UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NOV 3 1978

Docket Nos. 50-387
and 50-388

Pennsylvania Power and Light
Company
ATTN: Mr. William Barberich
Nuclear Licensing Group
Supervisor
2 North Ninth Street
Allentown, Pennsylvania 18101

Gentlemen:

On October 17 and 18, 1978 the environmental review staff conducted a site visit of the Susquehanna Steam Electric Station, Unit Nos. 1 and 2. As a result of inspection of the site and of the discussions with your technical staff, the additional information contained in the enclosure to our letter to you dated October 2, 1978 has been modified. The enclosure to this letter contains a revised list of additional information, and supersedes the list in the above referenced enclosure.

In order to continue our environmental review, we need completely adequate responses to these questions by November 27, 1978. Please verify that date within seven days of the receipt of this letter or supply an alternate date so that we can adjust the review schedule accordingly. If the requested information cannot be provided at the present time without performing studies, provide a time table showing the dates by when the information will be submitted to the NRC.

Sincerely,

Wm. H. Regan, Jr., Chief
Environmental Projects Branch 2
Division of Site Safety and
Environmental Analysis

Enclosure:
Additional Information
Requested

cc: Pennsylvania Power and Light Company
ATTN: Mr. Norman W. Curtis
Vice President-Engineering
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2 North Ninth Street
Allentown, Pennsylvania 18101

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Edward M. Nagel, Esq.
Vice President, General Counsel
and Secretary
Pennsylvania Power and Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101

Terrestrial

1. Provide data concerning bird kills at the cooling and meteorological towers at the SSES site. Also provide details concerning schedules and procedures used to document bird kills.

2. Explain the circumstances whereby the project site was increased from 955 (CP stage) to 1075 acres. Characterize the environment of the additional 120 acres prior to project activities and indicate any pertinent changes to baseline data as reported in the 1972 SSES-ER (Sec. 2.7, also Appendix A).

3. Characterize the bird survey conducted by Ichthyological Associates in 1977. To the extent possible, compare the results of the 1977 survey with findings of earlier studies. If any additional information concerning other terrestrial fauna or flora has been collected since the 1972-74 surveys, please provide same.

4. Provide details concerning studies designed to evaluate plant operational impacts on terrestrial biota, as alluded to in Section 5.5.5.2 of the 1972 SSES-ER.

5. In view of major changes in transmission facilities, advise of changes (if any) in the location and/or design of short-run 230-kv lines and substation facilities in the vicinity of the plant, as described in Sec. 3.2.1 (Fig. 3.2.1) of the 1972 SSES-ER.

6. Discuss efforts and methods to establish the presence or absence of threatened or endangered species (and/or critical habitat) in areas traversed by the project transmission system. Provide additional information or discussion to substantiate statements relevant to endangered species as presented in Amendments 4 and 5 of the 1972 ER.

7. Are any offsite substation facilities being developed or expanded to complete the proposed transmission system? If so, provide acreages and characterize the environment of the affected areas.

8. Indicate procedures undertaken by PP&L (if any) to ensure that metal structures (fences, buildings, etc.) in close proximity to activated transmission lines are adequately grounded to preclude severe electrical shock hazards.

Aquatic Ecology

1. Define "vicinity" as used in the first sentence of the first paragraph. (ER, p. 2.2-1)

2. Define and discuss "eel wall" in detail. (ER, Section 2.2.1)

3. Where are the eel walls located relative to the Susquehanna SES intake structure (distance upstream or downstream)? (ER, Section 2.2.1)

4. The second paragraph on ER, p. 2.2-21 discusses the presence of two cisco, which are listed as "rare" by the Pennsylvania Fish Commission. What species of cisco is being referred to and what options are available to the Applicant should further information indicate the species in question is threatened or endangered?

5. What are the dimensions of the wing walls? (ER, Section 3.4.2)

6. To what distance do the wing walls extend into the river channel? (ER, Section 3.4.2)

7. Provide reasons for using an embayment type of intake rather than perforated or slotted pipe intake structure. (ER, Section 3.4.2)

8. Provide the status of the shad reintroduction program. If applicable, discuss potential impacts of SSES operation on reintroduced shad and on the success of the program itself.

9. ER Section 5.1.3 discusses potential operational impacts only in the broadest sense and does not quantify any potential impacts. Provide discussion on the following:

   a. "important" species with respect to entrainment, impingement, and thermal discharges;

   b. susceptible life stages and seasonality of same;

   c. thermal tolerances and swim speed;

   d. projected entrainment losses of ichthyoplankton;

   e. operation impact experience at other power stations on the Susquehanna River, as related to SSES.

