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 DISE, D.P. Niagara Mohawk Power Corp.  
 RECIP. NAME RECIPIENT AFFILIATION  
 VASSALLO, D.B. Operating Reactors Branch 2

SUBJECT: Forwards addl info re upgraded senior reactor operator &  
 reactor operator training & training for mitigating core  
 damage in response to NUREG-0737 Items I.A.2.1 & II.B.4.

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	NRR/DHFS DIR 28	1 1	NRR/DHFS/DEPY29	1 1
	NRR/DL DIR 14	1 1	NRR/DL/ADL 16	1 1
	NRR/DL/ADOR 15	1 1	NRR/DL/ORAB 18	13 3
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	NRR/DSI/ADPS 25	1 1	NRR/DSI/ADRP 26	1 1
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May 11, 1982

Mr. Domenic B. Vassallo, Chief  
Operating Reactors-Branch #2  
Division of Licensing  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Re: Nine Mile Point Unit 1  
Docket No. 50-220  
DPR-63

Dear Mr. Vassallo:

Your letter of April 5, 1982 requested additional information regarding upgraded SRO and RO Training and Training for Mitigating Core Damage (NUREG 0737 Items I.A.2.1 and II.B.4). Administrative Procedures APN-10A and 10B provided by our September 5, 1980 letter were the latest revisions at that time. These are currently undergoing periodic review and were submitted for approval "as is." Therefore, the procedures as provided continue to reflect our current training program. The enclosed information is provided in response to your specific questions.

Very truly yours,

NIAGARA MOHAWK POWER CORPORATION

*Donald P. Dise*

Donald P. Dise  
Vice President Engineering

RJP:ja  
Enclosure  
cc: Dr. R. T. Liner  
Science Applications, Inc.  
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McLean, Virginia 22102

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The following information was obtained from the records of the  
 Bureau of the Census, Department of Commerce, Washington, D. C.  
 for the year 1954:

State	Population	Area (sq. miles)	Density (per sq. mile)
Alabama	2,500,000	52,400	47.7
Alaska	100,000	588,000	0.17
Arizona	1,000,000	114,000	8.77
Arkansas	1,500,000	53,000	28.3
California	10,000,000	160,000	62.5
Colorado	1,000,000	104,000	9.62
Connecticut	3,000,000	5,000	600.0
Delaware	1,000,000	2,000	50.0
District of Columbia	500,000	300	1,666.7
Florida	4,000,000	55,000	72.7
Georgia	3,000,000	59,000	50.8
Idaho	1,000,000	84,000	11.9
Illinois	10,000,000	143,000	69.9
Indiana	5,000,000	36,000	138.9
Iowa	3,000,000	57,000	52.6
Kansas	2,000,000	82,000	24.4
Kentucky	3,000,000	40,000	75.0
Louisiana	3,000,000	52,000	57.7
Maine	1,000,000	33,000	30.3
Maryland	4,000,000	10,000	400.0
Massachusetts	5,000,000	8,000	625.0
Michigan	7,000,000	96,000	72.9
Minnesota	4,000,000	225,000	17.8
Mississippi	2,000,000	47,000	42.6
Missouri	4,000,000	69,000	58.0
Montana	1,000,000	147,000	6.80
Nebraska	2,000,000	77,000	26.0
Nevada	1,000,000	110,000	9.09
New Hampshire	1,000,000	9,000	111.1
New Jersey	8,000,000	19,000	421.1
New Mexico	1,000,000	121,000	8.26
New York	15,000,000		

NUREG 0737 Items II.A.2.1 and II.B.4  
Additional Information  
Upgraded SRO and RO Training  
and  
Training for Mitigating Core Damage

Item 1. The Procedure APN-10A (4.1.10) and Procedure APN-10B (7.1.13) appear to have the potential for covering the subject of heat transfer, fluid flow and thermodynamics as called out in enclosure 1 of Denton's March 28, 1980 letter. Do these lectures in fact cover this material and is the coverage at the level of detail specified in enclosure 2 of the Denton letter?

Response Item 1.

Heat Transfer, Fluid Flow and Thermodynamics are included in APN-10A (4.1.10) and APN-10B (7.1.13). They include and are taught at the level of detail specified in Enclosure 2 of Mr. H. Denton's March 28, 1980 letter.

Item 2. The Procedure APN-10A (4.1.11) and Procedure APN-10B (7.1.14) appear to have the potential for addressing the subject of using installed plant systems to control or mitigate an accident in which the core is severely damaged. This requirement is called out in enclosure 1 of Denton's letter. Do these lectures address the topic at the level of detail specified in enclosure 3 of Denton's letter?

Response Item 2.

The use of installed plant systems to control or mitigate an accident in which the core is severely damaged is included in APN-10A (4.1.11) and APN-10B (7.1.14). They are taught at the level of detail, where applicable to Nine Mile Point Unit #1, as specified in enclosure 3 of Mr. H. Denton's March 28, 1980 letter.

