

9474

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
JAN 10 1990

IN THE MATTER OF)
NORTHERN STATES POWER COMPANY)
PATHFINDER ATOMIC PLANT)
BYPRODUCT MATERIAL LICENSE)
22-08799-02)

Docket No. 30-05084-NIA20 110:02
ASLEP No. 90-599-01-ML
November 17, 1989

SUPPLEMENT TO REQUEST FOR HEARING

By his Memorandum and Order of October 24, 1989, Administrative Law Judge Morton B. Margulies requested that Requestors for a hearing in the above-captioned matter provide additional information to help him determine the parties and germane concerns. This Supplement to Request for Hearing is the response of Requestors to this request.

Identity of Requestors

Judge Margulies requested more specific information concerning Requestors identity. The following information is provided.

Citizens For Responsible Government ("CRG") is a public action organization chartered under South Dakota law. CRG's corporate charter, stating its purposes, is provided in Exhibit A, attached hereto. CRG's Secretary/Treasurer, Donald Pay is a sponsor of the corporation and its activities and has indicated in a letter (Exhibit B) his desire to be represented by CRG.

The Technical Information Project ("TIP") is a public interest research organization chartered under South Dakota law. TIP's corporate charter, stating its purposes, is provided in Exhibit C, attached hereto. TIP's member group, South Dakota Resources Coalition, requested that TIP intervene in this proceeding in order to represent its interests in so far as SDRC could not.

DS03

The South Dakota Resources Coalition ("SDRC") is an environmental organization chartered under South Dakota law as a non-profit corporation. SDRC's bylaws, as represented in the letter from Catherine M. Hunt, SDRC's chairperson, state the organization's purposes (Exhibit D). SDRC's president and member, Catherine M. Hunt also states in her letter that she desires to be represented by SDRC in this proceeding.

Injury-In-Fact To Requestors

CRG and its sponsor Donald Pay will incur injury resulting from the decommissioning and transportation of low-level radioactive wastes from the Pathfinder Atomic Plant. CRG sponsor Donald Pay resides at 114 E. Philadelphia in Rapid City, South Dakota. Truck shipments of low-level radioactive waste from the decommissioning activities at the Pathfinder reactor will pass along Interstate 90 in Rapid City (Exhibit E). Pay's residence is located approximately one mile from Interstate 90. An accident involving a truck shipment of low-level radioactive waste from the Pathfinder Plant would result in radioactive material escape. Such an occurrence would injure Pay by causing him to receive an increased dose of radiation resulting in an increased risk of contracting cancer or other debilitating disease or condition. Pay would also be injured from non-catastrophic impacts of transport of radioactive waste in the same manner as described above. Pay's injuries are clearly within the zone of interest protected by the Atomic Energy Act and the National Environmental Policy Act.

TIP will incur injury resulting from the decommissioning of the Pathfinder Plant and from the transportation of the resulting Low-level radioactive wastes along Interstate 90. TIP's corporate office

is located at 1101 E. Philadelphia in Rapid City, South Dakota. Truck shipments of low-level radioactive waste resulting from the decommissioning of the Pathfinder Plant will pass within one mile of TIP's offices. An accident involving a truck shipment of low-level radioactive waste resulting from the decommissioning of the Pathfinder Plant will cause radioactive material to escape into the environment. Such occurrence will injure TIP by causing radioactively induced health impacts, such as cancer and immune deficiency in TIP's executive director and employees. TIP would also be injured by non-catastrophic impacts to the transport of radioactive waste in the same manner as described above. The injuries to TIP and its workers are clearly within the zone of interest protected by the Atomic Energy Act and the National Environmental Protection Act.

SDRC and its member Catherine Hunt will incur devastating injury resulting from decommissioning of the Pathfinder Atomic Plant and attendant activities. Hunt resides at Garretson, South Dakota, approximately 10 miles from the Pathfinder Plant. Hunt and her organization support the decommissioning of the Pathfinder Plant because of the deleterious impacts that the plant now has on the environment and public health of the residents of the area, including Hunt. SDRC and Hunt's concern is that the decommissioning be done right, to protect the current and future health of the members of SDRC. Injury to Hunt as the result of an incorrectly decommissioned plant include suffering a continued high risk of cancer and other debilitating diseases resulting from increased doses of radioactivity. Such increased doses of radiation are especially injurious to Hunt, because the water supply in Garretson

