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EPP 5.4.1

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Docket Nos. 50-352
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NPF-85

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

Subject: Limerick Generating Station, Units 1 and 2
1995 Annual Environmental Operating Report
(Non-Radiological)

Gentlemen:

Attached is the Limerick Generating Station, Units 1 and 2, 1995 Annual Environmental Operating Report (Non-Radiological). This report is being submitted in accordance with Section 5.4.1 of Appendix B of the Facility Operating Licenses, Environmental Protection Plan (EPP) (Non-Radiological), and describes the implementation of the EPP for 1995.

If you have any questions, please do not hesitate to contact us.

Very truly yours,

Walter G. MacFarland

DBN:bdd
Attachment

cc: T. T. Martin, Administrator, Region I, USNRC
(w/attachment)
N. S. Perry, USNRC Senior Resident Inspector, LGS
(w/attachment)

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LIMERICK GENERATING STATION
UNITS 1 AND 2

1995
ANNUAL ENVIRONMENTAL OPERATING REPORT
(NON-RADIOLOGICAL)

JANUARY 1995 - DECEMBER 1995

FACILITY OPERATING LICENSE NOS. NPF-39, NPF-85
DOCKET NOS. 50-352, 50-353

PECO ENERGY COMPANY

1. Introduction

This report describes the implementation of the Environmental Protection Plan (EPP), LGS Appendix B Technical Specifications, from January 1, 1995 through December 31, 1995.

Provided herein are summaries and results of the environmental protection activities required by Subsection 4.2 of the EPP.

2.0 Environmental Protection Activities

2.1 Aquatic Monitoring

The Environmental Protection Plan states that the NRC will rely on decisions made by the Commonwealth of Pennsylvania, under the authority of the Clean Water Act, for any requirements for aquatic monitoring. Industrial waste NPDES Permit PA 0051926 provides the mechanism for protecting water quality and indirectly aquatic biota. In accordance with the requirements of Section 3 of the Permit, monitoring results were summarized for each month and reported on Discharge Monitoring reports (DMR) which were submitted to the DER and EPA.

A summary of the results as reported in the monthly DMR's is In Table 1. In addition, studies of corbicula and Zebra mussels, fish impingement on the Schuylkill River intake screens, and water quality sampling and observations at Still Creek and Owl Creek Reservoirs were performed in support of LGS in 1995.

Periodic inspections of the Still Creek and Owl Creek reservoirs and receiving streams revealed no sign of increased erosion, sedimentation, or other environmental damage.

Spring, summer and fall surveys for the presence of zebra mussel were conducted at several points along the Point Pleasant water diversion route including the Delaware River at Point Pleasant, the intake on the Perkiomen Creek at Greaterford, and the two boat ramp locations on the Schuylkill; upstream near Limerick Island and downstream from the

Cromby Generating Station. Concrete blocks were placed in the water at each location and later inspected for colonization. No zebra mussels were found, although dense populations of Asiatic clams were observed on the Schuylkill as well as throughout the diversion system (including Bradshaw Reservoir and near the outfall structure on the East Branch Perkiomen Creek).

Fish tissue samples were collected as part of the Radiological Environmental Monitoring Program biannually on the Schuylkill River, both upstream and downstream. These collections allowed for a descriptive assessment of the fish community in the vicinity of Limerick. Most common were spottail, spotfin, and common shiners, carp, white sucker, redbreast and pumpkinseed sunfish, smallmouth and largemouth bass, brown and yellow bullhead, and channel and white catfish. Both species of bass appeared to be more common than previously observed as were white and channel catfish. The species composition upstream and downstream of Limerick appeared to be similar.

2.2 Terrestrial Monitoring

No terrestrial monitoring is required.

2.3 Maintenance of Transmission Line Corridors

Transmission line maintenance records concerning herbicide use are being maintained by the PECO Energy Company Consumer Energy Services Group - Power Delivery Division (Electric Transmission and Distribution Department). As required by the LGS Appendix B Technical Specifications, Section 4.2.3, these records can be made available to the NRC upon request.

2.4 Noise Monitoring

All noise surveys required by the LGS Final Environmental Statement, Section 5.14.4, Atomic Safety Licensing Board (ASLB) ruling LBP-83-

11, dated March 8, 1983, and LGS Appendix B Technical Specifications, Sections 2.3 and 4.2.4. were completed in 1990 for Limerick Generating Station Unit 2 operation and Bradshaw Reservoir. These studies were reported on in the 1990 Annual Environmental Operating Report (Non-radiological). No further noise monitoring is required per LGS Appendix B Technical Specifications, Section 4.2.4.1.

