Consolidated Edison Company of New York, Inc. 4 Irving Place, New York, N Y 10003 Telephone (212) 460-3819

November 15, 1978

Director of Nuclear Reactor Regulation ATTN: Mr. Albert Schwencer, Chief Operating Reactors Branch No. 1 Division of Operating Reactors U. S. Nuclear Regulatory Commission Washington, D. C. 20555

Dear Mr. Schwencer:

Forwarded herewith for your information is a copy of the Thirteenth Quarterly Report for the Seismic Monitoring Program for Indian Point covering the months of June 1978 through August 1978.

Very truly yours,

William J. Cahill, Jr.

Vice President

cc: Mr. George T. Berry
General Manager and Chief Engineer
Power Authority of the State of New York
10 Columbus Circle
New: York, New York 10019

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## Woodward-Clyde Consultants, Inc.

14 November 1978 76C073

QUARTERLY REPORT

ON THE

SEISMIC MONITORING NETWORK

IN THE VICINITY OF

INDIAN POINT, NEW YORK

CONSOLIDATED EDISON PROJECT

WCC/7

June 1978 through August 1978

### INTRODUCTION

During the quarter June through August 1978, nine hundred and eighty-seven seismic events were detected by routine analysis of data recorded by the Indian Point Seismic Monitoring Network (IPSMN). This relatively large number of events is likely the result of increased quarry and road construction blasting activity during the summer months.

Three events have been identified as naturally occurring seismic events within or near the perimeter of the IPSMN. Two of these events are main shocks; the third event is an aftershock. One event occurred at the general location of the Annsville event of September 1978 which is within the network. The second event and an aftershock occurred near Oakland, New Jersey approximately 20 km outside the perimeter of the network. Location of events was based on data obtained from seismic stations of IPSMN, Lamont-Doherty Geological Observatory (LDGO) and University of Connecticut (UConn).

#### DATA ANALYSIS

There were no changes in routine analysis procedures during this quarter.

The present computer program (a modified version of HYPOELLIPSE) was used to locate all three events using both IPSMN data, and data from other stations. For final epicentral locations, data from IPSMN stations, LDGO stations and UConn stations were utilized.

On 30 June 1978 at 04:13 EDT (20:13 UTC) a magnitude 2.9 event occurred near Oakland, New Jersey along the perimeter of the IPSMN. This event was followed by an aftershock at 06:39 EDT (22:39 UTC) of magnitude 2.2. Location coordinates of the two epicenters are presented in Table IA. Both events were well recorded by all IPSMN stations and some LDGO stations. Some LDGO stations and all UConn stations recorded the events less distinctly.

Felt report data associated with the mainshock included an area within about ten miles of the epicenter. People reported both shaking and sounds. The aftershock was also accompanied by felt reports. Preliminary determination of the Modified Mercalli Intensity of the mainshock is that of intensity MM IV. This determination was based on data collected by LDGO.

On 23 June 1978 at 07:02 EDT (23:02 UTC) a magnitude 2.1 event occurred near Peekskill, New York within the network. Location coordinates of this event are presented in Table IA. The epicentral location of this event is near the location of the Annsville, New York event of 2 September 1977.

No felt reports of this event were obtained. Therefore, no Modified Mercalli Intensity could be determined.

Epicentral location accuracy for these events is generally good (better than 2 km within the horizontal plane). Due to gaps in station distribution with respect to epicentral locations, however, and poor first motion data recorded by most stations of IPSMN, LDGO, and UConn, we have been unable to compute reliable focal mechanism solutions for any of these three events.

Other distant events, both regional and teleseisms, were recorded by the IPSMN. These events are summarized in Table IB and IC. These events are too distant to be located by the network; locational and other data for these events were obtained primarily from LDGO.

A total of eight events occurred in a region within six degrees of the IPSMN; see Table IB. Four events occurred in the vicinity of Bermuda. These include events of 4 June 1978 at 09:08 UTC, 11 August 1978 at 08:09 UTC, 17 August 1978 at 09:49 UTC, and 30 August 1978 at 07:30 UTC. A magnitude 3.0 event occurred near Lancaster, Pennsylvania on 15 July 1978 at 06:40 UTC. Two events of undetermined magnitude occurred off the coast

of Long Island; one on 25 July 1978 at 04:17 UTC, and one on 10 August 1978 at 21:12 UTC. One event of magnitude 3.5 to 4 occurred near LaChute, Canada on 30 July 1978 at 10:55 UTC.