has been found in violation of the drinking water quality standard for radium and the City has been ordered to correct the situation. Thus, Hunt is already exposed to an elevated radiation dose. Hunt could be further injured by contamination of the soil, air, and water by incomplete decommissioning. Radioactive debris not properly cleaned up or left will continue to decay on site. Wind will disperse particulates containing radioactive elements left as the result of an improper or incomplete decommissioning and will carry such particulates from the plant site to Hunt's residence and to the source of Hunt's water supply a mere 10 miles from the plant. Such particulates when deposited in Hunt's water supply or on Hunt's residence or surrounding environment will degrade Hunt's environment significantly. Rail transport of the reactor vessel will be through Garretson, a few blocks from Hunt's residence (Exhibit F). Hunt will experience grave risks to her safety and health by the passage of this highly radioactively contaminated vessel through her backyard. Increased risk of cancer and other debilitating conditions would be experienced by Hunt as the result of any accident or because simply of the passage of the highly radioactive vessel, so close to her residence.

Risks of Low-Level Radiation
From Pathfinder
Decommissioning

Exhibit G provides inventories of the radionuclide content of the waste proposed for decommissioning, transport, and disposal. It is clear that high levels of radioactivity still remain within the plant and that this radioactivity will be available for release to the environment during decommissioning. The levels at which the radioactivity remains is sufficient to kill a person. While

it is unlikely that this amount of radioactive contamination would escape during the decommissioning and/or the transport of the decommissioning waste, this amount of radioactivity must be considered as a worst case impact to the Requestors. Requestors will most likely be impacted by lower levels of radioactivity. However, even the slightest increase in the levels of radioactivity in the areas in which Requestors reside and work will result in increased risk to the life and health of Requestors. Such risks will result from inhalation and ingestion pathways, as well as from direct exposure to radiation.

By participating in this matter, Requestors seek to assure that their health is protected and that the risks to their health from the decommissioning activities is minimized.

Conclusion

Requestors have demonstrated standing sufficient to be considered parties to the proceedings. Requestors health and life is threatened by a poorly designed and executed decommissioning. Requestors seek to assure that the safest possible decommissioning is accomplished. We do not seek to halt the decommissioning, unless sufficient measures are not taken to assure Requestors life and health.

Dated this 17th day of November, 1989.

Donald Fay

Donald Fay
Secretary/Treasurer
Citizens for Responsible Government
P. O. Box 5613
Rapid City, South Dakota 57709

Deborah Rogers

Deborah Rogers
Executive Director
Technical Information Project
P. O. Box 1371
Rapid City, South Dakota 57709

Catherine M. Hunt

Catherine Hunt
President
South Dakota Resources Coalition
P. O. Box 7020
Brookings, South Dakota 57007

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF)
NORTHERN STATES POWER COMPANY)
PATHFINDER ATOMIC PLANT)
BYPRODUCT MATERIAL LICENSE)
22-08799-02)

DOCKET NO. 30-01004-MLA

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Supplement to Request for Hearing have been served upon the following persons by U. S. Mail, first class, in accordance with the requirements of 10 CFR Sec. 2.712.

Atomic Safety and Licensing
Appeal Board
US Nuclear Regulatory Commission
Washington, DC 20555

Administrative Judge
Jerry A. Kline
Special Assistant
Atomic Safety and Licensing
Board
US Nuclear Regulatory Commission
Washington, DC 20555

Jay E. Silberg, Esq.
Shaw, Pittman, Potts & Trowbridge
2300 M Street, NW
Washington, DC 20037

Administrative Law Judge
Morton E. Marglies
Presiding Officer
Atomic Safety and Licensing Board
US Nuclear Regulatory Commission
Washington, DC 20555

Bernard M. Bordenick, Esq.
Office of General Counsel
US Nuclear Regulatory Commission
Washington, DC 20555

Thomas Parker
Northern States Power Company
414 Nicollet Mall
Minneapolis, MN 55401

Dated this 17th day of November, 1989.



