

**Susquehanna Steam Electric Station
Units 1 & 2**

**1992
Annual Environmental
Operating Report
(Nonradiological)**

PP&L

Pennsylvania Power & Light Company
Allentown, PA

April 1993

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SUSQUEHANNA STEAM ELECTRIC STATION**ANNUAL ENVIRONMENTAL OPERATING REPORT
(NONRADIOLOGICAL)**

1992

Prepared by:

Jerome S. Fields
Jerome S. Fields
Senior Environmental Scientist - Nuclear

Date:

4/1/93

Reviewed by:

Deborah L. Hagan
Deborah L. Hagan
Supervisor-Effluents Management

Date:

4/5/93

Reviewed by:

Kenneth E. Shank
Kenneth E. Shank
Supervisor-Environmental Services-Nuclear

Date:

4/01/93

Approved by:

Richard L. Doty
Richard L. Doty
Supervisor-Operations Technology

Date:

4/13/93



FOREWORD

The Susquehanna Steam Electric Station (Susquehanna SES) consists of two boiling water reactors, each with a net electrical generating capacity of 1,050 megawatts. The 1,500 acre site is located in Salem Township, Luzerne County, Pennsylvania approximately five miles northeast of Berwick, Pennsylvania. Under terms of an agreement finalized in January 1978, 90% of the Susquehanna SES is owned by the Pennsylvania Power and Light Company (Licensee) and 10% by the Allegheny Electric Cooperative, Inc.

The 1992 Annual Environmental Operating Report (Nonradiological) for Units 1 and 2 describes results of programs necessary to meet requirements of Section 2F of the Operating License, Protection of the Environment, and Appendix B, Environmental Protection Plan, as well as commitments in the Final Environmental Statement related to operation (NUREG-0564), June 1981. This report discusses environmental commitments and impacts from January 1, 1992, through December 31, 1992.

TABLE OF CONTENTS

SUSQUEHANNA STEAM ELECTRIC STATION ANNUAL ENVIRONMENTAL OPERATING REPORT 1992

SECTION	TITLE	PAGE NO.
	Foreword	i
	Table of Contents	ii
1.0	Objectives	1-1
2.0	Environmental Issues	2-1
2.1	Aquatic Issues	2-1
2.2	Terrestrial Issues	2-4
2.2.1	Studies Previously Completed	2-4
2.2.2	Maintenance of Transmission Line Corridors	2-4
2.3	Cultural Resources Issues	2-4
3.0	Consistency Requirements	3-1
3.1	Plant Design and Operation	3-1
3.2	Reporting Related to NPDES Permits and State Certifications	3-2
3.3	Changes Required for Compliance with Other Environmental Regulations	3-3
4.0	Environmental Conditions	4-1
4.1	Unusual or Important Environmental Events	4-1
4.2	Environmental Monitoring	4-1
4.2.1	Maintenance of Transmission Line Corridors	4-1

TABLE OF CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE NO.</u>
4.2.1.1	Herbicides Used	4-1
4.2.1.2	Records	4-2
4.2.1.3	Types of Maintenance Reported	4-2
4.2.2	Aquatic Programs	4-3
5.0	Environmental Protection Plan Reporting Requirements	5-1
5.1	Review and Audit	5-1
5.2	Records Retention	5-1
5.3	Changes in Environmental Protection Plan	5-1
5.4	Plant Reporting Requirements	5-1
5.4.1	Routine Reports	5-1
5.4.2	Nonroutine Reports	5-1
	<u>Exhibit</u>	<u>NO.</u>
	American Shad Impingement Letter	1

TABLES

<u>Number</u>	<u>Title</u>
4.2-1	Maintenance of Transmission Line Corridors, Selected Herbicide Application
4.2-2	Maintenance of Transmission Line Corridors

FIGURES

<u>Number</u>	<u>Title</u>
5.1-1	Auditing Organization Chart

OBJECTIVES

The Licensee submitted an Environmental Report-Operating License Stage for the Susquehanna SES to the U.S. Nuclear Regulatory Commission (NRC) in May 1978. This report reviewed the results of the preoperational impacts of construction and described the preoperational and proposed operational environmental monitoring programs. The NRC and other agencies reviewed this report and made recommendations for operational environmental monitoring programs which were listed in the Final Environmental Statement (FES) related to the operation of the Susquehanna SES, Unit 1 and 2, NUREG-0564, June 1981. In addition, the Licensee developed procedures and guidelines to ensure that operation of the Susquehanna SES does not adversely affect the environment in the vicinity of the station.

