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ACCESSION NBR:9504250318 DOC.DATE: 95/03/31 NOTARIZED: NO DOCKET #
FACIL:50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylva 05000387
50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylva 05000388
AUTH.NAME AUTHOR AFFILIATION
BALL,R.S. Pennsylvania Power & Light Co.
BYRAM,R.G. Pennsylvania Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: Monthly operating repts for Mar 1995 for SSES Units 1 & 2.W/ 950419 ltr.r.

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Robert G. Byram
Senior Vice President—Nuclear
610/774-7502
Fax: 610/774-5019

APR 1 9 1995

Submitted pursuant to
Technical Specifications
Section 6.9.1.6

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

SUSQUEHANNA STEAM ELECTRIC STATION
MONTHLY OPERATING REPORTS
PLA-4307 FILE R41-2A

Docket Nos. 50-387/NPF-14
and 50-388/NPF-22

The March 1995 monthly operating reports for Susquehanna SES Units 1 and 2 are attached.

Very truly yours,

R. G. Byram

Attachment

cc: NRC Region I
Ms. M. Banerjee, NRC Sr. Resident Inspector
Mr. C. Poslusny, Jr., NRC Sr. Project Manager

#9504250318

250121

IE24
1/1

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-387
UNIT One
DATE 4-10-95
COMPLETED BY R.S. Ball
TELEPHONE (717)542-3453

MONTH March 1995

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	1051	17	1044
2	1054	18	1049
3	1054	19	1047
4	1051	20	1046
5	1051	21	1043
6	1049	22	1049
7	1041	23	1049
8	1039	24	909
9	1054	25	0
10	1054	26	0
11	1052	27	0
12	1049	28	0
13	1044	29	0
14	1019	30	0
15	1028	31	0
16	1025		

INSTRUCTIONS

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

SUSQUEHANNA STEAM ELECTRIC STATION

PP&L

OPERATING DATA REPORT

DOCKET NO. 50-387
DATE 4-10-95
COMPLETED BY R.S. Ball
TELEPHONE (717)542-3453

OPERATING STATUS

1. Unit Name: Susquehanna Steam Electric Station
2. Reporting Period: March 1995
3. Licensed Thermal Power (MWt): 3293
4. Nameplate Rating (Gross MWe): 1152
5. Design Electrical Rating (Net MWe): 1050
6. Maximum Dependable Capacity (Gross MWe): 1078
7. Maximum Dependable Capacity (Net MWe): 1040
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:
   N/A
9. Power Level To Which Restricted, If Any (Net MWe): None
10. Reasons For Restrictions, If Any: N/A

Notes

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744	2,160	103,561
12. Number Of Hours Reactor Was Critical	577.3	1,993.3	81,234.2
13. Reactor Reserve Shutdown Hours	0	0	1032
14. Hours Generator On-Line	576.6	1,992.6	79,747.2
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,887,492	6,542,459	251,700,329
17 Gross Electrical Energy Generated (MWH)	621,164	2,165,215	82,268,435
18. Net Electrical Energy Generated (MWH)	597,267	2,086,622	79,063,582
19. Unit Service Factor	77.5	92.3	77.0
20. Unit Availability Factor	77.5	92.3	77.0
21. Unit Capacity Factor (Using MDC Net)	77.2	92.9	73.4
22. Unit Capacity Factor (Using DER Net)	76.5	92.0	72.7
23. Unit Forced Outage Rate	0	0	7.5

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):
    Unit One commenced its Eighth Refueling andInspection Outage on March 25, 1995.

25. If Shut Down At End Of Report Period, Estimated Date of Startup: 5/13/95

26. Units In Test Status (Prior to Commercial Operation):

	Forecast	Achieved
INITIAL CRITICALITY		
INITIAL ELECTRICITY		
COMMERCIAL OPERATION		

SUSQUEHANNA STEAM ELECTRIC STATION
PP&L

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH March 1995

DOCKET NO. 50-387
UNIT NAME One
DATE 4-10-95
COMPLETED BY R.S. Ball
TELEPHONE (717)542-3453

No.	Date	Type[1]	Duration (Hours)	Reason[2]	Method of Shutting Down Reactor[3]	Licensee Event Report #	System Code[4]	Component Code[5]	Cause & Corrective Action to Prevent Recurrence
2	950325	S	167.5	C	2	N/A	XX	ZZZ	Unit 1 was manually shutdown for its planned eighth refuel and inspection outage commencing at 1822 hours March 24. The generator was taken off-line at 0033 hours March 25 and a manual Reactor Scram was initiated at 0120 hours March 25. The planned outage duration is 50 days, with an estimated return to service date of May 13, 1995.

