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 CURTIS, N.W. Pennsylvania Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 YOUNGBLOOD, B.J. Licensing Branch 1

SUBJECT: Forwards comments on draft suppl to DES re NUREG-0564, Encl
 drawings in Central Files only. **SEE 50-387 FOR DRAWINGS**

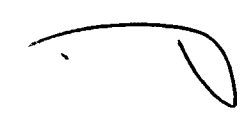
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JUN 10 1980



PP&L

May 29, 1980

Mr. B. J. Youngblood, Chief
Licensing Branch 1
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

SUSQUEHANNA SES
COMMENTS ON POND HILL DES
ER 100450 FILE 991
PLA-490

Docket Nos. 50-387
and 50-388

Dear Mr. Youngblood:

Attached are PP&L's comments on the Draft Supplement to the Draft Environmental Statement related to operation of the Susquehanna Steam Electric Station (NUREG-0564). If you have any questions on these comments, please contact W. E. Barberich (Phone 215-821-5833).

Very truly yours,

NW Curtis

N. W. Curtis

WEB:mg
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Attachment

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SUSQUEHANNA SES
COMMENTS ON DRAFT ENVIRONMENT
STATEMENT (DES)

Summary and Conclusions

It is suggested that an additional item be added to the list of potential impacts, stating, as indicated in Section 4, that the project will have minimal impacts on the Susquehanna River.

Section 1 - Introduction

- 1) Section 1.1 Para. 3: Add "plus consumptive use" after "the Q7-10 value".
- 2) Section 1.2 Para. 3: The Applicant will also obtain necessary federal permits (Corps of Engineers, etc.)

Section 2 - The Site and Its Environs

- 1) Section 2.3.3: It should be noted that one property owner has developed a spring within the proposed project boundary, as a source of water during part of the year. This spring is in the vicinity of the inundated area and, depending on its exact location, may be inundated. This was shown as the spring on the south side of the reservoir on plate 17 of our November 17, 1979 response.

Use of this spring as a water supply source would be discontinued after project completion.

- 2) Section 2.5.2.1 Para. 1: We are unaware of any sampling by DER in Pond Hill Creek. Sampling of Pond Hill Creek referenced in Appendix H was by consultants to PP&L. The reference to the ER-OL should probably be to Appendix H of the ER-OL. This reference should also be added on the footnotes to Tables 2.2, 2.3, 2.4 and 2.5.
- 3) Page 2-22, Reference 29: This reference is redundant to reference 24, which specified the date correctly.

Section 3 - Reservoir Description

- 1) Section 3.1 Para. 2: This paragraph should be clarified to indicate the 287 m (940 ft.) normal water surface project would have an active storage volume of $12.5 \times 10^6 \text{ m}^3$ (10,100 Ac-ft.) and

a total storage volume of $16.0 \times 10^6 \text{ m}^3$ (13,000 Ac-ft.). The higher, 299 m (981 ft.) MSL normal water surface project, would have an active storage volume of $27.1 \times 10^6 \text{ m}^3$ (22,000 Ac-ft.) and a total storage volume of $29.7 \times 10^6 \text{ m}^3$ (24,000 Ac-ft.). Based on a study of the optimum dam height, storage capacity of the site is topographically limited to a dam with a crest elevation of 310.9 m (1020 ft.) MSL, providing $38.5 \times 10^6 \text{ m}^3$ (31,200 AC-ft.) total storage. This study indicated the most economical project would have a normal water surface elevation of 299 m (981 ft) MSL. The design for the project is being prepared based on this height of Dam.

- 2) Section 3.1 Para 3: The last sentence should be clarified to note that the drawings provided in the DES are for the larger project. Revised Plates A-1, 2, 5, 6, 17, 19, & Figure 3-2 showing the latest project concepts are attached.
- 3) Section 3.1.1 Para 2: The last sentence should be revised to state that the impervious subsurface cutoff will be required to prevent seepage thru the saddle rather than in the saddle.
- 4) Section 3.1.3: The project concept for the inlet-outlet structure has recently been revised from the inclined structure previously proposed to a conventional multi-port vertical tower. Three outlet ports will be provided, at Elev. 956, 925, 850 MSL. The attached Plate 6 shows the revised inlet-outlet structure concept.
- 6) Section 3.1.4 Para 1: The pipe will convey an average flow of 3.0 m^3 sec. (106 cfs) but will be capable of conveying higher flows. The two submerged discharge sleeve valves in the pump station will each be capable of discharging up to 150 cfs. This will be the limiting feature of the design.
- 7) Section 3.2.2 Para 2: Average annual water use of SSES during a repeat of the meteorological conditions occurring during the drought of record has been estimated at 52.5 cfs (1.5 m^3 /sec) not 49.5 cfs (1.4 m^3 /sec.).
- 8) Section 3.2.2 Para 3: We suggest that this section be retitled "Compensation Releases" and wherever the term "augmentation releases" appears in the report it be replaced by "compensation releases". The purpose of releases from Pond Hill Reservoir will be to provide compensation for water consumed by downstream users. The term augmentation releases may be misinterpreted to imply that the releases will be solely to increase flow in the river.

