



August 30, 1984

Director
Office of Nuclear Reactor Regulation
U S Nuclear Regulatory Commission
Washington, DC 20555



Northern States Power Company

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Minneapolis, Minnesota 55401
Telephone (612) 330-5500

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket Nos. 50-282 License Nos. DPR-42
50-306 DPR-60

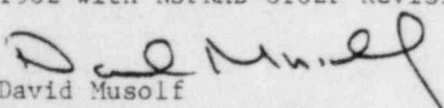
PROPRIETARY Topical Report -
Reload Safety Evaluation Methods, NSPNAD-8102P, Rev 2

Twenty-five copies of proprietary topical report NSPNAD-8102P, Revision 2, are being submitted for your review. A check in the amount of \$150.00 is also being submitted in accordance with 10CFR Part 170 as the required application fee.

Revision 1 of NSPNAD-8102P was reviewed and approved by the NRC Staff as documented by a February 17, 1983 Safety Evaluation Report (SER). This SER contained several limitations, one involving the control rod drop accident. This submittal is being made to remove the limitation associated with the control rod drop accident. Upon approval of this topical (NSPNAD-8102P, Rev 2) appropriate Technical Specification changes will be proposed. Following approval of these Technical Specification changes, the current operational restriction (above 90% power, when rods are less than 215 steps withdrawn, the control rods must be operated in manual) will then be removed from plant procedures.

Additional minor changes have also been made in Revision 2. We believe these changes do not require NRC Staff review and are provided for information. Attachment 1 contains a detailed list of the location of the minor changes.

Attachment 2 contains a copy of the affidavit of Mr. O. Anderson and Mr. J. R. Fisher which states the basis for exemption from public disclosure of this topical. The original affidavit was submitted on February 12, 1982 with NSPNAD-8102P Revision 0.


David Musolf
Manager - Nuclear Support Services

DMM/TMP/bd

c: Regional Administrator-III, NRC
NRR Project Manager, NRC
Resident Inspector, NRC
G Charnoff

Attachments

Attached Report, NSPNAD-8102P Revision 2,
Contains 10 CFR Part 2.790(a)(4) Information

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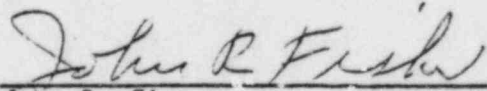
ATTACHMENT 1

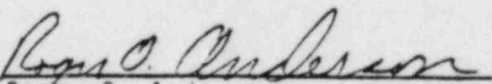
Minor Changes

- Revised Title Page.
 1. Page 1 of 305 (i)*
- Revised Proprietary Data Clause.
 2. Page 3 of 305 (ii)
- Addition of NSP Legal Notice.
 3. Page 4 of 305
- Revised Table of Contents.
 4. Pages 5 through 13 of 305 (iv through xi)
- Added description of appendices to Introduction section.
 5. Page 15 of 305 (1-2)
- Added reference to NSPNAD detailed procedure for calculating cycle. Specific Reload Physics Parameters.
 6. Page 16 of 305 (2-1)
- Revised Terminology.
 7. Page 16 of 305 (2-1)
 8. Page 17 of 305 (2-1)
- Revised definition to reflect exactly how the calculation is run according to the Reload Safety Evaluation procedure.
 9. Page 18 of 305 (2-3)
 10. Page 19 of 305 (2-4)
 24. Page 54 of 305 (3-34)
 27. Page 84 of 305 (3-42)
 28. Page 84 of 305 (3-42)
- Revised calculation of λ^* (prompt neutron lifetime) parameter. This is a more exact calculation.
 11. Page 21 of 305 (2-6)
- Deleted sentence. The moderator temperature coefficient is calculated as discussed in Section 2.1. Conservatism in the analysis are applied as discussed in Section 3.0. The value used in the safety analysis may or may not be positive as written in Revision 1.
 12. Page 27 of 305 (3-16)
 19. Page 39 of 305 (3-19)


AFFIDAVIT

Before me, the undersigned authorities, personally appeared John R. Fisher, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Nuclear Associates International (NAI), a consulting service of Control Data Corporation, and Roger O. Anderson, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Northern States Power Company (NSP), and that the averments of fact set forth in this Affidavit are true and correct to the best of their knowledge, information, and belief:


John R. Fisher
Technical Director
Nuclear Associates International (NAI)


Roger O. Anderson
General Supt., Nuclear Analysis
Northern States Power Company (NSP)

Sworn to and subscribed
before me this 10th day
of February 1982.


