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DOCKETED  
USNRC

98 JUL 13 A10:36

ALSO ADMITTED

\*TO MASSACHUSETTS BAR

\*\*TO MAINE BAR

OF COUNSEL

ROBERT A. BACKUS

NANCY E. HART

JON MEYER\*

STEVEN A. SOLOMON

JENNIFER ROOD\*\*

B. J. BRANCH

DARIN HOOD-TUCKER

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

July 9, 1998

Judge Paul Cotter, Jr., Chairman  
Atomic Safety and Licensing Board Panel  
Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Dr. Charles W. Kelber  
Atomic Safety and Licensing Board Panel  
Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Dr. Linda Little  
5000 Hermitage Drive  
Raleigh, NC 27612

Re: North Atlantic Energy Service Corporation  
Seabrook Station, Unit No. 1  
Docket No. 50-443  
ASLBP No. 98-746-05-LA

Dear Administrative Judges:

As directed by the Board's Order, I am herewith filing the following:

1. Sworn affidavits in support of standing of SAPL and NECNP.

The following have submitted affidavits on behalf of SAPL.

Kristie Conrad  
Doug Bogen  
Christopher Nord  
Steven N. Haberman

SECY-EHD-002

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U.S. NUCLEAR REGULATORY COMMISSION  
RULEMAKINGS & ADJUDICATIONS STAFF  
OFFICE OF THE SECRETARY  
OF THE COMMISSION

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The following have submitted affidavits authorizing the New England Coalition to represent them:

John Parker  
Sarah Parker  
Elizabeth Meiklejohn.

2. Contentions, with supporting bases filed jointly on behalf of both organizations.

3. A Memorandum of Law on the issue of the admissibility of Contentions 2-4. NAESCO has indicated that it will oppose any contention that does not deal solely with the issue of less frequent steam generator inspections.

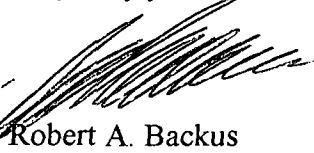
Finally, I would like to briefly respond to the claims made by both counsel for the NRC staff and counsel for NAESCO that the petition on behalf of NECNP is untimely. Counsel for the staff cites Boston Edison, 22 NRC 461, in support of his position that the NECNP petition is untimely.

In fact, there is no separate NECNP petition. NECNP is simply joining in the June 5<sup>th</sup> petition filed by SAPL, which the Board has already ruled as timely. NECNP is not raising any new contentions, bringing forth any matters not addressed in the June 5<sup>th</sup> filing, or using separate counsel.

Because of this, the case cited by counsel for the staff, Boston Edison, is not on point. In that case, there was only one petition, filed eight days late, which did not address the late filed criteria of 10 CFR 2.714(a). In the present case, there is a timely petition, in which another organization is joining.

Because of the circumstance, there cannot be any claim by either the staff or NAESCO that there was any prejudice as a result of the NECNP joinder in the SAPL June 5<sup>th</sup> petition. All that is at issue is whether the caption on pleadings in this proceeding can bear the names of two petitioners or must be limited to only one. In actuality, therefore, NECNP is merely seeking joinder pursuant to FRCP 20. The Federal Rules apply when, as here, the NRC has no rule on joinder. Georgia Power Company (Vogtle), LBP-96-16, 44 NRC 59, 62; Cincinnati Gas & Electric Company (Zimmer), LBP 82-47, 15 NRC 1538, 1542 (1982). Thus, as NECNP intends to raise no issues different than SAPL, NECNP should be allowed to join.

Very truly yours,



Robert A. Backus

RAB/acw

Enclosures

cc: SAPL  
NECNP  
David Lochbaum  
Paul Gunter, NIRS

UNITED STATES OF AMERICA

DOCKETED  
USNRC

BEFORE THE NUCLEAR REGULATORY COMMISSION '98 JUL 13 A10:36

Before Administrative Judges:

B. Paul Cotter, Jr., Chairman  
Dr. Charles N. Kelber  
Dr. Linda W. Little

OFFICE OF SECRETARY  
RULEMAKING AND  
ADJUDICATIONS STAFF

|                                  |   |                        |
|----------------------------------|---|------------------------|
| In the Matter of                 | ) |                        |
|                                  | ) |                        |
| North Atlantic Energy            | ) |                        |
| Service Corporation              | ) |                        |
|                                  | ) | Docket No. 50-443      |
| Seabrook Station, Unit No. 1     | ) |                        |
|                                  | ) | ASLBP No. 98-746-05-LA |
| Rockingham County, New Hampshire | ) |                        |

CERTIFICATE OF SERVICE

I hereby certify that copies of Affidavits of Kristie Conrad, Doug Bogen, Christopher Nord and Steven N. Haberman in support of SAPL and John Parker, Sarah Parker and Elizabeth Meiklejohn in support of NECNP, Contentions 1 through 4 and Memorandum of Law regarding the Admissibility of Contentions 2 through 4 in the above-captioned proceeding have been served on the following by deposit in the United States Mail, first class, this 9<sup>th</sup> day of July, 1998.

Office of the Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555  
Attn: Docketing and Service Station  
(Original and two copies)

Steven R. Hom, Esq.  
Office of the General Counsel  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Lillian M. Cuoco  
Senior Nuclear Counsel  
Northeast Utilities Service Company  
107 Selden Street  
Berlin, CT 06037

B. Paul Cotter, Jr.  
Chairman  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001


Dr. Charles N. Kelber  
Administrative Judge  
Atomic Safety and Licensing Board  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

David A. Repka  
Winston & Strawn  
1400 L Street, N.W.  
Washington, D.C. 20005

Adjudicatory File  
Atomic Safety and Licensing Board Panel  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Office of Commission Appellate Adjudication  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dated: July 9, 1995

  
\_\_\_\_\_  
Robert A. Backus  
For SAPL and NECNP

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

B. Paul Cotter, Jr., Chairman  
Dr. Charles N. Kelber  
Dr. Linda W. Little

In the Matter of

Docket No. 50-443-LA

NORTH ATLANTIC ENERGY  
SERVICE CORPORATION

ASLBP No. 98-746-05-LA

(Seabrook Station Unit No. 1)

AFFIDAVIT

Kristie Conrad being duly sworn, hereby states the following:

1. My name is Kristie Conrad and I reside at 395 Winnacunnet Rd Hampton NH. I have personal knowledge of the matters set forth.
2. I am a member of the Seacoast Anti-Pollution League and desire, and hereby authorize, SAPL to represent me in proceedings before the Atomic Safety and Licensing Board regarding the May 6<sup>th</sup> license exemption request from the operator of Seabrook station.
3. I have lived at my residence for 10 years. My residence is less than 2 miles, in a direct line, from Seabrook station

4. I have long been concerned about the safe operation of Seabrook station. Since I live within the 10 mile emergency planning zone, it is my understanding that I and my family are within the area that could not only be impacted by an accident at Seabrook with off site consequences, but within an area in which the licensee is required to provide protective actions in that event.
5. Any license exemption, which, if granted, would have the effect of reducing the safety margins at Seabrook, would have an impact on me should an accident resulting from reduced safety margins, release radioactivity off site,
6. Accordingly, I believe I am a person directly affected by the proposed action.

