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 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylv 05000388

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 SCHWENCER, A. Licensing Branch 2

SUBJECT: Submits info. on spraypond Piezometer 2 high groundwater reading. Piezometer 2 deletion will be included in next FSAR revision.

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	NRR/DST/LGB 33	1 1	REG FILE 04	1 1
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10/15/2010	15:30	SSO-03	STP	OK	Initial test of SSO-03
10/15/2010	16:00	SSO-04	STP	OK	Initial test of SSO-04
10/15/2010	16:30	SSO-05	STP	OK	Initial test of SSO-05
10/15/2010	17:00	SSO-06	STP	OK	Initial test of SSO-06
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10/15/2010	19:30	SSO-11	STP	OK	Initial test of SSO-11
10/15/2010	20:00	SSO-12	STP	OK	Initial test of SSO-12
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10/15/2010	22:30	SSO-17	STP	OK	Initial test of SSO-17
10/15/2010	23:00	SSO-18	STP	OK	Initial test of SSO-18
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Pennsylvania Power & Light Company

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Vice President-Engineering & Construction-Nuclear  
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AUG 03 1982

Mr. A. Schwencer, Chief  
Licensing Branch No. 2  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION  
SPRAYPOND PIEZOMETER NUMBER 2 HIGH  
GROUNDWATER READING  
ER 100450 FILE 281-01C105  
PLA-1189

Docket Nos. 50-387  
50-388

Dear Mr. Schwencer:

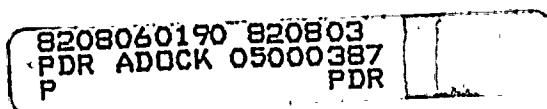
Per discussions with your staff, the following is a report on the high water level in piezometer number 2.

Background

Seven (7) piezometers exist along the perimeter of the spray pond. According to FSAR response to Question 371.30, if the groundwater level reaches Elevation 663 ft. at any one of the piezometer locations, the following actions will be taken:

- 1) NRC will be notified of the high (EL 663') groundwater condition;
- 2) Steps will be taken to identify the cause of the rise in the water level;
- 3) An assessment of the safety impact of the occurrence will be performed;
- 4) Appropriate action(s) will be taken based on the findings of the safety impact analysis.

On July 14, 1982 the following groundwater levels at the piezometers was measured:



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ER 100450 File 281-01C105  
Mr. A. Schwencer

<u>Piezometer</u>	<u>Groundwater Elevation (Feet)</u>
1	652½
2	677½
3	Dry at 643
4	629
5	Dry at 623
6	Dry at 625
1113	633½

Piezometer number 2 indicated a groundwater level higher than the allowable elevation stated above.

After investigating past readings, it was discovered that piezometer number 2 has always indicated a groundwater elevation greater than the allowable (EL. 663 ft.) The groundwater elevation ranged from 673.4 ft. to 681.1 ft.

#### Cause of High Groundwater Level

Prior to construction, the bedrock elevation at the southwest end of the spraypond was higher than the present elevation of the spraypond. The bedrock elevation for the remainder of the spraypond dropped off below the existing spraypond elevation. Therefore, the southwest portion of the spraypond is cut into bedrock and the remainder of the spraypond is supported on soil, as shown on FSAR Figures 2.5-17A (attached) and 2.5-30 (attached).

FSAR 2.5.1.2.6 states that the groundwater level appears to be controlled to a large extent by the top of the bedrock. Therefore, the groundwater level should be highest in the southwest portion of the spraypond, which is the case. FSAR 2.5.5.1.2 states "The undisturbed groundwater table elevation beneath the southwest end of the spray pond is about 670 ft. where it is in bedrock. At the east end of the pond, it is in soil at an elevation of 615 ft."

#### Assessment of Safety Impact

The piezometers are monitored to assure that liquefaction of the soil does not occur. As stated in FSAR 2.5.5.2.2.1, a groundwater elevation of 665 ft. was used in the liquefaction analysis.

Liquefaction relates only to granular soil. Piezometer number 2 cannot assess the possibility of liquefaction because it is located in an area where the spraypond is supported on bedrock.



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All piezometers, except number 2, are located in soil and presently have a maximum groundwater level of 652½ feet (12½ feet below the maximum groundwater elevation used in the liquefaction analysis).