1
F: Forced
S: Scheduled

2
Reason:
A-Equipment Failure (Explain)
B-Maintenance of Test
C-Refueling
D-Regulatory Restriction
E-Operator Training & License Examination
F-Administrative
G-Operational Error (Explain)
H-Other (Explain)

3
Method:
1-Manual
2-Manual Scram.
3-Automatic Scram.
4-Continuation from previous month
5-Reduction
9-Other

4
Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

5
Exhibit I - Same Source

SUSQUEHANNA STEAM ELECTRIC STATION

Docket Number 50-387 Date: 4-10-95

Completed by: R. S. Ball Telephone: (717) 542-3453

Challenges to Main Steam Safety Relief Valves

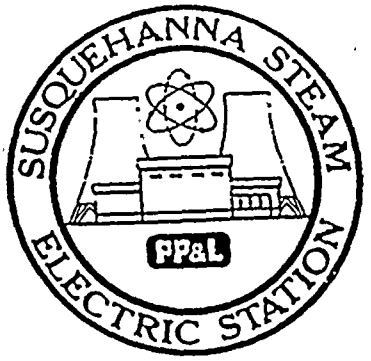
None.

Changes to the Offsite Dose Calculation Manual

Yes. See Attachment A for changes.

Major Changes to Radioactive Waste Treatment Systems

None.



AVERAGE DAILY UNIT POWER LEVEL

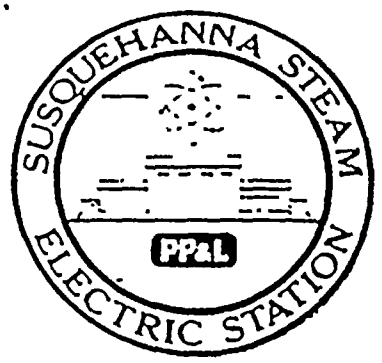
DOCKET NO. 50-388
UNIT Two
DATE 4-10-95
COMPLETED BY R.S. Ball
TELEPHONE (717)542-3453

MONTH March 1995

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	1107	17	1040
2	1109	18	766
3	1107	19	1080
4	1106	20	1102
5	1103	21	1102
6	1102	22	1106
7	1094	23	1106
8	1093	24	1107
9	1106	25	1103
10	1107	26	1101
11	1104	27	1103
12	1099	28	1103
13	1098	29	1102
14	1097	30	1102
15	1095	31	1151
16	1093		

INSTRUCTIONS

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.



OPERATING DATA REPORT

DOCKET NO. 50-388
DATE 4-10-95
COMPLETED BY R.S.Ball
TELEPHONE (717)542-3453

OPERATING STATUS

1. Unit Name: Susquehanna Steam Electric Station
2. Reporting Period: March 1995
3. Licensed Thermal Power (MWt): 3441
4. Nameplate Rating (Gross MWe): 1168
5. Design Electrical Rating (Net MWe): 1100
6. Maximum Dependable Capacity (Gross MWe): 1132
7. Maximum Dependable Capacity (Net MWe): 1094

Notes

8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:
None

9. Power Level To Which Restricted, If Any (Net MWe): None
10. Reasons For Restrictions, If Any: N/A

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744	2,160	88,800
12. Number Of Hours Reactor Was Critical	744	2,160	74,346.9
13. Reactor Reserve Shutdown Hours	0	0	717.9
14. Hours Generator On-Line	744	2,160	72,950.7
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,529,944	7,388,670	233,431,380
17. Gross Electrical Energy Generated (MWH)	837,192	2,454,932	76,629,716
18. Net Electrical Energy Generated (MWH)	809,836	2,373,633	73,774,529
19. Unit Service Factor	100.0	100.0	82.2
20. Unit Availability Factor	100.0	100.0	82.2
21. Unit Capacity Factor (Using MDC Net)	99.5	100.5	79.2
22. Unit Capacity Factor (Using DER Net)	99.0	99.9	78.8
23. Unit Forced Outage Rate	0	0.0	5.1

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):

25. If Shut Down At End Of Report Period, Estimated Date of Startup:

26. Units In Test Status (Prior to Commercial Operation):

	Forecast	Achieved
INITIAL CRITICALITY		
INITIAL ELECTRICITY		
COMMERCIAL OPERATION		

SUSQUEHANNA STEAM ELECTRIC STATION
PP&L

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH March 1995

DOCKET NO. 50-388
UNIT NAME Two
DATE 4-10-95
COMPLETED BY R.S. Ball
TELEPHONE (717)542-3453

No.	Date	Type[1]	Duration (Hours)	Reason[2]	Method of Shutting Down Reactor[3]	Licensee Event Report #	System Code[4]	Component Code[5]	Cause & Corrective Action to Prevent Recurrence
2	950317	S	0.0	B	5	N/A	XX	ZZZ	Unit 2 commenced a power reduction to as low as 55% power at 2003 hours March 17 to perform a Control Rod Sequence Exchange and Reactor Recirc MG Set Brush Changeout. Additional work during the downpower included cleaning and inspection of the "D" Condenser Waterbox and replacement of the vibration probe on the Main Turbine #4 bearing. The Unit returned to 100% power at 0909 hours March 19.