Donald Fay
Secretary/Treasurer
Citizens for Responsible Government
P. O. Box 5613
Rapid City, South Dakota 57709

Exhibit A



STATE OF SOUTH DAKOTA
Secretary of State



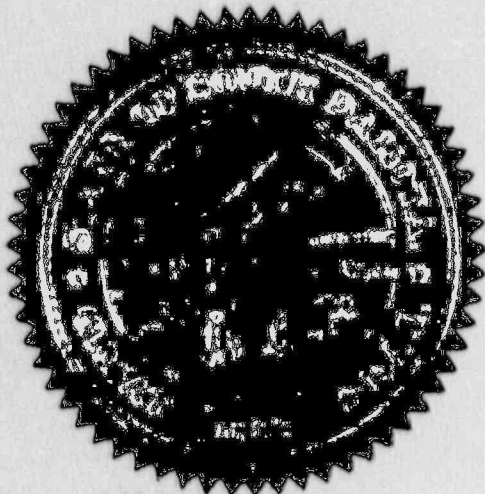
Certificate Of Incorporation
Non-Profit

I, JOYCE HAZELTINE, Secretary of State of the State of South Dakota, hereby
certify that duplicate originals of the Articles of Incorporation of
CITIZENS FOR RESPONSIBLE GOVERNMENT, INC.

duly signed and verified, pursuant to the provisions of the South Dakota Nonprofit Corporation
Act, have been received in this office and are found to conform to law.

ACCORDINGLY and by virtue of the authority vested in me by law, I hereby issue this
Certificate of Incorporation of
CITIZENS FOR RESPONSIBLE GOVERNMENT, INC.
and attach hereto a duplicate original of the Articles of Incorporation.

IN TESTIMONY WHEREOF, I have hereunto
set my hand and affixed the Great Seal of the
State of South Dakota, at Pierre, the Capital,
this 10th day of
..... May A.D. 19. 89....



..... *Joyce Hazeltine*
Secretary of State

.....
Deputy

Filed this 10th day of

May 19 89

Royce Hazelton

SECRETARY OF STATE

RECEIVED

MAY 10 1989

Secretary of State

ARTICLES OF INCORPORATION

OF

CITIZENS FOR

RESPONSIBLE GOVERNMENT, INC.

For the purpose of forming a non-profit corporation under the provisions of the South Dakota Non-Profit Corporation Act, South Dakota Codified laws Chapter 47-22 et seq, the undersigned natural persons of the age of majority, acting as incorporators of the corporation, adopt the following Articles of Incorporation for the purpose of forming a South Dakota Non-Profit Corporation under that Act.

Article I

The name of the corporation is Citizens for Responsible Government, Inc.

Article II

The corporation's duration is perpetual.

Article III

In furtherance, and not in limitation, of the general powers conferred by the laws of the State of South Dakota respecting non-profit corporations organized under South Dakota Law, the purposes for which the corporation is organized are:

(1) To act to protect the environment of this state while at the same time encouraging appropriate economic development by encouraging citizens to take control of their own destiny through educational activities, organizing citizen groups and associations, and encouraging full citizen participation in their communities and the affairs of local and state governments;

(2) To participate, as circumstances may warrant, in any activity designed or carried on to promote citizen involvement in community and state affairs;

(3) To engage in, advance, support, promote and administer projects and activities of every kind or nature to the extent that the project or activity is permitted to be carried on by a South Dakota non-profit corporation and by a corporation qualifying as non-profit pursuant to the Internal Revenue Code;

(4) To solicit, receive, hold, administer, invest and disburse contributions of money or property for use exclusively in fulfilling the purposes of the corporation;

(5) To make and execute any and all agreements for these purposes including agreements for carrying on the business activities of the corporations;

(6) To do all things subsidiary, necessary, or contingent for carrying out and putting into effect the purposes of the corporation;

To engage in any and all other purposes for which the corporation is incorporated under the South Dakota Non-Profit Corporation Act, SDCL 47-22 et seq.

Article IV

The corporation is organized expressly for educational, political and benevolent purposes as a non-profit corporation as provided by SDCL 47-22-4. Its activities shall be conducted for these purposes in such a manner that no part of its net earnings shall inure to the benefit of or be distributed to any Director, officer, or individual, except that the corporation shall be authorized and empowered to pay reasonable compensation for services and benefits necessarily provided to the corporation.

Article V

The corporation shall have no members.

Article VI

The corporation shall be managed by a Board of Directors consisting of three (3) persons. Of the initial Board of Directors, one member shall serve a term of one (1) year each, two members shall serve a term of two (2) years each. The first year of the first term for each member of the initial Board of Directors shall expire on the date of the 1990 annual meeting of the corporation. Each subsequent year of each term shall then similarly expire on the date of the next annual meeting of the corporation. Upon the expiration of the full term of any director, that director's successor shall be elected by a majority of the remaining directors of the corporation then in office.

