

RESPONSE TO NRC DRAFT ENVIRONMENTAL STATEMENT  
FOR MIDLAND PLANT FROM BARBARA STAMIRIS



GENERAL

The NRC's DES for Midland is not only flawed by unconservative data base assumptions, but is an attempt to justify the need for and acceptability of a nuclear plant by denying the existence of significant safety concerns and by advancing artificial economic analysis.

The unresolved safety issues regarding soil settlement problems and their remediation at this plant are, according to NRC statements in 1981, serious, extensive, and unprecedented. These soils issues set forth in the NRC Dec. 6, 1979 Order, have yet to be resolved by the ASLB hearing the case, yet the DES notes the absence of compelling safety concerns arising since the construction permit review and goes on to say "in the absence of any significant environmental or safety objection, the decision is an economic one."

The NRC then sets forth an economic analysis which considers the \$3.4 billion construction costs to be not "relevant for consideration now" despite the fact that these costs will become a part of the energy ratebase to the public as soon as the plant operates according to MPSC policy. Only production and operation costs are considered, resulting in a cost savings conclusion.

Although the NRC ignores the capital investment of the Midland plant, it does consider those factors for non nuclear alternatives. Saying "these alternatives would require significant environmental and capital commitments in addition to their cost of operation", it rules

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them out by using a double standard.

Unrealistic data base assumptions are apparant in the acceptance of a decommissioning estimate for Midland which represents less than 1% of its construction costs, in the face of Consumer's 1980 decommissioning request to the MPSC for Big Rock and Palisades which represented 100% of their original costs. Although inflation accounts for a portion of this difference, the discrepancy remains significant.

These are among the most flagrant examples of the extent to which the NRC feels compelled to go to justify the operation of a nearly complete facility. Consumers chose to proceed without predetermined acceptance criteria or NRC approval in their soil settlement remediation. Yet these and other construction practices undertaken supposedly at the Applicant's own risk, carry no risk at all when "sunk costs" are used in the manner the NRC has here elected, to justify the need for this plant. The denial of the existance of significant safety concerns at this plant is a virtual abdication of NRC regulatory responsibility to the public.

#### GEOLOGICAL CONSIDERATIONS

1) The effect of the probable maximum flood (PMF) has not been adequately accounted for in that the cooling pond dike embankment was not designed and constructed as a Category I structure resulting in questionable freeboard allowance, according to NRC testimony in the OM-OL hearing. The following 4/3/82 newspaper article raises further questions about the adequacy of PMF calculations for this plant.

# Dam at Sanford on hazard potential list

4-3-82  
Midland  
Daily News

From Associated Press  
And Daily News staff reports

Six dams in Midland and Gladwin counties would create "high hazard potential" if they failed, according to a report issued by a state environmental engineer.

A "high" rating does not mean the dam is expected to fail, but that if it does fail, there would be loss of life and extensive damage, according to Gary Croskey of the Department of Natural Resources.

Croskey supervised a four-year survey of 229 of Michigan's 2,300 dams.

Five dams given a "high hazard" rating include: Sanford Dam, Tittabawassee River; Beaverton Dam, Rose Lake; Chagat Dam, Wiggins Lake; Smellwood Dam, Tittabawassee River; Sugar River Dam, Lake Lancer; and Edenville Dam, Winom Lake. All but Sanford Dam are in Gladwin County.

Croskey used three ratings in the survey — high, significant and low. A rating of "significant" would mean if the dam failed there would be potential loss of life and some damage. A "low" rating would mean minor damage.

The "high" rating is based on assuming that the worst possible conditions — for example, flooding — occur at the dam, Croskey said. Engineers then estimated what property or persons could be affected below the dam.

The report does not mean residents should expect the dams to fail, Croskey said. It does mean that residents living

below the dams should be aware of the potential damage if the dam does fail, he said.

He also said residents should be aware that dam failure does not occur only during periods of flooding.

"We've had dams.... just give way," he said.

Telephones were not answered Friday morning at the Wolverine Power Co., which operates the Sanford dam, and Beaverton city manager Jim Wesley was not in his office Friday morning.

A 125-year-old earthen dam collapsed March 25 at Heli, in Livingston County, forcing evacuation of about 25 families. Croskey said other communities may be in the same jeopardy.

Two small lakes in southwest Michigan, near Constantine in St. Joseph County, drained last weekend when an earth bank washed away, but no evacuations were necessary.

"It's frightening because you don't know when it's coming," Croskey said. "Many of the dams haven't been touched in years. Through neglect, many of them have weakened internally. In most cases, there are no funds for their upkeep."

Croskey said dam owners and operators will meet next month with state officials to discuss maintenance and safety programs. He said the state survey was part of a nationwide safety check authorized by Congress after a 1977 dam failure in Georgia caused a 30-foot-high wall of water to hit dormitories of a small college, killing 40 people.