Notary Public

- 1.0 J. R. Fisher is Technical Director of Nuclear Associates International (NAI), a consulting service of Control Data Corporation (CDC), and Roger O. Anderson is General Superintendent of Nuclear Analysis of Northern States Power Company (NSP), and as such we have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing or rule-making proceedings, and are authorized to apply for its withholding on behalf of NAI and NSP.
- 2.0 We are making this Affidavit in conformance with the provisions of 10 CFR Section 2.790 of the Commission's regulations and in conjunction with NAI/NSP application for withholding accompany this affidavit.
- 3.0 We have personal knowledge of the criteria and procedures utilized by NAI/NSP in designating information as a trade secret, privileged or as confidential commercial or financial information.
- 4.0 The following is furnished, per Section 2.790 paragraph (b) (4) of the Commission's regulations, for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.
 - 1) A significant part of NAI/NSP's present and future consulting business to utilities is based on the licensing of proprietary computer codes, proprietary procedures for setup and application of these codes, and proprietary results used for validating said system of computer codes and procedures.
 - 2) The information sought to be withheld from public disclosure is owned and has been held in confidence by NAI and its licensees.
 - 3) This information is the type normally held proprietary by NAI/NSP and not customarily disclosed to the public. There is rational basis for determining the types of information that NAI/NSP normally holds proprietary.

4.1 Information is held proprietary if its release might result in the loss of existing or potential competitive advantage. These types of information are categorized as follows:

- 1) The information reveals the distinguishing aspects of a program, methodology, algorithms, procedures, etc. where prevention of their use without license provides a competitive advantage over other companies.
- 2) The information consists of supporting data, including test data, which aids in validation of methodologies and thereby provides a competitive advantage, e.g., computer runtime, reduced number of computer runs, creditability, etc.
- 3) The use of the information by a competitor would reduce his expenditure of resources and/or improve his competitive position in application or licensing of a similar product.
- 4) The information reveals aspects of past, present, or future NAI/CDC and/or NSP funded development plans and programs of potential commercial value to NAI/NSP.
- 5) The information is not the property of NAI or NSP, but must be treated as proprietary by NAI and NSP according to agreements with the owner.

4.2 There are valid reasons for NAI and NSP establishing these categories for evaluation of the confidentiality of information which include the following:

- 1) The use of such information by NAI gives NAI a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the NAI competitive position.

- 2) It is information which is marketable in many ways. The extent to which such information is available to competitors diminishes NAI's and NSP's ability to license systems and services involving the use of the information.
- 3) Use by our competitor would put NAI and NSP at a competitive disadvantage by reducing his expenditure of resources at our expense.
- 4) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information any one component would provide sufficient indication of the total thereby depriving NAI and NSP of a competitive advantage.
- 5) NAI and NSP have begun a concerted effort in the world market. Unrestricted disclosure would jeopardize a potential advantage in this market.
- 6) The NAI/NSP capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage in the licensing of systems and services.

5.0 The information is being transmitted to the Commission in confidence and under the provision in 10 CFR Section 2.790; it is to be received in confidence by the Commission.

6.0 The information is not available in public sources to the best of our knowledge and belief.

7.0 The proprietary information sought to be withheld in this submittal is that which is appropriately marked in the report, "Qualification of Reactor Physics Methods for Application to PI Units."

The document is being submitted as a Topical Report and will be referenced in future licensing or standardized reference approval applications.

The information enables NAI and NSP to:

- 1) Justify the methodology and procedures used in the reload analysis.
- 2) Assist its clients to obtain licenses.
- 3) Provide greater flexibility and additional reload design options to its clients and through in-house capability.
- 4) Provide to its clients a means of supporting the plant on a day-to-day basis and hence the potential of increasing availability.

In addition, the information presented in the subject documents and other similar endeavors is of commercial value to NAI and NSP and can be a source of considerable sums of money, for example:

- 1) NAI and NSP use the information to support the methodology, procedures, and services that NAI/NSP provide to their clients.
- 2) NAI and NSP use the information to provide a database which aids in the validation of the system of computer codes and procedures which NAI and NSP license to their clients.
- 3) Based on the experience gained and the methods developed from this and like information for other clients, NAI and NSP are automating the approach and procedures described and plan to license the resulting system.

- 8.0 Public disclosure of information concerning the "Qualification of Reactor Physics Methods for Application to PI Units" program is likely to cause substantial harm to the competitive position of NAI and NSP by allowing their competitors to develop similar analysis methods and models at a much reduced cost. The analysis performed in this

endeavor is a result of an analytical system (methodology, programs and procedures) which has been developed at NAI and NSP over a period of years. This represents a significant amount of highly qualified development effort resulting in NAI's and NSP's current business posture. Should a potential competitor be able to use the results of this analyses and descriptions of methodology in the attached document to establish and verify their own programs and procedures, the technical and monetary effort to achieve a comparable capability would be vastly reduced. NAI and NSP have expended a significant amount of money and technical resource to achieve their current position, a position which a competitor can attain only through a like investment of money and qualified technical talent.