7. I have 2 daughters who attend school within 2 miles of the Seabrook Nuclear Plant. We have a 3rd child (an infant) who lives with us within 2 miles of the plant where we garden, play, work and make a living - all affected by possible accidents at the Nuclear Plant.

DATED:

June 27, 1998

Name

Kristie Conrad

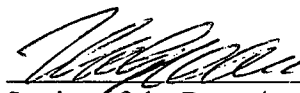
Address

395 Winnacumet Rd  
Hampton, NH 03842

STATE OF NEW HAMPSHIRE

COUNTY OF ROCKINGHAM

Subscribed and sworn to before me this 27<sup>th</sup> day of JUNE, 1998.



Justice of the Peace/

Notary Public

ROBERT A. BACKUS, Notary Public  
My Commission Expires December 6, 2000



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

B. Paul Cotter, Jr., Chairman  
Dr. Charles N. Kelber  
Dr. Linda W. Little

\_\_\_\_\_  
In the Matter of

NORTH ATLANTIC ENERGY  
SERVICE CORPORATION

(Seabrook Station Unit No. 1)  
\_\_\_\_\_

Docket No. 50-443-LA

ASLBP No. 98-746-05-LA

AFFIDAVIT

Doug Bogen being duly sworn, hereby states the following:

1. My name is Doug Bogen and I reside at  
404 Pleasant St, Apt 3, Portsmouth. I have personal  
knowledge of the matters set forth.
2. I am a member of the Seacoast Anti-Pollution League and desire, and hereby  
authorize, SAPL to represent me in proceedings before the Atomic Safety and  
Licensing Board regarding the May 6<sup>th</sup> license exemption request from the  
operator of Seabrook station.
3. I have lived at my residence for 7 years. My residence is less than 10 miles,  
in a direct line, from Seabrook station

4. I have long been concerned about the safe operation of Seabrook station. Since I live within the 10 mile emergency planning zone, it is my understanding that I and my family are within the area that could not only be impacted by an accident at Seabrook with off site consequences, but within an area in which the licensee is required to provide protective actions in that event.
5. Any license exemption, which, if granted, would have the effect of reducing the safety margins at Seabrook, would have an impact on me should an accident resulting from reduced safety margins, release radioactivity off site,
6. Accordingly, I believe I am a person directly affected by the proposed action.
7. I spend a lot of time outdoors, at the beach and around the NH seacoast.

DATED: 6/27/98

Dorey Bogen  
Name  
404 Pleasant St. Apt 3  
Portsmouth, NH 03801  
Address

STATE OF NEW HAMPSHIRE  
COUNTY OF Rockingham

Subscribed and sworn to before me this 27<sup>th</sup> day of JUNE,  
1998.

[Signature]  
Justice of the Peace/  
Notary Public

ROBERT A. BACKUS, Notary Public  
My Commission Expires December 6, 2000

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

B. Paul Cotter, Jr., Chairman  
Dr. Charles N. Kelber  
Dr. Linda W. Little

In the Matter of

Docket No. 50-443-LA

NORTH ATLANTIC ENERGY  
SERVICE CORPORATION

ASLBP No. 98-746-05-LA

(Seabrook Station Unit No. 1)

AFFIDAVIT

CHRISTOPHER WORD being duly sworn, hereby states the following:

1. My name is CHRIS WORD and I reside at  
7 MEADOW LANE, EXETER NH I have personal  
knowledge of the matters set forth.
2. I am a member of the Seacoast Anti-Pollution League and desire, and hereby  
authorize, SAPL to represent me in proceedings before the Atomic Safety and  
Licensing Board regarding the May 6<sup>th</sup> license exemption request from the  
operator of Seabrook station.
3. I have lived at my residence for 4 years. My residence is less than 10 miles,  
in a direct line, from Seabrook station

4. I have long been concerned about the safe operation of Seabrook station. Since I live within the 10 mile emergency planning zone, it is my understanding that I and my family are within the area that could not only be impacted by an accident at Seabrook with off site consequences, but within an area in which the licensee is required to provide protective actions in that event.
5. Any license exemption, which, if granted, would have the effect of reducing the safety margins at Seabrook, would have an impact on me should an accident resulting from reduced safety margins, release radioactivity off site,
6. Accordingly, I believe I am a person directly affected by the proposed action.
7. *I WORK IN & AROUND SEABROOK REGULARLY,  
ALSO I SAIL ALONG THE NH. COAST*

DATED:

*6/27*

Name

*Christopher S. Reed*  
*72 Middleton*  
*Exeter NH 03833*

Address

STATE OF NEW HAMPSHIRE

COUNTY OF ROCKINGHAM

Subscribed and sworn to before me this 27<sup>th</sup> day of JUNE, 1998.

*Robert A. Backus*  
Justice of the Peace/  
Notary Public

ROBERT A. BACKUS, Notary Public  
My Commission Expires December 6, 2000

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

B. Paul Cotter, Jr., Chairman  
Dr. Charles N. Kelber  
Dr. Linda W. Little

In the Matter of

Docket No. 50-443-LA

NORTH ATLANTIC ENERGY  
SERVICE CORPORATION

ASLBP No. 98-746-05-LA

(Seabrook Station Unit No. 1)

AFFIDAVIT

STEVEN N. HABERMAN being duly sworn, hereby states the following:

1. My name is STEVEN N. HABERMAN and I reside at  
105 HIGH ST., HAUPPON, NH 03872 I have personal  
knowledge of the matters set forth.
2. I am a member of the Seacoast Anti-Pollution League and desire, and hereby  
authorize, SAPL to represent me in proceedings before the Atomic Safety and  
Licensing Board regarding the May 6<sup>th</sup> license exemption request from the  
operator of Seabrook station.
3. I have lived at my residence for 18 years. My residence is less than 3 miles,  
in a direct line, from Seabrook station



4. I have long been concerned about the safe operation of Seabrook station. Since I live within the 10 mile emergency planning zone, it is my understanding that I and my family are within the area that could not only be impacted by an accident at Seabrook with off site consequences, but within an area in which the licensee is required to provide protective actions in that event.
5. Any license exemption, which, if granted, would have the effect of reducing the safety margins at Seabrook, would have an impact on me should an accident resulting from reduced safety margins, release radioactivity off site,
6. Accordingly, I believe I am a person directly affected by the proposed action.
7. *Exercise, Eat at Restaurants*

DATED: *JUNE 27, 1998*

Name

*STEVEN N. HABERMAN*

Address

*105 HIGH ST. HAMPTON, NH 03842*

STATE OF NEW HAMPSHIRE  
COUNTY OF *Rockingham*

Subscribed and sworn to before me this *27<sup>th</sup>* day of *JUNE*,  
1998.

