± 34	<4	<4	<6	<4	<8	<6	<4	<4	<3	<9
	24-Apr-06	<145	383 ± 24	<2	<2	<4	<3	<5	<4	<3	<3	<2	<5
	01-May-06	<145	334 ± 32	<4	<4	<9	<4	<8	<7	<4	<5	<4	<7
	11-May-06	<144	395 ± 36	<4	<4	<7	<4	<10	<7	<6	<4	<4	<4
	18-May-06	<144	328 ± 34	<4	<3	<9	<4	<8	<7	<6	<4	<3	<5
	25-May-06	<144	393 ± 23	<2	<2	<5	<2	<4	<4	<3	<3	<2	<4
	02-Jun-06	<145	357 ± 29	<3	<3	<6	<4	<8	<6	<4	<3	<3	<5
	07-Jun-06	<145	353 ± 24	<2	<2	<5	<3	<5	<4	<3	<2	<2	<4
	14-Jun-06	<145	343 ± 28	<3	<2	<5	<3	<5	<4	<3	<3	<3	<4
	21-Jun-06	<145	293 ± 24	<2	<3	<5	<2	<5	<4	<3	<3	<3	<4
	27-Jun-06	<144	410 ± 31	<3	<3	<6	<3	<7	<5	<3	<3	<3	<11
H59	03-Apr-06	<150	324 ± 39	<3	<3	<7	<5	<8	<5	<5	<5	<3	<5
	18-May-06	<144	375 ± 32	<4	<3	<7	<4	<7	<5	<6	<4	<3	<5
	14-Jun-06	<145	371 ± 18	<2	<1	<3	<2	<3	<3	<2	<2	<2	<3

(A) These tabulated LLD values for Zr/Nb-95 are the higher of the individual parent or daughter LLDs.

(B) These tabulated LLD values are for Ba-140, either based on direct measurement of Ba-140 or based on ingrowth of La-140, whichever method yields the greater sensitivity for a given sample.

3.b. SHORELINE SEDIMENT - (pCi/kg, dry weight)

Sample Site	Collection Date	Be-7	K-40	Co-58	Co-60	Cs-134	Cs-137	Pb-210	Ra-226	Th-232	U-238

These samples were previously collected.

4.a.1. CRUSTACEA - (pCi/kg, wet weight)

Sample Site	Collection Date	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Cs-134	Cs-137	Ra-226	Ra-228

These samples were previously collected.

4.a.2. FISH - (pCi/kg, wet weight)

Sample Site	Collection Date	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Cs-134	Cs-137	Ra-226	Ra-228

These samples were previously collected.

4.b. BROADLEAF VEGETATION - Brazilian Pepper - (pCi/kg, wet weight)

Sample Site	Collection Date	Be-7	K-40	I-131	Cs-134	Cs-137	Pb-210	Pb-212	Ra-226
H51	03-Apr-06	763 ± 74	2343 ± 169	<20	<22	<17	<2234	<78	746 ± 155
	18-May-06	520 ± 77	5264 ± 253	<21	<22	<18	<2646	<94	474 ± 159
	15-Jun-06	648 ± 78	5276 ± 256	<13	<20	<15	<2515	<88	<338
H52	03-Apr-06	568 ± 96	2963 ± 185	<17	<22	<16	<2263	<75	282 ± 136
	18-May-06	649 ± 82	4940 ± 251	<24	<19	<19	<2511	<95	447 ± 175
	14-Jun-06	598 ± 75	4327 ± 211	<15	<21	<17	<2389	<75	<314
H59	03-Apr-06	641 ± 80	2029 ± 148	<16	<12	<13	<1967	<72	527 ± 142
	18-May-06	963 ± 75	3035 ± 181	<21	<20	<16	<2303	<74	422 ± 169
	14-Jun-06	945 ± 87	3052 ± 218	<15	<22	<14	<2673	<89	<296

