

United States of America
Atomic Energy Commission

H.F.
PROD. & UTIL. FAC. 50-263

8-24-70

In the Matter of
Northern States Power Company
Monticello Nuclear Generating
Plant, Unit 1

Docket No. 50-263



ARGUMENT

MECCA and Messrs. Pepin, Dzugan and Burnett join in this argument as well as proposals concerning findings and conclusions. As the record indicates, MECCA represents the citizen concern over the placement of this large nuclear reactor at Monticello and the effect which it will have upon the total environment. Messrs. Pepin, Dzugan and Burnett are concerned citizens who have special knowledge in the field of Physics and associated areas. Intervenors acknowledge that they assumed certain responsibility by their intervention but wish to point out to the Board that they are all volunteer and had no staff or funds to help them in their intervention. Needless to say, the AEC Staff and NSP were well supplied with highly paid personnel throughout the entire proceeding.

At the onset, Intervenors wish to continue their objection to the narrow interpretation placed on paragraph 3 of the Notice of Hearing for the provisional operating license. Paragraph 3 reads as follows:

Whether there is reasonable assurance (i) that the activities authorized by the provisional operating license can be conducted without endangering the health and safety of the public, AND (ii) that such activities will be conducted in compliance with rules and regulations of the Commission.

This board did not desire to deal with subd(i) but only dealt with subd(ii). At many points too numerous to set forth in detail, cross-examination was cut off because the AEC standards would then be placed in question. (Tr. p938)(Tr. pp945-947)

We believe that AEC standards are unsafe and constitute an undue risk to the public. Extensive cross-examination should have been allowed so that subd(i) of paragraph 3 could be dealt with in depth. However, it is not strange that an AEC Board, appointed by the AEC, paid by the AEC, advised by the AEC should do anything else but protect the AEC.

INTERVENORS OPPOSE AN EXPEDITED INITIAL DECISION AUTHORIZING
FULL POWER OPERATION.

Throughout this hearing, NSP has cried "wolf" concerning its need "now" for the permit which is the object of this hearing. Yet, NSP has failed to show damage to the public which will result if specified time periods are followed. NSP was well able to buy electricity from other sources. None of its alarmist predictions throughout the hearings have come true. The Board chairman asked NSP if it had all necessary State of Minnesota permits for the operation of the plant. Mr. Dienhart advised the Board that one permit necessary for operation had not yet been acquired. This permit is one to store Condensate Water (Tr. 2121). The Minnesota Pollution Control Agency will not deal with this permit until its mid-September meeting. It is possible that this permit might not even be granted with the presently pending litigation between the State and NSP. Furthermore, this Board is not even considering the fact that litigation is pending in the Federal Court concerning the right of the State to set stricter radiation standards than those specified by the AEC. There is no need to rush matters for NSP. NSP has proven no need to do so.

It seems useless at this point to again argue the question of the Low-Power Startup Permit. NSP is well past the summer peak and the low-power process should be part of the Provisional Operating Permit.

1. At paragraph 1 of NSP's preliminary statement in its Proposed Findings of Fact and Conclusions of Law, NSP makes the point that there were no intervenors and the hearing was an uncontested proceeding concerning the application for a license to construct and operate the Monticello nuclear generating plant. Intervenors wish to make point of the fact that at the time of these original hearings in 1966, the method of informing the public was totally inadequate. Publication of Notice in the Federal Registrar is certainly not conducive to get full and maximum participation of the citizens of this area. The dangers surrounding nuclear plants were not as well known at that time as they are presently and the public is certainly now more aroused. If the question of the Monticello construction permit would now come up, there would, in fact, be far more participation as is evidenced by

Minnesota's present concern with the federal standards relating to radiation emissions.

2. The State of Minnesota, by way of the Pollution Control Agency (Tr. 333-35), has taken the position that this board should take one of two actions. One; to require that the operating permit not be granted until such time as NSP complies with the State permit or, Two; in the alternative to deny the permit until such time as the federal action is consummated and the determination made as to whether the State of Minnesota permit is valid. These points which have been raised by intervenors also have not been given valid and careful consideration by this Board nor have they been given any consideration by NSP and the AEC Staff. The total record evidences a total lack of concern for safer State standards.