*Robert A. Backus*  
Justice of the Peace/  
Notary Public

ROBERT A. BACKUS, Notary Public  
My Commission Expires December 6, 2000

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

B. Paul Cotter, Jr., Chairman  
Dr. Charles N. Kelber  
Dr. Linda W. Little

In the Matter of

NORTH ATLANTIC ENERGY  
SERVICE CORPORATION

(Seabrook Station Unit No. 1)

Docket No. 50-443-LA

ASLBP No. 98-746-05-LA

AFFIDAVIT

JOHN PARKER being duly sworn, hereby states the following:

1. My name is JOHN PARKER and I reside at 170 KENSINGTON RD  
HAMPTON FALLS, NH. I have personal  
knowledge of the matters set forth.
2. I am a member of the New England Coalition on Nuclear Pollution and desire, and  
hereby authorize, NECNP to represent me in proceedings before the Atomic  
Safety and Licensing Board regarding the May 6<sup>th</sup> license exemption request from  
the operator of Seabrook station.
3. I have lived at my residence for 39 years. My residence is less than 3.5 miles,  
in a direct line, from Seabrook station

4. I have long been concerned about the safe operation of Seabrook station. Since I live within the 10 mile emergency planning zone, it is my understanding that I and my family are within the area that could not only be impacted by an accident at Seabrook with off site consequences, but within an area in which the licensee is required to provide protective actions in that event.
5. Any license exemption, which, if granted, would have the effect of reducing the safety margins at Seabrook, would have an impact on me should an accident resulting from reduced safety margins, release radioactivity off site,
6. Accordingly, I believe I am a person directly affected by the proposed action.
7. I AM AN ACTIVE FOOT RUNNER  
IN THE VICINITY.

DATED:

6-27-98

John Parker  
JOHN PARKER

Name

170 KENSINGTON RD  
HAMPTON FALLS, NH 03844

Address

STATE OF NEW HAMPSHIRE  
COUNTY OF ROCKINGHAM

Subscribed and sworn to before me this 27<sup>TH</sup> day of JUNE,  
1998.

Robert A. Backus  
Justice of the Peace/  
Notary Public

ROBERT A. BACKUS, Notary Public  
My Commission Expires December 6, 2000



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

B. Paul Cotter, Jr., Chairman  
Dr. Charles N. Kelber  
Dr. Linda W. Little

\_\_\_\_\_  
In the Matter of

NORTH ATLANTIC ENERGY  
SERVICE CORPORATION

(Seabrook Station Unit No. 1)  
\_\_\_\_\_

Docket No. 50-443-LA

ASLBP No. 98-746-05-LA

AFFIDAVIT

SARA A. PARKER being duly sworn, hereby states the following:

1. My name is SARA A PARKER and I reside at  
170 KENSINGTON RD, HAMPTON FALLS, NH 03844. I have personal  
knowledge of the matters set forth.
2. I am a member of the New England Coalition on Nuclear Pollution and desire, and  
hereby authorize, NECNP to represent me in proceedings before the Atomic  
Safety and Licensing Board regarding the May 6<sup>th</sup> license exemption request from  
the operator of Seabrook station.
3. I have lived at my residence for 39 years. My residence is less than 3.5 miles,  
in a direct line, from Seabrook station

4. I have long been concerned about the safe operation of Seabrook station. Since I live within the 10 mile emergency planning zone, it is my understanding that I and my family are within the area that could not only be impacted by an accident at Seabrook with off site consequences, but within an area in which the licensee is required to provide protective actions in that event.
5. Any license exemption, which, if granted, would have the effect of reducing the safety margins at Seabrook, would have an impact on me should an accident resulting from reduced safety margins, release radioactivity off site,
6. Accordingly, I believe I am a person directly affected by the proposed action.
- 7.

DATED: JUNE 27, 1998

Name

Lana A Parker  
140 Kensington Rd

Address

Hampton Falls, NH 03844

STATE OF NEW HAMPSHIRE

COUNTY OF ROCKINGHAM

Subscribed and sworn to before me this 27<sup>th</sup> day of JUNE, 1998.

[Signature]  
Justice of the Peace/  
Notary Public

ROBERT A. BACKUS, Notary Public  
My Commission Expires December 6, 2000

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

B. Paul Cotter, Jr., Chairman  
Dr. Charles N. Kelber  
Dr. Linda W. Little

In the Matter of

NORTH ATLANTIC ENERGY  
SERVICE CORPORATION

(Seabrook Station Unit No. 1)

Docket No. 50-443-LA

ASLBP No. 98-746-05-LA

AFFIDAVIT

Elizabeth H. Meiblejohn being duly sworn, hereby states the following:

1. My name is Elizabeth H. Meiblejohn and I reside at 503 Exeter Rd, Hampton, N.H.. I have personal knowledge of the matters set forth.
2. I am a member of the New England Coalition on Nuclear Pollution and desire, and hereby authorize, NECNP to represent me in proceedings before the Atomic Safety and Licensing Board regarding the May 6<sup>th</sup> license exemption request from the operator of Seabrook station.
3. I have lived at my residence for 29 years. My residence is less than 10 miles, in a direct line, from Seabrook station

4. I have long been concerned about the safe operation of Seabrook station. Since I live within the 10 mile emergency planning zone, it is my understanding that I and my family are within the area that could not only be impacted by an accident at Seabrook with off site consequences, but within an area in which the licensee is required to provide protective actions in that event.
5. Any license exemption, which, if granted, would have the effect of reducing the safety margins at Seabrook, would have an impact on me should an accident resulting from reduced safety margins, release radioactivity off site,
6. Accordingly, I believe I am a person directly affected by the proposed action.
7. *It would affect my family and our ability to have a safe place to garden and to live as we know it.*

DATED:

*JUNE 27, 1998*

Name

*Elizabeth H. Meiklejohn*

Address

*563 Exeter Road  
Hampton, N.H. 03842*

STATE OF NEW HAMPSHIRE

COUNTY OF *ROCKINGHAM*

Subscribed and sworn to before me this *27<sup>th</sup>* day of *JUNE*, 1998.

*[Signature]*  
Justice of the Peace/  
Notary Public

ROBERT A. BACKUS, Notary Public  
My Commission Expires December 6, 2000



## CONTENTION I

The staff erred in its May 6 finding of no significant hazards consideration in regard to the request of NAESCO to change the Technical Specifications for Seabrook Station to accommodate fuel cycles of up to 24 months with respect to the allowed time between steam generator inservice inspections. Contrary to the staff's conclusion, the proposed changes may cause a significant increase in the probability or consequences of an accident previously evaluated, and may involve a significant reduction in the margin of safety, contrary to the requirements of 10 CFR 50.92.

## BASIS

The basis for this contention is the safety consequence of reducing the required surveillances for the steam generators by twenty-five percent. It is well known that the failure of steam generator tubes can result in an accident with offsite consequences. A steam generator tube rupture event is an analyzed accident at Seabrook. A failed steam generator tube or tubes can provide a direct by pass for radionuclides from the reactor core to the environment.

In addition, it is well established that degraded steam generator tubes are a key vulnerability in pressurized water reactors. Although Seabrook claims to have an improved steam generator, known as the Model F with thermally treated Inconel 600, there have been indications of steam tube degradation at Seabrook. This history is provided in SAPL's June 5, 1998 letter to the Commission. Briefly, that history reflected the fact of the plugging of some 36 tubes as of the date of Inspection Report 97-03. It also reflected the fact, acknowledged by the inspection report that "Most steam generator degradation problems have been found only after longer [than seven years] periods of operation." Since the age of Seabrook is now at a point where concern about

steam generator degradation should be greater, there is no basis to conclude, as staff does, that extending the period between surveillances by 25% is without safety significance. (Seabrook went into commercial operation in August, 1990.)