ST. LUCIE SITE

Offsite Dose Calculation Manual Specification Sampling

Third Quarter, 2006

Sample Type	Collection Frequency	Locations Sampled	Number of Samples
1. Direct Radiation	Quarterly	27	27
2. Airborne			
2.a. Air Iodines	Weekly	5	65
2.b. Air Particulates	Weekly	5	65
3. Waterborne			
3.a. Surface Water	Weekly	1	13
	Monthly	1	3
3.b. Shoreline Sediment	Semiannually	2	2
4. Ingestion			
4.a. Fish and Invertebrates			
4.a.1. Crustacea	Semiannually	2	1
4.a.2. Fish	Semiannually	2	1
4.b. Broadleaf Vegetation	Monthly	3	9
		Total:	186

NOTE: Measurement results having magnitudes that are significantly above the background of the measurement system are reported as net values plus or minus a one-standard-deviation error term. Measurement results that are not significantly above background and with greater than a 50% error term are reported as less than a Lower Limit of Detection (<LLD), which is an estimated upper limit (with at least 95% confidence) for the true activity in the sample.

The marine fauna listed in this report were collected in part, under Florida FWC SAL030.

1. DIRECT RADIATION - TLDs - (µR/hour)

Sample Site	Deployment 15-Jun-06 Collection 20-Sep-06	Sample Site	Deployment 15-Jun-06 Collection 20-Sep-06
N-1	4.5 ± 0.2	SW-2	4.6 ± 0.2
NNW-5	4.2 ± 0.3	SW-5	6.1 ± 0.3
NNW-10	4.6 ± 0.2	SW-10	4.9 ± 0.4
NW-5	4.5 ± 0.2	SSW-2	4.8 ± 0.3
NW-10	5.9 ± 0.3	SSW-5	5.4 ± 0.3
WNW-2	4.5 ± 0.2	SSW-10	5.0 ± 0.2
WNW-5	4.9 ± 0.3	S-5	4.7 ± 0.2
WNW-10	5.6 ± 0.3	S-10	4.5 ± 0.3
W-2	4.2 ± 0.2	S/SSE-10	4.3 ± 0.3
W-5	4.7 ± 0.3	SSE-5	3.8 ± 0.2
W-10	5.0 ± 0.3	SSE-10	4.9 ± 0.4
WSW-2	5.0 ± 0.3	SE-1	4.5 ± 0.2
WSW-5	4.7 ± 0.2	H-32	5.1 ± 0.3
WSW-10	4.2 ± 0.2		

2.a. IODINE-131 IN WEEKLY AIR CARTRIDGES - (pCi/ m^3)

Collection Date	H08	H12	H14	H30	H34
06-Jul-06	<0.01	<0.01	<0.01	<0.01	<0.01
11-Jul-06	<0.03	<0.02	<0.03	<0.03	<0.02
19-Jul-06	<0.01	<0.01	<0.01	<0.01	<0.01
25-Jul-06	<0.03	<0.03	<0.03	<0.03	<0.03
03-Aug-06	<0.01	<0.01	<0.01	<0.01	<0.01
09-Aug-06	<0.01	<0.02	<0.01	<0.01	<0.01
14-Aug-06	<0.02	<0.03	<0.03	<0.02	<0.02
23-Aug-06	<0.01	<0.01	<0.01	<0.01	<0.01
29-Aug-06	<0.01	<0.01	<0.01	<0.01	<0.01
05-Sep-06	<0.02	<0.02	<0.02	<0.02	<0.02
12-Sep-06	<0.02	<0.02	<0.02	<0.02	<0.02
20-Sep-06	<0.01	<0.01	<0.01	<0.01	<0.01
26-Sep-06	<0.02	<0.02	<0.02	<0.02	<0.02

2.b.1. AIR PARTICULATES - GROSS BETA - (pCi/m³)