Article VII

The officers of the corporation shall be elected or appointed in the manner provided by the corporation's bylaws. The number, qualifications, election, appointment, powers, authority, term of office and duties of the directors and officers of the corporation, the time and place of their meetings, and those other provisions with respect to them and the management of the corporation not inconsistent with express provisions of those articles of incorporation shall hereafter be specified and prescribed by the by-laws of the corporation.

Article VIII

The initial Board of Directors, and the names and addresses of the persons who are to serve as the initial directors, are:

<u>Name</u>	<u>Term:</u>	<u>Address</u>
Gary Heckenlaible	3 years	425 E. Fairlane Dr., #32 Rapid City, SD 57701
Don Pay	3 years	1322 Atlas, #207 Rapid City, SD 57701
John Sieh	2 years	RR #2, Box 141 Groton, SD 57445

Article IX

The address of the initial registered office of the corporation is 425 E. Fairlane Dr., #32, P.O. Box 5613, Rapid City, South Dakota 57709-5613; and the name of the corporation's initial registered agent at this address is Gary Heckenlaible.

Article X

Upon dissolution of the corporation, all assets remaining after the payment of its debts shall be distributed to another non-profit organization or association, whether or not incorporated, which is devoted primarily to the protection of the state's natural environment.

Article XI

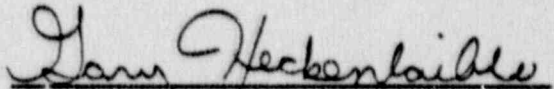
The names and addresses of incorporators of the corporation are:

Name:	Address:
Gary Heckenlaible	425 E. Fairlane Dr., #32 Rapid City, SD 57701
Don Pay	1322 Atlas, #207 Rapid City, SD 57701
Lawrence J. Sonneman	338 E. Custer St. Rapid City, SD 57701


Article XII

These articles of incorporation may be amended in the manner provided by law at the time any amendment may be desired by the corporation.

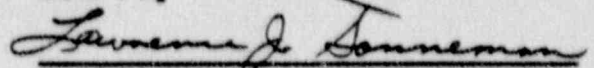
Dated this 12th day of April, 1989.



Gary Heckenlaible



Don Pay

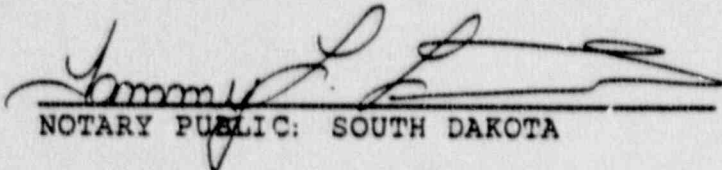


Lawrence J. Sonneman

STATE OF SOUTH DAKOTA)
)SS
COUNTY OF PENNINGTON)

On this 12th day of April, 1989, before me, the undersigned notary public for the State of South Dakota, personally appeared, Gary Heckenlaible, Don Pay and Lawrence J. Sonneman, known or satisfactory proven to me to be the persons whose names are subscribed to the above and foregoing Articles of Incorporation as the incorporators of the corporation for which those Articles are adopted and acknowledge that they executed the same for the purposes therein contained.

IN WITNESS WHEREOF I hereunto set my hand and official seal.


NOTARY PUBLIC: SOUTH DAKOTA

(SEAL)

MY COMMISSION EXPIRES: Sept. 19 1996

Exhibit B

114 E. Philadelphia
Rapid City, South Dakota 57701

November 17, 1989

Citizens for Responsible Government
P. O. Box 5613
Rapid City, South Dakota 57709

Dear Sirs:

Donald Pay requests and hereby allows Citizens for Responsible Government to represent my considerable interests in the matter of the decommissioning of the Pathfinder Plant. I reside within one mile of the highway (Interstate 90) which will be used to transport the decommissioning waste from the Pathfinder Plant to the disposal site at Richland, Washington. I believe my health and safety will be at risk if this plan is followed.

Thank you.

Sincerely,

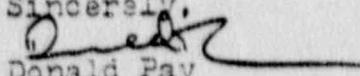


Donald Pay

Exhibit C

STATE OF SOUTH DAKOTA



OFFICE OF THE SECRETARY OF STATE

Certificate Of Incorporation Non - Profit

I, ALICE KUNDERT, Secretary of State of the State of South Dakota, hereby certify that duplicate originals of the Articles of Incorporation of

... TECHNICAL INFORMATION PROJECT
duly signed and verified, pursuant to the provisions of the South Dakota Nonprofit Corporation Act, have been received in this office and are found to conform to law.

