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LaSalle County Nuclear Station
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August 28, 1990

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

Subject: LaSalle County Nuclear Station
Semiannual Radioactive Effluent Release Report
NRC Dockets 50-373 and 50-374

Enclosed is the Radioactive Effluent Release Report for January through June 1990. Included with this report is a description of changes made to the Process Control Program.

A copy of this report will be furnished to the NRC Resident Inspector.

Sincerely,

G. J. Diederich
Station Manager

Enclosure

cc: Director of Nuclear Reactor Regulation
NRC Region III
Illinois Department of Nuclear Safety
American Nuclear Insurers
B. P. I.
American Electric Power Service Corp.
U. S. EPA
Illinois EPA
Illinois EPA (Division of Water Pollution Control)
Murray and Trettel, Inc.
Teledyne Isotopes Midwest Laboratory
Performance Assessments
Chemistry Services
Engineering and Construction Manager
Emergency Preparedness
Health Physics Services Supervisor
NRC Resident Inspector
Quality Assurance Supervisor
Chemistry Supervisor
Illini State Park
Central File

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LASALLE COUNTY NUCLEAR POWER STATION
UNITS ONE AND TWO
DOCKET NUMBERS 50-373 AND 50-374

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

		First Quarter	Second Quarter
A. Fission and Activation Gases			
1. Total release	Ci	4.36E+00	4.20E-02
2. Average release rate for period	uCi/sec	1.85E+00	8.23E-02
B. Iodines			
1. Total iodine-131	Ci	7.65E-04	5.64E-04
2. Average release rate for period	uCi/sec	3.12E-04	1.71E-04
C. Particulates			
1. Particulates with T1/2 >8 days	Ci	8.34E-04	1.80E-04
2. Average release rate for period	uCi/sec	3.13E-04	2.20E-04
3. Gross alpha radioactivity	Ci	<1.00E-11	<1.00E-11
D. Tritium			
1. Total release	Ci	0.00E+00	8.45E-03
2. Average release rate for period	uCi/sec	<1.00E-06	1.07E-03

"<" indicates activity of sample is less than LLD given in uci/ml

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

GASEOUS EFFLUENTS-ELEVATED RELEASE

Nuclides Released		Jan.	Feb.	March	First Quarter
1. Fission Gases					
Ar-41	Ci	<1.00E-06	<1.00E-06	<1.00E-06	<1.00E-06
Kr-85	Ci	<1.00E-06	1.68E-02	1.43E-01	1.60E-01
Kr-85m	Ci	<1.00E-06	<1.00E-06	4.17E+00	4.17E+00
Kr-87	Ci	<1.00E-06	<1.00E-06	<1.00E-06	<1.00E-06
Kr-88	Ci	<1.00E-06	<1.00E-06	<1.00E-06	<1.00E-06
Xe-133	Ci	<1.00E-06	3.20E-03	2.62E-02	2.94E-02
Xe-133m	Ci	<1.00E-06	<1.00E-06	<1.00E-06	<1.00E-06
Xe-135	Ci	<1.00E-06	<1.00E-06	7.92E-04	7.92E-04
Xe-138	Ci	<1.00E-06	<1.00E-06	<1.00E-06	<1.00E-06
Total for period	Ci	0.00E+00	2.00E-02	4.34E+00	4.36E+00
2. Iodines					
I-131	Ci	5.51E-05	1.68E-04	5.42E-04	7.65E-04
I-132	Ci	<1.00E-11	<1.00E-11	3.00E-04	3.00E-04
I-133	Ci	1.04E-03	1.83E-03	2.86E-03	5.73E-03
I-134	Ci	<1.00E-11	<1.00E-11	<1.00E-11	<1.00E-11
I-135	Ci	<1.00E-11	8.61E-04	3.24E-04	1.19E-03
Total for period	Ci	1.10E-03	2.86E-03	4.03E-03	7.99E-03
3. Particulates					
Mn-54	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Co-58	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Fe-59	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Co-60	Ci	3.29E-04	1.99E-04	3.06E-04	8.34E-04
Zn-65	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Sr-89	Ci	<1.00E-11	<1.00E-11	<1.00E-11	<1.00E-11
Sr-90	Ci	<1.00E-11	<1.00E-11	<1.00E-11	<1.00E-11
Nb-95	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Mo-99	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Cs-134	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Cs-137	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Ce-141	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Ce-144	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Total for period	Ci	3.29E-04	1.99E-04	3.06E-04	8.34E-04