Procedures were developed to allocate responsibilities and interfaces necessary to monitor environmental impacts. These include coordination of NRC requirements and consistency with other federal, state, and local requirements for environmental protection. To keep the NRC informed of other agency activities, copies of environmental correspondence are routinely provided. In addition, this 1992 Annual Environmental Operating Report (Nonradiological) provides a summary of both environmental programs and procedures as required in the FES and Appendix B - Environmental Protection Plans (EPP) to Operating Licenses, No. NPF-14 and No. NPF-22. The 1992 report is the eleventh Annual Environmental Operating Report (Nonradiological) submitted to meet EPP requirements.



2.0 ENVIRONMENTAL ISSUES

2.1 AQUATIC ISSUES

The aquatic monitoring program for operation of the Susquehanna SES is divided into two phases. Phase 1 includes effluent monitoring required by a National Pollutant Discharge Elimination System (NPDES) permit issued by the Pennsylvania Department of Environmental Resources (PaDER). Monthly discharge monitoring reports are submitted to the PaDER as part of the permitting requirements. The station operational NPDES permit No. PA-0047325 was reissued on January 22, 1990, and expires on January 21, 1995. Phase 2 of the aquatic monitoring program deals with programs listed in the FES involving environmental monitoring.

The PaDER in Phase 1 is responsible for regulating the water quality permit for the Susquehanna SES. The NPDES permit deals with discharge parameters for the Susquehanna SES sewage treatment plant, cooling tower blowdown, and miscellaneous low volume waste discharges. The cooling tower blowdown also includes in-plant process streams which discharge to the Susquehanna River. Various low volume waste sumps discharge to the storm sewers which flow into Lake Took-a-while, and eventually into the Susquehanna River.

The parameters monitored in the sewage treatment plant effluent limits are as follows:

Flow
pH
Total Suspended Solids (TSS)
Carbonaceous Biochemical Oxygen Demand (CBOD-5)
Fecal Coliforms

In-plant process effluents combine with the cooling tower blowdown before being released to the Susquehanna River. These process effluents are monitored for flow, TSS, and oil and grease. Parameters monitored in the combined cooling tower blowdown to the Susquehanna River are:

Flow
pH
Free Available Chlorine
Chromium
Zinc

The parameters monitored in the various low volume waste sumps and drains that discharge to storm sewers leading to Lake Took-a-while are:

Flow
pH
TSS
Oil and Grease

The Licensee has replaced gaseous chlorine at the Susquehanna SES with Betz Clam-Trol CT-1 as a microbiological control treatment. Approval of the use of

this product is included in the station's NPDES permit. Also, zinc and sulfuric acid are no longer used for treatment of circulating water.

Phase 2 of aquatic monitoring programs, identified in the FES and Appendix B of the Operating License for the Susquehanna SES, included monitoring algae and benthic macroinvertebrates both above the intake and below the discharge to the Susquehanna River. Requirements for these activities were completed in 1988.

The Susquehanna Anadromous Fish Restoration Committee directed the capture of 25,721 American shad in two fish lifts below the Conowingo Dam on the Susquehanna River during the spring of 1992. Of these, 15,386 shad were transported and stocked upstream of all major dams with 92% survival (Ref. 2.1-1).

Previous analysis of movements data indicated that few of these shad would migrate upriver beyond Sunbury, Pennsylvania, which is about 45 miles downriver from the Susquehanna SES. Therefore, Mr. Richard St. Pierre, Susquehanna River Coordinator for the U.S. Fish and Wildlife Service, decided to cancel autumn monitoring for impinged juvenile American shad at the intake of the Susquehanna SES (Exhibit 1). Monitoring is scheduled to resume if there is any likelihood that substantial numbers of juveniles will migrate past the intake in autumn 1993.

An agreement in principle to return American shad and other migratory fish, including the American eel, to the Susquehanna River transpired on October 1, 1992. It was a cooperative effort among state and federal agencies, environmentally concerned organizations, and the utility companies that own dams on the lower river. The plan calls for the following:

1. The Pennsylvania Power and Light Company will construct two lifts at the Holtwood Hydroelectric Dam. These lifts are scheduled for completion by 1996 in time for the spring 1997 migration of American shad.
2. Baltimore Gas and Electric and the Pennsylvania Power and Light Company will complete one lift at Safe Harbor during construction of the Holtwood lifts.
3. Metropolitan Edison will complete one lift at the York Haven Hydroelectric Station by 1999 for service by 2000.