Item 3. The Procedure APN-10A (4.1.12) has some training dealing with transients. Does this training deal with both normal transients and abnormal (accident) transients?

Response Item 3.

The training performed per APN-10A (4.1.12) Reactor and Plant Transients and Accidents is taught using the transients and accident analysis as described in the Final Safety Analysis Report Vol. II, Appendix E, sections I & II. The training includes anticipated transients and abnormal (accident) training.

Item 4. Does the Licensed NRC Operator Retraining (APN-10B) call for accelerated requalification if the overall score is less than 80% and the score in each category is less than 70%? This requirement is called out in enclosure 1 of Denton's letter.

Response Item 4.

The Licensed NRC Operation Retraining (APN-10B) outlines accelerated requirements if the overall score is less than 80% or the individual category score is less than 70%.



Item 5. Does the requalification program for instructors address current operating history, changes in procedures and administrative procedures as called for in enclosure 1 of Denton's March 28, 1980, letter?

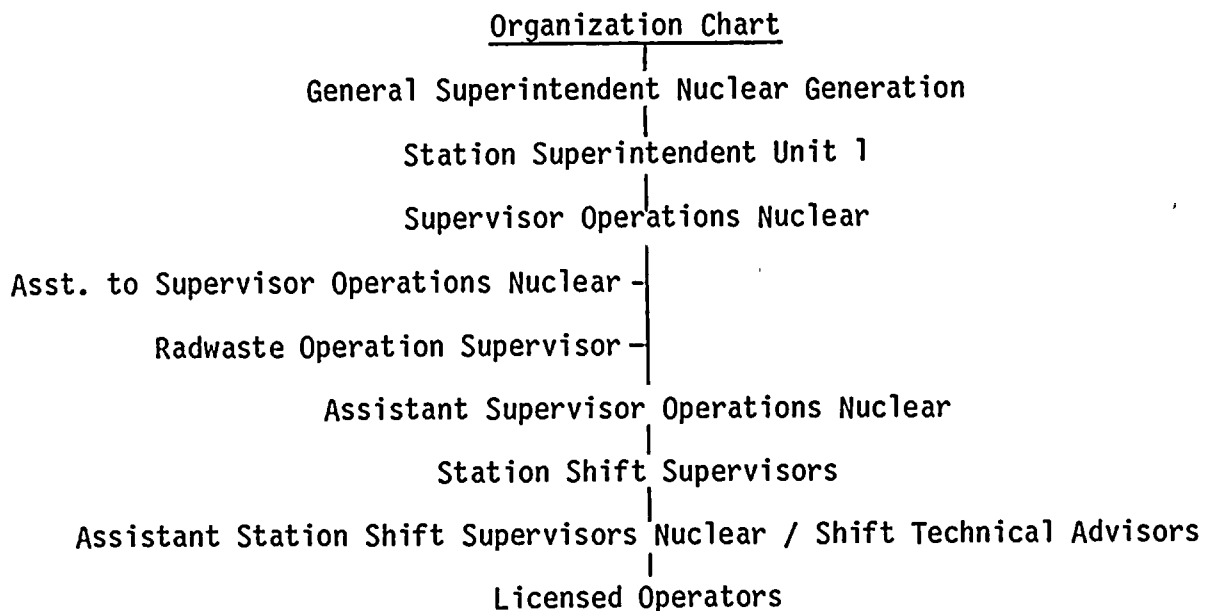
Response Item 5.

The requalification course instructors at Nine Mile Point hold active Senior Reactor Operator Licenses. As Senior Operator License holders, they either teach or attend requalification courses pursuant to APN-10B Licensed NRC Operator Retraining Section 7.3.1-7. Topics presented during the requalification program include operating history (significant operating events) and significant changes in both procedures and plant design.

Item 6. Are the lectures and quizzes on the subject of accident mitigation given to shift technical advisors and operating personnel from the plant manager through the operations chain to the licensed operators? If they are, would you please provide the titles of the people who are trained and an organization chart which illustrates their position in the operations chain?