NUREG/CR-XXXX, INEL/EXT-98-00401, "Rates of Initiating Events at U.S. Commercial Nuclear Power Plants - 1987 through 1995" (April 1998) discusses steam generator tube rupture events. It notes that: "The last SGTR identified in the 1987-1995 experience occurred at Palo Verde 2 in 1993. Since no SGTR events were identified in the last two years of this study, the 1996 through 1997 operating experience was screened for SGTR events to determine if a trend existed. Further trend analysis of SGTR frequency using the 1985 through 1997 operating experience showed no statistical evidence of a decreasing trend in the frequency of SGTR." (Emphasis supplied.)

Your petitioners would also rely on the Seabrook Individual Plant Examination Report, in response to Generic Letter 88-20. This report, part of the Seabrook Station Probabilistic Risk Assessment (subsequently known as the Seabrook Station Probabilistic Safety Study), presents evaluation of various transients that could result in accidents with offsite consequences, including the so called steam generator bypass event, or steam generator tube rupture. It should be noted that the IPE specifically notes that, "Seabrook-specific data has not been included in these distributions [of accident probabilities] based on limited operation experience." NAESCO has neither updated its IPE with Seabrook specific data nor provided any such data with its license amendment request.

In licensee letter NYN-91146, September 9, 1991, reporting on the first inservice steam generator inspection, it was noted "no defective tubes, that is a tube with a wall loss equal to or

greater than 40%, were identified.” However, 12 tubes were plugged with wall losses between 35% and 38% “for preventive maintenance.” By contrast, in a licensee letter dated June 18, 1997, and titled “Steam Generator Tubes Plugged During Fifth Inservice Inspection,” the licensee submitted information indicating that thirteen (13) tubes were plugged, and that seven of these had wall loss indications of greater than or equal to 35% (one of 35%, one at 37%, one at 39%, one at 40%, one at 45%, one at 55%, and one at 56%). The remaining tubes did not have their wall loss values specified. Since wall loss of 40% or more defines a defective tube, the recent information indicates that Seabrook was operating with at least four defective tubes.

The reduced surveillance frequency, coupled with the 1997 inservice inspection data showing that Seabrook had operated with defective steam generator tubes, indicates that the steam generator tube rupture event frequency assumed in the IPE is non-conservative. The 1991 inservice inspection data suggests that some steam generator tubes might have crossed the line into the defective classification had the plant operated for 25% longer.

In the current license amendment request, NAECSO has apparently redefined “defective tube” from the 40% standard referenced in letter NYN-91146, cited above. The current standard claimed by NAECSO is 75% wall loss. (See the License Amendment Request, April 8, 1998, page 5.) This relaxed standard for declaring a tube degraded, which is not addressed in the exemption request, would further reduce the safety margin for the steam generator tube rupture accident.

The 75% wall loss criterion is also the subject of an unresolved Differing Professional Opinion (DPO). Joram Hopenfeld, Task Manager, Generic Safety Issues Branch, NRR, has stated that permitting plants to operate with tubes with greater than 40% wall loss represents an insufficiently analyzed safety issue. According to Hopenfeld, the alternate repair criteria, based

upon eddy current voltage signals to predict tube failure, lacks sufficient field data to be considered valid. He says there is no direct correlation between voltage readings and tube leakage. Hopenfeld's position has been the subject of a hearing before the Advisory Committee on Reactor Safeguards, but remains an unresolved issue.

In raising a new generic issue, multiple steam generator leakage, Hopenfeld stated (March 1992):

"The present analysis shows that continuous operation with degraded tubes could lead to a core melt due to simultaneous leakage from many tubes following an unisolated steam line break. The risk for such an event cannot reliably be estimated because of lack of data. Although a design basis multiple tube rupture could bound the above leakage, it is not practical at this time to request the industry to modify present plant designs. The available data does not support NRC position that operation with degraded tubes is safe. That position is based on 'leak before break' consideration which is acceptable for normal operation is not applicable to the SLB accident."

The staff suggests, in supporting its no significant hazards determination, that the decreased inspection frequency can be offset by a tightening of the allowed leakage rate from 500 gallons per day (gpd) to 100 gpd. However, no analysis or rationale for suggesting the more stringent leak rate is an offsetting safety benefit to the decreased inspections is provided, and the staff's determination only claims that: "The more restrictive limit for leakage through any one steam generator placed in Category C-2, as well as the requirement to do an engineering assessment of steam generator tube integrity, provides additional margin of ensuring safe plant operation." (63 FR page 25113). However, the determination provides no reason for a finding that leakage rates can fulfill the function that would be provided by 18 month as opposed to 24



month inspections. In fact, there can be a tube failure, or tube failures, that could occur suddenly enough to not be preceded by detectable increase in leakage rates. For example, a steam generator tube with wall thinning approaching, or perhaps even exceeding, the "defective" tube criterion might suddenly fail during a transient due to the hydrodynamic forces or the thermal effects of cold emergency feedwater injection.

In summary, there is an undeniable reduction in safety margins by extending the time between steam generator inspections by 25%. Given the limited data supporting the Seabrook IPE on the steam generator tube rupture accident scenario, and the history of increasing tube wear at Seabrook, all of which occurred before the time when the staff reported in Inspection Report 97-03 serious wear problems would be expected, the staff is in error in its determination that the requested exemption involves no significant hazards consideration.

## CONTENTION 2

The staff erred in its May 6 finding of no significant hazards consideration in regard to the request to change the Technical Specifications for Seabrook Station to accommodate a 24 month fuel cycle because the staff failed to analyze the impact of a 25% longer operational run on fuel rod failure, and because the result of a longer run will be to increase fuel rod failure, thereby breaching the first line of defense against offsite radioactive releases. Therefore, the finding is contrary to the requirements of 10 C.F.R. 50.92 in that the analyzed consequences of an increased risk of fuel failure would involve a significant increase in the probability or consequences of a previously analyzed accident and involves a significant reduction in the margin of safety.

## BASIS

Although NAESCO has claimed that the current exemption request should be limited to the sole question of decreased steam generator inspections, the petitioners claim that this request is only one step in a plan to accommodate a two year operational run, requiring either the use of more highly enriched fuel or a higher burn up of fuel. In its letter NYN-98053, April 8, 1998, transmitting the request, the licensee states: "LAR 98-03 is the second submittal in a planned series of License Amendment Requests which propose changes to the Seabrook Station Technical Specifications to accommodate fuel cycles of up to 24 months." The first request appears to be the series of exemptions sought in the Federal Register for April 22, 1998, and particularly the request for reducing certain surveillances found at Vol 63, page 19974-75. This request, which SAPL opposed by a letter dated April 22 from Mr. Steve Haberman, sought changes "to support planned implementation of 24 month fuel cycle surveillance interval extensions." (Mr. Haberman's letter is attached.)

Since the intent of the current request is intended to permit authorizing the operators of Seabrook to move to bi-annual refueling, the petitioners contend that the staff erred in failing to analyze the risks of fuel failure before making a no significant hazards determination. The risk associated with this major change in operations should be evaluated under 10 C.F.R. 50.91 rather than considering only each piece of the change as independent of every other piece. Otherwise, decision making becomes incremental and the overall risk of the change cannot be properly evaluated. It is well recognized that accident scenarios are likely to involve multiple failures, or a systems problem, rather than an isolated failure of a single analyzed event. Accordingly, the licensee's request to be authorized to use bi-annual refuelings should be reviewed in an integrated and comprehensive manner.