2.5 Environmental Protection Plan

There were no Environmental Protection Plan (EPP) non-compliances identified by the Nuclear Quality Assurance Department or by Station Self-Assessment in 1995.

2.6 Changes in Station Design or Operation, Tests or Experiments

There were no changes in the Limerick Generating Station design or operation and performance of tests or experiments that required an Environmental Evaluation in accordance with the requirements of Section 3.1 of the Environmental Protection Plan.

2.7 Non-routine Reports Submitted

Two non-routine reports were submitted in accordance with EPP Section 5.4.2. Copies of all letters were supplied to the NRC.

1. One NPDES violation for the release of total zinc concentration in excess of the daily maximum limitation occurred on January 27, 1995. With the unit 2 reactor shutdown for its third refueling outage, Operations personnel commenced draining of the unit 2 circulating water system directly to the Possum Hollow Creek via the storm drain Outfall 005. Samples for zinc prior to the discharge indicated levels were within acceptable limits. Mud and silt may have been present in the circulating water system drain piping between the water box and the isolation valve. Leaching of zinc from this mud and silt as well

as the galvanized piping during periods of low flow may have contributed to the problem. A notification letter was sent on February 28, 1995.

2. One NPDES violation for Net Total Suspended Solids in excess of the maximum daily limit occurred on November 8, 1995. Composite samples for both the Discharge 001 (cooling tower blowdown) and river water input (cooling tower makeup) were analyzed for TSS and compared. The resulting net TSS value exceeded the maximum daily limit. On November 7, 1995, excessive storm water runoff caused a large increase in river water suspended solids. This caused the cooling tower makeup and blowdown TSS concentrations to also rapidly increase. The three (3) cooling tower makeup grab samples collected prior to the storm were low in TSS. After averaging with the fourth sample collected on November 8, 1995, the TSS concentration of the composite sample was artificially low. As a result, the net TSS value obtained, after subtracting out this artificially low background value, was inappropriately high. A notification letter was sent on February 28, 1996.

TABLE 1

YEARLY MEAN AND RANGE OR MAXIMUM (AS APPROPRIATE) OF PARAMETERS REPORTED IN THE 1995 DISCHARGE MONITORING REPORTS

PARAMETER	PERMIT PA 0051926 DISCHARGE POINT (LIMERICK) *					
	001	201	003	005	021	023
Average Monthly Flow, MGD						
Maximum	9.86	0.2454	0.25	0.267	0.12	0.46
Mean	8.64	0.1943	0.03	0.04	0.0101	0.04
Std Dev	0.64	0.0198	0.07	0.08	0.0331	0.12
Maximum Daily Flow, MGD						
Maximum	13.32	0.6296	0.25	0.31	0.12	0.7
Mean	11.42	0.4995	0.03	0.05	0.0101	0.06
Std Dev	0.73	0.0747	0.07	0.09	0.0331	0.19
Total Suspended Solids, mg/l						
Maximum	70.1	38.4	85.7	128.0	18.8	125.0
Mean	14.4	18.4	48.6	71.0	9.9	48.9
Std Dev	20.5	9.8	37.1	40.6	8.9	44.7
Discharge Temperature, Degrees F						
Maximum	95.0	NR*	94.0	71.0	NR	81.0
Mean	82.8	NR	87.3	69.7	NR	72.0
Std Dev	8.37	NR	6.7	14.6	NR	6.6
Total Residual Oxidants, mg/l						
Maximum	0.01	NR	NR	NR	NR	0
Mean	0	NR	NR	NR	NR	0
Std Dev	0	NR	NR	NR	NR	0
Zinc, Total, mg/l						
Maximum	0.58	NR	0.34	6.8	NR	0.60
Mean	0.33	NR	0.33	3.73	NR	0.37
Std Dev	0.1	NR	0.01	3.07	NR	0.11
Copper, Total, mg/l						
Maximum	0.1	NR	0.09	18.7	NR	0.01
Mean	0.07	NR	0.08	9.4	NR	0.06
Std Dev	0.01	NR	0.01	9.3	NR	0.03
Inlet Temperature, Degrees F						
Maximum	83.0	NR	NR	NR	NR	NR
Mean	63.7	NR	NR	NR	NR	NR