STATUS OF THE NETWORK

Network stations operated satisfactorily during this quarter. Due to a local power outage, the central recording station equipment in the Woodward-Clyde Consultants Clifton office was offline from approximately 18:11 UTC on 26 August 1978 to 14:56 UTC on 27 August 1978. A review of LDGO data for this time period indicated that no events of particular significance to the IPSMN had occurred.

Electrical storms caused only minimal station outages during Summer 1978. It appears that this is the result of circuitry changes made and the addition of zener diodes (lightning arresters) at several of the field stations.

#### TABLE IA

### NATURALLY OCCURRING SEISMIC EVENTS

### Within the Network

Date	Time (UTC)	Location	Magnitude
23 July 1978	23:02	Near Peekskill, NY 41°N 18.50 73°W 55.15	2.1

### Regional Events

(Within Two Degrees of the Network)

Date	Time (UTC)	Location	Magnitude
30 June 1978	20:13	Near Oakland, NJ 41°N 05.51 74°W 12.64	2.9
30 June 1978 (aftershock)	22:39	41°N 04.60 74°W 12.35	2.2

DISTANT EVENTS RECORDED BY THE NETWORK

TABLE IB

Date	Time (UTC)	Location	Magnitude
04 June 1978	09:08	Near Bermuda 30.61°N 68.29°W	
15 July 1978	06:40	Lancaster, PA 39.93°N 76.34°W	3
25 July 1978	04:17	Off Long Island 40.25°N 71.10°W	2.9
30 July 1978	10:55	Near LaChute Canada 45.65°N 74.39°W	3.5-4
10 August 1978	21:12	Off Long Island 40.37°N 70.93°W	
11 August 1978	08:09	Near Bermuda 30.61°N 68.29°W	
17 August 1978	09:49	Near Bermuda 30.61°N 68.29°W	e P
30 August 1978	07:30	Near Bermuda 30.61°N 68.29°W	,