As set forth in SAPL's June 5, 1998 letter to the Commission, a major concern with a 24 month fuel cycle is not only decreased surveillance of systems, structures and components important to safety, but additional stress on the fuel itself. The petitioners hereby reference the paper by G. Rothwell and J. Russ "On the Optimal Life of Nuclear Power Plants" (1995) describing the "primary trade off between (1) the potential improvement and capacity factor with longer operating cycles and (2) the potential risk of unplanned mid-cycle outages due to fuel and other failures." As the authors describe, some fission products appear as gasses that eventually create pressure within the fuel rods. "As a result, a fuel rod can swell, crack and become physically distorted to such an extent that it is no longer usable." (See SAPL, June 5, 1998 letter to the Commission.)

This condition, however, has more than operational significance; it has safety significance. The fuel, and in particular the fuel cladding, is both the first and a critical barrier against major releases of radioactivity. NRC rules require this barrier to be intact during operations.

Nonetheless, there have been instances, including instances at Seabrook, where nuclear plants have operated with a degraded fuel. The fact that many plants have operated with failed fuel cladding should not be taken as an indication that this is an acceptable safety practice or within the requirements of NRC regulation. Although to date the public may have been protected during normal plant operation with degraded fuel, there is no reason to believe that the public will be protected in the event of an accident. There is also no reason to believe that nuclear workers will be protected during normal plant operation with failed fuel.

The fuel cladding is the most important of the three barriers between highly radioactive material and the environment. As long as the fuel cladding remains intact, no nuclear plant accident can threaten the public health and safety. All safety analyses, including the Seabrook Individual Plant Examination, the Seabrook FSAR and the staff's Seabrook Safety Evaluation Report, assume that the fuel cladding is intact when an accident scenario begins. Operation with pre-existing fuel cladding failures may mean that a nuclear accident will have more severe consequences than predicted by the invalidated accident analyses. Therefore, a nuclear plant operating with defective fuel cladding is an increased risk to the public. This also constitutes a condition that cannot be treated as without "significant hazards consideration pursuant to 10 C.F.R. 50.92(c)(1).

As noted in SAPL's June 5, 1998 letter, with the current 18 month cycle, Seabrook has already had fuel failures. As the result of detecting increases in noble gasses and iodine on

December 10, 1996, it was found that there were five failed fuel rods, in the first burned batch of Westinghouse vantage ZH Zirlo clad fuel assemblies. Inspection Report 97-03 states, at page 20:

“The licensee root cause evaluation determined that a probable cause of the fuel failures was the combined effects of power history, core design and operational strategy that resulted in interaction between the fuel pellets and the fuel cladding. The affected fuel assemblies apparently carried a very large load (produced high power) for all of the last cycle.”

Given the pivotal role of fuel cladding as the first barrier against radioactive release, the record of fuel failure at Seabrook to date, its claimed source in the plant’s “power history” and the inevitable increased stress on the fuel rods from increasing the operational run by up to six months, or 25%, the staff cannot conclude that the operational change sought by the licensee is within the requirements of 10 C.F.R. 50.92.

In addition, the standard technical specifications prepared by Westinghouse, the nuclear steam supply vendor for Seabrook, specifies that “The fuel cladding must not sustain damage as a result of normal operation.” Westinghouse Electric Corporation, Standard Technical Specifications, Section B2.1.1, “Reactor Core SIs.”

Finally, to permit fuel cladding degradation as a result of the stresses resulting from extending the operational run is not consistent with the Commission’s ALARA requirements. 10 C.F.R. 50.32a and 50.36. See also Part 50, Appendix I “Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion ‘As Low as Reasonably Achievable’ for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents.”

### CONTENTION 3

The staff erred in its May 6 finding of no significant hazards consideration in regard to the request of NAESCO request to change the Technical Specifications for Seabrook Station to accommodate a 24 month fuel cycle because the staff failed to analyze the effect of increasing the operational run by 25% with a resulting requirement for an increased reliance on on line maintenance, which may cause an increase in the probability or consequences of an accident previously analyzed, or may cause an accident not previously analyzed, and which may cause a significant reduction in the a margin of safety, contrary to the requirements of 10 CFR 50.92.

### BASIS

As set forth in the SAPL June 5, 1998 letter to the Commission, the NRC staff in 1987 forbid the use of on line maintenance at Seabrook. In Inspection Report 87-16, dated October 21, 1987, the staff stated as follows:

Also, during this inspection period, the inspector confirmed with the station operations manager [New Hampshire Yankee, the predecessor to NAESCO] the position that TS [Technical Specification] Limiting Condition for Operation (LCO) 3.0.3 is not intended for use as an operational convenience to permit redundant safety systems to be removed from service for a limited period of time. Based upon problems of interpretation of LCO 3.0.3 at other plants, the NRC position is that voluntary entry into LCO 3.0.3 is unacceptable. (Emphasis supplied.)

Although the staff has since changed its position on the use of on line maintenance, by authorizing entry into the Limiting Conditions for Operation in order to perform on line maintenance, the staff has never justified its change from one of prohibiting the practice to one of authorizing the practice. Although the staff claims on line maintenance is authorized by the maintenance rule, 10 CFR 50.65(A)(3), nothing in the regulatory history of the rule, or its

accompanying environmental assessment, supports the use of on line maintenance. On line maintenance, by definition, involves the intentional disabling of safety related systems, structures and components (SSC's) "that could initiate or effect a transient or accident...." Reg. Guide 1.60, Introduction, June, 1993. Accordingly, the petitioners aver that on line maintenance is not authorized by either 10 CFR 50.65(A)(3) or 50.36(c)(2)(II) which were cited in the August 22, 1996 letter to SAPL from Richard W. Cooper, II, Director of Reactor Projects in authorizing the use of on line maintenance at Seabrook.

NRC Inspection Manual 62706 illustrates methods for licensee compliance with the maintenance rule. This manual, cited by the staff in response to SAPL's original protest over the staff's change of position on on line maintenance, states at page 17C, "Assessment of Equipment Out of Service."

In order to minimize outage time and reduce costs, many licensees are increasing the amount of preventive maintenance being performed during power operation. This can result in the simultaneous removal of multiple systems from service, which can result in significant increases in risk during these periods. The NRC is concerned that some licensees may not be adequately analyzing the risk or safety impact associated with these unavailabilities. The failure to adequately evaluate safety when planning and scheduling maintenance has lead to simultaneous unavailabilities of multiple redundant or diverse systems at some sites, possibly leading to unacceptable increases in risk despite the fact that such configurations may not be prohibited by technical specifications. Technical specifications for most sites were crafted for random failure; voluntary removal of multiple systems from service may not be bounded by worst case single failure assumptions and technical specifications. The NRC is concerned that risk is significantly increased during periods when multiple redundance or diverse safety systems are unavailable due to preventative maintenance. (Emphasis added.)