1
F: Forced
S: Scheduled

2
Reason:
A-Equipment Failure (Explain)
B-Maintenance or Test
C-Refueling
D-Regulatory Restriction
E-Operator Training & License Examination
F-Administrative
G-Operational Error (Explain)
H-Other (Explain)

3
Method:
1-Manual
2-Manual Scram.
3-Automatic Scram.
4-Continuation from previous month
5-Reduction
9-Other

4
Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

5
Exhibit I - Same Source

SUSQUEHANNA STEAM ELECTRIC STATION

Docket Number 50-388 Date: 4-10-95

Completed by: R. S. Ball Telephone: (717) 542-3453

Challenges to Main Steam Safety Relief Valves

None.

Changes to the Offsite Dose Calculation Manual

Yes. See Attachment A for changes.

Major Changes to Radioactive Waste Treatment Systems

None

PENNSYLVANIA POWER & LIGHT COMPANY
SUSQUEHANNA STEAM ELECTRIC STATION
OFFSITE DOSE CALCULATION MANUAL

Prepared By _____ Date 3/29/95

Reviewed By Kenneth E Slank Date 3/29/95
Supervisor-Environmental Services
Nuclear

Reviewed By _____ 95- Date 3-30-95
PORC/Meeting No.

Approved By _____ Date 3/30/95
Manager-Nuclear Technology

SUMMARY OF ODCM CHANGES

1. Table 6, Operational Environmental Monitoring Program, has been corrected to show information originally in Revision 1 of the ODCM (approved 10/14/94). Some information in this table was noted to be incorrectly carried into Revision 2 (approved 1/20/95). Table 6 was not intended to be changed in any way in Revision 2. This inconsistency was documented as a status control issue in SOOR 95-045; corrections are made in resolution to this SOOR.

2. Slight changes are made to Figure 1, Liquid Radwaste System Flow Diagram, to make the pathway from the distillate sample tank to the cooling tower blowdown pipe clearer, and to correct labeling of distillate sample tank pumps OP-327 A, B and LRW sample Tank Pumps OP-305 A, B, and C.

3. In Section 10.9.c.2, reference 10CFR20.302 is changed to 10CFR20.2002 to be consistent with the revision in the numbering of this regulation.

4. System classifications and references are added to Table 8 (Not an Effluent Pathway) and Table 9 (Insignificant Effluent Pathway). Table 10 (Significant Effluent Pathway) is added with references

5. Section 11 is revised to state that ODCM revisions shall be reviewed by PORC after approval by the Manager - Nuclear Technology.

50.59 DETERMINATION

☐ Procedure ☒ Other ODCM

Document No.: OFFSITE DOSE CALCULATION MANUAL Revision: 3

Subject: CORRECTIONS TO TABLE 6, FIG. 1, SYSTEMS AND REFERENCES ADDED TO TABLES 8 AND 9. TABLE 10 ADDED.

A 50.59 Determination evaluates whether or not a Safety Evaluation for the identified document is necessary. If the document DOES involve any of the following perform a written safety evaluation in accordance with NDI-QA-9.1.1.

This document:

		(Circle One)	
1.	Does	(Does Not)	Constitute a change to the Facility as described in the SAR.
2.	Does	(Does Not)	Constitute a change to the procedures as described in the SAR.
3.	Does	(Does Not)	Perform a test or experiment not described in the SAR on systems described in the SAR. Operational or functional test will not normally require a Safety Evaluation.