ACCORDINGLY and by virtue of the authority vested in me by law, I hereby issue this Certificate of Incorporation of

... TECHNICAL INFORMATION PROJECT
and attach hereto a duplicate original of the Articles of Incorporation.



IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the Great Seal of the State of South Dakota, at Pierre, the Capital, this 14th day of

..... October A.D. 19 86

Alice Kundert
.....
Secretary of State

Jay D. Vogt
.....
Deputy

ARTICLES OF INCORPORATION

Alvin Lundberg

Executed by the undersigned for the purpose of forming a South
SOUTH DAKOTA CORPORATION under SDCL 47-22 South Dakota Nonprofit
Corporation Act.

ARTICLE I

The name of the corporation is "Technical Information Project."

ARTICLE II

The period of existence is perpetual unless sooner dissolved.

ARTICLE III

The purposes for which the corporation is organized are:

- a) to provide information to the public on any issues related to environment, resources, public health, industrial or governmental development, or laws and regulations governing the same;
- b) to become involved in governmental administrative or judicial proceedings when such involvement will further the goal of making information more accessible to the public or of allowing more public input into decisions that could affect the public, and when such involvement is not in conflict with nonprofit, tax-exempt status;
- c) to raise funds in order to further the above purposes through solicitation of donations, sales of merchandise or services, fundraising events, or any other legitimate fundraising activities not in conflict with the laws and regulations governing nonprofit tax-exempt organizations; and
- d) to enter into any kind of activity and to perform and carry out legitimate contracts of any kind in connection with the accomplishment of any one of the purposes of the corporation.

ARTICLE IV

The corporation shall have one (1) class of members as follows: active members who shall be entitled to vote through their Directors. Members shall consist of organizations.

ARTICLE V

The Board of Directors shall be designated as follows: each member organization shall designate one Board member as it pleases, and the entire Board may (by majority vote) designate additional Directors not representing organizations to sit on the Board.

ARTICLE VI

This being a nonprofit corporation organized under SDCL 47-22 to 47-28 as amended, it shall not have any power to issue certificates of stock or declare dividends, and no part of its net earnings shall inure to the benefit of any member, director, officer, or individual therein (except that reasonable compensation may be paid for services rendered to or for the Corporation in connection with one or more of its purposes, and reimbursements may be made for any expenses incurred for the corporation by any officer, trustee, member, agent or employee, or any other person or corporation, pursuant to and upon authorization of the Board of Directors). In the event of the Corporation's dissolution, all of its property and affairs shall be liquidated in such a manner as the then Board

of Directors of the Corporation shall deem advisable and advantageous pursuant to SDCL 47-26, and such property or the proceeds of such liquidation shall be turned over to one or more domestic or foreign nonprofit corporations, societies or organizations engaged in activities substantially similar to the activities set forth in the statement of purposes for which this Corporation is organized. Assets held by the Corporation upon condition requiring return, transfer or conveyance, which condition occurs by reason of the dissolution, shall be returned, transferred or conveyed in accordance with such requirements. Under no circumstances shall any member, director, officer or any other person connected with the Corporation share in the proceeds of such liquidation, or have any personal interest therein, the purpose hereof being that the assets of the Corporation shall be preserved at all times to carry out the general purposes for which the Corporation is formed. The private property of the members, directors and officers of this Corporation shall not be liable for its corporate debts.

ARTICLE VII

The address of its registered office is 213 N. Madison, Pierre, SD, 57501, and the name of its registered agent at such address is Deborah Rogers.

ARTICLE VIII

The number of directors constituting the initial Board of Directors is ten (10), and hereafter shall not be less than three (3) nor more than twenty (20) as may be determined by the members of the Corporation from time to time. The names and addresses of the persons who are to serve as directors until the election of their successors are as follows:

<u>Position</u>	<u>Name</u>	<u>Address</u>
Chair	Linda Hasselstrom	HCR 83, Box 9A, Hermosa SD
Vicechair	Lawrence C. Novotny	928 8th Street, Brookings, SD 57006
Sec/Treas	Deb Rogers	213 N. Madison, Pierre, SD 57501
Director	Tim Langley	123 E. Kemp, #4, Watertown, SD 57201
Director	George Piper	Rt. 1, Box 70, Carpenter, SD
Director	Sam Welsch	214 Main St., Chadron, NE
Director	Norm Nelson	1111 9th St., Rapid City, SD
Director	Nick Meinhardt	3922 Canyon Lake Drive, Rapid City, SD 5770
Director	Dick Fort	HC 37, Box 2421, Lead, SD 57754
Director	Randy Bowman	RR2, Box 191, Madison, SD

ARTICLE IX

The names and addresses of the incorporators are as follows:

<u>Name</u>	<u>Address</u>
Linda Hasselstrom	HCR 83, Box 9A, Hermose, SD
Lawrence C. Novotny	928 8th Street, Brookings, SD 57006
Deb Rogers	213 N. Madison, Pierre, SD 57501

Executed in duplicate on the 14th day of October, 1986.

