Susquehanna Alliance
P O Box 249
Lewisburg, PA 17837
May 23, 1981

Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Att: Director, Division of Licensing

Sir/Madam:

We are enclosing our comments in relation to the Supplement to the Draft Environmental Impact Statement related to the operation of Susquehanna Steam Electric Station, Units 1 and 2. Docket numbers 50-387 and 50-388.

Since so much time has elapsed from the date of the original Draft EIS, it would be in the highest public interest to issue a 2nd full Draft EIS incorporating all previous comments and NRC responses. This 2nd full draft would provide the Commission with further information with which to base its decision regarding the environmental impacts of operating the Susquehanna Steam Electric Station.

Sincerely,

Michael M. Molesevich

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for the Susquehanna Alliance

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COMMENTS ON DRAFT SUPPLEMENT TO DRAFT EIS FOR THE SUSQUEHANNA STEAM ELECTRIC STATION, NUREG-0564, SUPPLEMENT NO. 2

1) The purpose of this supplement was to assess the additional environmental risks due to class nine accidents. These accidents previously have been considered to have minimal environmental effects because their probabilities have been thought to be low. However, since the accident at Three Mile Island, the conclusion of this supplement has not changed from the conclusion of the original Draft, EIS, of June 1979. Supplement: "These impacts could be severe, but the likelihood of their occurrence is judged to be small." Page 6-2 of the original Draft states: "Their consequences could be severe. However, the probability of their occurrence is judged so small that their environmental risk is extremely low." It is obvious that this supplement does not achieve its purpose. Therefore, the Susquehanna Alliance requests that another supplement be made available that adequately addresses the additional environmental risks due to class nine accidents.

2) This supplement does not address the long-term, man-made, and natural surface contamination from radionucleides. According to one source the delayed cancers and genetic defects due to radiation from ground and buildings contaminated with long-lived radioactive cesium could be the most severe consequence from a major release. (J. Beyea, Some Long-Term Consequences of Hypothetical Major Releases of Radioactivity to the Atmosphere from Three Mile Island, President's Council on Environmental Quality, September, 1979)

3) To always assume that downwind recipients of radioactive fallout will receive less dosage than those closer to the plant (source of radionucleides) is false.(Section 6.1.1.2) The plume does not always disperse more radionucleides closer and less further away due to certain meteorlogical conditions, i.e. ground base inversion. Also, the dosimeter readings 9 miles northeast of TMI, near Harrisburg, were higher than were the readings closer to the plant.

4) The supplement relies too much on sheltering and evacuation measures to help mitigate the effects on the local population. This ignores the potential for for the sequences of an accident which can take place in a very short time.(6.1.1.3) For example, anticipated transients without SCRAM which, according to Dr. Richard Webb can breach the reactor vessel within 6 seconds.

5) On page 6-5, section 6.1.2 the supplement states, "This experience base is not large enough to permit a reliable quantitative statistical inference." No large-scale-commercial reactor has yet gone through a complete life cycle. Therefore, to state that, "...significant environmental impacts due to accidents are very unlikely to occur over time periods of a few decades.", is an inaccurate conclusion.

6) To state that, "...a few million curies of xenon-133,..." were released at TMI implies a lesser severity when the NRC has stated that at least 13 million curies were released.

SUPPLEMENT COMMENTS CONTINUED

7) The Unit 2 reactor at TMI was very young. The fuel was only in service (fissioning) for three months. Had an accident of this severity occured with an older fuel assembly, then the inventory of the fission products available for release to the environment would have been much greater.

8) There are many assumptions based on the events, data, and results on the accident at TMI. However, there are many uncertainties in the analysis of the accident itself. While the supplement recognizes that the numbers used for population exposures are estimates, it does not discuss the uncertainties within those estimates.(6.1.2) "It has been estimated that..." For example, the monitors located on the stack vents were pegged off scale, and many of the off-site dosimeters were not brought into service until 3 days after the accident—when most of the radionucleides had already escaped.

9) The psychological impacts of the population surrounding the plant for at least a 75-mile radius must also be considered. It is obvious that the psychological effects of the people surrounding TMI and of central Pennsylvania were profound and continue today.