Collection Date	Sample Site H08	H12	H14	H30	H34
06-Jul-06	0.010 ± 0.001	0.009 ± 0.001	0.009 ± 0.002	0.010 ± 0.001	0.008 ± 0.001
11-Jul-06	0.009 ± 0.002	0.013 ± 0.002	0.011 ± 0.002	0.009 ± 0.002	0.007 ± 0.002
19-Jul-06	0.009 ± 0.002	0.012 ± 0.002	0.013 ± 0.002	0.011 ± 0.002	0.008 ± 0.002
25-Jul-06	0.009 ± 0.002	0.011 ± 0.002	0.012 ± 0.002	0.007 ± 0.002	0.010 ± 0.002
03-Aug-06	0.017 ± 0.002	0.019 ± 0.002	0.015 ± 0.002	0.015 ± 0.002	0.017 ± 0.002
09-Aug-06	0.022 ± 0.003	0.022 ± 0.003	0.019 ± 0.003	0.016 ± 0.002	0.015 ± 0.002
14-Aug-06	0.012 ± 0.003	0.014 ± 0.003	0.014 ± 0.003	0.013 ± 0.003	0.011 ± 0.002
23-Aug-06	0.015 ± 0.002	0.013 ± 0.002	0.017 ± 0.002	0.013 ± 0.002	0.010 ± 0.002
29-Aug-06	0.007 ± 0.002	0.010 ± 0.002	0.009 ± 0.002	0.008 ± 0.002	0.006 ± 0.002
05-Sep-06	0.005 ± 0.002	0.007 ± 0.002	0.008 ± 0.002	0.005 ± 0.002	0.004 ± 0.002
12-Sep-06	0.011 ± 0.002	0.012 ± 0.002	0.014 ± 0.002	0.010 ± 0.002	0.012 ± 0.002
20-Sep-06	0.021 ± 0.002	0.021 ± 0.002	0.017 ± 0.002	0.018 ± 0.002	0.016 ± 0.002
26-Sep-06	0.019 ± 0.003	0.021 ± 0.003	0.025 ± 0.003	0.021 ± 0.003	0.021 ± 0.003
Average:	0.013 ± 0.001	0.014 ± 0.001	0.014 ± 0.001	0.012 ± 0.001	0.011 ± 0.001

2.b.2. AIR PARTICULATES - GAMMA ANALYSIS OF QUARTERLY COMPOSITES (pCi/m³)

Third Quarter, 2006

Sample Site	Be-7	K-40	Cs-134	Cs-137	Pb-210
H08	0.1521 ± 0.0104	<0.0188	<0.0012	<0.0010	0.0354 ± 0.0035
H12	0.1594 ± 0.0112	<0.0187	<0.0016	<0.0009	0.0218 ± 0.0032
H14	0.1359 ± 0.0118	<0.0204	<0.0010	<0.0009	0.0266 ± 0.0039
H30	0.1290 ± 0.0110	<0.0199	<0.0011	<0.0007	<0.0069
H34	0.1083 ± 0.0127	<0.0283	<0.0013	<0.0015	<0.0581

3.a. SURFACE WATER - (pCi/L)

Sample Site	Collection Date	H-3	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Zr-95 Nb-95 (A)	I-131	Cs-134	Cs-137	Ba-140 La-140 (B)
H15	06-Jul-06	<135	363 ± 37	<4	<3	<7	<3	<8	<6	<5	<5	<4	<5
	11-Jul-06	<135	384 ± 35	<4	<4	<7	<4	<7	<6	<6	<5	<3	<6
	19-Jul-06	<135	355 ± 35	<3	<3	<8	<5	<8	<7	<5	<4	<4	<5
	25-Jul-06	<135	349 ± 35	<4	<4	<8	<4	<8	<6	<4	<4	<4	<13
	03-Aug-06	<140	354 ± 32	<4	<3	<7	<3	<8	<6	<5	<4	<4	<5
	09-Aug-06	<140	372 ± 36	<4	<3	<8	<4	<8	<6	<5	<5	<3	<5
	14-Aug-06	<140	340 ± 21	<2	<2	<4	<2	<4	<4	<3	<2	<2	<4
	23-Aug-06	<140	367 ± 31	<3	<3	<8	<4	<8	<5	<4	<4	<4	<14
	29-Aug-06	<140	391 ± 32	<4	<4	<6	<4	<7	<5	<4	<5	<4	<9
	05-Sep-06	<141	376 ± 36	<4	<3	<8	<5	<9	<6	<4	<4	<4	<15
	12-Sep-06	<141	341 ± 36	<3	<3	<8	<5	<8	<7	<6	<4	<4	<6
	21-Sep-06	<143	322 ± 35	<3	<3	<6	<4	<7	<6	<4	<4	<4	<6
	26-Sep-06	<143	403 ± 32	<4	<4	<7	<4	<8	<7	<4	<4	<4	<12
H59	06-Jul-06	<135	414 ± 36	<3	<4	<10	<5	<7	<7	<6	<5	<4	<6
	09-Aug-06	<140	362 ± 32	<4	<4	<8	<4	<9	<6	<7	<5	<3	<3
	21-Sep-06	<143	316 ± 20	<2	<2	<4	<2	<4	<3	<3	<2	<2	<3