2) Artesian water pressure, and its relationship to the underlying aquifers discussed in Appendix D to the 1970 SER, has not been addressed and resolved as a possible source of groundwater problems.  
(8/12/81 transcript p4293, OM-OL proceeding)

3) "The Water Resources Commission, State of Michigan (1960) has stated that the water requirements in the Midland area for cooling, processing, and waste assimilation have already exceeded the supply", according to Appendix D of the 1970 SER, yet the DES fails to consider

this finding and in fact accepts the elimination of the additional cooling capacity offered by the original cooling tower design.

4) The cause and effects of the unusual corrosion of stainless steel safety piping identified in 1979 near the BWST has not been resolved .

5) The effect of possible contaminants from seepage from the Dow pond have not been adequately analyzed in relation to corrosion or other synergistic effects with radioactive emissions from the nuclear plant.

#### MITIGATION OF ACCIDENT CONSEQUENCES

Section 5.9.4.4 of the DES credits Midland with possessing standard Engineered Safety Features designed to mitigate accident consequences, however these specific safety features are not analyzed as they exist at Midland.

The discussion of design features notes the passive mitigating capacity of the "steel lined, pre-stressed post-tensioned" concrete containment structure.

There is a bulge in the steel liner plate of Unit II (55e 74-01, 77-01). Structural reinforcing bars and Shear reinforcement were found lacking in the containment in 1975 and 1981 respectively (55e 81-05). Tendon sheath omissions occurred in 1977 and in 1979, containment post-tensioning errors occurred( I&E 79-19).

The component cooling water system, the next safety feature discussed, was found defective in 1980(55e 80-06) as was the reactor cavity cooling system in 1981(55e 81- 06).



Lastly the DES states, "all the mechanical systems mentioned above are supplied with emergency power from onsite diesel generators". The integrity of the diesel generator system itself is a major unresolved safety question of the ongoing soil settlement proceeding.

In addition to these deficiencies, the reactor pressure vessel anchor bolts have cracked and failed requiring extensive permanent design modifications(55e 79-10). During the investigation of this problem B&W requested confirmation of the Bechtel design input and discovered that the Bechtel NSSS Seismic-LOCA Analysis was defective (55e 80-07 #4) Errors were also found in Bechtels design input for the reactor building internal wall models which remain unresolved final 55e report(80-07 #5).

On top of these site specific problems with the reactor containment, the Unit 1 B&W reactor has been identified as one of 12 manufactured with a defectively high copper content in the welding making it sensitive to overcooling and embrittlement problems. Add to that the generic B&W system sensitivity and TMI problems, and the combined effect is overwhelming. Yet the NRC does not systematically address the combined and inter-related effect of these weaknesses.

The second section on Accident Mitigation in the DES concerns Midland site characteristics. This site was considered marginal even by 1969 standards according to the ACRS on 2/6/69 because of the Dow population within the exclusion zone and part of the city of Midland within the low population zone. According to this report "the site received a -34 index rating when compared to the hypothetical reference site". The DES states that "although a portion of the city is within the 1-1/3 mile (limit), it consists almost entirely of the Dow Chemical Property."

The NRC interprets CFR100 population distance requirements to be based on the "population center distance" thereby justifying the location.

The 1969 Foundation Investigation Report by the Applicant notes that the reactor site had to be relocated twice "because of subsurface conditions encountered" before returning to the original location. Located on a floodplain which had to be built up with up to 35 feet of fill soils, it is apparant that the controlling factor in the location of the Midland plant was the need to be near the Dow complex to provide it with process steam. Despite the Applicant's failure to meet the compensatory design requirements regarding removal of loose surface sands, fill soil procedures, and ground water analysis for this site which have resulted in the sitewide soil settlement problems facing us today, the NRC continues to defend and justify the construction of this plant.

#### NEPA CONSIDERATIONS

NEPA requires that a federal agency make a "good faith" effort to predict reasonably foreseeable environmental impacts after taking a hard look at potential impacts. (PSC of Oklahoma, LBP78-26, 8NRC 102, 141) It also requires that the NRC give "considerable weight to action taken by another competent and responsible governmental authority in enforcing an environmental statute". (Ibid p281,282) The DES does not represent a good faith effort to take a hard look at environmental impacts likely from this plant. Hopefully before it final Environmental Impact Statement the NRC will take a hard look at the studies by the Michigan Attorney General indicating that the Midland plant is neither necessary or cost effective compared to environmentally safer alternatives and at the

recent criticisms of the Michigan Environmental Review Board to the DES.

The overall effect of the safety and environmental deficiencies at the Midland Plant will reduce its capability to operate at its intended capacity at the least, and threaten the health and safety of the public at the worst. The analysis performed by the NRC in its DES falls far short of NEPA and Atomic Energy Act mandates it is required to uphold in the public interest.

Respectfully Submitted

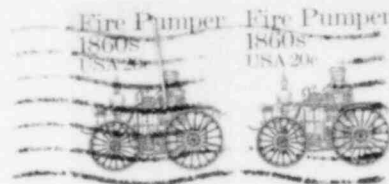
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