This plan is part of the largest American shad restoration effort on the east coast. The lifts at Holtwood and Safe Harbor will reopen shad and eel migration to 35 miles of the Susquehanna River within the next five years. The York Haven passage will reopen an additional 200 miles of river for these fishes three years later. The final agreement on the plan is currently scheduled for approval by all parties for 1993.

The biofouling mollusk monitoring program continued at the Susquehanna SES in 1992. Though zebra mussels (Dreissena polymorpha) have been found repeatedly in samples near Johnson City, New York, about 150 miles upriver, and asiatic

clams (Corbicula fluminea) have been confirmed 40 miles downriver at Northumberland, Pennsylvania, neither of these species have yet been found in the vicinity of the Susquehanna SES.

The monitoring program currently involves a biweekly schedule of water and artificial and natural substrate sampling in the river in the vicinity of the Susquehanna SES River Intake Building. In addition, artificial substrates are maintained in a side-stream sampler located in the Intake Building. In 1992, water and substrate samples were collected on eighteen dates from March through November. Scuba divers performed inspections of natural substrates on nine dates in June, August, and October, and inspected the station's discharge diffuser pipe on June 22 and the Emergency Service Water Spray Pond on August 11.

A survey for asiatic clams was performed downstream of the Susquehanna SES on October 31 at seven select points from Bloomsburg to Northumberland, Pennsylvania. Results confirmed the presence of asiatic clams only as far upriver as Northumberland.

Once the mollusks are found in the vicinity of the plant, Susquehanna SES will implement its mitigation and control plan. The plan is designed to limit any mollusk growth within the power plant systems beyond the planktonic veliger stage. By so doing, fouling and flow blockage should be prevented.

The primary control method will be via the use of a non-oxidizing biocide, Betz Clam-Trol. Clam-Trol is a patented blend of a alkyl dimethyl benzyl ammonium chloride and dodecyl guanidine hydro chloride. It will be used to treat the river water make-up systems, the circulating/service water systems, the spray pond and safety related service water systems and the fire protection system.

Treatments will be made around three times a year. A concentration of 15 ppm will be maintained within the system for 12 to 24 hours depending upon water temperature. A detoxifier (bentonite clay) will be added as needed to plant discharge streams during treatment to prevent release to the environment.

Additional control at the River Intake Structure may consist of the installation of an anti-fouling coating or sheeting at the entrance to prevent mollusk growth. Also, normally elevated circulating/service water system temperatures occurring during the summer months may eliminate the use of Clam-Trol at least once during the season.

The success of the above outlined mitigation and control methods will be evaluated with the use of several mollusk samplers. The samplers will be installed in the systems targeted for treatment. They will provide optimum environments for the mollusks to settle and grow. The success of treatments will be measured by the number of fatalities counted within the samplers.

2.2 TERRESTRIAL ISSUES

2.2.1 STUDIES PREVIOUSLY COMPLETED

Terrestrial environmental studies completed prior to 1989 included cooling tower bird impaction and sound level surveys.

2.2.2 MAINTENANCE OF TRANSMISSION LINE CORRIDORS

During 1992, trees and brush in the transmission line corridors were maintained with herbicides and by manual clearing. The terrestrial monitoring program for the Susquehanna SES transmission lines was initiated in response to commitments in Section 5.3.5 of the FES. Three major transmission lines are associated with the Susquehanna SES: 1) Stanton-Susquehanna No. 2-500 kV line, 2) Sunbury-Susquehanna No. 2-500 kV line and 3) Susquehanna-Wescosville 500 kV line (former Susquehanna-Siegfried line). These lines may be operated at either 230 kV or 500 kV. The maintenance program for transmission line corridors is discussed in detail in subsection 4.2.1 of this report.

The schedule for conducting periodic erosion control inspections of these lines and access roads is based on the age of the line. Susquehanna's transmission lines are inspected twice per year by foot patrols and three times per year by helicopter patrols. A comprehensive overhead inspection is performed once every five years.

In 1992, the three transmission lines and corridors were inspected by helicopter and foot patrols with no adverse impacts reported.