(A) These tabulated LLD values for Zr/Nb-95 are the higher of the individual parent or daughter LLDs.
(B) These tabulated LLD values are for Ba-140, either based on direct measurement of Ba-140 or based on ingrowth of La-140, whichever method yields the greater sensitivity for a given sample.

3.b. SHORELINE SEDIMENT - (pCi/kg, dry weight)

Sample Site	Collection Date	Be-7	K-40	Co-58	Co-60	Cs-134	Cs-137	Pb-210	Ra-226	Th-232
H15	09-Aug-06	<111	549 ± 97	<11	<13	<16	<11	<1049	428 ± 132	199 ± 23
H59	09-Aug-06	<106	350 ± 68	<11	<12	<8	<9	<813	579 ± 139	<64

4.a.1. CRUSTACEA - (pCi/kg, wet weight)

Sample Site	Collection Date	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Cs-134	Cs-137	Ra-226	Ra-228
H59	10-Aug-06	2044 ± 194	<31	<24	<68	<34	<59	<32	<28	1049 ± 256	<146

4.a.2. FISH - (pCi/kg, wet weight)

Sample Site	Collection Date	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Cs-134	Cs-137	Ra-226	Ra-228
H59	10-Aug-06	2469 ± 199	<15	<16	<32	<18	<38	<19	<17	<275	<73

4.b. BROADLEAF VEGETATION - Brazilian Pepper - (pCi/kg, wet weight)

Sample Site	Collection Date	Be-7	K-40	I-131	Cs-134	Cs-137	Pb-210	Pb-212	Ra-226
H51	06-Jul-06	937 ± 90	4025 ± 194	<19	<15	<14	<1938	<72	<292
	09-Aug-06	832 ± 101	4316 ± 231	<21	<17	<19	<2595	<95	<360
	21-Sep-06	919 ± 38	3981 ± 108	<9	<9	<7	<1002	<34	<147
H52	06-Jul-06	826 ± 68	4009 ± 218	<21	<20	<18	<2233	<75	<329
	09-Aug-06	580 ± 84	4821 ± 214	<20	<20	<15	<2199	<78	<311
	21-Sep-06	883 ± 64	4136 ± 182	<17	<16	<13	<1760	<60	<258
H59	06-Jul-06	899 ± 65	3494 ± 142	<15	<12	<11	<1697	26 ± 7	<229
	09-Aug-06	792 ± 66	3532 ± 148	<12	<10	<12	<688	<76	<219
	21-Sep-06	804 ± 28	4058 ± 70	<6	<4	<5	<278	<30	<94

ST. LUCIE SITE

Offsite Dose Calculation Manual Specifications Sampling

Fourth Quarter, 2006

Sample Type	Collection Frequency	Locations Sampled	Number of Samples
1. Direct Radiation	Quarterly	27	27
2. Airborne			
2.a. Air Iodines	Weekly	5	65
2.b. Air Particulates	Weekly	5	65
3. Waterborne			
3.a. Surface Water	Weekly	1	13
	Monthly	1	3
3.b. Shoreline Sediment	Semiannually	0	0
4. Ingestion			
4.a. Fish and Invertebrates			
4.a.1. Crustacea	Semiannually	1	1
4.a.2. Fish	Semiannually	1	1
4.b. Broadleaf Vegetation	Monthly	3	9
			Total: 184

NOTE: Measurement results having magnitudes that are significantly above the background of the measurement system are reported as net values plus or minus a one-standard-deviation error term. Measurement results that are not significantly above background are reported as less than a Lower Limit of Detection (<LLD), which is an estimated upper limit (with at least 95% confidence) for the true activity in the sample.

