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

OCT 14 1980

Ms. Jane Seed
150 East 10th Street
Hobart, Indiana 46342

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Dear Ms. Seed:

As indicated in Mr. Folsom's letter of June 20, 1980, your comments regarding the Bailly facility, which you made at the issues briefing session held in March 1980 at the White House, have been forwarded to the Nuclear Regulatory Commission for our consideration. Your comments on the Bailly plant fall into three basic areas; i.e., site suitability with emphasis on the population density, the feasibility of evacuating the adjacent steelmill and national park in the event of a severe accident at Bailly and the capability of the foundation of this plant. Each of these areas is discussed below.

Your comment that the Bailly site, ". . . scored worst of all the country's sites . . ." undoubtedly refers to the proposed guidelines for siting of future nuclear power plants contained in NUREG-0625, "Report of the Siting Policy Task Force," August 1979. That document proposed new siting criteria, including surrounding population, which would be considered by the NRC staff in evaluating sites for nuclear power plants. It should be noted that the basic intent of the NRC in issuing this document was to reemphasize the importance of low population as one of the factors to be considered when evaluating a proposed site. However, NUREG-0625 does not consider any of the other equally important siting considerations such as the availability of cooling water, the proximity of a site to existing transmission corridors, the geology and seismology of a site and the environmental impact of a plant. Since all of these factors must be considered in establishing acceptability of a site, NUREG-0625 is not intended to be the sole basis for judging sites. Public comment on this document has been invited.

With respect to your comment characterizing the Bailly site as the worst of all the country's sites, we have reviewed all of the presently licensed sites for their potential to cause significant radiation exposure to the surrounding population in the event of a severe accident. We found that when the distribution of population, the potential source of fission products and a typical "worst case" meteorological dispersion is considered, the Bailly site ranks eighth to ninth in terms of potential radiation dosage for distances between 30 miles and 50 miles away from the site. (At these distances, the population centered about Chicago, Illinois is included.) However, Bailly is far down the list for distances up to ten miles from the plant. This reflects the relatively small population in a ten mile radius around the Bailly facility as well as its relatively small power level in comparison with other nuclear power plants. If only

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the total population around a facility is considered, the Bailly plant ranks eighth at a distance of 10 miles from the site. This is relevant to the evacuation of the total population within a 10-mile emergency planning zone (EPZ). We have also determined on various other population criteria that the Bailly facility does not rate as one of the worst of the country's sites.

With respect to your concern regarding the feasibility of evacuating Bethlehem Steel in the event of a serious accident at Bailly, this was considered prior to issuance of the Bailly construction permit. You may wish to refer to Chapter 13 of the Bailly Preliminary Safety Analysis Report, a copy of which is available in the West Chester Public Library, 125 South Second Street, Chesterton, Indiana, 46304. This local Public Document Room contains all information pertaining to the Bailly facility. Basically it was determined that only a small number of people would be required to shutdown the critical steel facilities and that adequate protection could be provided for these steel workers. In a similar vein, during the construction permit stage, it was determined that there would be a limited number of park visitors in the westernmost portion of the Indiana Dunes National Park adjacent to the Bailly facility. Our position with respect to these visitors is that they would receive prompt notification in the event that an evacuation of that area was required and that this evacuation could be readily accomplished. Both of the above topics were considered in the licensing actions leading up to the issuance of the Bailly construction permit.

The evacuation of all people within the 10-mile EPZ around Bailly was recently considered in a study by a consultant to the Federal Emergency Management Agency. This FEMA funded study indicated that the 10-mile EPZ could be evacuated in about three hours under normal conditions and in five hours during peak attendance at the nearby State Park Beach. Both of these estimates place the Bailly site as ranking about fifth or sixth in terms of the time required to evacuate the 10-mile EPZ. While we are continuing our review of the evacuation feasibility of various nuclear power plants, we can state that Bailly has no fundamental impediment unduly restricting evacuation and that the Bailly site is not the worst site in this regard.

The environmental impact of the construction and operation of the Bailly facility on the flora and fauna in the Indiana Dunes was considered during the 65 hearing days before the Atomic Licensing and Safety Board and was not found to be significant.

Finally, we recognize that the soils in the upper strata at the Bailly site consist of a compressible clay layer of varying thickness overlain by low density dune sand. This material is not suitable as a foundation for a nuclear power plant. However, NIPSCO has excavated the dune sand and proposes to drive piles through the compressible clay layer into the underlying, dense interbedded layers of sand and clay. All the field investigations to date have indicated that piles driven in this manner can

carry loads far in excess of the actual loads which could occur under extreme environmental conditions (i.e., a severe earthquake) in combination with the design basis accident. While we have not yet completed our evaluation of NIPSCO's present proposal for installing the foundation piles, we intend to assure that the piles provide a proper foundation for the plant.

Thank you for expressing your concerns regarding the Bailly site.

Sincerely,

Harold R. Denton

Harold R. Denton, Director
Office of Nuclear Reactor Regulation