The manual properly manifests a concern about the safety implications of on line maintenance. These concerns, based on the inherent increased risk from on line maintenance, will be increased if the period when off line maintenance can be performed is reduced by substantially reducing the time between refueling outages.

The August 22, 1996 Cooper letter, despite authorizing on line maintenance, acknowledged a “small risk” associated with the unavailability of certain safety systems due to the on line maintenance. No basis for assessing the risk to be small has been provided, either in the Cooper letter or by any of the regulatory analysis supporting the issuance of the maintenance rule itself. Similarly, no analysis or rationale has been provided for believing that “on line maintenance can show a high degree of reliability that the equipment will perform its function is required,” as the Cooper letter asserts.

The extension of the operational run to two years obviously increases the need for on line maintenance, thereby increasing the hazards that the NRC staff felt were sufficiently serious to lead them to prohibit the practice in 1987.

Furthermore, the risks are not within the analysis of the Seabrook Individual Plant Examination (IPE), referenced in the discussion of “basis” to Contention 1. The IPE, which purports to assess accident probabilities for all credible initiating events, deals with maintenance data assumptions on older plant date; i.e., plants which had not yet gone to 18 month or 24 month cycles.<sup>1</sup> Therefore, there is no basis for believing that the maintenance data assumptions in the

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<sup>1</sup>Petitioners note that Seabrook was originally licensed on the basis of annual refueling. With the current 18 month refueling cycle, Seabrook already is authorized to extend its operational run by one third more than permitted in the initial licensing.



IPE bound conditions at Seabrook now, much less in a condition which requires more and more on line maintenance.

Petitioners also contend that before any determination that a license change involve no significant hazards determination is made that the IPE analysis of initiating events should be evaluated and the relevant probability calculations weighed. No reference to this basic Seabrook specific risk assessment appear either in the licensee's request to the staff or in the finding of no significant hazard found in the May 6, 1998 Federal Register.

Finally, the IPE is supposed to be a "living document" in that the NRC intends licensees to rely on the plant specific IPE when making decisions about plant plant modifications and procedure modifications. The NRC also expects licensees to update their IPE's based on changes to plant configurations or procedures. Thus, although the Seabrook licensee's reliance on generic data may have been defensible in 1991 because of limited operating experience, it is not defensible at the present time. Before authorizing a major operational change that will inevitably involve other changes such as significantly greater reliance on on line maintenance, however, the IPE should be updated to include both generic and plant specific data, or the licensee's request to the staff should explicitly justify why the IPE results are not invalidated by the surveillance interval extension.

Because a 25% increase in the operational run will require the use of additional on line maintenance, which by definition involves the intentional disabling of safety important SSC's, and

because this condition has not been analyzed the staff, although it may cause a decrease in the safety margins or increase the probability or consequences of previously analyzed accidents, the staff lacked a basis under 10 CFR 50.92 to conclude that the requested change presented no significant hazards considerations.

#### CONTENTION 4

The staff erred in its May 6 finding of no significant hazards consideration in regard to the request of NAESCO to change the Technical Specifications for Seabrook Station to accommodate fuel cycles up to 24 months because the decreased opportunity to conduct surveillances within the areas of the plant inaccessible during normal operations may create an increased hazard as the result of the failure to timely detect abnormal or improper conditions (such as misaligned or mispositioned valves), which may result in an increased probability of a previously analyzed accident and which may result in a significant reduction in the margin of safety, contrary to the requirements of 10 CFR 50.92.

#### BASIS

Petitioners again reference the Seabrook IPE, cited in the "basis" to Contention 1. As previously stated, it appears that the majority, if not the entirety, of the human interactions assumptions in the Seabrook IPE are based on older plant data; i.e., plants which unlike Seabrook had not yet changed to either an 18 month or a 24 month operating cycle. Any discovery of a mispositioned or tampered component during a 24 month surveillance cycle means that, in all likelihood, the component will have been in a degraded condition for a longer period of time. Thus, although the chances of human error may remain comparable to those assumed in the IPE, the consequences increase. Thus, the assumptions for initiating events in the Seabrook IPE cannot be assumed to bound conditions at Seabrook with a 25% decrease in surveillance frequency.

In addition to the steam generators, discussed in Contention 1, the Seabrook Technical

Specifications indicate that the hydrogen recombiner system is to be subject to verification "at least once per 18 months during shutdown." A similar frequency requirement exists for portions of the Containment Enclosure Emergency Air Clean-up System and the emergency diesel generators. The petitioners acknowledge that the licensee has already sought an extension of the surveillance requirement for the emergency diesel generators by an application dated March 2, 1998. See Federal Register, Vol 63, page 19971, April 22, 1998. Petitioners assume this is the first in a series of requests for approval of 24 month refuelings referred to in licensee letter NYN-98053, April 8, 1998, by forwarding the present License Amendment Request. SAPL protested this request, along with three others published in the same Federal Register by its April 22 letter to the Commission from Mr. Steve Haberman, a copy of which is attached.

The current surveillance requirements for critical safety systems reflects the necessity for timely detection of any abnormal condition of equipment important to safe operation or accident mitigation. However, the staff has failed to analyze the adverse impact on safety margins of substantially less frequent inspections either for the items specified for inspections at 18 month intervals (with the exception of the finding of no significant hazards consideration in regard to decreased inspections of the emergency diesel generators) or for other components, such as motor operated valves or pump controls.

The NRC is aware of instances of deliberate tampering at nuclear power stations. NRC Information Notice No. 96-71, "Licensee Response to Indications of Tampering, Vandalism, or Malicious Mischief," dated December 27, 1996, describes recent events at the Beaver Valley and St. Lucie plants and states that "some licensee personnel may not recognize the potential significance" of such events. One of the two tampering events described in Notice 96-71 was

discovered by the licensee performing a quarterly surveillance. If this activity had been revised to a two year interval, the tampering might have remained undetected for more than a year.

Although petitioners recognize that whether a valve mispositioning is deliberate or inadvertent is not material insofar as the safety concerns is delay in detection, a deliberate tamperer may be assumed to also take steps to defeat detection other than by direct observation. Therefore the ability to timely detect tampering or vandalism is an important reason for not permitting substantially longer intervals between visual inspections.

Therefore, the staff's finding of no significant hazards consideration is without a proper basis under the criteria of 10 CFR 50.92 because the staff has failed to analyze the risks associated with a likely delay in detecting abnormal conditions in the portion of the plant accessible only in a Mode 5 or shutdown condition.

#### FURTHER INFORMATION AS TO ALL CONTENTIONS

Petitioners submit that the foregoing information meets the requirement of 10 CLR 2.714(b)(2) and Board Order of June 22, 1998. Petitioners, in addition, advise the Board that they intend to use Mr David Lochbaum, Nuclear Safety Engineer for the Union of Concerned Scientists, as their expert in support of this contention. Mr. Lochbaum's curriculum vitae is attached hereto and incorporated by reference. Petitioner's reserve their right to call additional witnesses in the event of an evidentiary hearing.

May 22, 1998

Secretary John Hoyle  
Office of the Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Re: North Atlantic Energy Services Corp., Docket No. 50-443, Seabrook Station, Unit 1, Rockingham County, New Hampshire

Dear Secretary Hoyle,

Please accept this letter as notice of the Seacoast Anti-Pollution League's formal opposition to several requests for license changes that appeared in the Federal Register of Wednesday, April 22, 1998, Pages 19972-74.