2.3 CULTURAL RESOURCES ISSUES

Environmental Protection Plan actions required to satisfy Title 36, Code of Federal Regulations Part 800, relating to archeological sites, were completed in 1987. The Advisory Council on Historic Preservation (ACHP), in accordance with 36 CFR 800.6 (a)(1), approved the NRC's determination of "no adverse effect" for archeological sites SES-3, SES-6, SES-8, and SES-11 located on the Licensee's property (NRC letter dated October 28, 1987, to ACHP).

As part of the determination of effect process, the Licensee committed to and is taking appropriate measures to mitigate impacts from plant maintenance and operation to sites SES-3, SES-6, SES-8 and SES-11. There was no impact to these sites from plant maintenance and operation in 1992.

REFERENCES

- 2.1-1 Restoration of American Shad to the Susquehanna River, Annual Progress Report-1992, Susquehanna River Anadromous Fish Restoration Committee, February 1993.

3.0 CONSISTENCY REQUIREMENTS

3.1 PLANT DESIGN AND OPERATION

In accordance with the Environmental Protection Plan (EPP), the Licensee shall prepare and record an environmental evaluation of proposed changes in plant design, operation, or performance of any test or experiment which may significantly affect the environment. Before initiating such activities, the Licensee shall provide a written evaluation and obtain prior approval from the Director, Office of Nuclear Reactor Regulation. Criteria for the need to perform an environmental evaluation include: (1) a significant increase in any adverse environmental impact previously evaluated by the NRC or Atomic Safety and Licensing Board, (2) a significant change in effluent or power level, or (3) a matter not previously evaluated which may have a significant adverse environmental impact.

The EPP requires that if an activity meets any of the criteria to perform an environmental evaluation, the NRC will be notified. If the change, test, or experiment does not meet any of these criteria, the Licensee will document the evaluation and allow the activity to occur.

During operation of the Susquehanna SES in 1992, there were nine proposed activities which the Licensee reviewed as part of the unreviewed environmental question program. None of these nine activities were determined to be an unreviewed environmental question. These were:

1. Cleaning chemicals used for cleaning floors and walls as well as decontaminating tools and parts which could then be discharged to the river were reviewed with the PaDER. The chemicals Mellow Orange Solvent, Planisol M, and Touch It Up would essentially be consumed as part of the cleaning process. The PaDER concurred that there would not be any additional environmental impacts from this activity.
2. New PaDER Residual Waste Regulations (July 1992) require Cooling Tower silt and sediment to be disposed of at a lined disposal site. The PaDER was notified that silt and sediment from the Unit 2 outage in the 3rd quarter was shipped to a Maryland Department of the Environment permitted lined landfill.
3. The Susquehanna River Basin Commission (SRBC) was notified of a diversion of 60 gallons per minute for a period of approximately 12 hours from an onsite tributary stream. There would be no adverse impact to the stream from this temporary activity. The SRBC concluded this diversion was not subject to their regulations.
4. PaDER was notified that Organic Orange was to replace Mellow Orange Solvent because it contained a defoaming agent not included in Mellow Orange. There is no additional impact from using Organic Orange. See item No. 1 above.

5. Well water may be used to replace river water for make-up to Demineralizer. An additional withdrawal of 9 gallons per minute of well water will not have any adverse impact on the environment. Ground water withdrawal has been previously addressed in site studies.
6. Sodium hypochlorite used to decontaminate respirators could be discharged to Cooling Tower blowdown from Liquid Radioactive Waste NPDES Outfall 171. The amount of chlorine discharged would not be detectable and there would be no additional impact from this activity.
7. The PaDER was notified of a discharge of 250 gallons of Betz Pre-film 108L from a Heat Exchanger Flush to the Cooling Tower Basin. We estimated less than 1 mg/l of phosphate would be discharged from the 7 million gallon Cooling Tower Basin. Discharge of phosphates through Cooling Tower blowdown has been previously addressed in the NPDES application. The PaDER has concurred that there is no adverse impact from this discharge.
8. The discharge to the Susquehanna SES Sewage Treatment Plant (STP) of approximately 250 gallons of a glycerin:water solution (50:50) used during the shipping of new reactor water pumps to prevent corrosion was reviewed with the PaDER. They felt this would not adversely impact STP operations. Discharge of this solution occurred in November and December 1992.
9. A Double Check Valve Assembly separating clarified and domestic water systems failed. The possibility of contamination of the domestic system existed if there would be a back flow of clarified water into the domestic system. Because of the size of the 14" valve and a 26-week delivery time for a replacement, it was decided to physically separate the two systems. The PaDER concurred with this corrective measure.