"<" indicates activity of sample is less than LLD given in uci/ml

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

GASEOUS EFFLUENTS-ELEVATED RELEASE

Nuclides Released		April	May	June	Second Quarter
1. Fission Gases					
Ar-41	Ci	<1.00E-06	<1.00E-06	4.18E-02	4.18E-02
Kr-85m	Ci	<1.00E-06	<1.00E-06	<1.00E-06	<1.00E-06
Kr-87	Ci	<1.00E-06	<1.00E-06	<1.00E-06	<1.00E-06
Kr-88	Ci	<1.00E-06	<1.00E-06	<1.00E-06	<1.00E-06
Xe-133	Ci	<1.00E-06	<1.00E-06	3.08E-07	3.08E-07
Xe-133m	Ci	<1.00E-06	<1.00E-06	<1.00E-06	<1.00E-06
Xe-135	Ci	<1.00E-06	1.76E-04	1.87E-08	1.76E-04
Xe-138	Ci	<1.00E-06	<1.00E-06	<1.00E-06	<1.00E-06
Total for period	Ci	0.00E+00	1.76E-04	4.18E-02	4.20E-02
2. Iodines					
I-131	Ci	2.13E-04	2.01E-04	1.50E-04	5.64E-04
I-132	Ci	<1.00E-11	<1.00E-11	1.19E-04	1.19E-04
I-133	Ci	1.09E-03	1.71E-03	1.27E-03	4.07E-03
I-134	Ci	1.03E-03	<1.00E-11	<1.00E-11	1.03E-03
I-135	Ci	<1.00E-11	<1.00E-11	2.52E-04	2.52E-04
Total for period	Ci	2.33E-03	1.91E-03	1.79E-03	6.03E-03
3. Particulates					
Mn-54	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Co-58	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Fe-59	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Co-60	Ci	7.81E-05	3.18E-05	6.98E-05	1.80E-04
Zn-65	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Sr-89	Ci	<1.00E-11	<1.00E-11	<1.00E-11	<1.00E-11
Sr-90	Ci	<1.00E-11	<1.00E-11	<1.00E-11	<1.00E-11
Nb-95	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Mo-99	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Cs-134	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Cs-137	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Ce-141	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Ce-144	Ci	<1.00E-04	<1.00E-04	<1.00E-04	<1.00E-04
Total for period	Ci	7.81E-05	3.18E-05	6.98E-05	1.80E-04

"<" indicates activity of sample is less than LLD given in uci/ml

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

UNIT ONE

LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

		First Quarter	Second Quarter
A. Fission and Activation Products			
1. Total release (not including tritium, gases, alpha)	Ci	0.00E+00	0.00E+00
2. Average concentration released	uCi/ml	N/A	N/A
3. Maximum concentration released	uCi/ml	N/A	N/A
B. Tritium			
1. Total release	Ci	0.00E+00	0.00E+00
2. Average concentration released	uCi/ml	N/A	N/A
C. Dissolved Noble Gases			
1. Total release	Ci	0.00E+00	0.00E+00
2. Average concentration released	uCi/ml	N/A	N/A
D. Gross Alpha Radioactivity			
1. Total release	Ci	0.00E+00	0.00E+00
2. Average concentration released	uCi/ml	N/A	N/A
E. Volume of Waste Released	liters	0.00E+00	0.00E+00
F. Volume of Dilution Water	liters	0.00E+00	0.00E+00

"<" indicates activity of sample is less than LLD given in uCi/ml

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

UNIT ONE

LIQUID EFFLUENTS

Nuclides Released		Jan.	Feb.	March	First Quarter
Cr-51	Ci	No	No	No	
Mn-54	Ci	Releases	Releases	Releases	
Fe-55	Ci				
Co-58	Ci				
Fe-59	Ci				
Co-60	Ci				
Zn-65	Ci				
Sr-89	Ci				
Sr-90	Ci				
Mo-99	Ci				
I-131	Ci				
Xe-133	Ci				
Xe-133m	Ci				
Cs-134	Ci				
Xe-135	Ci				
Cs-137	Ci				
Ce-141	Ci				
Ce-144	Ci				
Total for period	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

UNIT ONE

LIQUID EFFLUENTS

Nuclides Released		April	May	June	Second Quarter
Cr-51	Ci	No	No	No	
Mn-54	Ci	Releases	Releases	Releases	
Fe-55	Ci				
Co-58	Ci				
Fe-59	Ci				
Co-60	Ci				
Zn-65	Ci				
Sr-89	Ci				
Sr-90	Ci				
Mo-99	Ci				
I-131	Ci				
Xe-133	Ci				
Xe-133m	Ci				
Cs-134	Ci				
Xe-135	Ci				
Cs-137	Ci				
Ce-141	Ci				
Ce-144	Ci				
Total for period	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

UNIT TWO

LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

		First Quarter	Second Quarter
A. Fission and Activation Products			
1. Total release (not including tritium, gases,alpha)	Ci	0.00E+00	0.00E+00
2. Average concentration released	uCi/ml	N/A	N/A
3. Maximum concentration released	uCi/ml	N/A	N/A
B. Tritium			
1. Total release	Ci	0.00E+00	0.00E+00
2. Average concentration released	uCi/ml	N/A	N/A
C. Dissolved Noble Gases			
1. Total release	Ci	0.00E+00	0.00E+00
2. Average concentration released	uCi/ml	N/A	N/A
D. Gross Alpha Radioactivity			
1. Total release	Ci	0.00E+00	0.00E+00
2. Average concentration released	uCi/ml	N/A	N/A
E. Volume of Waste Released	liters	0.00E+00	0.00E+00
F. Volume of Dilution Water	liters	0.00E+00	0.00E+00

"<" indicates activity of sample is less than LLD given in uCi/ml

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

UNIT TWO

LIQUID EFFLUENTS

Nuclides Released		Jan.	Feb.	March	First Quarter
Cr-51	Ci	No	No	No	
Mn-54	Ci	Releases	Releases	Releases	
Fe-55	Ci				
Co-58	Ci				
Fe-59	Ci				
Co-60	Ci				
Zn-65	Ci				
Sr-89	Ci				
Sr-90	Ci				
Mo-99	Ci				
I-131	Ci				
Xe-133	Ci				
Xe-133m	Ci				
Cs-134	Ci				
Xe-135	Ci				
Cs-137	Ci				
Ce-141	Ci				
Ce-144	Ci				
Total for period	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