SAPL is particularly concerned about the April 3 amendment request asking the NRC to approve a 24-month refueling cycle for Seabrook Station, and the removal of the "during shutdown" restriction from the performance requirements of certain surveillance requirements.

Seabrook Station Unit 1 operators, North Atlantic Energy Services Corp., have recently been cited for multiple violations of NRC regulations. Most of those violations have to do with the plant management's inability or unwillingness to address degraded safety equipment issues in a timely manner. In fact, the plant's rating in the area of maintenance was downgraded in its most recent Systematic Assessment of Licensee Performance (SALP) report, and fines were considered against North Atlantic for failure to address safety systems-related problems the company was aware of as much as four years ago.

Most recently, degraded steam generator tubes have been discovered at the Seabrook plant. As you are aware, those tubes cannot be checked except during outages, and recent studies have shown that if as few as 15 tubes fail simultaneously the loss of fluid could overwhelm the plant's safety systems.

By extending the refueling cycle a full year beyond what was determined to be appropriate when the plant first went on-line just eight years ago, operators lose the ability to review the status of those tubes on a more current basis.

This also feeds into the objection SAPL has already raised concerning the dangers of performing maintenance while the plant is on-line. Plant operators will have no choice but to do more on-line maintenance if the time normally set aside for this maintenance, refueling outages, is extended.

All this, we feel, creates a new risk at the plant, contrary to the view of the NRC staff

as expressed in the Federal Register notice.

We are also concerned with the amendment request dated March 5, 1998, calling for relocating the plant's Radiological Effluent Technical Specifications currently in the administrative controls section of the technical specifications to the Offsite Dose Calculation Manual. We believe this constitutes an "end-run" around 10CFR50.91, and the ability that regulation gives the public to intervene in decisions concerning the release of radioactive effluents, both solid and liquid, from the Seabrook Station plant.

In addition, we feel the ramifications and technical basis for the license amendment request from North Atlantic dated March 2, 1998, has not been adequately investigated by NRC staff.

It is our understanding that the Westinghouse technical specifications for the testing of the Emergency Diesel Generators were not reviewed prior to the staff finding no significant impact would result from the license change being requested.

As you are aware, the diesel generators are the backbone of Seabrook's reactor safety systems in the event of a full plant blackout, an incident that has already occurred in this plant's short history. To lower the testing standards for these most important pieces of safety equipment certainly increases the risk to on- and off-site personnel in the event of an accident at the nuclear plant.

SAPL sees all these proposed amendments as cost-beneficial licensing actions aimed at lowering the cost of operating the Seabrook Station nuclear power plant in the face of the financial troubles currently being experienced by its primary owner, Northeast Utilities, and the New Hampshire and national moves toward electric utility deregulation.

However, we feel these requested license changes create new risks for the public and should be rejected as simply not feasible at a plant that is, per its management's own admission, experiencing some internal control problems.

Thank you for your consideration, and we look forward to a response to our concerns.

Sincerely,

Steve Haberman  
Field Director

## David A. Lochbaum

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### Experience Summary

10/96 to date    *Nuclear Safety Engineer, Union of Concerned Scientists*

Responsible for directing UCS's nuclear safety program, for monitoring developments in the nuclear industry, for serving as the organization's spokesperson on nuclear safety issues, and for initiating action to correct safety concerns.

11/87 to 09/96    *Senior Consultant, Enercon Services, Inc.*

Responsible for developing the conceptual design package for the alternate decay heat removal system, for closing out partially implemented modifications, reducing the backlog of engineering items, and providing training on design and licensing bases issues at the Perry Nuclear Power Plant.

Responsible for developing a topical report on the station blackout licensing bases for the Connecticut Yankee plant.

Responsible for vertical slice assessment of the spent fuel pit cooling system and for confirmation of licensing commitment implementation at the Salem Generating Station.

Responsible for developing the primary containment isolation devices design basis document, reviewing the emergency diesel generators design basis document, resolving design document open items, and updating design basis documents for the James A. FitzPatrick Nuclear Power Plant.

Responsible for the design review of balance of plant systems and generating engineering calculations to support the Power Uprate Program for the Susquehanna Steam Electric Station.

Responsible for developing the reactor engineer training program, revising reactor engineering technical and surveillance procedures and providing power maneuvering recommendations at the Hope Creek Generating Station.

Responsible for supporting the lead BWR/6 Technical Specification Improvement Program and preparing licensing submittals for the Grand Gulf Nuclear Station.

03/87 to 08/87    *System Engineer, General Technical Services*

Responsible for reviewing the design of the condensate, feedwater and raw service systems for safe shutdown and restart capabilities for the Browns Ferry Nuclear Plant.

08/83 to 02/87    *Senior Engineer, Enercon Services, Inc.*

Responsible for performing startup and surveillance testing, developing core monitoring software, developing the reactor engineer training program, and supervising the reactor engineers and Shift Technical Advisors at the Grand Gulf Nuclear Station.



## David A. Lochbaum

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### Experience Summary (continued)

10/81 to 08/83 *Reactor Engineer / Shift Technical Advisor, Tennessee Valley Authority*

Responsible for performing core management functions, administering the nuclear engineer training program, maintaining ASME Section XI program for the core spray and CRD systems, and covering STA shifts at the Browns Ferry Nuclear Plant.

06/81 to 10/81 *BWR Instructor, General Electric Company*

Responsible for developing administrative procedures for the Independent Safety Engineering Group (ISEG) at the Grand Gulf Nuclear Station.

01/80 to 06/81 *Reactor Engineer / Shift Technical Advisor, Tennessee Valley Authority*

Responsible for directing refueling floor activities, performing core management functions, maintaining ASME Section XI program for the RHR system, providing power maneuvering recommendations and covering STA shifts at the Browns Ferry Nuclear Plant.

06/79 to 12/79 *Junior Engineer, Georgia Power Company*

Responsible for completing pre-operational testing of the radwaste solidification systems and developing design change packages for modifications to the liquid radwaste systems at the Edwin I. Hatch Nuclear Plant.

### Education

June 1979 Bachelor of Science in Nuclear Engineering, The University of Tennessee at Knoxville

May 1980 Certification, Interim Shift Technical Advisor, TVA Browns Ferry Nuclear Plant

April 1982 Certification, Shift Technical Advisor, TVA Browns Ferry Nuclear Plant

### Professional Affiliations

Member, American Nuclear Society (since 1978).

UNITED STATES OF AMERICA

BEFORE THE NUCLEAR REGULATORY COMMISSION

Before Administrative Judges:

B. Paul Cotter, Jr., Chairman  
Dr. Charles N. Kelber  
Dr. Linda W. Little

|                                  |   |                        |
|----------------------------------|---|------------------------|
| In the Matter of                 | ) |                        |
|                                  | ) |                        |
| North Atlantic Energy            | ) |                        |
| Service Corporation              | ) |                        |
|                                  | ) | Docket No. 50-443      |
| Seabrook Station, Unit No. 1     | ) |                        |
|                                  | ) | ASLBP No. 98-746-05-LA |
| Rockingham County, New Hampshire | ) |                        |
|                                  | ) |                        |

**MEMORANDUM OF LAW SUBMITTED BY SAPL AND NECNP IN SUPPORT OF  
JOINTLY FILED CONTENTIONS 2 THROUGH 4**

NAESCO, in its "Answer to Supplemental Petition for Hearing" of July 2, 1998, takes the position that only contentions related to decreased frequency of steam generator inspections should be considered relevant or admissible. The Petitioners' contentions 2 through 4 do not involve the narrow issue of steam generator inspection frequency. Nonetheless, the Petitioners strongly object to NAESCO's attempt to limit the relevance of the present exemption request to steam generator issues, and in support of this position submit this Memorandum of Law.