Preparer Robert K. Barclay Date 3/29/95

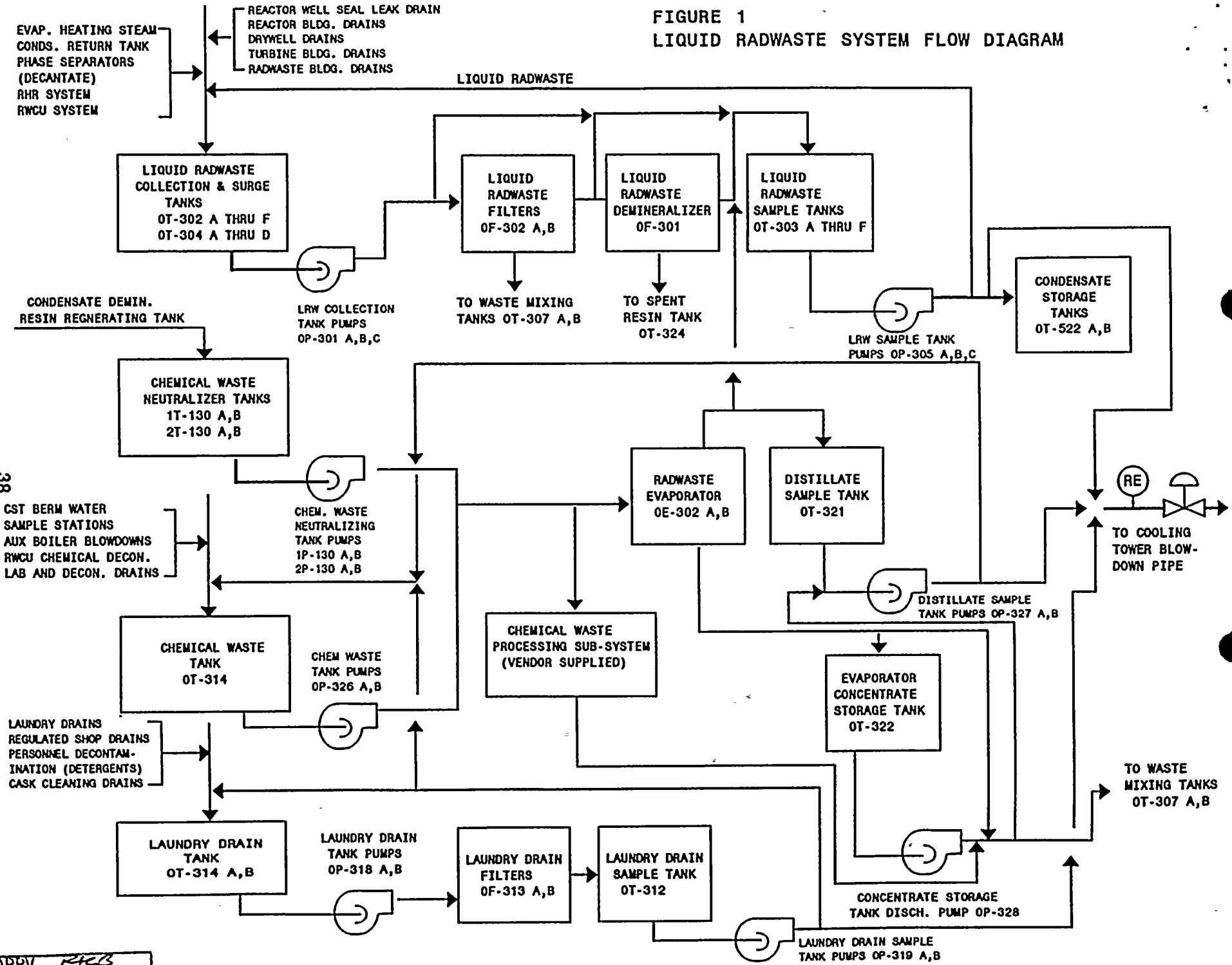
Responsible Supervisor (Level I or II) K E Shank Date 3/29/95

APPV [illegible]
DATE 3/30/95

APPV Revs
DATE 3/30/95

LIST OF FIGURES

FIGURE 1
LIQUID RADWASTE SYSTEM FLOW DIAGRAM



APPV RFB
DATE 3/23/95

TABLE 6

OPERATIONAL RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

Exposure Pathways and/or Sample	Number of Samples and Locations*				Sampling and Collection Frequency	Type and Frequency of Analysis
Airborne						
Radioiodine and Particulates*	12S1	0.4 mi	WSW	EOF Building	Continual sampler operation with sample collection weekly.**	Radioiodine Canister: analyze weekly for I-131
	9B1	1.3 mi	S	Transmission Line		
	5S4	0.8 mi	E	Environmental Laboratory		
	12E1	4.7 mi	WSW	Berwick Hospital		
	7G1	14 mi	SE	PP&L Hazleton Complex[a]		Particulate Sample: Analyze for gross beta radioactivity following filter change. Perform isotopic analysis on composite sample (by location) quarterly.
	3S2	0.5 mi	NE	SSES Backup Met. Tower		
	7S7	0.4 mi	SE	End of Kline's Road		
	10S3	0.6 mi	SSW	East of Confer's Lane, South of Towers Club		
	13S6	0.4 mi	W	Former Laydown Area, West of Confer's Lane		
	12G1	15 mi	WSW	PP&L Bloomsburg Service Center[a]		
Direct Radiation						
	1S2	Perimeter Fence - 0.2 mi N			Quarterly	Gamma Dose: Quarterly.
	1D5	Mocanaqua Sewage Treatment Plant - 4.0 mi N				
	2S3	Perimenter Fence - 0.2 mi NNE				
	2B3	Durabond Corporation - 1.3 mi NNE				
	2F1	St. Adalberts Cemetery - 5.9 mi NNE				
	3S4	Perimeter Fence - 0.3 mi NE				
	4S3	West of SSES APF - 0.2 mi ENE				
	4E2	Ruckles Hill & Pond Hill Roads Intersection: 4.7 mi ENE				
	4G1	Crestwood Industrial Park - 14 mi ENE[a]				
	5S7	Perimeter Fence - 0.3 mi E				
	5E2	Bloss Farm - 4.5 mi E				
	6S4	Perimeter Fence - 0.2 mi ESE				
	6A4	Riverside Restaurant - 0.6 mi ESE				
	6E1	St. James Church - 4.7 mi ESE				