The marine fauna listed in this report were collected in part, under Florida FWC SAL030.

1. DIRECT RADIATION - TLDs - (µR/hour)

Sample Site	Deployment Collection 20-Sep-06 08-Dec-06	Sample Site	Deployment Collection 20-Sep-06 08-Dec-06
N-1	4.7 ± 0.3	SW-2	4.4 ± 0.3
NNW-5	4.4 ± 0.3	SW-5	5.6 ± 0.4
NNW-10	4.8 ± 0.3	SW-10	4.9 ± 0.3
NW-5	4.4 ± 0.3	SSW-2	4.9 ± 0.3
NW-10	5.7 ± 0.4	SSW-5	5.2 ± 0.3
WNW-2	4.8 ± 0.3	SSW-10	5.6 ± 0.3
WNW-5	4.6 ± 0.3	S-5	4.7 ± 0.3
WNW-10	5.2 ± 0.3	S-10	5.2 ± 0.5
W-2	4.3 ± 0.3	S/SSE-10	4.8 ± 0.3
W-5	4.9 ± 0.3	SSE-5	4.3 ± 0.3
W-10	4.5 ± 0.4	SSE-10	4.9 ± 0.3
WSW-2	4.6 ± 0.4	SE-1	5.0 ± 0.3
WSW-5	4.5 ± 0.3	H-32	5.5 ± 0.3
WSW-10	4.4 ± 0.3		

2.a. IODINE-131 IN WEEKLY AIR CARTRIDGES - (pCi/ m³)

Collection Date	H08	H12	H14	H30	H34
04-Oct-06	<0.02	<0.02	<0.02	<0.02	<0.02
10-Oct-06	<0.01	<0.01	<0.01	<0.01	<0.01
17-Oct-06	<0.01	<0.01	<0.01	<0.01	<0.01
24-Oct-06	<0.01	<0.01	<0.01	<0.01	<0.01
02-Nov-06	<0.01	<0.01	<0.01	<0.01	<0.01
06-Nov-06	<0.02	<0.02	<0.02	<0.02	<0.02
15-Nov-06	<0.01	<0.01	<0.01	<0.01	<0.01
20-Nov-06	<0.02	<0.02	<0.02	<0.02	<0.02
29-Nov-06	<0.01	<0.01	<0.01	<0.01	<0.01
07-Dec-06	<0.02	<0.02	<0.02	<0.02	<0.02
13-Dec-06	<0.01(A)	<0.01	<0.01	<0.01	<0.01
20-Dec-06	<0.01	<0.01	<0.01	<0.01	<0.01
28-Dec-06	<0.01	<0.01	<0.01	<0.01	<0.01

(A) Gas meter malfunction; full sample volume collected.

2.b.1. AIR PARTICULATES - GROSS BETA - (pCi/m³)