10. Appendix F, Environmental Technical Specifications. Provide bases for not proposing monitoring of:

    a. zooplankton, as suggested in FES-CP Section 5.5.2.b(2), p. 5-26;

b. farfield fishes to compliment the impingement program;

c. farfield ichthyoplankton to compliment the entrainment program;

d. plant growth within the heated blowdown holding pond, as discussed in FES-CP Section 5.5.2.d, p. 5-29 and 5-30.

11. Provide a copy of State of Pennsylvania Department of Environmental Resources Industrial Waste Discharge Permit # 4076203 dated October 1977. (ER, Section 3.6)

12. Provide the capacity, location and provisions for draining of the erosion control ponds, as they will be used for the disposal of cooling tower basin sludges. (ER, Section 3.7)

13. What is the area and volume of the embayment created by the wing-walls at low flow? at normal flow? at high flow?

14. What type of rip-rap will be used to fill the areas behind the wing-walls of the intake?

15. How much area will be filled by rip-rap behind each wing-wall?

16. How much of the area filled by rip-rap will be available for breeding by fish such as the spotfin shiner?

17. Please provide a discussion on the potential of gas bubble disease relative to operation of the discharge.

Thermal Discharge

1. The discharge velocity quoted, 6 ft/s, is not consistent with the specifications of 10000 gallons per minute discharge and 72, 4 inch diameter ports. Please give and explain the correct discharge velocity.
2. Review the properties of the thermal plume in light of the correct discharge velocity.
3. Please give the final specifications of the discharge structure including the maximum height of the structure above the river bed and the water depth above the pipe at various river stages.

Water Quality

1. Please provide a copy of each of the following permits. If a permit has not yet received, please indicate its status, and provide a copy of the permit application, if available.
   a. Final copy of NPDES Effluent Discharge Permit (the staff has a copy of the proposed document)
   b. Water quality certificate (401) - DER
   c. Industrial waste discharge permit - DER
   d. Sanitary waste discharge permit - DER
2. Please described in detail the operational monitoring program for both ground water and surface water quality. Please list the parameters to be measured, the frequency of measurement, and the location and depth at which the samples will be collected.

Chemical Discharges

1. The OL-ER states (Table 3.6-2) that a Cl_2 dose of 2 mg/L or 1065 lbs/day Table 3.6-2, footnote 4) will be used to control biological growth in the condensers. This is about one half the dose which is estimated in the CP-FES to be necessary (page 3-34 and Table 3.8).

   What is your basis for considering the dose given in the OL-ER to be sufficient?

   In particular:

   a. What is the desired free Cl_2 residual at the condenser outlet during chlorination periods and what is the basis for this choice? [The residual mentioned during the meeting of 10/18/78 of 0.5 mg/L is different from that given in Table 3.6-1 of the OL-ER.]

   b. Do you have results of tests on Susquehanna River water at the station site showing, for different times of the year, the amount of Cl_2 necessary to give the desired free Cl_2 residual as well as the amounts of Cl_2 necessary to give various free Cl_2 residuals? If so, please provide the test results.

2. The OL-ER gives the amounts of H_2SO_4 (Tables 5.3-1 and 3.6-3) which are needed to control scale under maximum and average conditions. The parameters which are needed to derive these amounts do not seem to be given in the OL-ER, also the CP-FES (page 3-39) gives a lower amount of acid as needed under average conditions than does the OL-ER (Table 3.6-3, Footnote 6).

   In view of this, what are the input parameters (e.g., desired pH and alkalinity levels) used by the applicant to calculate the amount of H_2SO_4 needed for maximum, average, and minimum conditions?

3. Provide a summary of the Susquehanna River water analyses similar to that given in Table 3.3-2 of the OL-ER for the years 1977 and 1978 (if available).

4. What testing procedures will the applicant carry out to ensure that the blowdown is in fact chlorine free when it enters the river?

5. When available, provide copies of the NPDES blowdown discharge permit and a description, which includes the chemical species, pH, and sampling frequency, of the procedures which the applicant proposes to use to monitor the blowdown stream.

6. Can the applicant give assurance, by means of the results of this testing procedure that the SO_2 has mixed well with and destroyed all the Cl_2 in the blowdown stream when it enters the river? If so, give the reasons supporting a positive answer.