TABLE 1

YEARLY MEAN AND RANGE OR MAXIMUM (AS APPROPRIATE) OF PARAMETERS REPORTED IN THE 1995 DISCHARGE MONITORING REPORTS

PARAMETER	PERMIT PA 0051926 DISCHARGE POINT (LIMERICK) *					
	001	201	003	005	021	023
Std Dev	14.6	NR	NR	NR	NR	NR
Hydrothol 191, mg/l						
Maximum	0.025	NR	NR	NR	NR	NR
Mean	0.03	NR	NR	NR	NR	NR
Std Dev	0	NR	NR	NR	NR	NR
Betz - 3625, mg/l						
Maximum	0.28	NR	NR	NR	NR	NR
Mean	0.1	NR	NR	NR	NR	NR
Std Dev	0.08	NR	NR	NR	NR	NR
Clamtrol, CT-1, mg/l						
Maximum	NR	NR	NR	NR	NR	NR
Mean	NR	NR	NR	NR	NR	NR
Std Dev	NR	NR	NR	NR	NR	NR
pH, Instantaneous Minimum						
Maximum	8.1	NR	8.2	8.32	8.38	8.15
Mean	7.94	NR	7.89	8.04	8.37	7.95
Std Dev	0.12	NR	0.31	0.21	0.01	0.16
pH, Maximum Daily						
Maximum	8.32	NR	8.2	8.2	8.38	8.32
Mean	8.22	NR	7.89	7.89	8.37	8.22
Std Dev	0.1	NR	0.31	0.31	0.01	0.09
Phosphorous as P, MG/L						
Maximum	4.63	NR	0.73	1.08	1.22	2.79
Mean	1.45	NR	0.68	0.71	1.08	1.01
Std Dev	1.03	NR	0.05	0.37	0.14	0.92
Iron, Dissolved, MG/L						
Maximum	NR	NR	NR	NR	0.023	NR
Mean	NR	NR	NR	NR	0.01	NR
Std Dev	NR	NR	NR	NR	0.01	NR

* There were no discharges reported for 1995 from discharge point numbers 101, 301, 020, 002, 003, 004, 005, 012, 022, 023, 006, 007, 008, 009, and 023

** NR = Not Required

TABLE 1

YEARLY MEAN AND RANGE OR MAXIMUM (AS APPROPRIATE) OF PARAMETERS REPORTED IN THE 1995 DISCHARGE MONITORING REPORTS

PARAMETER	PERMIT PA 0052221 DISCHARGE POINT (BRADSHAW) 001
Average Monthly Flow, MGD	
Maximum	38.2
Mean	23.9
Std Dev	11.99
Maximum Daily Flow, MGD	
Maximum	41.4
Mean	29.5
Std Dev	12.9
Discharge Temperature, Degrees F	
Maximum	88.5
Mean	65.1
Std Dev	16.8
Zinc, Total, mg/l	
Maximum	8.69
Mean	8.1
Std Dev	0.4
pH, Instantaneous Minimum	
Maximum	7.29
Mean	6.96
Std Dev	0.19
pH, Maximum Daily	
Maximum	8.69
Mean	8.10
Std Dev	0.4
Dissolved Oxygen, mg/l	
Maximum	7.82
Mean	6.17
Std Dev	1.2
Aluminum, Total, mg/l	
Maximum	0.324
Mean	0.1

TABLE 1

YEARLY MEAN AND RANGE OR MAXIMUM (AS APPROPRIATE) OF PARAMETERS REPORTED IN THE 1995 DISCHARGE MONITORING REPORTS

PARAMETER	PERMIT PA 0052221 DISCHARGE POINT (BRADSHAW)
	001
Std Dev	0.08
Cadmium, Total, mg/l	
Maximum	0.00002
Mean	0
Std Dev	0
Iron, Total, mg/l	
Maximum	0.389
Mean	0.13
Std Dev	0.11
Iron, Dissolved, mg/l	
Maximum	0.081
Mean	0.05
Std Dev	0.01
Mercury, Total, mg/l	
Maximum	0
Mean	0
Std Dev	0
Nickel, Total, mg/l	
Maximum	0.002
Mean	0
Std Dev	0
Fecal Coliform, #/100 ml	
Maximum	127
Mean	42.3
Std Dev	37.6
Phenolics, Total (4AAP)	
Maximum	7.29
Mean	6.96
Std Dev	0.19