10) The supplement assumes that the owners of the Susquehanna Plant will have control of the water from the river by restricting its use during and after an accident.(6.1.4.5) thereby claiming that the consequences would be more economic and social, and not radiological. The supplement does not address the use of water from the river by: the borough of Danville, the city of Sunbury and other downstream communities who withdraw their drinking water from the river, farmers that use water from the river for irrigation and other agricultural related activities (and especially Amish farmers who might not be aware of an accident miles downstream), industries that are located on the river that also use its water i.e. Merck Co. in Danville, and unalerted people who may be fishing the river at the time of the accident. The supplement should also address the uptake of radionucleides into the aquatic food chain.

11) The statement that arrangements have already been made to control highway traffic (6.1.3.2) seem premature since the Emergency Preparedness Plans for Susquehanna are in an advanced but not fully completed stage.

12) The supplement recognizes the substantial uncertainties calculated by the Reactor Safety Study. However, these uncertainties are not reflected in the tables where firm numbers are used. These tables should use ranges of numbers to reflect these uncertainties. Also, the range of accidents do not appear to have been adjusted to reflect the accident at TMI.(6.1.4.7)

13) The calculated, estimated, economic risk per year (p.6-19) reflects an inconsistency in the use of the Reactor Safety Study. In taking the example of an average decontamination cost of one billion dollars, the supplement assumes the probability of 2.4 chances of this occuring in 100,000 reactor years. Thus yielding an estimated economic cost of

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24,000 dollars per year. However, on page 6-20, section 6.1.4.7, it is implied that the reactor safety study predicted the probability of a TMI-type accident as greater than one chance in 400 reactor years. Since this accident has an estimated clean-up cost of at least one billion dollars, then the economic risk could be calculated at 2.5 million dollars using the latter probability. It should be noted that this figure is somewhat larger than 24,000 dollars.

14) An obvious shortcoming of the accident at TMI was that there was no plan of recovery—either with the facility itself or the off-site consequences. At present they are developing the strategy and plans for the recovery of that accident along with its environmental impact. With the safety of the public in mind, this should have been prepared before the accident had occurred. Therefore, a plan of recovery and its environmental impact should be included in the analysis of an accident.

15) The economic risk associated with protective action and decontamination cannot be compared with the property damage costs associated with alternative energy technologies—especially anthracite coal. Anthracite does not have the same amount of sulfur compounds that most other coals have and would not lead to a substantial amount of acid rain as would the use of bituminous. Also, the increased use of anthracite can only lead to improved environmental conditions in that area. Since much of the area is already impacted then more mining would alleviate such problems found in that area such as: acid mine drainage, abandoned mines and spoils, a distressed economy, and the elimination of underground mine fires, open shafts and pits, and other dangerous conditions. This would be possible because all new/recent mining would meet stringent environmental laws and guidelines that were not in effect years ago when most of the damage was done. Page 6-18,(sect. 6.1.4.6)

16) Why are there no thyroid doses included on table 6.1.4-1?

17) Accident sequence or sequence groups should be expressed in terms rather than symbols or letters. (table 6.1.4-2)

18) Probability should be expressed as a range in table 6.1.4-2.

19) Other tables should include sum totals of land/surface accumulations of radionucleides based on probability and economics of decontamination.(table 6.1.4-4)

20) Evacuation item can also be considered probabilistically and the health effects should be more properly treated using site specific data. Considering the range of susceptibility to the health effects of radiation and other factors would be helpful to place on the figures the background radiation and other data from TMI. (figures 6.1.4-1, -2, -3, -4, -5)

21) The consequences of the accident at TMI should also be included in figure 6.1.4-6.

SUPPLEMENT COMMENTS CONTINUED

22) The maps are of the poorest quality and should be improved so that they could be read more clearly. (figures 6.1.4-7 and 6.1.4-8)

23) Add a map or maps that would show the isopleths of costs of mitigation.

24) The speed of groundwater movement seems to be highly underestimated, especially in the local glacial material, and epspecially under saturated ground conditions.(6.1.4.5)

25) There should be references sited of past work or studies that show effective isolation of radioactive contaminants in groundwater. (6.1.4.5)

26) This supplement should address site-specific conditions and not generic conditions as it seems to have done.

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