7. According to the OL-ER (page 3.7-1), the maximum discharge of sewage effluent expected during station operation is 17 gallons/minute which will contain 1 ppm available Cl_2 (Table 3.6-1). Since Cl_2 is toxic to aquatic biota at concentrations well below 1 ppm, what methods have you considered to minimize the area of damage to river biota around the discharge point?

8. What future developments have been proposed or are under construction which are upstream from your site and are likely to affect the chemical characteristics of the river water at the station site?

9. What existing activities downstream from your station are likely to be affected by the changes in the chemical characteristics of the river water which will result from the operation of your plant?

10. What are the proposed changes in federal or state regulations on chemical discharges into the river which are likely to be in effect at the time your station becomes operational and which are relevant to your operation?

Hydrology

1. Identify those wells and springs listed in ER, Tables 2.1-41 and 2.1-42 as owned by PP&L that will be used when the plant is in operation.

2. Provide a description of the floodplain of the Susquehanna River near the site and its relationship to the site and station. Include maps and cross sections. (ER, 2.4.2)

3. Do the successive sheets in ER, Table 2.4-2 represent different months and do the columns labeled "projected" refer to the year 2020? Label that table to clarify this.

4. Clarify the information presented in ER, Table 2.4-3. Do the numbers represent the probability per year of a flood occurring in a specific month, do they represent the probability that the most severe flood in a given year will occur in the specified month or is there another interpretation?

5. Correct the date given on page 2.4-5 for initiation of stage and discharge data at Wilkes-Barre.

6. Describe the design hydrologic conditions for the intake system. This should include:

   a. Water levels, both maximum and minimum;

   b. Wave effects on the structure;

   c. Ice effects.

   Characterize the design conditions by comparison to historical and probable maximum (or minimum) conditions. (ER, 3.4.2)

7. Are there any water use or hydrologic impacts of construction that have occurred or are anticipated to occur that are substantially different than those described in Section 4.2 of the Final Environmental Statement issued for the Construction Permit? If so, plese discuss. (ER, 4.1)

8. Identify any plant structures or related topographic alterations in the floodplain. Discuss the potential for altered flood flows and levels, both upstream and downstream, due to those structures. Consider the possibility of debris accumulating at the structures and of debris from plant structures being carried downstream. (ER, 6)

9. Discuss the restraints on water use that may be imposed by the Susquehanna River Basin Commission during periods of low river flows. The discussion should address the following subjects:

   a. The river flow levels at which restraints or requirements for replacement water will be imposed and the estimated recurrence interval of those flows;

   b. The manner in which you intend to meet the requirement for replacement water during periods of low river flow. If it is by the construction of a reservoir, a complete description including all hydrologic design bases is needed. If you intend to purchase water, identify the vendors and their sources of water;

   c. If a supplemental water supply for use during periods of low river flow will not be available to you at the anticipated time of initial plant startup, discuss the consequences in terms of reduced plant reliability.

10. Discuss the effects of construction activities, including blasting and dewatering, on nearby wells. Specifically:

   a. Have you observed in your own wells (or received complaints from users of nearby wells) physical alterations in well water levels, maximum withdrawal rates or water characteristics (e.g., color, odor, sediment content)?

   b. If the answer above is affirmative provide a description of the alterations and discuss the investigations you have undertaken or plan to undertake and your conclusions (including justification) as to:

      1) the actual alterations in ground water characteristics,

      2) the duration of the alterations,

      3) the causes of the alterations,

      4) the effects on water users, and

      5) anticipated further alterations of ground water characteristics.

Meteorology

1. Information from Avoca, Penn. on the occurrence of fog was presented for a four year period concurrent with the onsite meteorological program. Provide long-term data (e.g., 30 years) for this meteorological phenomena. (ER, 2.3.1.2)

2. Provide any revisions to the extreme meteorological values presented in the Susquehanna Environmental Report that may be necessary as a result of meteorological events occurring subsequent to 1974. (ER, 2.3.2.1)

3. Provide the relative frequency of calms distributed with B stability. (ER, 2.3.2.1.1)

4. Tables 2.3-66 through 2.3-77 provide a precipitation wind rose for the Susquehanna site. During the winter months the occurrence of invalid observations is quite frequent (e.g., January & February - 22%, December - 46%). To what may these invalidations be attributed? Provide a list of the periods of significant outage, including the cause, and discuss the effect of these outages on the monthly data summaries. (ER, 2.3.2.1.3)

5. Atmospheric stability data are provided for Avoca based on STAR data, for the period 1971-1975. Explain the rationale for selection of this five-year period and the representativeness of this period to long-term meteorological conditions (e.g., 30 years). Describe the seasonal occurrence of Pasquill E and F stability categories which were noted to occur 24% of the year. (ER, 2.3.2.1.5)