UNIT TWO

LIQUID EFFLUENTS

Nuclides Released		April	May	June	Second Quarter
Cr-51	Ci	No	No	No	
Mn-54	Ci	Releases	Releases	Releases	
Fe-55	Ci				
Co-58	Ci				
Fe-59	Ci				
Co-60	Ci				
Zn-65	Ci				
Sr-89	Ci				
Sr-90	Ci				
Mo-99	Ci				
I-131	Ci				
Xe-133	Ci				
Xe-133m	Ci				
Cs-134	Ci				
Xe-135	Ci				
Cs-137	Ci				
Ce-141	Ci				
Ce-144	Ci				
Total for period	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

MAXIMUM DOSES RESULTING FROM RELEASES

		First Quarter	Second Quarter
A. Gaseous Effluents (Units One and Two)			
1. Gamma air	MRAD	2.54E-05	1.51E-09
2. Beta air	MRAD	8.88E-06	4.53E-10
3. Total Body	MREM	1.05E-05	6.35E-10
4. Skin	MREM	2.60E-05	1.50E-09
5. Organ (infant thyroid)	MREM	7.15E-04	1.16E-03
B. Liquid Effluents (Unit One)			
1. Total body	MREM	0.00E+00	0.00E+00
2. Internal organ (infant GI-LLI)	MREM	0.00E+00	0.00E+00
C. Liquid Effluents (Unit Two)			
1. Total body	MREM	0.00E+00	0.00E+00
2. Internal organ (infant GI-LLI)	MREM	0.00E+00	0.00E+00

COMPLIANCE STATUS

A. Gaseous Effluents (Units One and Two)			
1. Gamma air	% of Tech. Spec. Limit	0.00	0.00
2. Beta air	% of Tech. Spec. Limit	0.00	0.00
3. Total body	% of Tech. Spec. Limit	0.00	0.00
4. Skin	% of Tech. Spec. Limit	0.00	0.00
5. Organ	% of Tech. Spec. Limit	0.01	0.02
B. Liquid Effluents (Unit One)			
1. Total body	% of Tech. Spec. Limit	0.00	0.00
2. Internal organ	% of Tech. Spec. Limit	0.00	0.00.
C. Liquid Effluents (Unit Two)			
1. Total body	% of Tech. Spec. Limit	0.00	0.00
2. Internal organ	% of Tech. Spec. Limit	0.00	0.00

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL

		Jan.	Feb.	March	First Quarter
1. Spent resins, filter sludges, evaporator bottoms, etc.					
a. Quantity shipped	cu.m.	3.97E+01	1.86E+01	1.29E+01	7.12E+01
b. Total activity	Ci	4.51E+02	6.50E+02	1.12E+02	1.21E+03
c. Major nuclides (estimate)					
Co-60	%	22	25	36	
Fe-55	%	64	58	35	
Mn-54	%	05	13	21	
d. Container type		LSA	LSA	LSA	
e. Container volume	cu.m.	2.12E-01 3.85E+00 3.94E+00 5.07E+00	2.12E-01 3.85E+00 3.94E+00	3.94E+00 5.07E+00	
f. Solidification agent		Cement	Cement	Cement	
2. Dry compressible waste, contaminated equipment, etc.					
a. Quantity shipped	cu.m.	5.70E+01	5.43E+01	2.21E+01	1.33E+02
b. Total activity	Ci	2.18E+00	1.43E+00	7.04E-01	4.31E+00
c. Major nuclides (estimate)					
Co-60	%	36	36	36	
Mn-54	%	21	21	21	
Cr-51	%	32	32	32	
d. Container type		LSA	LSA	LSA	
e. Container volume	cu.m.	2.12E-01 2.72E+00	2.12E-01 2.72E+00 3.51E+01	2.12E-01 2.72E+00	

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL

		Jan.	Feb.	March	First Quarter
3. Solid Waste Disposition					
a. Number of Shipments		14	07	04	25
b. Mode of Transportation		Hittman	Hittman	Hittman	
	Number	14	07	04	
c. Destination		Barnwell, SC	Barnwell, SC	Barnwell, SC	
	Number	03	01	01	
		Beatty, NV	Beatty, NV	Beatty, NV	
	Number	08	04	02	
		Oak Ridge, TN	Oak Ridge, TN	Oak Ridge, TN	
	Number	03	01	01	
			Waltz Mill, PA		
	Number		01		

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL

		April	May	June	Second Quarter
1. Spent resins, filter sludges, evaporator bottoms, etc.					
a. Quantity shipped	cu.m.	1.56E+01	1.47E+01	2.10E+01	5.13E+01
b. Total activity	Ci	9.43E+01	5.48E+01	1.13E+02	2.62E+02
c. Major nuclides (estimate)					
Co-60	%	70	79	79	
Fe-55	%	02	01	01	
Mn-54	%	24	18	18	
d. Container type		LSA	LSA	LSA	
e. Container volume	cu.m.	2.12E-01 3.94E+00 5.07E+00	2.12E-01 3.94E+00	2.12E-01 3.94E+00 5.07E+00	
f. Solidification agent		Cement	Cement	Cement	
2. Dry compressible waste, contaminated equipment, etc.					
a. Quantity shipped	cu.m.	4.21E+01	2.28E+01	3.12E+01	9.61E+01
b. Total activity	Ci	6.45E+00	1.06E+00	2.44E+01	3.19E+01
c. Major nuclides (estimate)					
Fe-59	%	30	30	30	
Mn-54	%	28	28	28	
Cr-51	%	25	25	25	
d. Container type		LSA	LSA	LSA	
e. Container volume	cu.m.	2.12E-01 2.72E+00	2.12E-01 2.72E+00	2.12E-01 4.05E+00	