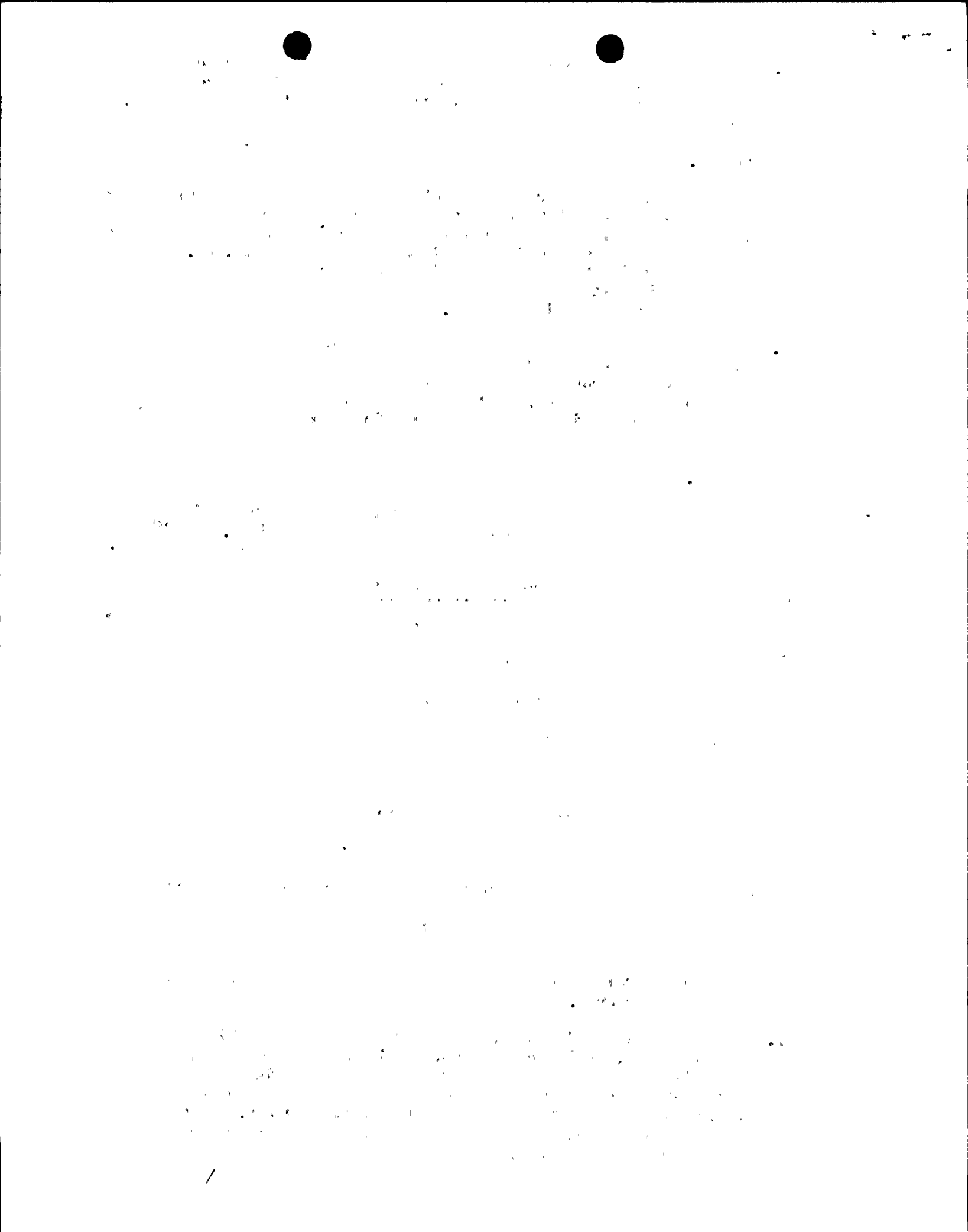
Response Item 6.

Operations personnel and shift technical advisors were trained in a series of lectures on Mitigation of Core Damage in 1981. The titles and organization chart for operations personnel are presented below:



Subsequent training in this area is included as part of the annual retraining program.

Item 7. Do the training and requalification program elements which include heat transfer, fluid flow, thermodynamics and accident mitigation use 80 contact hours? (A contact hour of instruction is a one-hour period in which the course instructor is present or available for instructing or assisting students; lectures, seminars, discussions, problem-solving sessions, and examinations are considered contact periods under this definition).





Response to Item 7.

The initial training program which includes elements such as heat transfer, fluid flow, thermodynamics and accident mitigation exceeds 80 contact hours of instruction. Subsequent requalification lectures in these subjects covers the same material, but at a much faster pace and therefore may not utilize 80 contact hours annually.

Item II.B.4

For item II.B.4 provide an outline of the training program for mitigating core damage, including the number of training hours involved. Your outline can include any training program which relates to the training for mitigating core damage. Follow the guidelines given in the enclosure 3 of H. R. Denton's letter dated March 28, 1980 and INPO Guidelines for Training to Recognize and Mitigate the Consequences of Core Damage (Document Number STG-01, Rev. 1, January 15, 1981). NRC requires a minimum of 80 contact hours of training for mitigating core damage.

Response Item II.B.4

Our letter of March 25, 1981 provided a description of the program for training for mitigating core damage. In addition to that program (i.e., 40 contact hours of training for mitigating core damage), our operator licensing program contains greater than 80 contact hours of Thermodynamics and Fluid Flow, Heat Transfer and Accident and Transient Analysis. During the annual operator requalification program, licensed personnel and shift technical advisors also attend a simulator retraining program.

The simulator retraining program provides the opportunity to perform or direct the control manipulations contained in APN-10B for transient and accident analysis.



The following information was obtained from the files of the  
 Internal Security - Communist Section, New York Office, dated  
 10/10/68.

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