APPV [illegible] 2/13/95

Exposure Pathways and/or Sample	Number of Samples and Locations*	Sampling and Collection Frequency	Type and Frequency of Analysis
	6S9 Perimeter Fence - 0.2 mi ESE		
	7S6 Perimeter Fence - 0.2 mi SE		
	7E1 Harwood Transmission Line Pole #2 - 4.2 mi SE		
	7G1 PP&L Hazleton Complex - 14 mi SE[a]		
	8S2 Perimeter Fence - 0.2 mi SSE		
	8B2 LaWall Residence - 1.4 mi SSE		
	8D3 Mowry Residence - 4.0 mi SSE		
	9S2 Security Fence - 0.2 mi S		
	9D4 Country Folk Store - 3.6 mi S		
	10S1 Post South of Switching Station - 0.4 mi SSW		
	10D1 Ross Ryman Farm - 3.0 mi SSW		
	11S3 Security Fence - 0.3 mi SW		
	11E1 Thomas Residence - 4.7 mi SW		
	12S3 Perimeter Fence - 0.4 mi WSW		
	12E1 Berwick Hospital - 4.7 mi WSW		
	12G1 PP&L Bloomsburg Service Center - 15 mi WSW[a]		
	13S2 Perimeter Fence - 0.4 mi W		
	13E4 Kessler Farm - 4.1 mi W		
	14S5 Beach Grove Rd. & Confer's Lane Intersection 0.5 mi WNW		
	14B3 Moskaluk Residence - 1.3 mi WNW		
	15F1 Zawatski Farm - 5.4 mi NW		
	15S5 Perimeter Fence - 0.4 mi NW		
	16S1 Perimeter Fence 0.3 mi NNW		
	16S2 Perimeter Fence - 0.3 mi NNW		
	16F1 Hidlay Residence - 7.8 NNW		
Waterborne			
Surface	6S6 river water intake line[a]	Monthly composite	Gamma isotopic analysis. Composite tritium analysis at least quarterly.
	6S7 cooling tower blowdown discharge line	Monthly composite	
Drinking	12H2 Danville Water Company (Approximately 30 miles downstream)	Monthly composite[b]	Gross beta and gamma isotopic analyses monthly. Composite for tritium analysis at least quarterly.

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APPV [illegible] DATE 3/23/95

Rev. 3

Exposure Pathways and/or Sample	Number of Samples and Locations*	Sampling and Collection Frequency	Type and Frequency of Analysis
Sediment from Shoreline	7B Bell Bend - 1.2 mi SE	Semi-annually	Gamma isotopic analysis semi-annually.
Milk***	12B3 Young Farm - 2.0 mi WSW	Semi-monthly when animals are on pasture, monthly otherwise	Gamma isotopic and I-131 analysis of each sample
Fish and Invertebrates	Outfall area 2H Falls, Pa[a] (Approximately 30 mi NNE)	Semi-annually. One sample[c] from each of two reacreationally important species from any of the following families: bullhead catfish, sunfish, pikes, or perches.	Gamma isotopic on edible portions.
Food Products	11D1 Zehner Farm - 3.3 mi SW vegetable	At time of harvest	Gamma isotopic on edible portions.
	12F7 Lupini Farm - 8.3 mi WSW vegetable		

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*The location of samples and equipment were designed using the guidance in the Branch Technical Position to NRC Rev. Guide 4.8, Rev. 1, Nov. 1979, Reg. Guide 48.1975 and ORP/SID 72-2 Environmental Radioactivity Surveillance Guide. Therefore, the airborne sampler locations were based upon X/Q and/or D/Q.

**A dust loading study (RMC-TR-81-01) concluded that the assumption of 1 for the transmission correction factor for gross beta analysis of air particulate samples is valid. Air particulate samples need not be weighed to determine a transmission correction factor.

***If a milk sample is unavailable for more than two sampling periods from one or more of the locations, a vegetation sample shall be substituted until a suitable milk location is evaluated. Such an occurrence will be documented in the REMP annual report.

[a]Control sample location.

[b]Two-week composite if calculated doses due to consumption of water exceed one millirem per year. In these cases, I-131 analyses will be performed.

[c]The sample collector will determine the species based upon availability, which may vary seasonally and yearly.

10.0 DOSE ASSESSMENT POLICY STATEMENTS

10.1 Selection of Analysis Results for Dose Calculations

For determination of compliance with SSES Technical Specification dose limits, effluent totals shall be based only on activity positively detected at the 95% confidence level.

