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50-389 St. Lucie Plant, Unit 2, Florida Power & Light Co.      05000389  
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SAGER, D.A.      Florida Power & Light Co.  
RECIP. NAME      RECIPIENT AFFILIATION  
TICHLER, J.      Brookhaven National Laboratory

SUBJECT: Forwards marked-up data pages that require correction & or  
addl info, in response to BNL 940729 request for verification  
of 1992 radioactive effluent release data for plant.

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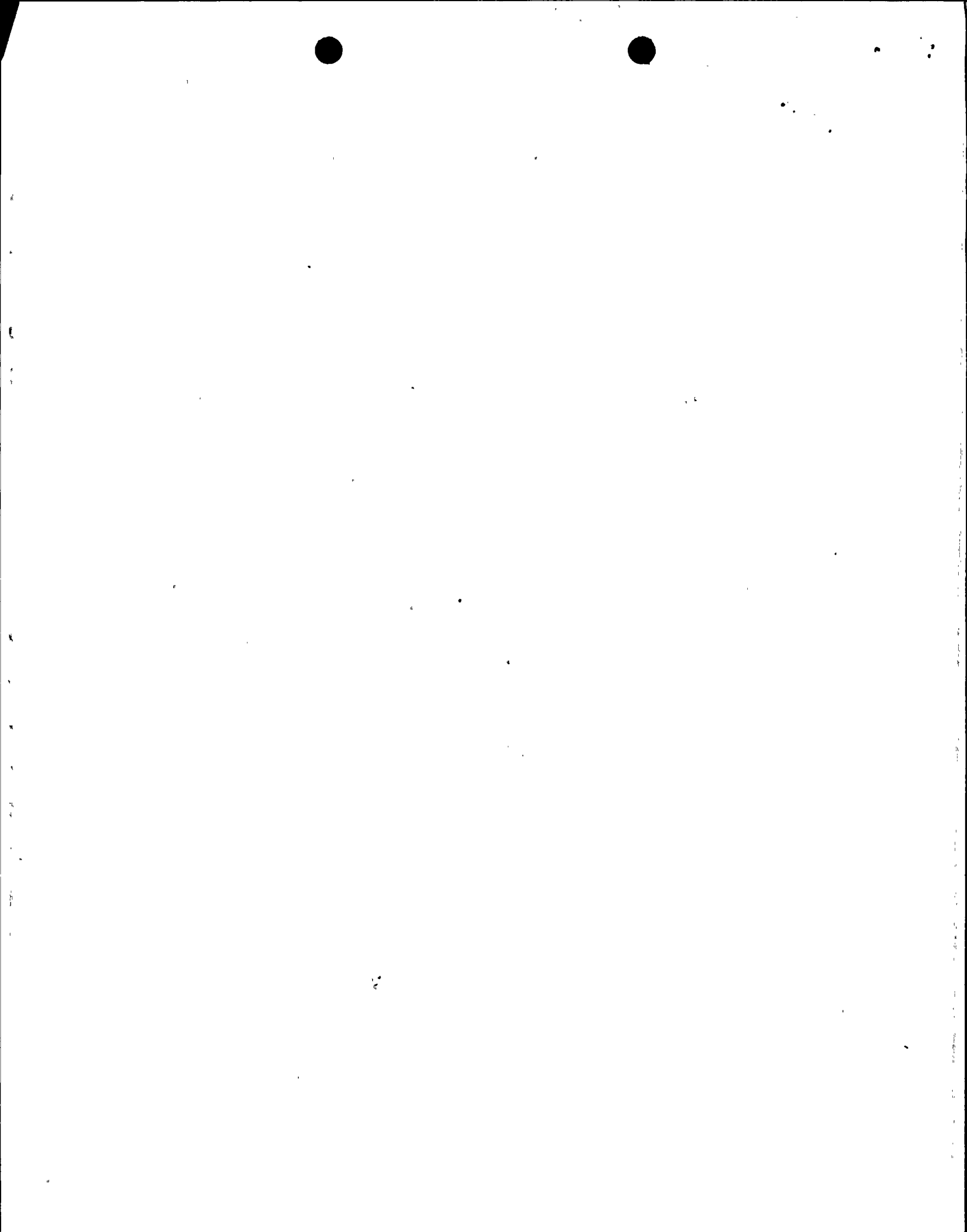
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September 1, 1994

L-94-229

Ms. Joyce Tichler  
Brookhaven National Laboratory  
Analytical Sciences Division  
Building 490D  
P.O. Box 5000  
Upton, NY 11973

Re: St. Lucie Units 1 and 2  
Docket Nos. 50-335 and 50-389  
Response to Brookhaven National Laboratory  
Request for 1992 Radioactive Effluent Release  
Data Verification

This letter is being submitted in response to Brookhaven National Laboratory letter dated July 29, 1994, which requested verification of 1992 radioactive effluent release data for the St. Lucie Plant.

Attached are the marked-up data pages that require correction and/or additional information.

If there should be any questions please contact us.

Very truly yours,

D. A. Sager  
Vice President  
St. Lucie Plant

DAS/CDW/kw

cc: USNRC Document Control Desk, Washington, DC  
Stewart D. Ebnetter, Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, St. Lucie Plant  
Stephen Klementowicz, USNRC, Washington, DC

DAS/PSL#1198-94

Attachments

9409130214 940901  
PDR ADOCK 05000335  
R PDR

Installation: St. Lucie  
Unit Number: 1 & 2

Location: 8 Mi S Ft. Pierce, FL

# Effluent and Waste Disposal Annual Report for 1992 Supplemental Information

## Measurements and Approximations of Total Radioactivity

### Fission and Activation Gases

Principal gamma emitters are analyzed by gaseous grab samples using gamma spectrum pulse height analyses using germanium-lithium detectors. All peaks are identified and quantified. Tritium is analyzed using liquid scintillation counting.