Therefore the high groundwater elevation indicated by piezometer number 2 will not affect the safe operations of the spray pond and in turn the Susquehanna Steam Electric Station. Piezometer Number 2 should not be used as an indication of the potential for liquefaction in the future.

The deletion of piezometer number 2 will be included in the next revision of the FSAR. A request to change the Technical Specifications will be made in the near future.

Very truly yours,



N. W. Curtis  
Vice President-Engineering & Construction-Nuclear

CTC/mks

Attachments

cc: R. L. Perch - NRC

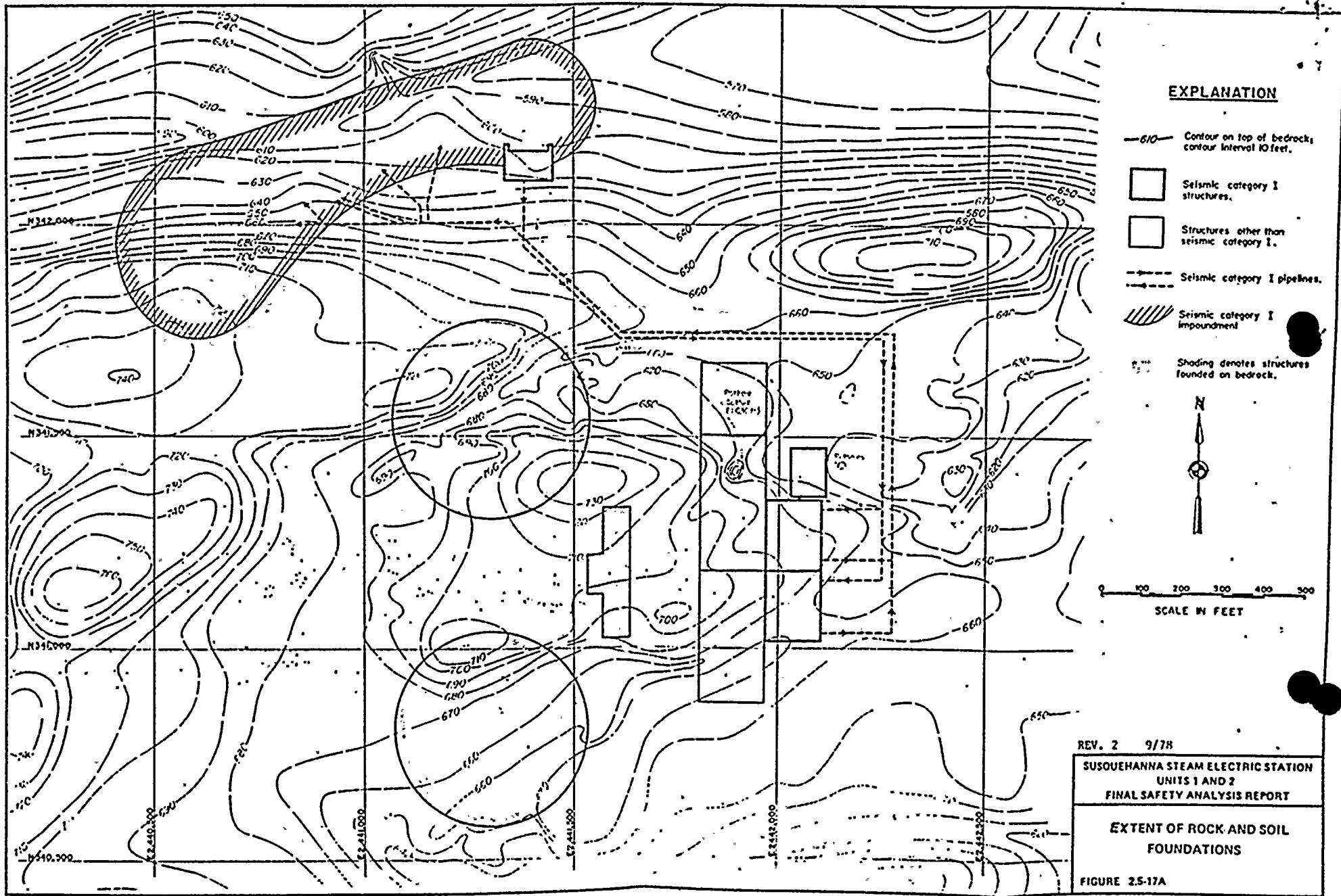