10.2 Assignment of Releases to the Reactor Units

For determination of compliance with SSES radioactive effluent dose limits which are on a "per reactor unit" basis:

a. Effluents from the Unit 1 Reactor Building vent and the Unit 1 Turbine Building vent shall be included as Unit 1 releases.

b. Effluents from the Unit 2 Reactor Building vent and the Unit 2 Turbine Building vent shall be included as Unit 2 releases.

c. Effluents from the Standby Gas Treatment System vent shall be equally divided between Unit 1 and Unit 2 release totals.

d. Waterborne effluents shall be equally divided between Unit 1 and Unit 2 release totals.

10.3 Evaluation and Monitoring Criteria for Effluent Pathways

Potential effluent pathways will be evaluated on a case-by-case basis. The evaluation will include identification of systems which are normally non-radioactive (as described in the FSAR) but could possibly become radioactive through interfaces with radioactive systems (Reference: NRC IE Bulletin No. 80-10). The evaluation will determine the significance of any potential effluents pathways and extent of sampling and/or monitoring required. The frequency of sampling or monitoring will be determined based on the potential for contamination, the potential for inadvertent releases, the potential levels of contamination and releases, and the potential impact on station offsite doses.

APPV KWS
DATE 3/23/95

Results of sampling and/or evaluation will be used to classify potential effluent pathways into one of the following categories:

a. Not an Effluent Pathway: Realistic evaluation (e.g., engineering design, system operation, radionuclide inventory) demonstrates that the pathway has no potential for release of radioactive material (Table 8). Although not required, periodic sampling may at times be performed to confirm the result of the evaluation.

b. Insignificant Effluent Pathway: Evaluation and/or periodic sampling demonstrate that the pathway may contain radioactive effluents, however, these effluents may not be reasonably expected to exceed 10 percent of the appropriate unrestricted area MPC value (fractional MPCs summed when appropriate) listed in Table II of Appendix B to 10 CFR 20 (Table 9). A release pathway which falls in this category will be sampled periodically.

c. Significant Effluent Pathway: Evaluation and/or periodic sampling demonstrate that the pathway may contain radioactive effluents, and these effluents may be reasonably expected to exceed 10 percent of the appropriate unrestricted area MPC value (fractional MPCs summed when appropriate) listed in Table II of Appendix B to 10 CFR 20 (Table 10). A release pathway which falls in this category will be sampled continuously.

If sampling indicates a non-radioactive system has become contaminated, further use of the system shall be restricted until the cause of the contamination has been corrected and the system is decontaminated. If continued operation of the system as contaminated is necessary, a 10CFR50.59 safety evaluation of the operation of the system as a radioactive system shall be performed immediately by the system operator/engineer. The safety evaluation will include any changes in the effluent pathways and the impacts to offsite doses. (Ref. NRC IE Bulletin 80-10).

Positively detected radioactive material in samples collected from all airborne and waterborne offsite release pathways will be reported in the Annual Effluent and Waste Disposal Report.

10.4 Flow from the SGTS Vent when the System is Not in Use

When the Standby Gas Treatment is not being used, there remains a small amount of flow from the SGTS vent. This residual flow is exhaust from the battery rooms in the control structure. Because there are no identifiable sources of radioactivity in these rooms, auxiliary particulate and iodine sample and noble gas grab sample at 4-hour intervals are not required from the SGTS vent when the SGTS continuous vent monitor is out of service, provided that -

a. the Standby Gas Treatment System is not being used,

b. there are proper administrative controls in place to ensure that the required sampling will begin within 4 hours if the treatment system is operated.

10.5 ODCM Setpoints are Upper Limit Values

Effluent monitor alarm/trip setpoints calculated in accordance with the ODCM shall be considered upper limit values. Higher (less conservative) setpoints shall not be used, however lower (more conservative) setpoints may be used as required to maximize the utility of the monitor.

10.6 Definition of "Appropriate Treatment" for Liquid Wastes

Technical Specification 3.11.1.3 requires that the appropriate portions of the liquid waste treatment system be operable and be used to reduce radioactivity in liquid wastes prior to their release when projected doses from each reactor unit to unrestricted areas would exceed 0.06 mrem to the total body or 0.2 mrem to any organ in a 31 day period.

o The normal treatment, which is considered appropriate for each subsystem, is as follows:

- Filtration is considered appropriate treatment for the Liquid Radwaste Laundry Processing Subsystem, which consists of high conductivity liquid wastes, such as those from equipment washdown and personnel decontamination facilities, or laundry.

- The atmospheric demineralizer (a vendor-supplied system which is directed to the Distillate Sample Tank) is considered appropriate for the Liquid Radwaste Chemical Processing Subsystem.