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL

		April	May	June	Second Quarter
3. Solid Waste Disposition					
a. Number of Shipments		07	05	08	20
b. Mode of Transportation		Hittman	Hittman	Hittman	
	Number	06	04	06	
		Kindrick	Kindrick	Kindrick	
	Number	01	01	02	
c. Destination		Barnwell, SC	Beatty, NV	Barnwell, SC	
	Number	01	04	02	
		Beatty, NV	Oak Ridge, TN	Beatty, NV	
	Number	04	01	04	
		Oak Ridge, TN		Oak Ridge, TN	
	Number	02		02	

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

Supplemental Information

1. Regulatory Limits

a. Gaseous effluents

1) The air dose due to noble gases released in gaseous effluents, from each reactor unit, from the site shall be limited to the following:
a) During any calendar quarter: Less than or equal to 5 mrad for gamma radiation and less than or equal to 10 mrad for beta radiation, and
b) During any calendar year: Less than or equal to 10 mrad for gamma radiation and less than or equal to 20 mrad for beta radiation.
2) The dose to an individual from radioiodines and radioactive materials in particulate form, and radionuclides, other than noble gases, with half-lives greater than eight days in gaseous effluents released, from each reactor unit, from the site shall be limited to the following:
a) During any calendar quarter: Less than or equal to 7.5 mrems to any organ, and
b) During any calendar year: Less than or equal to 15 mrems to any organ.

b. Liquid effluents

1) The dose or dose commitment to an individual from radioactive materials in liquid effluents released, from each reactor unit, from the site shall be limited:
a) During any calendar quarter to less than or equal to 1.5 mrem to the total body and to less than or equal to 5 mrem to any organ, and
b) During any calendar year to less than or equal to 3 mrem to the total body and to less than or equal to 10 mrem to any organ.

c. Total dose

1) The dose or dose commitment to any member of the public, due to releases of radioactivity and radiation, from uranium fuel cycle sources shall be limited to less than or equal to 25 mrem to the body or any organ (except the thyroid, which shall be limited to less than or equal to 75 mrem) over 12 consecutive months.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

Supplemental Information (continued)

2. Maximum Permissible Concentrations

a. Gaseous effluents

1) The dose rate due to radioactive materials released in gaseous effluents from the site shall be limited to the following:
a) For noble gases: Less than or equal to 500 mrems/year to the total body and less than or equal to 3000 mrems/year to the skin, and
b) For all radioiodines and for all radioactive materials in particulate form, and radionuclides, other than noble gases, with half-lives greater than eight days: Less than or equal to 1500 mrems/year to any organ via the inhalation pathway.

b. Liquid effluents

1) The concentration of radioactive material released from the site shall be limited to the concentrations specified in 10 CFR Part 20, Appendix B, Table II, Column 2 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall be limited to the following:

Nuclide	MPC (uci/ml)
Kr-85m	2.00E-04
Kr-85	5.00E-04
Kr-87	4.00E-05
Kr-88	9.00E-05
Ar-41	7.00E-05
Xe-131m	7.00E-04
Xe-133m	5.00E-04
Xe-133	6.00E-04
Xe-135m	2.00E-04
Xe-135	2.00E-04

3. Average Energy

a. Not applicable.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

Supplemental Information (continued)

5. Batch Releases

a. Gaseous

1) Number of batch releases: None
2) Total time period for batch releases: N/A
3) Maximum time period for a batch release: N/A
4) Average time period for batch releases: N/A
5) Minimum time period for a batch release: N/A

b. Liquid

1) Number of batch releases: None
2) Total time period for batch releases: N/A
3) Maximum time period for a batch release: N/A
4) Average time period for batch releases: N/A
5) Minimum time period for a batch release: N/A
6) Average stream flow during periods of release of effluent into a flowing stream: N/A

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

Supplemental Information (continued)

4. Measurements and Approximations of Total Radioactivity

a. Gaseous effluents

1) Containment vent and purge system is sampled by grab sample which is analyzed for principal gamma emitters and H-3.
2) Main vent stack is sampled by grab sample which is analyzed for principal gamma emitters and H-3.
3) Standby gas treatment system is sampled by grab sample which is analyzed for principal gamma emitters.
4) All release types as listed in 1 and 2 above, at the vent stack and as listed in 3 above, at the standby gas treatment system whenever there is flow, are continuously sampled by charcoal, particulate and composite samples which are analyzed for iodines, principal gamma emitters, gross alpha, Sr-89 and Sr-90. Noble gases, gross beta and gamma are continuously monitored by noble gas monitors for the vent stack and the standby gas treatment system.

b. Liquid effluents

1) Batch waste release tanks are sampled each batch for principal gamma emitters, I-131, dissolved and entrained noble gases, H-3, gross alpha, Sr-89, Sr-90 and Fe-55.
2) Continuous releases are sampled continuously in proportion to the rate of flow of the effluent stream and by grab sample. Samples are analyzed for principal gamma emitters, I-131, dissolved and entrained noble gases, H-3, gross alpha, Sr-89, Sr-90 and Fe-55.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

Supplemental Information (continued)