3. Concerning the subpoena requested by Intervenors: This Board has failed to take positive action to bring about compliance with its order of full production of records in an uncensored state. Instead, the matter has been allowed to linger on and been placed over as a doubtful question for appeal. There should be no matters relating to a civilian reactor which should be censored. The public should have a full view of all materials relating to a nuclear plant. The Board's certification of the question would appear to be an additional attempt to take an important question away from a public hearing into a closed hearing in Washington D.C. where none of the parties are involved. It should be noted that the Intervenors have seen less of the Inspection Reports than the AEC Staff, NSP and the Board which took it upon itself to, in an ex parte manner, examine the full Inspection Reports. Intervenors feel at a substantial disadvantage in this regard.

4. It is noted that the Regulatory Staff finds its Inspection Reports and data concerning other reactors highly important. Experience from other reactors helps the Regulatory Staff in arriving at judgements concerning the Monticello plant or any other plant which it might be inspecting. (126-27 deposition of Regulatory Staff)

^{Neither}
5. NSP nor the Regulatory Staff have taken into consideration the buildup of long-lived radioactive isotopes. (Tr. 944-45)
Intervenors attempted to cross-examine extensively on this area from two basic articles concerning the effect of long-lived radiation but were stopped by the Chairman (Tr. 949). These two articles are:

"Nuclear Power Production and Estimated Krypton-85 Levels" by Coleman and R. Liberaze. Published in the Radiological Health Data and Reports, November 1966, and "Approaches to the Calculation of Limitations on Nuclear Detonations for Peaceful Purposes" by G. Hoyt Whipple School of Public Health, University of Michigan at Ann Arbor. Whipple's article was prepared for the Symposium on Public Health Aspects of Peaceful Uses of Nuclear Explosives sponsored by the Southwestern Radiological Health Laboratory, April 7-11, 1969. If intervenors had not been stopped in their cross-examination they might have found out from the Regulatory Staff whether estimates of the growth of nuclear reactor power and the amount of Krypton-85 over a long period of time had been taken into consideration. The Chairman refused to apply paragraph 3 of the Notice of Hearing of this proceeding as the clear language of that paragraph would seem to indicate.

6. At point 22 of Applicant's final argument, reference is made to Dregden II by way of comparison with Monticello. This is an improper reference because Monticello, while a BWR, has many new and novel features not contained in any other BWR plants.

7. There exists in the reactor a substantial defect of design. No detection system was built in to the main pressure vessel in order to detect loose objects prior to the time that they might block the flow of coolant to the fuel rods. Thus going undetected, postage-stamp size particles could cause the melt down of one or two rods. (Tr. 1151) Attention should be paid to all of the AEC investigation reports concerning the Fermi accident which was caused by the melting of a few fuel rods resulting from the blockage of coolant. It seems extraordinarily derelict of GE to have designed the reactor in such a way that loose objects can only be detected by a meltdown of fuel rods.

8. Another poor element of design was the fact that it was not possible to provide for 100% accessibility to examine every foot of the longitudinal weld seams in the reactor pressure vessel and therefore, substantial areas of welding were not tested. (Tr. 767)

9. Calculations of off-site dosages resulting from stack emissions do not include an error analysis. (Tr. 983) Such an analysis

is necessary in order to properly evaluate off-site dosages at the plant site in Monticello. Applicant blindly relies on the work of others without considering any error involved in other experimental work and apparently without understanding how such errors would change the off-site dosage at the Monticello site. Time and again off-site dosages are stated with no associated error term. To write a number down without the error is a highly unsophisticated and unscientific procedure where the dangers are so great.

10. In point 30 of its final argument, Applicant makes some erroneous statements. The Applicant states that particulate filters have an efficiency of 99.97%. In the Technical Specifications (page 149) the efficiencies of these filters is only 99%. Although the Applicant apparently states that they are going to use filters which have an efficiency of 99.97%, they are only required to use the less efficient 99% filters which would allow more than 33 times as many radioactive particulates to pass. The Applicant also states in their item 30 of their final argument that most of the gaseous isotopes such as Krypton-85 which decay into biologically important radioactive daughters decay into radioactive particulates during the 30 minute holdup time. This is an erroneous statement. Krypton-85 has a 10.7 year half-life and a negligible of this gas would decay during the 30 minute holdup time. The Intervenor believe that this is one of the numerous attempts of the Applicant to mislead both the public and the Board during the course of this hearing.