- Demineralization and filtration are considered appropriate treatment for low conductivity/low organic contaminant liquid wastes entering the Liquid Radwaste Processing Subsystem (LRW collection tanks), except for batches which yield projected doses prior to treatment of less than or equal to 6.45-04 mrem to the total body and 2.15E-03 mrem to any organ, where filtration alone is appropriate,

or

o For batches which have no identified gamma activity above the Technical Specification Liquid Effluent LLD level (Table 4.11.1.1.1-1), release without treatment is considered appropriate.

BASES

The projected dose threshold values used are derived by dividing the site-total maximum projected doses without treatment (0.12 and 0.4 mrem) by 31 days and by 6, the maximum possible number of batches released per day, to yield per-batch dose action levels. The two levels of "appropriate" treatment are in place so as not to require application of demineralization for

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treating low activity, high conductivity water (e.g., from Circulating or Service Water leakage). This would increase the overall efficiency of the solid radwaste program while ensuring calculated doses remain at a suitable fraction of 10 CFR 50 design objectives and Technical Specification 3.11.1.2 limit.[1][2]

10.7 Monitor Line Loss Corrections

In order to correct for airborne effluent monitor sample line loss, the following correction factors shall be applied to monitor data and sample analysis results:

ROUTINE EFFLUENT MONITORS	CORRECTION FACTORS IODINE	CORRECTION FACTORS PARTICULATES
Reactor Building Unit 1	1.5	3.2
Reactor Building Unit 2	1.5	3.2
Turbine Building Unit 1	1.6	3.6
Standby Gas Treatment	1.5	3.9
Turbine Building Unit 2	1.6	3.6

POST ACCIDENT VENT MONITORS	CORRECTION FACTORS IODINE	CORRECTION FACTORS PARTICULATES
Turbine Building Unit 1	1.7	4.2
Standby Gas Treatment	1.6	4.4
Turbine Building Unit 2	1.7	4.3

[1]Reference Calculation No. OT-RKB-92-001: Calculation of Liquid Isotope Offsite Dose Consequences for Use of Atmospheric Demineralizer System, PLI-70360, 2/4/92.

[2]Reference Letter R. K. Barclay to R. A. Breslin: Atmospheric Demineralizer Effluent Results, PLI-70612, 3/4/92.

Each indicated iodine and particulates concentration shall be multiplied by the appropriate correction factor to estimate the actual concentration at the inlet to the sample line.

10.8 Selection of Data for Determination of Dose Rate Compliance

Airborne effluent monitor setpoints are maintained in accordance with Section 2.2 to alarm before the dose rate limits of Specification 3.11.2.1 are exceeded. Station alarm response procedures contain instructions for investigation and verification of monitor alarms. Because setpoint calculations must include assumptions about the composition of the monitored effluent, a monitor high alarm does not necessarily indicate that a dose rate limit has been exceeded.

Valid ten-minute averaged data should be the primary information used to determine the compliance status of an incident. One-minute averaged data should also be reviewed if available, but they may or may not provide additional information depending on the magnitude of the release due to the manner in which the monitors update values to be stored and associated statistical considerations. Averages over a longer period should be used only when data with higher resolution is not available. Grab sample analyses should be performed whenever possible to confirm or disprove monitor data, and to provide indication of the nuclide-specific composition of the effluent. When grab sample data are available which, based on vent monitor data, are indicative of the period of elevated release, dose rate calculations should be performed using the actual effluent mix. The determination of compliance status should not be based on monitor data alone when it is possible to collect and analyze a vent sample which will be representative of the period of elevated release.

10.9 Low-Level Radioactivity in the Sewage Treatment Plant

Like all sewage processing facilities, the SSES sewage treatment plant can under certain conditions receive low levels of radioactive materials. The most notable scenario is when individuals who work on-site have been subjected to the medical administration of radiopharmaceuticals for diagnostic or therapeutic purposes. In these cases, normal biological elimination processes can easily result in levels of radioactivity in sewage treatment plant solutions and suspensions which are within the detection capabilities of the associated sampling and analysis program.

Because disposal of sewage treatment plant sludge by controlled dispersal on specified tracts of land is a common practice, the following guidelines have been established:

a. All sludge collected in the sludge holding tank should be sampled and analyzed prior to land disposal to quantify any radioactivity present above natural background levels.

b. Sludge containing nuclides with short half-lives, for example iodine-131, should be contained on-site to permit decay to less than detectable levels.

c. When sludge is contaminated with nuclides which have half-lives sufficiently long to make hold-up for decay impractical, the following options should be considered:

    1. Dispose of the sludge as low level radioactive waste.

    2. Obtain a special permit pursuant to the requirements of 10 CFR 20.2002.

d. The sewage treatment plant liquid effluent should be sampled monthly for radioactivity. This can be accomplished by drawing a sample from the chlorine contact chamber.