Signature of Incorporators

[Signature]

[Signature]

[Signature]

State of South Dakota
County of Hughes

On this the 14th day of Oct, 1986, before me, Penny Schreiner the undersigned officer, personally appeared Deborah Rogers, known to me or satisfactorily proven to be the person whose name subscribed to the within instrument and acknowledged that (s)he executed the same for the purposes therein contained. In witness whereof I hereunto set my hand and official seal.

My commission expires 1-18-1987 [Signature]
(Notary Public Signature)

Notary Seal

State of South Dakota
County of Brookings

On this the 22nd day of September, 1986, before me, [Signature] the undersigned officer, personally appeared Lawrence C. Novotny known to me or satisfactorily proven to be the person whose name subscribed to the within instrument and acknowledged that (s)he executed the same for the purposes therein contained. In witness whereof I hereunto set my hand and official seal.

My commission expires Mar 23-1992 [Signature]
(Notary Public Signature)

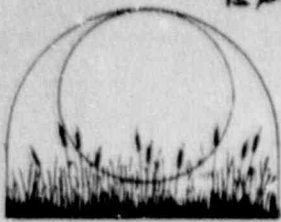
Notary Seal

State of South Dakota
County of Seward

On this the 8th day of October, 1986, before me, [Signature] the undersigned officer, personally appeared Linda Hasselstrom, known to me or satisfactorily proven to be the person whose name subscribed to the within instrument and acknowledged that (s)he executed the same for the purposes therein contained. In witness whereof I hereunto set my hand and official seal.

My commission expires 8-27-91 [Signature]
(Notary Public Signature)

Notary Seal



South Dakota Resources Coalition

Volunteers in the Public Interest

P.O. Box 7020, Brookings, S.D. 57007

Docket No. 30-05004-MLA

ASLBP No. 90-599-01-ML

November 13, 1989

United States of America
Nuclear Regulatory Commission
Administrative Law Judge
Morton B. Margulies

In reply to the Memorandum and Order, dated October 24, 1989, I wish to clarify the purpose of the South Dakota Resources Coalition, as requested. Our by-laws state six objectives:

1. To gather and disseminate information pertaining to local, state, and national environmental problems and legislation.
2. To initiate and coordinate environmental programs and projects.
3. To cooperate with environmental and conservation groups in this and other states to resolve local, state, regional and national problems.
4. To promote and develop environmental education programs at all levels throughout the state.
5. To remain non-partisan.
6. This organization is organized exclusively for charitable and educational purposes within the meaning of Section 501(c)(3) of the IRS code.

I choose to have my interests represented by the South Dakota Resources Coalition. Since I am the Chairperson of this organization, it is redundant to also represent myself as an individual. In the stated interest (3) concerning my property, this consists of my family home which represents a good share of our total assets, being retired and without a mortgage. It is located approximately ten miles from the Pathfinder plant to the north-east. In the summer, in South Dakota, we have prevailing winds from the south. I pass the entrance to the plant enroute to Sioux Falls, generally once or twice a week.

It is not my intention to impede this proceeding in any way. I consider Northern States Power Co. to be a responsible corporate neighbor. I just want to be sure everything is done to insure the decommissioning is done correctly as a matter of setting national precedent.