6. Abnormal Releases

a. Gaseous

1) Number of releases: None
2) Total activity released: N/A

b. Liquid

1) Number of releases: None
2) Total activity released: N/A

CECo LASALLE STATION
375 ft. WIND SPEED and WIND DIRECTION
NUMBER OF OBSERVATIONS = 2018

January-March 1990
375-33 ft. DIFFERENTIAL TEMPERATURE

SPEED CLASS	DIRECTION CLASS																	STABILITY CLASS							
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		.00						
SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			.00					
N	.05	.05	.10	.00	.10	.00	.05	.00	.00	.05	.05	.10	.10	.05	.05	.05	.79				.79				
SS	.00	.10	.05	.10	.00	.00	.00	.05	.00	.05	.00	.00	.05	.00	.00	.00	.40					.40			
MS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.05						.05		
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							.00	
																									1.24
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
MU	.00	.00	.00	.00	.00	.00	.00	.00	.05	.10	.00	.00	.00	.00	.00	.00	.15		.15						
SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.05			.05					
N	.30	.30	.25	.10	.15	.00	.15	.20	.15	.20	.35	.10	.25	.59	.20	.25	3.52				3.52				
SS	.05	.00	.10	.05	.30	.30	.15	.00	.00	.15	.10	.25	.05	.10	.15	.05	1.78					1.78			
MS	.00	.00	.00	.05	.00	.00	.00	.00	.10	.15	.05	.10	.00	.05	.10	.00	.59						.59		
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							.00	
																									6.10
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		.00						
SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			.00					
N	.74	.55	1.44	.20	.15	.10	.10	.20	.35	.84	.99	.89	.25	.25	.64	.99	8.67				8.67				
SS	.00	.10	.30	.15	.35	.20	.15	.10	.50	.15	.20	.20	.25	.40	.20	.10	3.32					3.32			
MS	.00	.00	.00	.00	.00	.00	.10	.00	.10	.05	.15	.05	.15	.05	.30	.00	.94						.94		
ES	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.05	.00	.00	.10							.10	
																									13.03
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		.00						
SU	.05	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.05	.00	.00	.00	.10	.25			.25					
N	.94	.94	1.49	.99	.50	.30	.35	.30	.94	.55	.45	.35	.64	.40	.74	2.13	11.99				11.99				
SS	.20	.35	.05	.00	.10	.20	.30	.25	.25	.30	.50	.45	.64	.84	.59	.45	5.45					5.45			
MS	.00	.00	.00	.00	.00	.15	.15	.30	.50	.40	.30	.25	.35	.30	.05	.00	2.73						2.73		
ES	.00	.00	.00	.00	.00	.00	.05	.05	.15	.00	.00	.00	.05	.00	.00	.00	.30							.30	
																									20.71
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		.00						
SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.20	.00	.15	.00	.00	.00	.05	.40			.40					
N	.50	.45	.84	.55	.84	.15	.20	.84	.69	.45	.59	.55	.89	1.19	1.93	.50	10.95				10.95				
SS	.30	.10	.10	.05	.25	.30	.20	.25	.50	.94	.50	.45	.59	.69	.59	.30	6.10					6.10			
MS	.00	.00	.00	.00	.05	.05	.10	.15	.35	.35	.45	.10	.30	.20	.10	.00	2.18						2.18		
ES	.00	.00	.00	.00	.00	.05	.05	.15	.15	.10	.00	.05	.10	.00	.00	.00	.64							.64	
																									20.27
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		.00						
SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.05	.00	.00	.00	.15			.15					
N	.25	.40	.10	.64	.59	.00	.05	.00	.59	1.24	.55	.30	.74	.99	1.14	.35	7.93				7.93				
SS	.00	.00	.00	.05	.25	.30	.40	.69	2.23	2.23	1.24	.50	.94	.55	.59	.10	10.06					10.06			
MS	.00	.00	.00	.00	.05	.00	.05	.10	.69	.64	.99	.59	.15	.05	.05	.00	3.37						3.37		
ES	.00	.00	.00	.00	.00	.00	.00	.10	.35	.20	.00	.20	.00	.05	.00	.00	.89							.89	
																									22.40

CECo LASALLE STATION
375 ft. WIND SPEED and WIND DIRECTION

January-March 1990
375-33 ft. DIFFERENTIAL TEMPERATURE

SPEED CLASS	DIRECTION CLASS																	STABILITY CLASS							
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
3 MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		.00						
2 SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.05	.00	.15			.15					
- N	.00	.05	.00	.15	.10	.00	.00	.00	.20	.64	.35	.10	.45	1.14	.89	.05	4.11				4.11				
3 SS	.00	.00	.00	.00	.00	.00	.25	.30	1.78	2.38	.30	.10	.25	.20	.00	.00	5.55					5.55			
8 MS	.00	.00	.00	.00	.00	.00	.00	.05	.40	.20	.45	.45	.15	.00	.00	.00	1.68						1.68		
ES	.00	.00	.00	.00	.00	.00	.00	.00	.05	.15	.05	.05	.00	.00	.00	.00	.30							.30	
																									11.79
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
3 MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		.00						
9 SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			.00					
- N	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.15	.05	.20	.50	.10	.25	1.29				1.29				
4 SS	.00	.00	.00	.00	.00	.00	.00	.15	.84	.55	.15	.10	.10	.20	.00	.00	2.08					2.08			
6 MS	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.10						.10		
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							.00	
																									3.47
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
G MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		.00						
T SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			.00					
N	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.64	.05	.00	.79				.79				
4 SS	.00	.00	.00	.00	.00	.00	.00	.05	.10	.05	.00	.00	.00	.00	.00	.00	.20					.20			
6 MS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00						.00		
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							.00	
																									.99
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		.00						
C SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			.00					
A N	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00				.00				
L SS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00					.00			
M MS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00						.00		
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							.00	
																									.00
TOT	3.37	3.37	4.81	3.07	3.82	2.08	2.82	4.21	11.99	13.53	8.87	6.49	7.88	9.46	8.52	5.70	100.00	.00	.15	.99	50.05	34.94	11.65	2.23	100.00

S EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
U MU	.00	.00	.00	.00	.00	.00	.00	.00	.05	.10	.00	.00	.00	.00	.00	.00	.15
B SU	.05	.00	.00	.00	.00	.00	.00	.00	.00	.40	.00	.20	.15	.00	.05	.15	.99
- N	2.78	2.73	4.21	2.63	2.48	.55	.89	1.34	2.92	3.96	3.47	2.43	3.62	5.75	5.75	4.56	50.05
T SS	.55	.64	.59	.40	1.24	1.29	1.44	1.83	6.19	6.79	2.97	2.03	2.87	2.97	2.13	.99	34.94
O MS	.00	.00	.00	.05	.10	.20	.40	.69	2.13	1.83	2.38	1.54	1.09	.64	.59	.00	11.65
T ES	.00	.00	.00	.00	.00	.05	.10	.35	.69	.45	.05	.30	.15	.10	.00	.00	2.23

CECo LASALLE STATION — April-June 1990
375 ft. WIND SPEED and WIND DIRECTION — 375-33 ft. DIFFERENTIAL TEMPERATURE
NUMBER OF OBSERVATIONS = 2148

SPEED CLASS	DIRECTION CLASS N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASS EU	MU	SU	N	SS	MS	ES	TOTAL
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		.00						
7 SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			.00					
- N	.00	.00	.00	.00	.00	.05	.00	.00	.05	.00	.00	.05	.00	.05	.00	.00	.19				.19				
3 SS	.05	.05	.00	.05	.05	.00	.00	.09	.00	.00	.00	.00	.00	.00	.00	.00	.28					.28			
MS	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05						.05		
ES	.05	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09							.09	
																									.61
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.05		.05						
4 SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09	.00	.00	.00	.00	.00	.09			.09					
- N	.37	.37	.74	.33	.00	.14	.19	.23	.28	.23	.19	.33	.19	.19	.14	.33	4.24				4.24				
7 SS	.05	.19	.09	.09	.14	.09	.05	.05	.09	.09	.09	.28	.14	.00	.14	.19	1.77					1.77			
MS	.00	.05	.00	.00	.00	.05	.14	.00	.05	.09	.09	.09	.00	.00	.00	.14	.70						.70		
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							.00	
																									6.84
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
MU	.00	.28	.00	.00	.00	.00	.00	.00	.05	.23	.00	.00	.00	.00	.00	.00	.56		.56						
8 SU	.23	.33	.09	.05	.05	.00	.00	.00	.23	.37	.14	.00	.00	.00	.00	.00	1.49			1.49					
- N	.61	.42	1.54	.56	.70	.28	.09	.74	.65	.23	.42	.37	.56	.65	.88	.51	9.22				9.22				
1 SS	.37	.14	.65	.19	.74	.23	.09	.14	.23	.61	.51	.51	.51	.51	.23	.23	5.91					5.91			
2 MS	.00	.09	.05	.00	.19	.05	.09	.14	.14	.09	.19	.37	.33	.23	.09	.14	2.19						2.19		
ES	.00	.00	.00	.00	.00	.00	.00	.09	.14	.05	.09	.00	.00	.00	.00	.00	.37							.37	
																									19.74
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
1 MU	.00	.00	.05	.05	.00	.00	.00	.00	.00	.05	.19	.00	.00	.00	.00	.00	.33		.33						
3 SU	.00	.14	.23	.00	.05	.00	.00	.00	.00	.09	.14	.00	.00	.00	.00	.00	.65			.65					
- N	.74	.74	1.49	.88	.42	.28	.37	.74	.70	.65	.65	.37	1.30	1.58	1.44	.56	12.94				12.94				
1 SS	.28	.37	.74	.37	.42	.33	.14	.51	.28	.37	.56	.37	.61	.74	.51	.37	6.98					6.98			
8 MS	.14	.09	.09	.05	.28	.19	.05	.19	.28	.33	.23	.42	.33	.42	.47	.09	3.63						3.63		
ES	.00	.00	.00	.00	.00	.09	.14	.09	.19	.00	.19	.09	.00	.00	.00	.00	.79							.79	
																									25.33
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
1 MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.37	.14	.00	.00	.00	.00	.00	.51		.51						
9 SU	.00	.00	.00	.00	.00	.00	.00	.09	.14	.28	.09	.00	.00	.05	.00	.28	.93			.93					
- N	.65	.70	.14	.33	.19	.23	.42	.56	1.16	1.07	.93	.61	.51	.84	2.33	1.58	12.24				12.24				
2 SS	.28	.23	.14	.14	.23	.42	.65	.61	.84	.61	.51	.09	.28	.47	.56	.09	6.15					6.15			
4 MS	.00	.00	.00	.09	.09	.09	.28	.28	.23	.23	.28	.33	.56	1.12	.33	.09	4.00						4.00		
ES	.00	.00	.00	.00	.00	.05	.05	.23	.23	.00	.09	.00	.05	.05	.00	.00	.74							.74	
																									24.58
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00							
2 MU	.00	.00	.00	.00	.00	.00	.00	.00	.05	.47	.00	.00	.00	.00	.00	.05	.56		.56						
5 SU	.00	.00	.00	.00	.00	.00	.00	.00	.23	.23	.00	.00	.05	.09	.09	.05	.74			.74					
- N	.09	.09	.00	.05	.70	.28	.00	.28	.65	.79	.79	.14	.14	.56	.79	.33	5.68				5.68				
3 SS	.00	.00	.00	.00	.00	.09	.19	.33	.93	1.86	.33	.09	.23	.51	.14	.00	4.70					4.70			
1 MS	.00	.00	.00	.00	.00	.00	.00	.42	.47	.98	.42	.00	.09	.37	.09	.00	2.84						2.84		
ES	.00	.00	.00	.00	.00	.00	.05	.28	.09	.00	.19	.05	.00	.00	.00	.00	.65							.65	
																									15.18