N/A = Not Applicable  
ND = Not Detectable

Installation: St. Lucie  
Unit Number: 1&2

Location: 8 Mi S Ft. Pierce, FL

## Effluent and Waste Disposal Annual Report for 1992 Supplemental Information

### Measurements and Approximations of Total Radioactivity

#### Iodines

Iodines are analyzed using charcoal filter samples by gamma spectrum pulse height analyses using ~~lithium~~-germanium detectors. All peaks are identified and quantified.

N/A = Not Applicable  
ND = Not Detectable

Installation: St. Lucie  
Unit Number: 1&2

Location: 8 MI S Ft. Pierce, FL

# Effluent and Waste Disposal Annual Report for 1992 Supplemental Information

## Measurements and Approximations of Total Radioactivity

### Particulates

Particulates are analyzed by particulate filter samples using gamma spectrum pulse height analyses using germanium-~~thium~~ detectors. All peaks are identified and quantified. SR-90 and 89 are analyzed by chemical separation and liquid scintillation counting. Gross alpha particulates are analyzed by particulate filter samples using gas flow proportional counting.

N/A = Not Applicable  
ND = Not Detectable

Installation: St. Lucie  
Unit Number: 1 & 2

Location: 8 Mi S Ft. Pierce, FL

## Effluent and Waste Disposal Annual Report for 1992 Supplemental Information

### Measurements and Approximations of Total Radioactivity

#### Liquid Effluents

Principal gamma emitters are analyzed using gamma spectrum pulse height analyses using germanium-lithium detectors. Tritium is analyzed using liquid scintillation counting. Gross alpha is analyzed using gas flow proportional counting. SR-90 and 89 are analyzed using chemical separation and liquid scintillation counting.

N/A = Not Applicable  
N/D = Not Detectable

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Printed: 6/28/94

Installation: St. Lucie  
 Unit Number: 1

Location: 8 Mi S Ft. Pierce, FL

Effluent and Waste Disposal Annual Report for 1992  
 Gaseous Effluents - Ground Release

Particulates Nuclide Released	Unit Ci	Continuous Mode		Batch Mode	
		Quarter 3	Quarter 4	Quarter 3	Quarter 4
CO-60		1.33E-04	8.87E-05		
SR-89		2.63E-06			
SR-90		1.73E-06			
Y-90		1.73E-06			
CS-137			$\emptyset$		
			<del>2.39E-10</del>		

N/A = Not Applicable  
 ND = Not Detectable



Installation: St. Lucie  
Unit Number: 1

Location: 8 MI S Ft. Pierce, FL

Effluent and Waste Disposal Annual Report for 1992  
Liquid Effluents

Nuclide Released	Unit Ci	Continuous Mode		Batch Mode	
		Quarter	Quarter	Quarter	Quarter
		+3	-2-4	+3	-2-4
CS-138				2.20E-04	1.24E-04
BA-140				8.87E-05	
LA-140				3.26E-03	7.12E-04
CE-144					6.59E-05
W-187				1.10E-03	8.23E-04
AR-41					1.08E-05
KR-85M				1.32E-04	1.04E-04
KR-85					1.68E-03
KR-88					8.00E-05
XE-131M				2.37E-03	2.66E-04
XE-133M				5.63E-03	1.66E-03
XE-133				4.46E-01	1.19E-01
XE-135M				8.76E-04	
XE-135				1.58E-02	9.11E-03

N/A = Not Applicable

N/D = Not Detectable

Installation: St. Lucie  
Unit Number: 1&2

Location: 8 MI S Ft. Pierce, FL

Effluent and Waste Disposal Annual Report for 1992  
Solid Waste and Irradiated Fuel Shipments

Solid Waste Shipped Offsite for Burial or Disposal (not irradiated fuel)

Type of Waste	Unit		Description	Est Total Error %
	First	Six Months		
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3	5.36E+01	BURIAL VOLUME	2.00E+01
	m3			
	ci	2.37E+02		
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3	3.07E+01	BURIAL VOLUME	2.00E+01
	m3			
	ci	4.45E+00		
C. Irradiated Components, Control Rods, etc.	m3			
	m3			
	ci			
D. Other (describe) Metal, Soil/Grit	m3	3.11E+01	BURIAL VOLUME	2.00E+01
	m3			
	ci	5.15E-01		

Fill in a brief description for each waste volume (Ex. compacted, non-compacted, burial volume, incineration).

N/A = Not Applicable  
N/D = Not Detectable

Installation: St. Lucie  
Unit Number: 1&2

Location: 8 MI S Ft. Pierce, FL

**Effluent and Waste Disposal Annual Report for 1992  
Solid Waste and Irradiated Fuel Shipments**

**Solid Waste Shipped Offsite for Burial or Disposal (not irradiated fuel)**

Type of Waste	Unit		Description	Est Total Error %
	Second	Six Months		
A. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m3	1.60E+01	<i>BURIAL VOLUME</i>	2.00E+01
	m3			
	ci	1.44E+02		
B. Dry Compressible Waste, Contaminated Equipment, etc.	m3	7.95E+01	<i>BURIAL VOLUME</i>	2.00E+01
	m3			
	ci	1.96E+00		
C. Irradiated Components, Control Rods, etc.	m3			
	m3			
	ci			
D. Other (describe) Metal	m3	2.94E+00	<i>BURIAL VOLUME</i>	2.00E+01
	m3			
	ci	6.50E-03		

Fill in a brief description for each waste volume (Ex. compacted, non-compacted, burial volume, incineration).

N/A = Not Applicable  
ND = Not Detectable