### TABLE IC

### TELESEISMS

1978	-	Date	Time	Location
19:43			<del></del>	
09 " 07:44 Peru-Brazil Border 10 " 17:56 Bali Sea 11 " 03:09 Nuclear Blast Kazakh, USSR 11 " 15:02 Vancouver Island, B.C. 12 " 08:27 Japan 14 " 12:51 Philippine Islands 15 " 08:25 South of Panama 15 " 09:41 Kuril Islands 15 " 09:41 Kuril Islands 16 " 08:15 Philippine Islands 16 " 08:15 Philippine Islands 16 " 08:15 Philippine Islands 16 " 11:58 West Texas 17 " 08:59 Southern Pacific Ocean 18 " 02:26 Northern Pacific Ocean 18 " 02:26 Northern Columbia 20 " 20:14 Greece 21 " 11:22 Kuril Islands 24 " 09:51 Southern Sumatra  01 July 1978 09:00 Panama 20 " 02:55 Northern Columbia 22 " 08:43 Central Mid-Atlantic Ridge 24 " 09:51 Southern Sumatra  01 July 1978 09:00 Panama 02 " 02:55 Northern Columbia 03 " 04:24 Costa Rica 04 " 08:05 05 " 02:59 Nuclear blast Kazakh, USSR 11 " 03:02 Queen Charlotte Islands Region 11 " 12:24 Peru-Brazil Border 11 " 12:24 Peru-Brazil Border 11 " 12:24 Peru-Brazil Border 12 " 08:10 Gulf of Mexico 23 " 15:01 Taiwan Region 24 " 08:10 Gulf of Mexico 25 " 21:59  03 August 1978 06:20 USSR - Mongolia Border 13 " 18:22 Northern Chile 24 " 08:10 Southern Sumatra 15 " 19:11 Nouthern Chile 25 " 21:59  03 August 1978 06:20 USSR - Mongolia Border 13 " 18:22 Northern Chile 24 " 08:10 Southern Sumatra 15 " 15:41 Near coast of Guatemala 25 " 22:25 Virgin Islands 26 " 08:00 Puerto Rico 26 " 08:00 Puerto Rico 29 " 02:49 North Atlantic Ocean 31 " 14:06 Southern Nuclear Blast Kazakh, USSR		· · · · · · · · · · · · · · · · · · ·		South Indian Ocean
10		04		
- 11 " 15:02 Vancouver Island, B.C. 12 " 08:27 Japan 14 " 12:51 Philippine Islands				
11				·
12				
14		12 "		
15				
15	*			South of Panama
16			09:41	
16	_			
17				
- 17				
18				
20				
22 " 08:43 Central Mid-Atlantic Ridge 24 " 09:51 Southern Sumatra  - 01 July 1978 09:00 Panama	_			
O9:51   Southern Sumatra	_	22 "		
02		24 "		Southern Sumatra
02		01 7010 1070	00.00	Danama
03 " 04:24 Costa Rica  - 04 " 08:05 05 " 02:59 Nuclear blast Kazakh, USSR 11 " 03:02 Queen Charlotte Islands Region - 11 " 12:24 Peru-Brazil Border - 20 " 09:40 Nicaraqua - 23 " 15:01 Taiwan Region - 24 " 08:10 Gulf of Mexico - 25 " 21:59  - 03 August 1978 O6:20 USSR - Mongolia Border - 03 " 18:22 Northern Chile - 10 " 19:11 Southern Sumatra - 10 " 08:10 Nuclear explosion Novaya Zemlya - 13 " 23:01 Southern California - 15:41 Near coast of Guatemala - 25 " 22:25 Virgin Islands - 26 " 03:57 - 26 " 08:00 Puerto Rico - 29 " 08:00 - 249 North Atlantic Ocean - 31 " 14:06 - 31 " Nuclear blast Kazakh, USSR - Nuclear Nevada NTS		02 "		
- 04 " 08:05 05 " 02:59 Nuclear blast Kazakh, USSR 11 " 03:02 Queen Charlotte Islands Region 11 " 12:24 Peru-Brazil Border 20 " 09:40 Nicaraqua 23 " 15:01 Taiwan Region 24 " 08:10 Gulf of Mexico  25 " 21:59  03 August 1978 06:20 USSR - Mongolia Border 05 " 19:11 Southern Chile 10 " 08:10 Nuclear explosion Novaya Zemlya 13 " 23:01 Southern California 18 " 12:56 Fiji Islands 18 " 15:41 Near coast of Guatemala 23 " 00:45 Costa Rica 26 " 03:57 26 " 08:00 Puerto Rico 29 " 08:22 North Atlantic Ocean 31 " 14:06 Southern Nevada NTS				·
05	_			Coota Nica
11				Nuclear blast Kazakh. USSR
11		11 "		Queen Charlotte Islands Region
20 " 09:40 Nicaraqua 23 " 15:01 Taiwan Region 24 " 08:10 Gulf of Mexico  25 " 21:59   03 August 1978 06:20 USSR - Mongolia Border 05 " 18:22 Northern Chile 10 " 08:10 Nuclear explosion Novaya Zemlya 13 " 23:01 Southern California 15 " 12:56 Fiji Islands 18 " 15:41 Near coast of Guatemala 23 " 00:45 Costa Rica 24 " 08:00 Puerto Rico 25 " 08:22 North Atlantic Ocean 31 " 14:06 Southern Nevada NTS				Peru-Brazil Border
24 " 08:10 Gulf of Mexico 25 " 21:59  03 August 1978				Nicaraqua
O3 August 1978	<b>;</b> '	· ·	15:01	
03 August 1978	_			Gulf of Mexico
18:22   Northern Chile		25 "	21:59	
18:22   Northern Chile			06:20	HCCD - Mongolic Dawley
10 " 08:10 Nuclear explosion Novaya Zemlya 23:01 Southern California Fiji Islands Near coast of Guatemala Costa Rica Virgin Islands 26 " 03:57 26 " 08:00 Puerto Rico North Atlantic Ocean Nuclear blast Kazakh, USSR 31 " 14:06 Southern Nevada NTS	-			Northern Chile
13				Southern Sumatra
15 " 12:56 Fiji Islands 18 " 15:41 Near coast of Guatemala 23 " 00:45 Costa Rica 26 " 22:25 Virgin Islands 26 " 08:00 Puerto Rico 27				
18 " 15:41 Near coast of Guatemala O0:45 Costa Rica Virgin Islands 26 " 22:25 Virgin Islands 26 " 08:00 Puerto Rico North Atlantic Ocean O2:49 North Atlantic Ocean Nuclear blast Kazakh, USSR Southern Nevada NTS	-		*	Southern California
23 "				Fiji Islands
- 25 " 22:25 Costa Rica 26 " 03:57 26 " 08:00 Puerto Rico 29 " 08:22 North Atlantic Ocean 31 " 02:49 Nuclear blast Kazakh, USSR 31 " 14:06 Southern Nevada NTS				
26 " 03:57 ?6 " 08:00 Puerto Rico 29 " 08:22 North Atlantic Ocean 31 " 14:06 Southern Nevada NTS	-			
100   Puerto Rico   Puerto R				Virgin Islands
26 " 08:22 North Atlantic Ocean 02:49 Nuclear blast Kazakh, USSR 31 " 14:06 Southern Nevada NTS				Describe mi
31 " 02:49 Nuclear blast Kazakh, USSR 31 " Southern Nevada NTS	<u>-</u>			
14:06 Southern Nevada NTS				
31 . " Southern Nevada NiiS			· · · · · · · · · · · · · · · · · · ·	Nuclear blast Kazakh, USSR
	-	31 "		Virgin Islands
ATTATU ISTAIRS				Arraru Islands