3.2 REPORTING RELATED TO NPDES PERMITS & STATE CERTIFICATIONS

All reports and information required by the NPDES Permit were submitted to both the NRC and PaDER. Pennsylvania is a NPDES Permitting Agreement State with the U.S. Environmental Protection Agency, therefore, State Certification pursuant to Section 401 of the Clean Water Act is not required.

3.3 CHANGES REQUIRED FOR COMPLIANCE WITH OTHER ENVIRONMENTAL REGULATIONS

During 1992, three air quality control permits were renewed. These permits are:

<u>Renewals - Air Quality</u>	<u>Permit No.</u>	<u>Expiration Date</u>
Air Blasting Operation	40-399-024	9-30-93
Four Diesel Generators (5,580 Horsepower Each)	40-306-005	9-30-93
Diesel Generator (6,948 Horsepower)	40-306-004	9-30-93

4.0 ENVIRONMENTAL CONDITIONS

4.1 UNUSUAL OR IMPORTANT ENVIRONMENTAL EVENTS

During 1992, four operating occurrences were reviewed as part of the potentially significant environmental event evaluation. None of these events were reportable to the NRC since there were no adverse environmental effects from these activities.

These four events were as follows:

1. Approximately 5 gallons of lube oil spilled onto the ground when a hose flipped out of its pump holder when the pump was turned on. This occurred near the E Diesel generator onsite. The oil was contained and immediately cleaned up with no adverse environmental impact. Since less than 5 gallons were spilled, there were no agency reporting requirements.
2. Approximately 15-25 gallons per minute of river water was discharged to the storm sewer from a deicing line leak over an 8-hour period. Once the leak was discovered valves were isolated and the leak was stopped. The PaDER was notified of this leak and concurred that there was no adverse impact. This line has since been repaired.
3. There was a Halon System inadvertent discharge of approximately 200 pounds into the Security Control Center. The facility was evacuated. Even though this discharge was determined not to be reportable under the Clean Air Act Amendments, Comprehensive Environmental Response, Compensation, and Liability Act (Superfund), or SARA Title III the Community Right to Know Act, the Nuclear Regulatory Commission (NRC) (Region I), Pennsylvania Department of Environmental Resources (Northeast Region), and Pennsylvania Emergency Management Agency were notified of this discharge. The NRC was notified since this event was reported to other agencies.
4. A spill of approximately 5 gallons of electrolyte (sulfuric acid) from a 250 volt (DC) battery occurred when the battery was dropped from a sling onto asphalt when being lifted. This spill was not reportable and was contained and cleaned up.

4.2 ENVIRONMENTAL MONITORING

4.2.1 MAINTENANCE OF TRANSMISSION LINE CORRIDORS

4.2.1.1 HERBICIDES USED

All herbicides utilized to control incompatible vegetation within the Susquehanna SES transmission line corridors are approved for use by the U. S. Environmental Protection Agency. In addition, all major manufacturers or formulators have had these products registered for distribution by the Commonwealth of Pennsylvania under the authority of the Pennsylvania Pesticide Control Act of 1973.

The following herbicides are specified for use in the Licensee's programs and are applied according to the instructions on the label.

Commercial Name	Active Ingredients	EPA Registration Number
Krenite UT	Fosamine Ammonium	352-395
Tordon 101	2, 4-D, Picloram	464-306
Pathway (Formerly Tordon RTU)	2, 4-D, Picloram	62719-31
Garlon 3A	Triclopyr	62719-37
Access	Triclopyr, Picloram	464-576
Garlon 4	Triclopyr	464-554
Accord	Glyphosate	524-326-AA
Escort	Metsulfuron Methyl	352-439

Additional herbicides may be needed if the level of control (i.e., new/different species, sudden increases, resistance to established chemicals) changes.

4.2.1.2 RECORDS

Records of herbicide use are maintained for a period of at least five years in appropriate Division Offices of the Licensee. These records include the following:

1. Copies of labels of specified herbicides which designate commercial names, active ingredients, rates of application, warnings, and storage and handling requirements
2. Concentrations of active ingredient formulations diluted for field use
3. Diluting substances (carriers)
4. Rates of application
5. Methods of application
6. Locations and dates of application

4.2.1.3 TYPES OF MAINTENANCE REPORTED

A. Selective Herbicide Applications

In 1992, herbicides were applied on the Stanton-Susquehanna No. 2 line. Herbicides used, their active ingredient, acid equivalent, amount of concentrate in a designated carrier, drift retardant, and wetting agents are summarized in Table 4.2-1.