Section 4 - Environmental Effects of Construction and Operation

- 1) Section 4.3.1 Para 5: As significant volumes of fill material will be removed from the borrow areas, it will be impossible to reestablish the original contours; however, the areas will be regraded so that they will drain properly, topsoil will be replaced and suitable landscaping will be provided.
- 2) Section 4.3.1 Para 6: Drainage features such as culverts will be provided in the final design for the access road where necessary to control runoff from the road as well as runoff intercepted by the road.
- 3) Section 4.3.2.3 Para. 2: As indicated above, the inlet-outlet structure concept has been revised. The revised design will provide 3 outlet ports with the top outlet port of elev. 956 ft. (291.4m) MSL or 25 ft. (7.6m) below the normal water surface. Model data indicates that this port will be in the epilimnion, thereby eliminating the problems associated with the withdrawal of hypolimnetic water. Tables 1 & 2 (attached) show the results of temperature model studies of the revised inlet-outlet structure concept. These studies are based on meteorological conditions and stream temperatures occurring in 1964 and 1975 and assume 1964 release patterns.
- 4) Section 4.3.2.3 Para. 8: The average release velocity thru the screens will only be about 0.4 fps (0.9 cm/s) (measured 1 foot from the screens) and the screens will be about 2 ft. (0.6 m) above the river bed. It is, therefore, not believed any significant scour will result from compensation releases.
- 5) Section 4.4.2.2 Para 3: Minimum flow releases to Pond Hill Creek will be 5.7 L/s (0.2 cfs) and not 5 L/s (0.18 cfs).
- 6) Section 4.4.2.3: We are currently reviewing the design concept for the spillway, and will consider the NRC's comments in this review. As design approval for the project will rest with the Pennsylvania Department of Environmental Resources, the final spillway design will meet their criteria. We will inform the NRC of any revisions to the spillway concept.

Section 5 - Alternatives, Need for Facility, and Benefit Analysis

- 1) Section 5.1.3: In February, 1980, the SRBC established July 1, 1984 as the deadline for compliance with the consumptive water make-up requirements (SRBC Regulations, Section 803.61).
- 2) Section 5.3.1 Para 1: The second sentence states that the applicant would have to purchase replacement power if Susquehanna were down due to low flow. This is not correct since, depending on PP&L/PJM conditions, it may be that "sales" would be lost rather than "purchases" needed. The sentence should read "Under the river following

alternative, the applicant would incur added costs because of the loss of generation due to the shutdown of SSES".

- 3) Section 5.3.1 Para 2: The 14 day shutdown probability appears inconsistent with Table 5.3.
- 4) Section 5.3.3: The cost reported here (\$47 million) is for the smaller reservoir design. The cost is estimated to be \$65 million (1983 dollars) for the larger reservoir assessed in the DES.
- 5) Section 5.3.4 Para 3: Since PP&L is a winter peaking system in the summer-peaking RJM power pool and since PP&L has favorable generation availability relative to RJM, the reserve margin without Susquehanna will exceed this reserve requirement for reliability through about 1986. However, should Susquehanna be shutdown because of low river flows, PP&L and RJM are both exposed to capacity reductions of other units on the Susquehanna River and other regional rivers for the same reason. In addition, because RJM currently has about 45% oil-fired capacity, the added exposure to low reserves due to fuel curtailment also exists.
- 6) Table 5.4: The 1980 RJM Reserve Margin without Susquehanna should be 34%.

1964 DATA
TABLE 1

POND HILL RESERVOIR DISCHARGE TEMPERATURE (°C)
3-PORT STRUCTURE

MONTH DAY	AUGUST		SEPTEMBER			OCTOBER			NOVEMBER		
	19	24	3	13	23	3	13	23	2	12	22
Temp. Effluent (°C)	19.6	20.6	21.5	16.7	17.8	15.8	13.4	11.8	10.8	10.2	9.0
Temp. River (°C)	26.0	24.0	22.0	20.0	18.0	17.0	15.0	13.0	11.0	9.0	8.0
Outlet Discharge (CFS)											
Outlet No. 1) El. 956	102	102	99	0	0	0	0	0	0	0	0
2) El. 925	0	0	0	99	99	102	102	0	0	0	0
3) El. 850	0	0	0	0	0	0	0	102	102	102	102

NOTE: Outflow rates of the model deviate from the specified 102 cfs flow in order to compensate for averaging techniques.

1975 DATA
TABLE 2

POND HILL RESERVOIR DISCHARGE TEMPERATURE (°C)
3-PORT STRUCTURE

MONTH DAY	AUGUST		SEPTEMBER			OCTOBER			NOVEMBER			
	19	24	3	13	23	3	13	23	2	12	22	
Temp. Effluent (°C)	21.6	22.5	18.7	18.6	16.9	16.4	15.1	13.4	12.9	11.4	9.6	
Temp. River (°C)	21.6	22.6	19.0	19.0	17.0	16.6	16.3	16.0	15.0	14.0	14.0	
Outlet Discharge (CFS)												
Outlet No.	1) El. 956	91.8	96.8	75.3	0	0	0	0	0	0	0	0
	2) El. 925	0	0	0	99	86.5	99.2	102	0	0	0	0
	3) El. 850	15.2	10.2	23.7	0	12.5	2.8	0	102	102	102	102

NOTE: Outflow rates of the model deviate from the specified 102 cfs flow in order to compensate for averaging techniques.