Collection Date	Sample Site H08	H12	H14	H30	H34
04-Oct-06	0.033 ± 0.003	0.026 ± 0.002	0.026 ± 0.002	0.027 ± 0.002	0.022 ± 0.002
10-Oct-06	0.021 ± 0.003	0.025 ± 0.003	0.024 ± 0.003	0.018 ± 0.003	0.017 ± 0.003
17-Oct-06	0.017 ± 0.002	0.018 ± 0.002	0.022 ± 0.002	0.017 ± 0.002	0.021 ± 0.002
24-Oct-06	0.022 ± 0.002	0.017 ± 0.002	0.021 ± 0.002	0.014 ± 0.002	0.013 ± 0.002
02-Nov-06	0.016 ± 0.002	0.017 ± 0.002	0.017 ± 0.002	0.018 ± 0.002	0.015 ± 0.002
06-Nov-06	0.020 ± 0.003	0.020 ± 0.003	0.023 ± 0.003	0.020 ± 0.003	0.016 ± 0.003
15-Nov-06	0.021 ± 0.002	0.024 ± 0.002	0.021 ± 0.002	0.020 ± 0.002	0.022 ± 0.002
20-Nov-06	0.022 ± 0.003	0.021 ± 0.003	0.020 ± 0.003	0.014 ± 0.003	0.013 ± 0.003
29-Nov-06	0.013 ± 0.002	0.010 ± 0.002	0.012 ± 0.002	0.011 ± 0.002	0.011 ± 0.002
07-Dec-06	0.017 ± 0.002	0.015 ± 0.002	0.021 ± 0.002	0.016 ± 0.002	0.016 ± 0.002
13-Dec-06	0.017 ± 0.002(A)	0.013 ± 0.002	0.010 ± 0.002	0.012 ± 0.002	0.011 ± 0.002
20-Dec-06	0.008 ± 0.002	0.010 ± 0.002	0.008 ± 0.002	0.014 ± 0.002	0.013 ± 0.002
28-Dec-06	0.013 ± 0.002	0.010 ± 0.002	0.013 ± 0.002	0.012 ± 0.002	0.011 ± 0.002
Average:	0.018 ± 0.001	0.017 ± 0.001	0.018 ± 0.001	0.016 ± 0.001	0.015 ± 0.001

(A) Gas meter malfunction; full sample volume collected.

2.b.2. AIR PARTICULATES GAMMA ANALYSIS OF QUARTERLY COMPOSITES (pCi/m³)

Fourth Quarter, 2006

Sample Site	Be-7	K-40	Cs-134	Cs-137	Pb-210
H08	0.1892 ± 0.0124	<0.0198	<0.0014	<0.0008	0.0275 ± 0.0047
H12	0.1676 ± 0.0119	<0.0190	<0.0015	<0.0008	0.0296 ± 0.0047
H14	0.1745 ± 0.0170	<0.0227	<0.0016	<0.0012	<0.0603
H30	0.1896 ± 0.0146	<0.0240	<0.0019	<0.0012	<0.0550
H34	0.1679 ± 0.0128	<0.0169	<0.0012	<0.0007	0.0333 ± 0.0037

3.a. SURFACE WATER - (pCi/L)

Sample Site	Collection Date	H-3	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Zr-95 Nb-95 (A)	I-131	Cs-134	Cs-137	Ba-140 La-140 (B)
H15	04-Oct-06	<146	383 ± 39	<4	<3	<9	<5	<8	<8	<4	<5	<5	<12
	10-Oct-06	<146	385 ± 34	<4	<3	<7	<4	<8	<6	<5	<5	<4	<10
	17-Oct-06	<146	357 ± 34	<3	<5	<8	<5	<7	<5	<4	<4	<4	<12
	24-Oct-06	<146	384 ± 31	<3	<3	<7	<4	<7	<5	<4	<4	<3	<14
	02-Nov-06	<142	413 ± 34	<3	<4	<7	<4	<10	<6	<6	<4	<4	<6
	06-Nov-06	83 ± 26	385 ± 35	<4	<4	<9	<4	<8	<7	<4	<5	<4	<9
	15-Nov-06	<142	325 ± 36	<4	<4	<8	<6	<10	<6	<4	<4	<4	<14
	20-Nov-06	<144	318 ± 30	<4	<3	<6	<4	<8	<5	<4	<3	<3	<7
	29-Nov-06	<143	356 ± 14	<1	<1	<3	<2	<3	<2	<2	<1	<1	<2
	08-Dec-06	<143	323 ± 49	<6	<5	<13	<6	<12	<11	<7	<6	<6	<9
	13-Dec-06	<143	382 ± 31	<3	<3	<7	<3	<8	<5	<4	<4	<3	<4
	20-Dec-06	<140	353 ± 16	<2	<2	<3	<2	<4	<2	<3	<2	<2	<2
	28-Dec-06	<140	386 ± 18	<1	<2	<3	<2	<3	<3	<2	<2	<2	<2
H59	04-Oct-06	<144	364 ± 35	<3	<4	<7	<4	<8	<6	<4	<5	<3	<9
	02-Nov-06	<142	368 ± 23	<2	<2	<5	<2	<4	<4	<3	<2	<2	<3
	08-Dec-06	<143	355 ± 46	<6	<5	<12	<7	<11	<11	<7	<6	<5	<9

(A) These tabulated LLD values for Zr/Nb-95 are the higher of the individual parent or daughter LLDs.