Application data for this line are presented by number of acres on which herbicides were applied, total amount of solution used, rate of application in gallons per acre, total amount of concentrate used, average gallons of concentrate applied per acre, total pounds of acid equivalent, and average pounds per acre applied. Dates and locations by grid number of all applications are listed with the title of the responsible Division Manager, the phone number, and the mailing address.

B. Vegetation Maintenance by Manual Methods

Maintenance of Transmission Line Corridors, Table 4.2-2, summarizes vegetation maintenance activities other than the utilization of herbicides. The manual activities used in 1992 were as follows:

1. Selective Reclearing - cutting incompatible vegetation where herbicide applications are restricted.
2. Danger Tree Removals - cutting those trees outside of the cleared right-of-way which are of such a height and position that they create a potentially hazardous condition which could interrupt the line.
3. Top/Side Trimming - trimming of trees on the edge of or within the right-of-way which through yearly growth encroach on the conductors.

4.2.2 AQUATIC PROGRAMS

The aquatic monitoring requirements, identified in the FES and Appendix B of the operating license for the Susquehanna SES, have been completed and confirm that effects on aquatic biota and water quality due to plant operation were no greater than predicted.

Table 4.2-

SUBQUEHANNA SES Maintenance of Transmission Line Corridors Selective Herbicide Application								
1992 Year		Stanton-Susquehanna 22 500KV Line Names				Susquehanna Division		
Herbicides					Additives		Carrier	
Alt. No.	Commercial Name	Active Ingredient	Acid Equiv.	Spec. Amt. Per 100 Gal Solution	Commercial Name	Spec. Amt. Per 100 Gal Solution	Name	Spec. Amt. Per 100 Gal Solution
1	Garlon 3A Tordon 101	Triclopyr Picloram 2,4-D	3#/Gal. .54#/Gal. 2#/Gal	.5 Gal. .5 Gal.	Clean Cut	.25 Gal.	Water	98.75 Gal.
4	Accord	Glyphosate	3#/Gal.	1.25 Gal.	Aquatic Surfactant	.5 Gal.	Water	98.25 Gal.
Application Data								
Alt. No.	No. of Acres	Total Gallons(*) Solution	Application Rate Gal./A	Total Gallons Concentrate	Rate Gal./A	Total Pounds Acid Equivalent	Pounds Per Acre	
1	221.121	12475	56.40	Garlon 3A-62.38 Tordon 101-62.38	.28 .28	Triclopyr-187.14 Picloram - 33.69 2,4-D -124.76	.85 .15 .56	
4	96.138	5390	56.06	Accord -67.38	.70	Glyphosate-202.14	2.10	
Alt. No.				Application Date		Location By Grid No.		
		From	To			From	To	
1		6/8/92	7/14/92	43594 N 35804		49023 N 40592		
4		7/15/92	9/21/92	43653 N 35465		48961 N 40543		
Line Clearance Forester				717-368-5219		P.O. Box 158, Montoursville, PA 17754		
Title				Phone		Address:		

Table 4

**SUSQUEHANNA SES
Maintenance of Transmission Line Corridors
Selective Herbicide Application**

<u>1992</u> Year		<u>Stanton-Susquehanna #2</u> Line Names				<u>Northeast</u> Division	
Herbicides				Additives		Carrier	
<u>Alt. No.</u>	<u>Commercial Name</u>	<u>Active Ingredient</u>	<u>Acid Equiv.</u>	<u>Spec. Amt. Per 100 Gal Solution</u>	<u>Commercial Name</u>	<u>Spec. Amt. Per 100 Gal Solution</u>	<u>Name</u> <u>Spec. Amt. Per 100 Gal Solution</u>
4	Accord	Glyphosate	3#/Gal.	5 Gal.	Ortho X77	1/2 Gal.	Water 94 1/2 Gal.
Application Data							
<u>Alt. No.</u>	<u>No. of Acres</u>	<u>Total Gallons(*) Solution</u>	<u>Application Rate Gal./A</u>	<u>Total Gallons Concentrate</u>	<u>Rate Gal./A</u>	<u>Total Pounds Acid Equivalent</u>	<u>Pounds Per Acre</u>
4	156.6	589	3.76	Accord - 29.45	0.19	Glyphosate - 88.35	0.56
Alt. No.				Application Date		Location By Grid No.	
		From	To			From	To
<u>4</u>		<u>8/4/92</u>	<u>8/24/92</u>			<u>53370 N 44739</u>	<u>49125 N 40557</u>
_____		_____	_____			_____	_____
_____		_____	_____			_____	_____
_____		_____	_____			_____	_____
Line Clearance Forester				717-253-7000		RR #4, Box 405, Honesdale, PA 18431	
Title				Phone		Address	