### TABLE II

### PROBABLE NATURALLY OCCURRING SEISMIC EVENTS

None

### TABLE IIIA

## CLINTON POINT QUARRY BLASTS 41°N 37.5' 73°W 57.0

Date			Time (UTC)
01 June 05 " 06 " 09 " 12 " 14 " 15 " 16 " 19 " 20 22 " 23 " 26 " 27 " 29 " 30 "	٠.		19:44 19:55 19:35 16:35 19:53 19:47 20:03 19:36 19:46 19:57 16:56 18:15 19:38 16:21 17:54 19:54
03 July 05 " 06 " 07 " 10 " 13 " 18 " 19 " 20 " 21 " 24 " 26 " 27 " 31 "	1978		19:45 19:31 19:34 19:44 19:03 19:47 19:47 19:47 18:25 19:42 19:09 18:50 19:39 19:30 20:15
01 Augus 02 " 04 " 07 " 09 " 10 " 11 " 14 " 16 " 18 " 23 "	t 1978		19:36 19:46 19:44 19:38 19:32 19:49 17:55 19:47 19:13 19:50 19:49

### TABLE IIIB

### HAVERSTRAW QUARRY BLASTS

41°N 10.6' 73°W 57.2'

<u>Date</u>	Time (UTC)	<u>Date</u>	Time (UTC)
01 June 1978 02 " 05 " 06 " 07 " 08 " 11 " 12 "	16:20 16:09 16:12 16:13 15:31 16:13 13:14 16:15	01 August 1978 02 " 03 " 04 " 08 " 10 " 11 "	16:09 16:17 16:10 16:18 16:43 16:14 16:15 20:14
14 " 15 " 16 " 19 " 20 " 22 " 23 " 26 " 27 " 28 " 30 "	16:14 16:16 16:28 16:04 16:17 16:16 16:16 19:49 16:15	22 " 24 " 29 " 30 " 31 "	16:14 18:26 12:17 16:16 18:09
05 July 1978 12 " 17 " 18 " 20 " 25 " 26 " 27 " 28 "	16:14 16:21 16:17 16:16 16:13 16:13 16:15 16:15		·

### TABLE IIIC

# PLAZA MATERIALS QUARRY BLASTS 41°N 07.0' 74°W 08.8'

	Date			Time (UTC)
01 05 06 07 08 13 14 15 16 19 20 23 26 27	11 11 11	1978		18:57 15:29 13:59 16:25 19:07 14:55 15:57 12:56 15:59 15:14 12:28 18:58 19:08 13:26 19:00
05 06 10 10	July " "	1978		16:11 15:00 13:28 12:56 16:41 16:11
10 23	Augus	t~1978 }		13:59 15:25