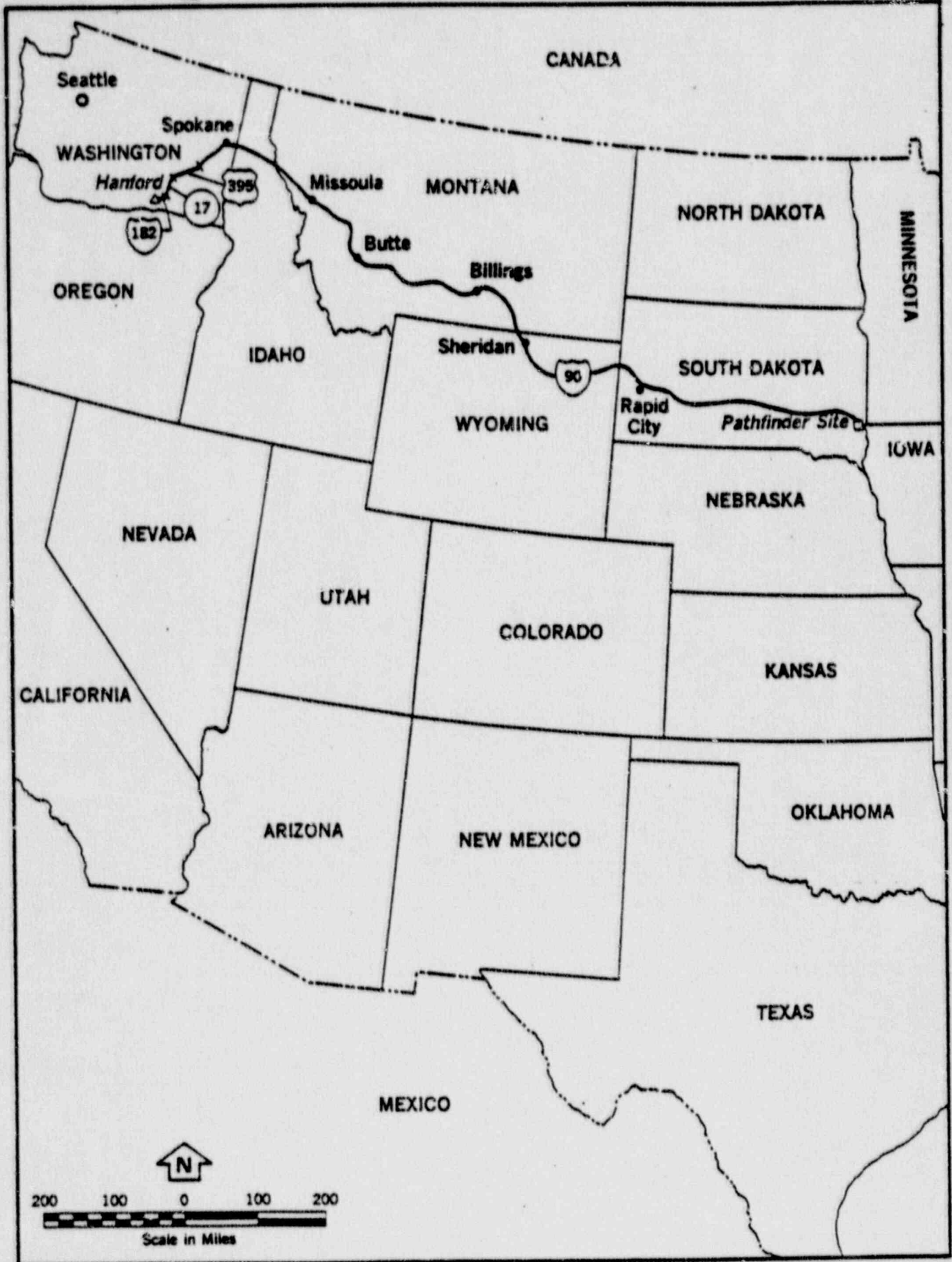
If there is any further information needed, I will be glad to respond.

Catherine M. Hunt

Catherine M. Hunt, Chairperson



Exhibit E



PROBABLE TRUCK ROUTE FROM THE PATHFINDER SITE TO THE HANFORD DISPOSAL SITE

Figure 5-1

Exhibit F

TABLE 5-2.

PROBABLE RAIL ROUTE FROM THE PATHFINDER SITE TO THE HANFORD, WASHINGTON DISPOSAL SITE AND POPULATION CENTERS.