6. Calendar year 1976 meteorological data were inputted into the natural draft cooling tower impact assessment model. Explain the rationale for selection of this year of data and its representativeness with respect to long-term atmospheric conditions. (ER, 2.3.6.6)

7. Regulatory Guide 1.23 identifies recommended accuracies of the entire meteorological data collection and reduction system; however, the specifications provided in Section 6.1.3.1.1.3 pertain only to the sensors. Provide the system accuracies for each parameter and compare these with the recommendations of Regulatory Guide 1.23.

8. Are the temperature accuracies presented in Section 6.1.3.1.1.3 instantaneous or time-averaged values?

9. On page 6.1-12, full scale on the wind speed sensor is listed as 25 mph. Is this a typographical error or does the number refer to something other than the maximum speed that the system is capable of recording? (ER, 6.1.3.1.1.3)

10. Identify the fraction of meteorological data recorded digitally that was lost and supplemented by strip chart records. (ER, 6.1.3.1.1.4)

11. Provide an estimate of the average and largest differences found in the comparison of strip chart and digital data for each meteological parameter measured. (ER, 6.1.3.1.1.4)

12. Discuss the results of the calibration findings including adjustments and/or replacements of components in the data collection and recording system. (ER, 6.1.3.1.1)

13. Provide the dates and times of significant instrument outage, the causes of the outage, and the corrective action taken. (ER, 6.1.3.1.6)

14. Are the digital data recorded onto magnetic tape instantaneous or integrated one-minute time averages? (ER, 6.1.3.1.1.6)

15. A description of the method used to calculate hourly wind directions is provided. What are the bases for selecting the modal direction for wind speeds between calm and 3 mph? How are multi-modal occurrences of the same magnitude within the same hour treated? For wind speeds about 3 mph, what are the differences in the resultant wind direction selected using the modal technique versus the vector analysis technique? (ER, 6.1.3.1.1.6)

16. Describe the proposed onsite operational meteorological program. If there are no differences between the preoperational program and the operational program, a statement to that effect and commitment to conduct the operational program is sufficient. If there are differences in the operational program, describe the reasons for the differences and discuss any plans and rationale for updating the program during station operation. (ER, Sec. 6.2)

Cooling System

1. Provide detailed bases for using less-than-state-of-the-art drift eliminators. (ER, p. 3.4-7)

2. Provide expected drift rate at off-design conditions, such as low wet-bulb conditions and/or partial plant loads.

3. Will the spray pond be used for cooling during non-emergency periods? If so, describe the conditions under which it may be used, frequency and duration of use, etc. How often will the system be tested? (ER, p. 3.4-11)

4. Provide a full description (or a reference) to the model, including full documentation of validation studies. Provide bases for the statement on page 6.1-23 that the model does in fact yield predictions in good agreement with observations. (ER, Sec. 6.1.3.2.4)

5. Provide bases for using the full heat load, rather than only the sensible heat flux, in calculating the term "F". The use of the full heat load leads to plume rise values that are too high. (ER, p. 6.1-23)

6. Provide bases for using two separate values of F in the plume rise and drift formulas. (ER, Sec. 6.1.3.2.5.2)

7. Describe the procedure used to calculate plume rise during periods of downwash. (ER, Sec. 6.1.3.2.5.3)

8. For validation purposes of drift effects and plume effects describe the effects and impacts observed due to cooling tower discharges at the Montour plant (fogging, icing, wetting, snowfall generation, long plumes, drift effects).

9. Provide bases for using of a 0.002% drift rate when the guaranteed rate is 0.02%. (ER, p. 5.1-10)

10. The data presented indicate gross overprediction of plume length; 99% extend to 6000 ft, 70.5% to greater than 20,000 ft. Provide data on observed plume lengths from natural draft cooling towers in a climatic zone similar to that of the SSES that would support these predictions. (ER, Table 5.1-21)

11. Explain the high drift values SSW of the plant in view of the low frequency of NNE winds. (ER, Table 5.1-23)

12. Compare these drift predictions with natural salt deposition for the area. (ER, Table 5.1-23)

13. Complete the equations in the definition of Σ_y expressed on page 6.1-18.

14. On page 6.1-18, a reference is made to "plume number". Define this term and explain its role in estimating short-term relative concentration values.