11. Another attempt at misleading the Board and the Public was made by Dr. C. F. Falk of GE. Table 9-3-2 of the FSAR prepared by Dr. Falk is entitled "Gaseous Radwaste System, Typical Off-gas Release Rates". (Tr. 1078-84). Under extensive cross-examination by Intervenor, Dr. Falk admitted that the only thing typical about the release rates is the composition of the gasses and not the amounts involved. This is an incredibly deceptive table. The apparent intention of this table is to ^{make} the radioactivity put out by the plant by way of the stack look extremely small while in reality, it is much higher than would appear by the table. This table should have clearly stated that all that was being shown was the relative composition of gasses. This

table should have gone on and included the quantity of gasses as well as the composition. Apparently, the expected amounts of radioactive gasses were so high that GE was afraid to publically release their estimates. NSP has never indicated to either the Atomic Energy Commission or to the State of Minnesota that it could ever operate at the off-gas release rates listed in Dr. Falk's table.

12. Throughout this hearing, Applicant speaks of a "Plant design-basis accident" but constantly refuses to deal with the possibility of a 100% core meltdown and associated thermal and mechanical effects. NSP contends that this problem need not be taken into consideration because they have designed the plant in such a way that it cannot happen. But to say that a plant has been designed in such a manner does not eliminate the possibility of error. Perhaps the likelihood of such an accident is indeed remote, however, it is this remote circumstance that members of the public want taken into consideration. Indeed, a reputable arm of the government, namely, the Department of the Interior, strongly urged that the effects of a 100% core meltdown be determined by Applicant. The United States Department of Health, Education and Welfare report evaluating the Monticello facility dated May 10, 1967 suggests that NSP should show cause why it has neglected to evaluate the consequences of a 100% core meltdown. NSP failed to deal with that question throughout the entire hearing and again failed to meet the question in its final arguments. Apparently Congress considers it in setting limitations on liability by way of the Price-Anderson Act. It would be interesting to have Applicant list any accident which could cause approximately 600 million dollars worth of damages. If Congress in its wisdom has seen fit to provide coverage for this amount of damage, what could cause this kind of damage if it were not a 100% core meltdown with associated thermal and mechanical effects? If Congress does not consider the 100% core meltdown as being responsible for this kind of damage then is Congress concerned over the effects of long term exposures to ionizing radiation. Constantly the Staff and Applicant speak of Congress' intent when it serves their purposes but refuse to meet in any meaningful way the problems of a 100% core meltdown. Intervenors request that Applicant in its reply

set forth all instances which could cause up to 600 million dollars worth of damage as apparently has been anticipated by Congress in the event of some kind of happening.

13. The AEC Staff, which in this area must service over 40 reactors presently being built, already built or in the construction stage (Staff deposition: 25-30), did not even bother to test the Applicant's plant security program. On page 1866 of the transcript, Mr. Grier of the Regulatory Staff in response to the question: "So no test of the plant security system has been made by the AEC?" answered: "No". Apparently, plant security is not deemed to be important at a nuclear reactor. Intervenors disagree and believe that it is a matter of utmost importance and yet as in so many cases throughout the proceeding, the Staff was willing to take the untested word of the Applicant. We believe that independent and in-depth tests of the security system should be made by the AEC and that this plant should not be allowed to operate until it has been proven beyond any doubt that security is tough and cannot be broken.

14. Again, NSP has failed to respond in its final argument to an important contention. NSP apparently believes that it has control over that part of the River adjacent to the plant site. No where has NSP indicated how it will exercise its jurisdiction or in fact how it claims its jurisdiction. NSP has stated that if anyone stays at the point of the river adjacent to the site too long that it will call the Sheriff. What law will the Sheriff be asked to enforce in requiring a citizen to vacate any section of the River when that citizen is not interfering with navigation or breaking any laws of the State of Minnesota? Will the Sheriff of a county in Minnesota be asked to enforce federal law? If that Sheriff is not asked to enforce federal law, what law enforcement officers does NSP plan to call and what segment of law will it be asked to enforce? NSP refuses to deal with this question and it is suggested that a response to this point be made in its reply. The Mississippi River should not be included as part of the exclusion zone for the purpose of determining off-site dosages. This will necessarily result in lowering the allowed stack emission rates. NSP does not own the River nor does it control it.