Table 4.2.-2

SUSQUEHANNA SEB MAINTENANCE OF TRANSMISSION LINE CORRIDORS											
1992 Year		Sunbury-Susquehanna #2 500 KV Line Names					Susquehanna Division				
Selective Reclearing					Top/Side Trimming						
Dates		Grid Location			Acres		Dates		Grid Location		Trees
From	To	From	To	To	Acres	From	To	From	To	Trees	
3/92	4/92	43233N32584	43110N32517	2.67		3/92	4/92	33493N27232	33430N27188	18	
Danger Tree Removals					Screen Trimming						
Dates		Grid Location			Trees	Dates		Grid Location			
From	To	From	To	Trees	From	To	From	To			
3/92	4/92	33493N27232	33430N27188	4							
		41418N31969	41611N32011	5							
Line Clearance Forester		717-368-5219			P.O. Box 158, Montoursville, PA 17754						
Title		Phone			Address						

5.0 ENVIRONMENTAL PROTECTION PLAN REPORTING REQUIREMENTS

5.1 REVIEW AND AUDIT

The Licensee has established procedures for an independent group to review and audit compliance with the EPP. Audits of EPP compliance are conducted by Environmental Management Division (EMD) and Nuclear Quality Assurance. The Auditing Organizational Chart (Fig. 5.1-1) lists the various groups utilized in environmental reviewing and auditing of the Susquehanna SES environmental monitoring programs. The Manager-Nuclear Technology is responsible for off-site environmental monitoring and for providing any related support concerning licensing. The Superintendent of Plant-Susquehanna is responsible for on-site environmental matters. The Manager-Nuclear Quality Assurance with support from the Manager-Environmental Management Division of the System Power and Engineering Department is responsible for verifying compliance with the EPP. Additional Nuclear Department responsible positions are also included in Figure 5.1-1.

Audits of the EPP are conducted every other year. There was an audit of the EPP in 1991 and the next audit will be conducted in 1993.

5.2 RECORDS RETENTION

Records and logs relative to environmental aspects of plant operation and audit activities are retained in the Susquehanna Records Management System. This system provides for a convenient review and inspection of environmental documents which are available to the NRC upon request.

All records concerning modifications of plant structures, systems and components which are determined to potentially affect the continued protection of the environment, shall be retained for the life of the plant. All other records, data, and logs relating to the environmental programs and monitoring shall be retained for at least five years or, where applicable, in accordance with the requirements of other agencies.

5.3 CHANGES IN ENVIRONMENTAL PROTECTION PLAN

There were no requests for changes in the EPP during 1992.