(B) These tabulated LLD values are for Ba-140, either based on direct measurement of Ba-140 or based on ingrowth of La-140, whichever method yields the greater sensitivity for a given sample.

3.b. SHORELINE SEDIMENT - (pCi/kg, dry weight)

Sample Site	Collection Date	Be-7	K-40	Co-58	Co-60	Cs-134	Cs-137	Pb-210	Ra-226	Th-232	U-238

These samples were previously collected.

4.a.1. CRUSTACEA - (pCi/kg, wet weight)

Sample Site	Collection Date	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Cs-134	Cs-137	Ra-226	Ra-228
H15	07-Nov-06	1805 ± 90	<9	<8	<15	<9	<19	<11	<9	<142	94 ± 11

4.a.2. FISH - (pCi/kg, wet weight)

Sample Site	Collection Date	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Cs-134	Cs-137	Ra-226	Ra-228
H15	01-Nov-06	2758 ± 84	<6	<6	<13	<8	<15	<7	<7	<105	<26

4.b. BROADLEAF VEGETATION - Brazilian Pepper - (pCi/kg, wet weight)

Sample Site	Collection Date	Be-7	K-40	I-131	Cs-134	Cs-137	Pb-210	Pb-212	Ra-226
H51	04-Oct-06	940 ± 80	2887 ± 165	<16	<16	<15	<1956	<67	<275
	02-Nov-06	736 ± 24	3137 ± 51	<8	<4	<4	<228	<24	<76
	08-Dec-06	1481 ± 76	3355 ± 153	<17	<14	<12	<731	<90	<254
H52	04-Oct-06	650 ± 58	5848 ± 196	<15	<16	<14	<1893	<65	424 ± 109
	02-Nov-06	752 ± 32	3730 ± 79	<12	<6	<5	<778	<27	<116
	08-Dec-06	1016 ± 105	5564 ± 272	<20	<16	<16	<2412	<89	<357
H59	04-Oct-06	1129 ± 64	2804 ± 131	<14	<12	<11	<690	<79	<220
	02-Nov-06	768 ± 66	2336 ± 125	<24	<11	<12	<1401	<53	<212
	07-Dec-06	1386 ± 84	1661 ± 162	<18	<14	<14	<2193	<73	<294

ATTACHMENT C

RESULTS FROM THE INTERLABORATORY

COMPARISON PROGRAM 2005

DEPARTMENT OF ENERGY

MAPEP 15, June 2006

AND

MAPEP 16, December 2006

2006
ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT
ST. LUCIE PLANT – UNITS 1 & 2
DOE-MAPEP 15 RESULTS