15. The AEC has set up a method of inspection whereby the Applicant, its contractors and sub-contractors do the actual testing. The transcript as well as depositions are replete with evidence that the AEC does not have sufficient numbers of men or equipment to do the kind of in-depth testing which is necessary. Therefore, it would appear that it must rely upon the Applicant. NSP has consistently shown throughout this hearing that it is in a great hurry to get this plant "on-lined". Applicant has indicated that it loses a great deal of money by not having the Monticello plant on-line as soon as possible. This is the same Applicant upon whom the AEC must rely for the veracity of its tests. In many cases, the Regulatory Staff does not even look at documents which are maintained by Applicant as well as contractors. (Staff deposition p42). In those cases in which the Regulatory Staff does review testing of Applicant only in 10% of the cases is the original data reviewed. In 90% of the cases, reports written by NSP or contractors are used instead of original data. (Staff deposition p146) At many points throughout the entire transcript as well as throughout the depositions, it was clear that the Regulatory Staff does no independent testing, but rather dedicates itself to searching through stacks of paper and taking the word of the Applicant. (Staff deposition 9,23,54,63,68,98). Nowhere in this proceeding are the citizens of the State of Minnesota assured by truly independent tests that this plant will be operated safely and without danger to the Public. Time after time the Staff has relied on the Applicant which has a substantial interest in the plant going on-line as quickly as possible. We believe that this kind of testing is bound to lead to an unsafe plant and one which is not reliable. The AEC itself cannot agree on whether the Regulatory Staff has sufficient manpower. Mr. Grier of the Regulatory Staff stated that the AEC had enough men to do an adequate and competent inspection program. However, since the hearings, Intervenors have received a copy of a letter from Mr. Glenn Seaborg, Chairman of the Atomic Energy Commission to Earl Ewald, Chairman of the Board of Northern States Power Company. In that letter dated, August 3, 1970 and received by the United States Atomic Energy Commission on August 4, 1970 at page 2 Mr. Seaborg states: "We have recognized for some time that operating license applications would be peaking about this time and that personnel limitations on the Regulatory Staff would create problems. Unfortunately, we are experiencing personnel limitations despite our efforts to avert them."

Apparently, Dr. Seaborg has not communicated his concern to Mr. Grier. However, it has been quite obvious to Intervenors and we hope to this Board, that there are gross limitations on Regulatory Staff personnel when they are unable to perform tests but must rely on the Applicant.

It is disturbing to us that the AEC has no set of codes of their own such as the standard codes established by NASA or the United States Navy (Staff depositions p 46,58) but rather totally relies on the voluntary codes established by industry such as ASME Boiler and Pressure Vessel Code Committees. We do not feel that industry is capable of establishment and enforcement of their own safety codes but rather feel that such codes should be established and enforced by the relevant governmental agency. Preferably, this would be an independent agency severed from the AEC and having nothing to do with the promotion of nuclear power.

The AEC does no independent check of vendors related to the construction of the reactor. Total reliance is left on the Applicant (deposition p 87,96). The Regulatory Staff's attitude as evidenced throughout the entire hearing would appear to be, "its your baby" in reference to NSP. As stated in Intervenor's oral argument, the Regulatory Staff has made it quite clear that if anything goes wrong at the plant, it is the fault or responsibility of NSP. Early in the hearings the reference was made by Mr. Burnett to the staff that they would be dumping radiation into the River. The Staff quickly retorted by saying: "We aren't dumping anything, the Applicant is."

The AEC attempts to detach itself from any responsibility concerning the plant.

16. The present plans of the Atomic Energy Commission do not include the AEC doing its own independent monitoring of the plant site area or the surrounding area. Rather, the AEC plans to review Applicant's data on a quarterly basis or perhaps in the first 18 months on a more frequent basis. Why shouldn't the AEC be required to perform its own monitoring program on a more frequent basis? Certainly, in the area of monitoring, it could be shown that NSP could be forced into considerable expense by being required to shut the plant down if it exceeds certain radiation limits. This is a terrible responsibility to place upon Applicant. It first must detect that it is in violation and on the basis of that violation cause itself

substantial monetary loss by retiring the Monticello facility for however short a length of time is involved.