15. Provide a reference for the cooling tower impact assessment model which was used. (ER, 6.1.3.2.4)

16. Provide a reference for the comparison of the cooling tower impact assessment model results with actual observed plume lengths at Keystone Generating Station or describe specific details of the comparison such as input parameters and assumptions, actual meteorological conditions and how the predicted results compared with observations. Discuss the applicability of the model for use in evaluating the Susquehanna site. (ER, 1.3.2.4)

17. For each parameter, provide the level of meteorological data inputted into the model to assess the impact of the proposed Susquehanna natural draft cooling towers. (ER, 6.1.3.2.4.1)

18. Describe any adverse environmental impacts (such as fogging, icing, snowfall, drift damage to biota, switchyards, etc., plumes intersecting elevated terrain areas, etc.) from natural-draft cooling towers in the applicant's system.

Cost and Benefits

1a. If Susquehanna Unit 1 did not operate in first year of operation, and PP&L had to find replacement energy from the sources in the table below, what is your best estimate of the numbers of the following table (1980 dollars)?

	High Sulfur Coal	Low Sulfur Coal	Oil	Combustion Turbine	Diesel Generator	Hydro	Nuclear
Fuel Cost (Mills/KWH)							
Operating and Maintenance Cost (Mills/KWH)							
Other Cost (Mills/KWH)							
Total Operating Cost (#1+2+3) (Mills/KWH)							
Percent of Replacement Energy Generated by PP&L							
Percent of Replacement Energy Generated by Interchange							

1b. Assuming Susquehanna is operating in fiscal 1982, provide the following costs: (1) fuel, (2) operating and maintenance, (3) other, (4) total. Use 1980 dollars.

2. Provide what fraction of the capital costs of Susquehanna should be considered not sunk. Should an OL be delayed or not granted then, excepting fuel and operation and maintenance, can any of the costs of Susquehanna be recovered? If yes, please explain in what way and the amounts of money involved. For example, if the plant never became operative, how much less than 31.2 million (ER, Table 5.8.1) would decommissioning costs be?

3. Provide form 1 and form 12 reports filed with the FPC for the three most recent years.

4. For Schedule 432a, Form 1, please further provide the breakdown of kilowatt hours generated (line 12), fuel costs (line 21), and production costs other than fuel (line 34 minus line 21) for each of the fuel types for each of the plants (when there is more than one fuel type).

5. What was the average delivered cost of coal per BTU and in mills per kilowatt hour delivered to the PP&L system in 1977 by type of coal.

6. Provide the PP&L projections for future cost of uranium and coal fuel in mills per KW hours for the life of Susquehanna units.

7. What are the megawatt hours demanded per heating degree day and megawatts per cooling degree day?

8. Explain your contingency plans in the event the Susquehanna operating license is not granted to the degree they may differ from question #1.

9. Provide the most recent Annual Reports to Stockholders of Pennsylvania Power and Light Co. and to REA of the Allegheny Electric Cooperative, Inc.

10. Why (p. 1.1-2) might there not be renewal of Applicant's hydroelectric licenses?

11. Provide completed reexamination of projections in Appendix B1 (referred to on p. 1.1-16) as "substantial reexamination of these projections is underway" and load projections "based on a somewhat different methodology than in Appendix B2." (ER, p. 1.1-17)

12. Explain footnote 5 of Table 1.1-6 more fully and give the finalized arrangements with LU.

13. Why do fuel cycle costs in Table 8.2.2 differ between Applicant and cooperative?

14. How is the cost of permanent disposal of spent fuel calculated for Table 8.2.2?

15. Give the general formula used to calculate levelized annual costs (as in Table 11.3.1) together with the definitions of the symbols. Do the same for levelized cost (as in Table 8.2-2).

16. Is 10.5% used throughout as the discount factor to calculate present value? If not, what other discounts were used?

17. Provide one copy each of references 1.1-1, 1.1-2, 1.1-4, 1.1-5, 1.1-6, 1.1-7, 1.1-8 (for 1977) and 1.1-9 and REA Bulletin 120-1.

18. Are the members of the PJM interconnection required to buy cheaper power from other members rather than generate the electricity themselves, and is this arrangement automatic standard operating procedure or are there other factors involved before energy can be shipped throughout the PJM interconnection?

19. In answering questions 1, 6, 19, and 20, please indicate when and under what circumstances the cheapest generating cost data (and/or replacement energy) applies to PP&L facilities and when such cost data applies to other utilities within the PJM interconnection.