### TABLE IIID

# WEST NYACK QUARRY BLASTS 41°N 06.3' 73°W 57.4'

No Confirmed Blasts During This Quarter

TABLE IIIE
HAZELTON, PENNSYLVANIA BLASTS

	Date		Time (UTC)
01 03	June 1978.		16:39
03			16:24
	17		18:30
08 09	n .		17:53
10	11	•	16:47
12	; ·		14:19
13	11		19:12
15	11		17:12
19	11		16:46
20	<b>!!</b>		16:46
20	11		14:32
21	**		15:25
22	11		15:12
22	11		17:06
24	a		17:09
24	11	•	17:34
26	Ħ		17:35
28	11	,	19:16 16:11
30	11		19:25
01	July 1978	•	17:22
03	īı	•	18:12
13	11 .		17:27
14	11		13:37
20	n ·		15:26
04	11	•	16:52
05	11		15:26
05	11		17:25
09	11		17:16
10	**	•	16:09
10	t) 11	•	17:59
11	11		18:10
14	. II		15:24
21	"		18:29
24	;" 11		17:43
29	•••		17:17

### TABLE IIIF

MT. HOPE QUARRY BLASTS
40°N 56.3' 74°W 32.3'

No Confirmed Blasts During This Quarter

### TABLE IIIG

# ATLANTIC CEMENT QUARRY BLASTS 42°W 29.5' 73°W 50.0'

Date	Time (UTC)
01 June 1978	18:00
07 "	16:50
12 "	18:16
19 "	16:25
26 "	17:15
28 "	16:53
07 July 1978	18:58
20 "	17:00
26 "	17:02
03 August 1978	15:00
09 "	18:44*
10 "	19:44*
18 "	15:59*
30 "	
	18:00

<sup>\*</sup>Time discrepancy between recorded events and time of blasts reported by quarry

TABLE IVA

### PROBABLE QUARRY OR OTHER MAN-MADE BLASTS WITH DISTINCT PHASES

Date	<u>Time</u>	S-P (seconds) at Nearest Station
02 June 1978 02 "	14:35 17:36	19 OSB 22 STL
05	14:24	24 SRM
<b>U</b> 5	15:41	<b>20</b> SRM
05 " 06 "	20:27	40 STL
06 "	17:18 18:12	24 STL
07 "	21:09	27 STL 26 BLM
08 "	13:55	20 BLM
08 "	14:13	26 STL
08 "	15:49	18.5 GSC
08 "	16:08	19 STL
09 "	15:30	5 STL
09 "	16:09	12 BLM
09 "	16:44	14 BLM
	19:11	3 GSC
12 " 12 "	14:15	12 BLM
12 "	15:40	41 GSC
12 "	16:33 18:14	20 GSC
12 "	20:21	18 BLM 12 BLM
12 "	20:21	12 BLM 19 BLM
13 "	12:42	29 GSC
13 "	13:09	22 BLM
13 "	14:39	20 GSC
13 "	16:01	57 BLM
13 "	16:07	25 BLM
13 "	17:26	24 STL
13 " 14 "	17:30	21 BLM
14 "	13:57	11 GSC
14 "	14:28 14:30	7 STL
14 "	15:00	19 BLM 8 BLM
14 "	15:30	18 STL
14 "	16:50	10 31L 13 BLM
14 "	17:08	22 STL
14 "	17:15	15 GSC
14 "	21:11	32 GSC
14 "	22:39	25 BLM
15 "	12:29	<b>2</b> 2 GSC
15 "	14:17	17 STL
15 "	14:30	12 BLM 11.5 BLM
15 "	15:27	
15 "	15:28	<b>2</b> 3 GSC