THE REQUESTED EXEMPTION IS IN SUBSTANCE FOR 24 MONTH REFUELING,  
NOT FOR DECREASED STEAM GENERATOR INSPECTIONS.

The NAESCO exemption request is described in the Federal Register as a revision to the Seabrook Technical Specifications, regarding steam generator inservice inspections and reactor coolant system leakage "to accommodate fuel cycles of up to 24 months with respect to the

allowed time between steam generator inservice inspections.” The request is described by NAESCO, in its cover letter from Mr. Ted C. Feigenbaum as “the second submittal in a planned series of License Amendment Requests which propose changes to the Seabrook Station Technical Specifications to accommodate fuel cycles of up to 24 months.”

From this, it is absolutely clear that the intent of the present request is to permit Seabrook to operate for a two year period before refueling, and the means to this goal is to revise the technical specifications in a series of requests, including this one. There is no independent reason to extend the steam generator inspections other than to permit two year operational runs. To permit the licensee to do this in small incremental requests, without ever affording the NRC an opportunity to evaluate the overall change from 18 month to 24 month fueling would be a classic example of segmentation, and would impair the NRC’s ability (and avoid its responsibility) to provide necessary safety analysis and review of a major operational change.

#### SEGMENTATION OF A PROJECTED CHANGE IS CONTRARY TO LAW

SAPL and NECNP are not aware of any decided NRC adjudicatory decision in which the issue of segmentation by means of a series of license amendment requests has been discussed. However, the issue is very well understood by federal agencies, including NRC, in the context of the National Environmental Policy Act, (42 U.S.C. 4331 *et seq.*) Under the extensive case law on applying NEPA’s requirement for an integrated and comprehensive review of “major federal actions” that may have an impact on the environment, it is clear that an agency may not avoid an overall review of a project by dealing with the projects in “segments.” See Named Individual Members of San Antonio Conservation Soc. v. Texas Highway Dept., 446 F.2d 1013 (5<sup>th</sup> Cir. 1971) cert. denied, 406 U.S. 933; Scientists’ Institute for Public Information, Inc. v. Atomic

Energy Commission, 481 F.2d 1079 (D.C. Cir. 1973).

In Susquehanna Valley Alliance v. Three Mile Island Nuclear Reactor, 619 F.2d 231 (3d Cir. 1980), cert. denied, 449 U.S. 1096 (1981), the citizen's organization challenged an attempt to build and operate a decontamination system to process radioactive water accumulated in the TMI accident. The organization claimed that the NRC violated NEPA by authorizing construction before completion of an EIS. The organization claimed that the NRC fragmented its decision making by delaying a final decision on how it would resolve the water disposal problem until after private parties had been permitted to expend a lot of money on construction. The Court said "segmentation of a large or cumulative project into smaller components in order to avoid designating the project as a major federal action has been held to be unlawful."

Susquehanna Valley, 619 F.2d at 240.

In City of Rochester v. United States Postal Serv., 541 F.2d 967, 972 (2<sup>nd</sup> Cir. 1976), the court wrote that "[t]o permit noncomprehensive consideration of a project divisible into smaller parts, each of which taken alone does not have a significant impact, but which taken as a whole has cumulative significant impact, would provide a clear loophole to NEPA."

In Fritioson v. Alexander, 772 F.2d 1225 (5<sup>th</sup> Cir. 1985), the Court said that proposed actions with potential cumulative significance requires a comprehensive EIS; when deciding whether to do EIS for a single action, NEPA mandates consideration of impacts from actions that are not yet proposed and from actions, past, present, or future, that are not themselves subject to the requirements of NEPA. See also Northwest Resource Information Center, Inc. v. National Marine Fisheries Service, 56 F.3d 1060 (9<sup>th</sup> Cir. 1995) (EIS required for connected, cumulative actions).

In the federal highway context, one of the criteria in determining whether a project can be regarded as a “stand alone,” is whether the project has “independent utility or independent significance....” Indian Lookout Alliance v. Volpe, 477 F.2d 11 (8thCir. 1973). It is certainly clear that the current exemption request, in regard to the steam generator inspection schedule, has no independent utility or significance. The sole purpose of requesting less frequent steam generator inspections is to make possible the planned move to 24 month cycling.

Today, the inspections for the steam generators, like those for the emergency diesel generators and the hydrogen recombiner system, among others, are required at 18 month intervals, the current refueling cycle. However, in the future, as a part of the planned “series of requests” of which the current exemption is a part, all of these surveillances will occur at 24 month intervals to accommodate a two year operational run. The intended change is to the current operational regime, and it is this change which must be evaluated against the criteria of 10 CFR 50.92 to determine whether there is in fact a “significant hazards consideration.”

#### SEGMENTATION OF A PROJECTED CHANGE IS NEITHER SAFETY CONSERVATIVE NOR SOUND POLICY

In addition, it is a fact that the systems that make up a nuclear power plant are not discrete or independent of each other. One of the most feared accident scenarios is the “interfacing loss of coolant accident.” This is an accident, like the Three Mile Island event of 1979, that is the result of multiple failures of systems acting on each other in unanticipated ways. The change to 24 month refueling admittedly involves changes to numerous technical specification requirements. Those changes must be reviewed in a comprehensive, integrated and overall manner. This obligation cannot be defeated by the licensee’s decision, with no rational basis, to get to the

overall intended change by making a series of segmented requests.

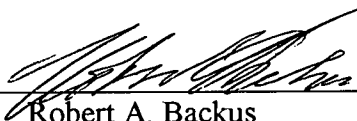
In the current exemption request, 98-03, the staff states that, “the extension of the current surveillance intervals to accommodate a 24 month fuel cycle will not significantly degrade the ability, the availability or the reliability of the steam generators to perform their intended safety function.” 63 FR at p. 25113. In the prior request, a similar conclusion is made regarding another change to the Technical Specifications “to support phased implementation of 24 month fuel cycle surveillance interval extensions.” 63 FR at p. 19974. However, there is no indication of any analysis of the combined or synergistic effects of the changes. Because the request is actually part and parcel of a planned change to extending the authorized operational run of Seabrook, the Board should admit contentions 2 through 4, which raise concerns about the planned change.

#### CONCLUSION

For the reasons stated, the Board should reject the NAESCO argument that all contentions not focused solely on steam generator inspection frequency are inadmissible. Since the purpose of the present exemption is to make a major operational change to the facility, that change can only be sufficiently analyzed through a review of the issues raised in the Petitioner’s Contentions 2 through 4 which the staff has not to date evaluated.

Respectfully submitted,  
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