CECo LASALLE STATION
375 ft. WIND SPEED and WIND DIRECTION

April-June 1990
375-33 ft. DIFFERENTIAL TEMPERATURE

SPEED CLASS	DIRECTION CLASS N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3 MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.05	.00	.00	.00	.09
2 SU	.00	.00	.00	.00	.00	.00	.00	.00	.05	.14	.00	.00	.09	.09	.00	.00	.37
- N	.00	.00	.00	.00	.09	.05	.00	.00	.37	.56	.09	.05	.09	.56	.33	.05	2.23
3 SS	.00	.00	.00	.00	.00	.00	.00	.05	.14	1.02	.09	.28	.00	.23	.00	.00	1.82
8 MS	.00	.00	.00	.00	.00	.00	.00	.05	.37	.88	.00	.00	.05	.05	.00	.00	1.40
ES	.00	.00	.00	.00	.00	.00	.00	.09	.00	.00	.00	.05	.00	.00	.00	.00	.14
																	6.05
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3 MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.05
9 SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.05
- N	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09	.05	.14	.28	.65	.09	.00	1.30
4 SS	.00	.00	.00	.00	.00	.00	.00	.05	.05	.00	.00	.05	.00	.05	.00	.00	.19
6 MS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.05
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
																	1.63
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
G MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
T SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
N	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.05
4 SS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6 MS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
																	.05
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
A N	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
L SS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
M MS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
																	.00
TOT	3.91	4.28	6.05	3.21	4.38	2.98	3.03	6.33	9.36	13.18	7.82	5.12	6.47	10.15	8.66	5.07	100.00

STABILITY CLASS	EU	MU	SU	N	SS	MS	ES	TOTAL
	.00							
		.09						
			.37					
				2.23				
					1.82			
						1.40		
							.14	
								6.05
	.00							
		.05						
			.05					
				1.30				
					.19			
						.05		
							.00	
								1.63
	.00							
		.00						
			.00					
				.05				
					.00			
						.00		
							.00	
								.05
	.00							
		.00						
			.00					
				.00				
					.00			
						.00		
							.00	
								.00

SOIL TYPE	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
SEU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
UMU	.00	.28	.05	.05	.00	.00	.00	.00	.09	1.16	.37	.00	.09	.00	.00	.05	2.14
BSU	.23	.47	.33	.05	.09	.00	.00	.09	.65	1.12	.47	.00	.14	.28	.09	.33	4.33
- N	2.47	2.33	3.91	2.14	2.09	1.30	1.07	2.56	3.86	3.63	3.12	2.05	3.07	5.12	6.01	3.35	48.09
TSS	1.02	.98	1.63	.84	1.58	1.16	1.12	1.82	2.56	4.56	2.09	1.68	1.77	2.51	1.58	.88	27.79
OMS	.14	.23	.14	.14	.61	.37	.56	1.07	1.54	2.65	1.21	1.21	1.35	2.19	.98	.47	14.85
TES	.05	.00	.00	.00	.00	.14	.28	.79	.65	.05	.56	.19	.05	.05	.00	.00	2.79

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

CHANGES TO THE PROCESS CONTROL PROGRAM

DESCRIPTION OF THE CHANGES

The Process Control Program (PCP) definition for LaSalle County Station was changed in accordance with NRC Generic Letter 89-01, and a revision is in progress to the Technical Specifications (On-site Review 89-038). This new definition is more complete and conservative, therefore it does not change the present Technical Specification definition, it enhances it.

New referenced documents, letters, burial site licenses and procedures which implement and affect the program, or that were utilized to change this program have been added to the references section.

The limitations and actions have been changed due to format changes in the body of the procedure. The definition of PCP changes has been added, the limitations to PCP changes and the actions to be taken when PCP changes occur are listed. New limitations identified the documentation and records to be kept necessary to change the PCP. Limitations are given on vendor procedures control. Limitations to deviation on vendor procedures which implement the PCP are also listed. A limitation has been added to ensure the PCP complies with 10CFR20 and 10CFR61. It establishes a limitation to ensure LAP-100-16 Attachment S is performed in concurrence with waste processing by vendors. Limitations on the operability of the solid radwaste system and surveillance requirements are transferred from the Technical Specifications to this procedure. Limitations on the location and minimum requirements for use of portable systems are given.

Cosmetic changes to the procedure section of this program have been implemented. Definitions of the most important terms used throughout the program are provided. The revised scope of the program, and the revised description of the solid radwaste handling system are given.

The LaSalle County Station Solid Radwaste System feeds include all the minor feeds and their description. The description of the major feeds have been changed in accordance to operating changes that have occurred (i.e. new resins used, etc).
The description of the Stock system and formulas has been changed to reflect actual approved use.

Administrative controls to vendor procedures, formula developments, and waste processing have been formalized. The batch definitions for the different streams have been expanded. The control of process parameters that affect solidification has been expanded to include the control of vendor parameters.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

CHANGES TO THE PROCESS CONTROL PROGRAM

DESCRIPTION OF THE CHANGES (CONTINUED)

Shipment control has been expanded to include LAP-100-16 as a reference, step reflection encapsulation of cartridge filters prior to shipping has been deleted. The Stock system can only be used to process the major waste streams as unstable waste.