<u>South Dakota</u>	<u>Population</u>	<u>North Dakota</u>	<u>Population</u>
Corson	----	Whapeton	9,064
Garretson	963	Galchutt	----
Sherman	----	Colfax	----
		Wolcott	----
TOTAL	963	Kindred	568
		Davenport	----
		Durbin	----
<u>Minnesota</u>		Casselton	1,661
Jasper	731	Wheatland	----
Ihlen	----	Buffalo	226
Pipertone	4,887	Tower City	293
Holland	----	Oriska	----
Ruthton	----	Valley City	7,774
Florence	----	Sanborn	237
Russell	----	Eckelson	----
Lynd	----	Spiritwood	----
Marshall	----	Jamestown	16,280
Green Valley	----	Eldridge	----
Cottonwood	924	Windsor	----
Hanley Falls	----	Cleveland	----
Granite Falls	3,451	Medina	521
Maynard	428	Crystal Springs	----
Clara City	1,574	Tappen	271
Raymond	723	Dawson	----
Willman	15,895	Steele	796
Pennock	----	Driscoll	----
Kerkkoven	761	Sterling	----
Murdock	----	McKenzie	----
De Graff	----	Bismark	44,485
Benson	3,656	Mandan	15,513
Clontarf	----	Judson	----
Hancock	877	New Salem	1,081
Morris	5,367	Glen Ullin	1,125
Donnelly	----	Helron	1,078
Herman	600	Richardton	699
Norcross	----	Taylor	----
Tintah	----	Gladstone	----
Campbell	----	Lehigh	----
Doran	----	Dickinson	15,924
Breckenridge	3,909	South Heart	----
		Belfield	----
		Fryburg	----
TOTAL	43,783	Medora	94
		Sentinel Butte	----
		Beach	1,381
		TOTAL	119,071

Exhibit G

REV-0

TABLE 2-1. PATHFINDER PROCESS EQUIPMENT RADIONUCLIDE INVENTORY*

<u>Radionuclide</u>	<u>Isotope Half Life years</u>	<u>Inventory (millicuries)</u>	
		<u>July 1980*</u>	<u>Jan 1990**</u>
Cobalt-60	5.3	105.0	30.3
Nickel-63	100.0	14.2	13.3
Iron-55	2.7	7.95	0.694
Cesium-137	30.2	0.120	0.096
Nickel-59	80,000.0	0.100	0.100
Silver-108m	130.0	0.0036	0.0034
Europium-152	13.4	0.0019	0.0012
Plutonium-238	87.7	0.0008	0.0007
Plutonium-239/240	24,100.0	0.0002	0.0002
Americium-241	432.0	<u>0.0002</u>	<u>0.0002</u>
Total		127.38	44.50

*Data taken from "Topical Report: Residual Radionuclide Distribution and Inventory at the Pathfinder Generating Plant" (June 1982) by Pacific Northwest Laboratory, Richland, Washington.

**1990 data calculated by Black & Veatch, 1989.

TABLE 2-2. ESTIMATED RADIONUCLIDE INVENTORY IN THE REACTOR VESSEL AND INTERNALS AS OF JANUARY 1990

REV-0

Component	Inventory (Curies)								Total
	H-3	C-14	Fe-55	Co-60	Ni-59	Ni-63	Eu-152	Others	
Superheater Baffle	0.08	0.03	4.58	34.40	0.19	21.97	0.02	--	61.3
Superheater Fuel Insulation Tubes	0.15	0.06	8.77	65.92	0.35	42.11	0.05	--	117.4
Superheater Support Plate	--	--	--	--	--	--	--	--	<0.01
Superheater Control Rods	--	--	0.04	0.32	--	0.21	--	--	0.6
Boiler Fuel Boxes	0.01	0.03	0.84	7.19	0.04	4.35	--	0.86	13.3
Boiler Shroud	0.15	0.06	9.59	51.61	0.39	46.84	--	0.01	108.6
Boiler Hold-Down Structure	0.01	--	0.61	4.58	0.02	2.93	--	--	8.1
Boiler CR Tubes/Remaining Structure	--	--	0.49	3.69	0.02	2.36	--	0.01	6.6
Boiler Element Poison Shims	0.03	0.01	1.88	14.14	0.08	9.03	0.01	--	25.2
Boiler Control Blades	0.11	0.04	6.39	48.03	0.26	30.68	0.03	--	85.5
Instrumentation/Sample Holders	--	--	0.48	3.58	0.02	2.29	--	0.01	6.4
Boiler Grid Plate	0.04	0.02	2.52	18.96	0.10	12.11	0.01	--	33.8
Steam Separators and Supports	--	--	0.54	2.93	0.02	2.66	--	0.01	6.2
Feedwater Ring and Supports	--	--	0.15	0.83	--	0.75	--	0.01	1.7
Vessel Cladding	--	--	0.06	0.34	--	0.31	--	--	0.7
Vessel	--	--	0.41	0.14	--	0.09	--	--	0.6
Total by Isotope	0.59	0.25	37.36	256.66	1.49	178.68	0.13	0.93	476.1
Percent of Total by Isotope	0.12%	0.05%	7.85%	53.91%	0.31%	37.53%	0.03%	0.19%	

2-10