5.4 PLANT REPORTING REQUIREMENTS

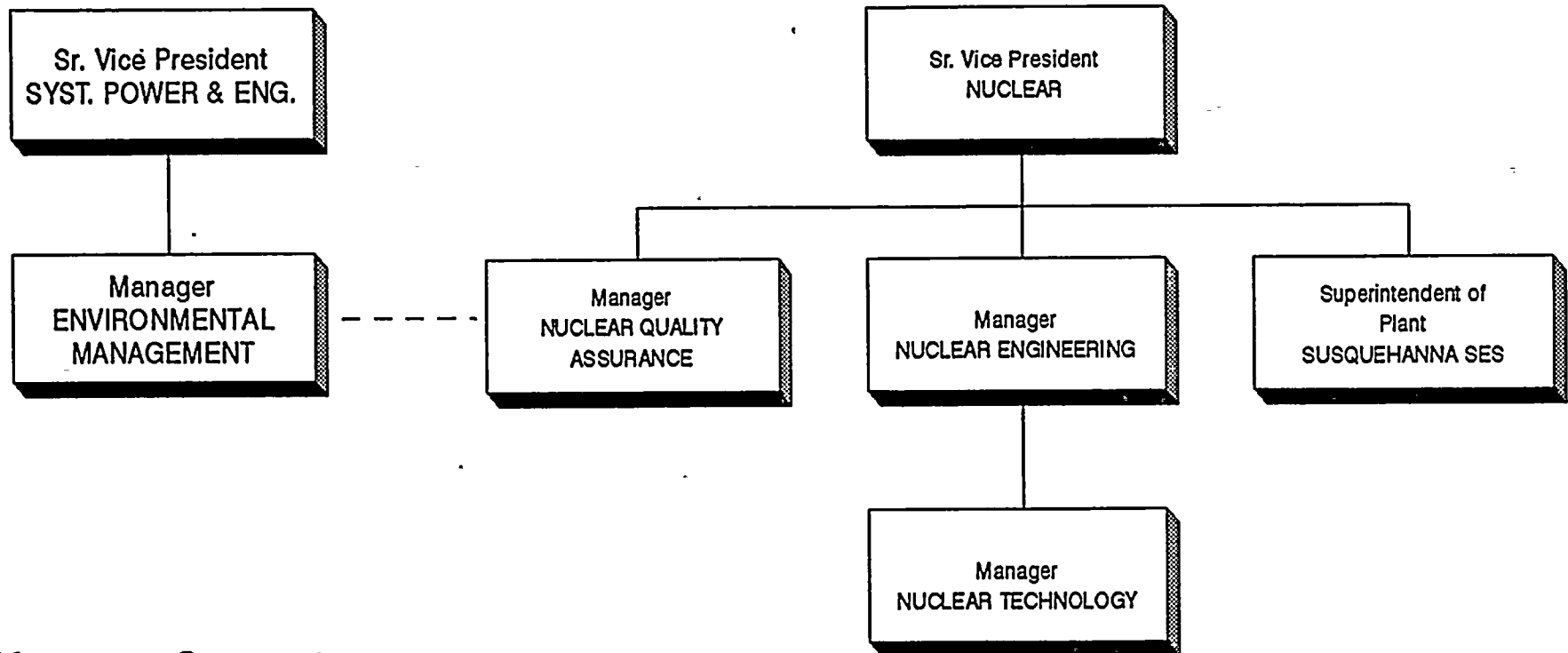
5.4.1 ROUTINE REPORTS

This Annual Environmental Operating Report (Nonradiological) was prepared to meet routine reporting requirements of the EPP for 1992. It provides summaries and analyses of environmental protection activities required in Subsection 4.2 of the EPP for the reporting period.

5.4.2 NONROUTINE REPORTS

There were no nonroutine events in 1992.

Figure 5.1-1
AUDITING ORGANIZATION CHART



Key: - - - Support

SUSQUEHANNA RIVER ANADROMOUS FISH RESTORATION COMMITTEE



Members

Maryland Department of Natural Resources
New York Division of Fish and Wildlife
Pennsylvania Fish and Boat Commission
Pennsylvania Power & Light Company
Philadelphia Electric Company
Safe Harbor Water Power Commission
Susquehanna River Basin Commission
United States Fish and Wildlife Service
York Haven Power Company

Secretary

Susquehanna River Fisheries Coordinator
U.S. Fish and Wildlife Service
1721 North Front Street, Suite 105
Harrisburg, PA 17102
Telephone: 717-238-6425
FAX: 717-238-0495

September 11, 1992

Jerome S. Fields (A9-3)
PA Power & Light Company
Two North Ninth Street
Allentown, PA 18101

Dear Mr. Fields,

During April through mid-June this year, a total of 25,721 American shad were collected in the fish lifts at Conowingo Dam. Of these, 15,386 were transported and released above York Haven Dam at Middletown, PA with about a 92% survival rate. Most fish were taken during May. Juvenile shad collections in the vicinity of Columbia and Wrightsville in late July and August indicated successful spawning in this vicinity.

Our past analyses of adult shad movements following release at Middletown showed only modest upstream migration, with some fish reaching Sunbury on the mainstem and Lewistown on the Juniata River. Considering the relatively advanced stage of maturation of most fish and with the peak of abundance occurring late in the season, it is doubtful that shad successfully migrated into the North Branch in 1992. For these reasons I do not believe it is necessary to sample for juvenile shad at the cooling water intakes of the Susquehanna SES at Beach Haven this fall.

We appreciate your continued interest and PP&L's involvement with this program. The situation regarding likelihood of shad reproduction near your facility will be reevaluated each year.

Sincerely,

Richard St. Pierre
Susquehanna River Coordinator