## TABLE IVA (continued)

		Date		Time (UTC)			Nearest	t		
_		Duce		(010)		<u>D ca</u>	<u> </u>	_		
	15	June 1978		17:53		22	GSC			
	15	••		17:54		27	STL			
-	15			20:08		22	GSC			
	16	11		12:17	· ,	27	GSC			
	16	68		15:01		13	BLM			
	16	11		15:20		13	BLM			
	16	Ħ		15:37	•	23	STL			
	16	. 11		16:00		13	BLM			
	16	ti		17:10		21	STL			
	16	11	•	19:19		20	BLM			
	17	11		12:47		24	STL			
_	17	11		14:06		23	STL			•
_	19	tt ·		15:10		22	WGL			
	19	<sup>2</sup> <b>9</b> 8		17:29		21	BLM			
	19	ri~		19:43		37	STL			•
	19	88		20:34		28	BLM			
	20	n		14:26	***	12	WGL			
	20	11		15:00		21	STL	•		
	20	n		15:31		24	STL			
	20	n n		15:49	•	9	BLM			
	20	11		16:14		<b>2</b> 3	STL			
	20	11	•	16:31		18	STL		•	
	- 20	11 .		18:30			WGL			
	20	. #		19:18		46	STL		9	
	20	11		19:20		11	WGL			
	20	11		20:02		46	STL			
	20	11	•	21:15		43	STL			
•	21			12:14		20	STL			
_	21	H		14:58		22	WGL			
	21	**	•	15:36		11	WGL			
	21 21	"		16:02		23	STL			
	21	n tr		16:59		15	WGL			
	21	n		17:33		26	STL			
	21			18:02		16	BLM	Blast	£	1700
	22	11		22:38 15:50		24 12	WGL I	Slast	LLOin	Λ.I.
	22			17:00		17	STL			
	22	u ·		17:00		11	STL	*		
	22	91	•	17:26		24	STL			
	22	11		18:30		31	STL			
	22	11	,	19:14		50	STL			
	23	10		13:56		21	WGL			
_	23	•		14:00		6	BLM			
	23	n		14:15		19	STL			
	23	H ·		14:27		24	WGL			
-	23	H		15:35		15	WGL			
	23	n .		15:44		36	WGL			
	23			15:55	•	15	WGL			
_	23	* 10	•	16:28		19	STL			
			• •	20,20		± 2				,

TABLE IVA (continued)

		Time	S-P at Nearest
	Date	(UTC)	Station
	Date	(010)	
	23 June 1978	16:46	18 BLM
-	23 Julie 1970 23 "	18:39	30 BLM
•	23 "	19:23	17 BLM
	23 "	20:46	40 BLM
		00:30	43 STL
	44	13:13	25 STL
	44	15:28	10 WGL
	44	19:56	23 WGL
_	<i>4</i>	10:34	22 WGL
	26 "	14:25	21 STL
	26 "		14 BLM
	26 "	14:31	
_	26 "	15:49	29 STL
	26 "	15:56	20 BLM
	26 "	16:14	6 WGL
_	26 "	16:45	13 BLM
	27 "	17:54	36 STL
	28 "	14:14	18 WGL
•	28 "	14:43	24 WGL
_ `	28 "	15:00	12 WGL
•	28 "	15:48	10 WGL
		15:54	25 WGL
	20	16:40	11 WGL
	20	17:55	l STL Poss. Plaza
	20	19:29	13 BLM Materials
	28 "	21:36	10 WGL
	28 "	14:37	
	29 "		10 WGL
	29 "	14:40	10 BLM
	29 "	16:00	13 WGL
	29 "	16:41	2 STL Poss. Plaza
	29 " .	17:26	Materials
	29" "	17:54	13 STL
-	29 "	18:59	15 WGL
	30 "	13:45	19 STL
	30 "	14:30	12 WGL
_	30 "	16:00	21 BLM
	30 "	16:05	25 WGL
	30 "	17:10	6 STL
	30 "	18:27	19 BLM
<del></del>	30 "	20:00	14 STL Poss. Riverdale
	30		17 BLM
	00 7-1 1070	14:59	18 WGL
_	03 July 1978	15:55	21 WGL
	03 "		
	05 "	15:25	12 WGL
	05 "	19:23	15 STL
<b></b>	05 "	20:26	4 WGL Poss. Clinton Pt.
	·		

TABLE IVA (continued)