20. Provide for the PJM System a table similar to Table 1.1-4, use PJM's most likely demand projections.

21. With respect to Tables 1.1-3 through 1.1-6 -- in calculating reserve margins without Susquehanna and with or without hydro and oil capacity, the adjustments taken are not consistent with the capacity credits given for these items at the top end of the table -- explain the apparent discrepancy.

22. Provide comparative economic and environmental analysis of the alternatives for providing replacement water to comply with 18 CFR Part 803 amendment September 30, 1976.

23. In Table 1.1-15 does (peak) refer to PP&L and PJM's peak periods?

Socioeconomic

1. Provide a profile on the operational work force and the method used to develop this profile including: (a) number of workers, (b) family size, (c) number of in-migrants, (d) residence type preference, (e) location preference (rural/town and probable town), (f) skill and technical training and (g) wage scale. (ER, Section 8.1).

2. Provide data on housing availability for the Columbia and Luzern counties. (ER, Section 2.1).
3. What is the base to service worker ratio for the plant site area and Luzerne and Columbia counties? (ER, Section 8.1)
4. Provide an estimate of the locations and commuting patterns expected for the operational and induced service workers that could be hired locally. (ER, Section 8.1) How were these estimates derived?
5. Provide additional data on the picnic areas to be developed on the floodplains (i.e., facilities, estimated numbers of visitations). (ER, Section 8.1)
6. What is the estimated number of annual recreational visitations to the river in front of the plant (ER, Section 8.1)? Is the number included in the estimated number of visitors provided in ER, Section 3.1.6?
7. What are the present capabilities of the following social services for Columbia and Luzern counties and the communities of Berwick, Black Haven, and Sheckshinny (police, fire, and ambulance services, sewage and water facilities, and in and out patient medical care)? (ER, Section 2.1)

8. Provide copies of the references used to prepare Tables 2.1-18 and 2.1-19. (ER, Section 2.1)
9. Provide additional data similar to that presented in Table 2.1-17 on the 40 Berwick industries referred to in Section 2.1. (ER, Section 2.1)
10. Who will maintain the cropland, nature trails, and recreational facilities described in ER, Section 3.1.6? Provide more details on the scheduling and maintenance of the recreational areas.
11. Based on the existing formula for the Pennsylvania Public Utility Realty Tax, estimate the taxes to be redistributed to Luzerne, Columbia counties due to the Susquehanna unit. Indicate whether the formula provides any special credits to host and neighboring counties.
12. Will a program be established to control hunting on PP&L lands that surround the plant and are posted "no trespassing?" These properties now adjoin land owned by local residents.
13. How many homes has PP&L purchased for the plant and in the area surrounding the plant property? How many individuals were involved and how many of these people were retired? What is the current use of these homes, and the property tax paid by PP&L? Are local police and fire services supplied to these homes; what financial compensation is made by PP&L to support these services?
14. Are the two archaeological sites located on the plant property (see amendment) functionally or culturally related to the large burial areas reported across the river in the transmission corridor? What is the current status of these sites on the plant property and will they have a protection/mitigation program since they might be affected by the operational recreational areas?

RADIOLOGICAL ASSESSMENT

1. Identify the current nearest locations of meat animals within 5 miles of the plant site, in the same manner as used in Tables 2.1-34 through 2.1-38.

2. Explain the omission of Selinsgrove from Table 5.2-19 & 20, and the different transit times for Danville in Table 5.2-20 and 5.2-23.

3. What is the future potential for use of Susquehanna River drinking water at the Berwick, Pa. intake?

4. How many man-hours/year of the recreational usage in Table 5.2-32 is considered for swimming only?

5. The assumption of a garden at the nearest residence in the specification does not satisfy the option requirement. In lieu of the garden census, sampling of broad leaf vegetation may be performed at the site boundary or location in the sector with the highest D/Q.

6. The following statement needs to be added to the first paragraph used under B of Section 3.2 (Appendix F):

   when more than one of the radionuclides in Table F-4 are detected in the medium, the reporting level shall be exceeded if:

$$\frac{\text{concentration(1)}}{\text{reporting level(1)}} + \frac{\text{concentration(2)}}{\text{reporting level(2)}} + \cdots\cdots \geq 1$$

7. The monitoring location description, in Table F-2, should include the compass sector and distance from the plant. The nearest downstream monitoring station (Table F-2) for drinking water should have composite sampling equipment capable of collecting an aliquot water sample every two hours.

8. The Cs-134, 137 Minimum Detectable Level for airborne particulate sample analysis in Table F-3 should be 1×10^{-2} pCi/m^3.