17. NSP has admitted that they are now working to develop a concept which had been reported in the newspaper and had been discussed with interested officials of the State of Minnesota concerning installation of gaseous holding tanks for the Monticello facility (Tr. 993-994). Yet, up to this point of the proceeding, no amendment has been filed pertaining to the installation of such holding tanks. During periods of fuming, there will be no adequate dispersion of gaseous emission. It is our contention that emission should only be allowed out of the stack during periods of time when there will be a maximum dispersion. If holding tanks are used, monitors could be placed in these tanks to determine the content of the tank isotope by isotope, prior to release. In this way, if any unusual releases occur, they will be captured in the holding tanks prior to being emitted to the environment. It will also allow more thorough documentation of emitted radiation. No good reason exists other than dollars and cents for not having gaseous holding tanks at the Monticello site. Certainly, holding of all emissions for (i) maximum dispersion and (ii) for substantial decay is a conservative practice that the AEC should be following which is well within present day technology and in the best interests of the health, life and safety of the State of Minnesota.

18. NSP claims that it's personnel have gained a great deal of experience by operation of the Pathfinder plant in South Dakota. It should be pointed out to the Board, that the Pathfinder plant is not exactly a glowing story of success in the annals of nuclear history. To set the record straight, Pathfinder is operating as a fossil plant and the total nuclear operation has been shut down.

19. At point 55 of NSP's final argument, it is noted that the ACRS has stated that the plant can be operated at power levels up to 1670 Megawatts thermal without undue risk to the health and safety of the Public. Intervenors wonder if the ACRS has provided a list of the risks which are acceptable to the Public. Nowhere have we seen any such list published by any aspect of the Atomic Energy Commission.

20. With all due respect to the individual members who compose the Board, Intervenor do not believe that they are or can be impartial. As was pointed out in the early part of our argument, there is a total connection with the AEC. A typical example of the Board's bias can be seen by a remark made by Dr. Greuling at page 477 of the transcript. At this point, Dr. Greuling was attempting to row the boat for the Agency as well as for Applicant in its public relations image. It would appear that the members of the Board have their minds made up as to the safety of the AEC standards as well as to the methods used by the AEC.

21. Intervenor have shown several points of the lack of safety at the plant at Monticello and the lack of the adequacy of monitoring. However, the burden of proof is not on Intervenor, but rather on Applicant to prove the safety of the plant. This has not been done. Therefore, the Provisional Operating License should be denied.

22. This Board has refused to accept testimony concerning high level radioactive wastes caused by the operation of the Monticello plant. This matter was disposed of in a shorthand manner. (Tr. 1134-40) Intervenor have, in effect, been told that we should not worry where the high level wastes are going as long as they are not kept in Minnesota. The Board should know that Intervenor care about the storage of high level radioactive waste. The present policy of storage of high level waste in liquid form is dangerous. In view of the advanced state of the solidification and salt disposal technology, it would be appropriate to establish the industrial requirement for conversion of all high activity liquid wastes to a solid form which would be far more suitable for off-site shipment and ultimate disposal in a few, as yet undesignated centralized waste repositories.

CONCLUSIONS

Based on the Boards review of the entire record, and of a review of all the facts of the case, this Board should conclude that no Provisional Operating Permit should be issued until:

- i) The Federal Court action pending between NSP and the State of Minnesota is finally determined.
- ii) Independent testing of the entire Monticello facility is completed by the Atomic Energy Commission.
- iii) A detection device is placed in the reactor to detect loose objects in the core.
- iv) All welds are independently tested by the AEC Regulatory Staff.
- v) All subpoenaed material has been given to Intervenors in an undeleted form.
- vi) Applicant has met all objections raised by Intevenors, the State of Minnesota, and the City of St. Paul.

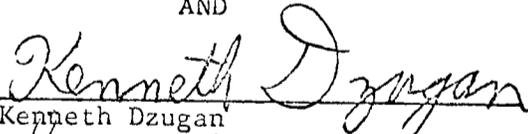
Respectfully submitted,

MECCA

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August 24, 1970

AND


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