Radionuclide	Result	Ref. Value	Flag (Evaluation)	Acceptance Range
Matrix: RdF Air Filter Bq/filter				
MN54	< MDA	None	A	Not Applicable
CO57	4.300	4.096	A	2.87 – 5.32
CO60	2.170	2.180	A	1.53 – 2.84
ZN65	3.820	3.423	A	2.40 – 4.45
CS134	2.920	2.934	A	2.05 – 3.81
CS137	2.580	2.531	A	1.77 – 3.29
Am-241	0.100	0.093	A	0.07 – 0.12
Pu-238	0.076	0.067	A	0.05 – 0.09
Matrix: GrF Air Filter Bq/filter				
Gross Beta	0.444	0.481	A	0.24 - 0.72
Matrix: MaS Soil Bq/kg				
K40	601.47	604	A	423 - 785
MN54	348.23	346.77	A	242.74 - 450.80
CO57	669.5	656.29	A	459.4 - 853.18
CO60	428.93	447.1	A	312.97 - 581.23
ZN65	669.83	657.36	A	460.15 - 854.57
CS134	2.11	None	N	
CS137	335.37	339.69	A	237.78 - 441.60
U238	50.10	38.85	W	27.20 - 50.50
AM241	59.02	57.08	A	39.96 - 74.20
Matrix: MaW Water Bq/L				
H3	1039.3	952.01	A	666.41 - 1,238
MN54	328.47	315	A	220.50 - 409.50
CO57	162.17	166.12	A	116.28 - 15.96
CO60	154.50	153.5	A	107.45 - 199.55
ZN65	242.77	228.16	A	159.71 - 296.61
CS134	95.36	95.1	A	66.57 - 123.63
CS137	< MDA	None	A	Not Applicable
AM241	0.99	1.3	A	0.91 - 1.69
Matrix: RdV Vegetation, Bq/sample :				
MN54	5.76	6.247	A	4.37 - 8.12
CO57	8.89	8.578	A	6.00 - 11.15
CO60	4.10	4.52	A	3.16 - 5.88
ZN65	9.39	9.798	A	6.89 - 12.74
CS134	< MDA	None	A	Not Applicable
CS137	2.84	3.074	A	2.15 - 4.00

Evaluation : A = Acceptable, W = Acceptable with Warning, N = Not Acceptable

2006
ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT
ST. LUCIE PLANT – UNITS 1 & 2

DOE-MAPEP 16 RESULTS

Radionuclide	Result	Ref. Value	Flag (Evaluation)	Acceptance Range
Matrix: RdF Air Filter Bq/filter				
MN54	2.20	1.92	A	1.10 – 2.05
CO57	2.93	2.582	A	1.81 – 3.36
CO60	1.66	1.577	A	1.10 – 2.05
ZN65	-0.006	0	A	0 ± 0.027
CS134	3.29	3.117	A	2.20 – 4.09
CS137	2.03	1.805	A	1.26 – 2.35
AM241	0.16	0.142	A	0.10 – 0.19
Matrix: GrF Filter Bq/sample				
Gross Beta	0.39	0.359	A	0.18 – 0.54
Matrix: MaS Soil Bq/kg				
K40	622.13	604	A	423.00 – 785.00
MN54	625.4	594.25	A	415.98 – 772.52
CO57	721.33	676.33	A	473.43 – 879.23
CO60	2.698	1.98	A	None Listed
ZN65	965.1	903.61	A	632.53 – 1,175
CS134	457.75	452.13	A	316.49 – 587.77
CS137	545.2	525.73	A	368.01 – 683.45
Matrix: MaW Water Bq/L				
H3	469.59	428.85	A	300.20 – 557.50
MN54	-0.05	0	A	0 ± 0.11
CO57	212.2	213.08	A	149.16 – 277.00
CO60	48.54	47.5	A	33.20 – 61.80
NI63	98.82	118.62	A	83.03 – 154.21
ZN65	190.9	176.37	A	123.46 – 229.28
SR90	17.7	15.69	A	10.98 – 20.40
CS134	113.57	112.82	A	78.97 – 146.66
CS137	202.80	196.14	A	137.30 – 254.98
Matrix: RdV Vegetation, Bq/sample :				
MN54	7.77	8.351	A	5.85 – 10.86
CO57	0.00	0	W	0 ± 0.01
CO60	5.26	5.806	A	4.06 – 7.55
ZN65	5.68	5.984	A	4.19 – 7.78
CS134	6.99	7.487	A	5.24 – 9.73
CS137	5.03	5.495	A	3.85 – 7.14
AM241	0.01	0	A	0 ± 0.03

Evaluation : A = Acceptable, W = Acceptable with Warning, N = Not Acceptable

From the MAPEP handbook:

Acceptance criteria were developed from a review of precision and accuracy data compiled by other PEPs, the analytical methods literature, from several MAPEP pilot studies, and from what is considered reasonable, acceptable, and achievable for routine analyses among the more experienced laboratories.