11.0 ODCM REVIEW AND REVISION CONTROL

The Supervisor-Environmental Services-Nuclear shall ensure that a total review of the ODCM is performed during each even-numbered year. Comments shall be documented and revisions initiated as appropriate.

Each ODCM page shall be numbered and provided with an approval and date box. The ODCM Table of Contents shall present the current revision date for each page so that any manual holder can check manual completeness based on a current Table of Contents.

All ODCM revisions shall be reviewed by PORC after approval by the Manager-Nuclear Technology. PORC review shall be indicated by PORC chairperson or designee signature on ODCM cover.

ODCM copies shall be issued in a controlled fashion by the staff of the Nuclear Department Library. The distribution list shall be maintained by the Nuclear Department Library Staff.

Any comments on ODCM contents or proposed revisions should be directed to the Supervisor-Environmental Services-Nuclear.

TABLE 8

SYSTEMS CLASSIFIED AS NOT AN EFFLUENT PATHWAY (Page 1 of 3)

SYSTEM DESCRIPTION	REFERENCE
Domestic Water	(1)
River Water Makeup	"
Intake Compressed Air	"
Screens and Screenwash	"
Fire Protection Water	"
Fire Protection CO_2	"
Fire Protection Halon	"
Turbine Building Closed Cooling Water	"
Building Drains: NON RAD	"
Water Pretreatment	"
Condensate and Refuel Water Transfer	"
Low Pressure Air	"
Condensate Demins	"
Lube Oil Transfer/Purification	"
Cooling Tower Acid/Chlorination	"
Circulating Water	"
Condenser Tube Cleaning	"
Feedwater	"
Extraction Steam	"
Feedwater Heaters	"
Residual Heat Removal	"
Reactor Core Isolation Cooling	"
Core Spray	"
High Pressure Coolant Injection	"
Standby Liquid Control	"
Control Rod Drives	"

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TABLE 8

SYSTEMS CLASSIFIED AS NOT AN EFFLUENT PATHWAY (Page 2 of 3)

SYSTEM DESCRIPTION	REFERENCE
Suppression Pool	(1)
Primary Containment Vacuum Breakers	"
Suppression Pool Cleanup	"
Reactor Water Cleanup	"
Reactor Pressure Vessel	"
Reactor Recirculation System	"
Radwaste Chilled Water	"
Solid Radwaste/Cement Silo	"
LRW Collection/Tb and Cond. Outer Area Sumps	"
LRW Processing/Radwaste Evaporator	"
Gaseous Radwaste Recombiner Closed Cooling Water	"
Nitrogen Storage	"
Hydrogen Storage	"
Sampling Stations	"
Post Accident Sampling System	"
Bypass Steam	"
Main Steam Isolation Valves/ Nuclear Steam Supply System Shutoff	"
Automatic Depressurization System	"
MSIV Leakage Control	"
Moisture Separators	"
Turbine Steam Seals	"
Electrohydraulic Control	"
Stator Cooling	"
Main Generator	"
Storm Drains	"

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TABLE 8

SYSTEMS CLASSIFIED AS NOT AN EFFLUENT PATHWAY (Page 3 of 3)

SYSTEM DESCRIPTION	REFERENCE
Makeup Demineralizers	(1)
Fuel Oil	(1)
Containment Instrument Gas	(1)
Control Structure Chilled Water	(1)
Turbine Bldg. Chilled Water	(1)
Reactor Bldg. Chilled Water	(1)
Auxiliary Boilers	(1)
Fuel Pool Cooling	(1)
Fuel Pool Demineralizers	(1)
Fuel Pools	(1)
Temporary SDHR System	(7)

TABLE 9

SYSTEMS CLASSIFIED AS INSIGNIFICANT EFFLUENT PATHWAY

SYSTEM DESCRIPTION	REFERENCE
H_2 Seal Oil	(1)
Condensate Storage Tank and Berm	"
Main Turbine/RFPT Lube Oil	"
Instrument Air	"
Service Air	"
Temporary Laundry Facility	(2)
Second Sort (DAW Volume Reduction) Facility	(3)
Low Level Radwaste Handling Facility	(4)

TABLE 10

SYSTEMS CLASSIFIED AS SIGNIFICANT EFFLUENT PATHWAY

SYSTEM DESCRIPTION	REFERENCE
Liquid Waste Management Systems	(5)
Gaseous Waste Management Systems	(6)

(1) PP&L Calculation EC-ENVR-1008
(2) Safety Evaluation NL-90-029: Temporary Laundry Facility
(3) Safety Evaluation NL-89-002: Dry Active Waste Volume Reduction System
(4) Safety Evaluation NL-92-007: Operation of LLRWHF at SSES
(5) SSES FSAR Chapter 11.2
(6) SSES FSAR Chapter 11.3
(7) Safety Evaluation NL-95-001: Refueling Outage Decay Heat Removal and Tie-In of the SDHR Temporary Cooling Equipment.

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