Limiting conditions for operations, and surveillance requirements for the solid radwaste system are included. The number of procedures which implement the PCP has been expanded. The new Attachment E is an outline of the LaSalle County Station controls on vendor procedures. A typo on the minimum run mixing times has been corrected.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

CHANGES TO THE PROCESS CONTROL PROGRAM

PURPOSE OF THE CHANGE

1. To implement a new format to the Process Control Program, which will be easier to follow, understand, and maintain. Due to the large number of regulations which control radwaste processing and shipment, it is necessary (and required) to have a more user friendly Process Control Program which ensures that these regulation are implemented.

2. To revise the definition and the scope of the Process Control Program at LaSalle County Station due to NRC Generic Letter 89-01, and On-Site review of Technical Specification Changes OSR-89-038. The new definition and scope are more conservative, specific, and increase control of radioactive waste management at LaSalle County Station. The program under revision includes requirements for vendor control on formula development, procedures, and processing. The new definition includes compliance with regulations for shipment.

3. The general purpose of the procedure did not change. New references that were utilized for doing the revision are included, references that implement, regulate, limit, supplement or give guidelines for the program are included. The addition of these references will help ensure that revisions to these references are reviewed and compared with the existing program. These comparison will help maintain the PCP current with the State, Federal and any other relevant regulation.

4. Limitations and actions have been added to describe changes to the PCP, the requirements, specifications, documentation, and reporting actions that have to be met in accordance with corporate guidelines and LaSalle County Station's PCP for implementation of the changes.

5. Limitations and actions have been added to ensure vendor procedures for waste processing are on-site reviewed prior to implementation. These will ensure that any changes to any vendor processing parameters which affect the final waste product, thereby affecting the PCP, are reviewed and proper steps to implement the changes are taken.

6. A limitation and action to perform Attachment S of LAP-100-16, "Process and Container Checklist" in concurrence with all vendor solidification and dewatering procedures has been added. This will increase the station's control on vendor's processing.

7. Definitions of several relevant terms which are pertinent to the program are included. These terms are defined by Technical Specifications, UFSAR, and State, Federal or controlling regulations. This will ensure that a conflict of definitions does not occur.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

CHANGES TO THE PROCESS CONTROL PROGRAM

PURPOSE OF THE CHANGE (CONTINUED)

8. The description of the Waste Feeds has been expanded to not only include the station's major streams but to include the minor streams which are produced at LaSalle County Station. These are either processed or waiting to be processed at LaSalle County Station. The addition of these streams allows for a guideline to be given on how to classify these streams, and which options are available for processing.

9. A definition for Dry Active Waste (DAW) is included due to the new scope of the program. Processing of Radioactive Waste is controlled by LAP-900-25, which supplements this procedure.

10. A definition for waste oil is included, due to the new scope. Currently waste oil is being decontaminated by vendors with approved special procedures. The option is being left open for the processing of waste oil by the station or vendor, as long as procedures are on-site reviewed, due to the rapidly evolving waste oil processing industry.

11. A definition of chelated waste is included. The Station has performed three chemical decontaminations during refueling outages L1R02, L2R02, and L1R03. Chelated waste will be process by vendors and will meet necessary burial site criteria.

12. Due to the discontinuance of the NRC review of the Stock Equipment Company Topical Report (stable waste) as of the last quarter of 1988, LaSalle County Station waste streams are not processed as stable waste by the Stock equipment. Further testing, documentation and a new topical report submittal to the NRC by Stock is required prior to ever using the Stock equipment for stable waste.

13. The definition of a batch for the major waste streams has been expanded. Currently the waste is transferred to the vendor's liner/HIC, when the amount of waste to be processed has been transferred, a sample is taken and this becomes the batch. This definition has been included for the different waste streams. The conditions are different than for the tank being the batch.

14. References to the Decant Tanks for transferring and processing of the waste by vendors have been deleted due to the valve manifold added to the DPUs with M-1-0-87-006, which allows bypassing of the tanks.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

CHANGES TO THE PROCESS CONTROL PROGRAM

PURPOSE OF THE CHANGE (CONTINUED)

15. Due to the Technical Specification changes, approved under review OSR-89-038, Attachment B and C have been created. Attachment B copies the conditions for operations of the Solid Radwaste System from the Technical Specifications to the PCP. Attachment C copies the Solid Radwaste System Surveillance requirements to meet the controlling conditions that shall be taken from the Technical Specifications to the PCP.

16. Several procedures have been added to the LaSalle County Station list of procedures which implement the program. These procedures help to comply with the expanded PCP scope. Any changes to this procedures need to be reviewed and compared to the PCP in compliance with limitations and actions of this procedure. If the program is changed, then the steps necessary to document this program changes should be performed.

17. A new Attachment E is implemented to establish administrative control guidelines on vendor procedures which implement the PCP. Limitations and actions shall be followed when reviewing these procedures.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1990)

CHANGES TO THE PROCESS CONTROL PROGRAM

JUSTIFICATION FOR THE CHANGE

This procedure change does not affect the facility or its operation as described in UFSAR Section 11.4, Solid Waste Management System. This section does not specifically state whether waste is processed to be stable or unstable, nor which waste streams are processed by the Stock system and which are processed by vendor equipment. The AIR to change the PCP and UFSAR was originated due to the corporate assessment. The UFSAR description of a number of the waste streams has been revised to reflect actual operations. A sentence has been added to the UFSAR stating that solid radwaste processing is controlled by the PCP. In addition a statement has been added in accordance with Branch Technical Position Paper ETSB 11-3 stating "Regulatory Guide 1.143, Seismic criteria for structures housing solid waste systems are not applicable to portable solid waste systems."