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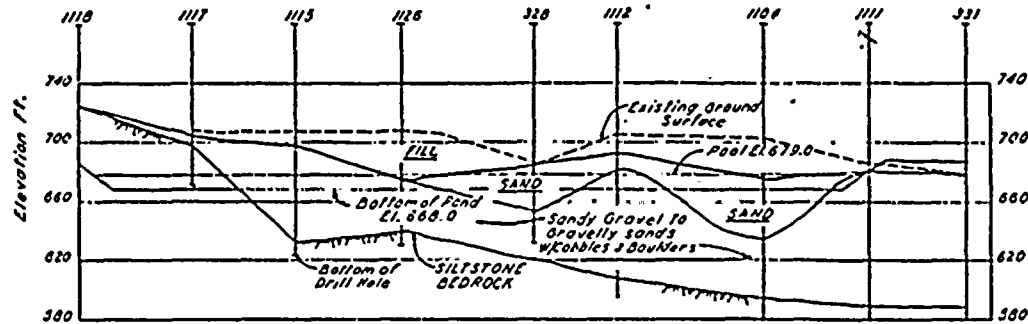
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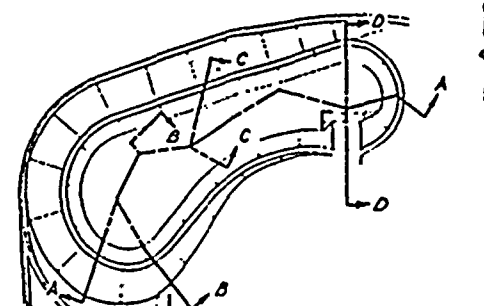




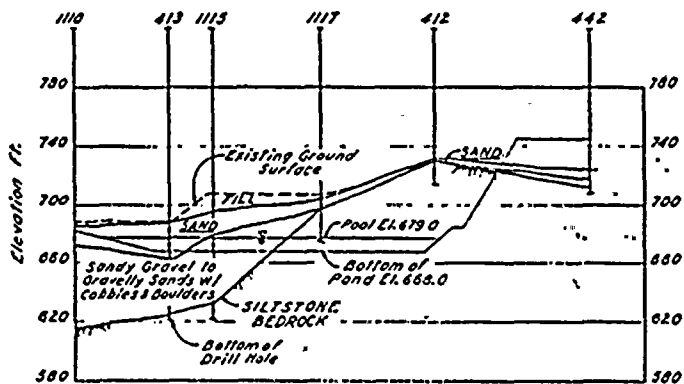
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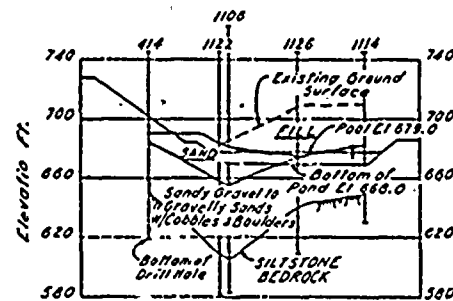
SECTION A-A



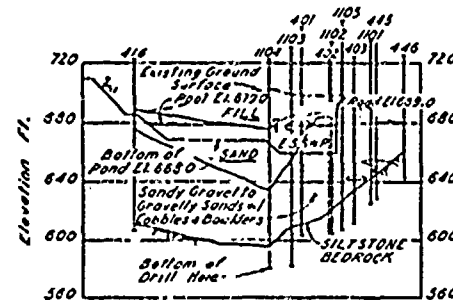
KEY PLAN



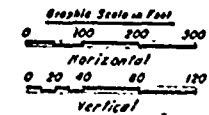
SECTION B-B



SECTION C-C



SECTION D-D



SUSQUEHANNA STEAM ELECTRIC STATION  
 UNITS 1 AND 2  
 FINAL SAFETY ANALYSIS REPORT

SPRAY POND - GENERALIZED  
 CROSS-SECTIONS

FIGURE 2.5-30