			Time			Nearest	
	Date		(UTC)		Stat	ion	
			14.26		11	DTM	
	06 July 1978		14:26		11 12	BLM WGL	•
	00		16:08				
	06 "		16:50	•	8	WGL	
-	06 "		16:58		20	WGL	
	06 "		17:26		21	WGL	
	06 "		17:33	,	19	CHR	
-	06 "		18:42		15	BLM	C
	06 "	•	19:16		24	WGL Blast	rrom vw
	06 "		21:21		2.4	WGL	
	07 "		14:34		12	WGL	
	07 "		15:02	·	24	BLM	
	07 "	·	15:41		13	CHR Poss.	Riverdale
	07 "		15:46	•	12	BLM	
-	07 "		16:05	•	5	CHR	
	07 "		16:45		11	WGL	
	07 "		17:10		15	WGL	
	07 "		17:30		15	WGL	•
	07 "		17:52		21	CHR	•
			14:45	•	17	BLM	
	10				13	WGL	
_	10		14:55	•	18	WGL	
	T.0		15:00		31	WGL	•
	11 "		14:45		18		
	11 "		15:30			WGL	
	11 ""		15:59		7	WGL	
	11 "		16:12		23	WGL	
	11 "		17:59		18	WGL	
<del>-</del>	12 "		14:01	•	. 7	WGL	
	12 "		14:21		23	WGL	
	12 "		14:33		18	WGL	
	12 "		15:45		17	CHR	•
-	12 "	,	16:01		22	WGL	
	12 "		17:59	•	. 12	BLM	
	12 "		18:30		10	WGL	
-was	12 "		19:29		26	WGL	
	12 "	•	23:16		13	CHR	
	13 "		14:49		46	CHR	
	13 "		15:00	•	. 19	CHR	
	13 "		15:15		11	WGL	T.
	13 "		15:44		6	BLM	
	13 "		15:22		26	BLM	
.—	13 "				26	WGL	
			16:05	• • • • • • • • • • • • • • • • • • •	11	BLM	•
	<b>4</b> 9	•	16:12		10	WGL	
_	14 "		14:15				•
-	14 "	•	14:34	* *.	20	WGL	
	14 "		15:08		12	WGL	

TABLE IVA (continued)

-	Date		Time (UTC)		S-P at Neare Station	st —	
-					0.5	<b>.</b>	
	14 July 1978		15:49		25 CH		
	14 "		16:49		24 CH		
	14 "		17:41	•	18 WG		
	17 "	•	13:34		20 CH		
	17 "		15:46		23 OS 12 CH		Riverdale
	17 "		19:11		22 OS		VIAGIGATE
	18 "	•	13:51		22 OS		
	18 "		16:02	•	13 CH		
	18 "		16:59		16 OS		
	18 "		17:00		20 CH		
	18 "		17:44		26 CH		
	18 "		19:13		10 OS		
	18 "		19:15		11 OS		
	10		20:30 14:38		14 OS		
	19		14:30		7 os		
	13		16:46		14 CH		
	±-2		15:45	•	11 BL		
	20		17:30		13 OS		
	20 " 20 "	٠.,	17:54	•	23 CH		
	21 "	•	15:45		12 OS		
:	21 "		16:02		19 OS		
	21 "		18:03		20 CH		
	22 "	•	17:19		18 CH		
,	24 "		14:50		12.5 OS	В	
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<del></del>	24 "		21:34		. 18 OS	В	
	25 "		13:03		12 OS	В.	
	25 "		14:12		23 CH	R	
-	25 "		15:33		20 BI		
	25	•	15:34		22 BI		•
	25 "	•	15:40		14 05		
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	26 "·	• •	16:15		16 09		
-	27 "		13:42		17 BI		
	27 "		15:59		21 BI		
	27 "		16:45		11 05	В	n:dala
_	27 "		18:01				Riverdale
-	27 "		18:29		30 BI		
	28 "		14:06	•	30 BI		
	28 "	•	15:09		12 09		٠.
_	28 "		15:12		23 GS		
	28 "		17:32		8 GS		

TABLE IVA (continued)

_								
				Time		S-P at	Moarost	
		Date		(UTC)				
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	20	- 1 10-0	• '	· .				
	29	-		16:09		25	GSC	
	31	11		13:51		12	OSB	•
-	31	, 11		15:21		12	OSB	
	31	. 11		16:00	•			·
	31	11				8	OSB	,
,	71		•	18:20		. 27	STL	,
		3			•			
	OT	August 1978		14:30		26	STL	
	01	11		15:11		23	GSC	
	01	11		17:50		40	STL	
_	01	11		18:38		19	GSC	
	02	11						
	02	11		15:05		24	STL	
				15:44		13	GSC	
	03			12:45		23	OSB	
	03	. 11		17:16		24	STL	
	04	17		13:04		20	OSB	
_	04	11		15:13		21		
	05	11 - 4					GSC	
	07	11		19:07	•	24	STL	. •
		<b>n</b> /		20:08		24	OSB	
	08			14:09		14	OSB	
	0.8	11		14:36		23	GSC	
-	09	11		14:51		21	STL	•
	09	11		16:45		13	OSB	
<del>-</del>	09	11		16:58				
	09	11				21	OSB	
	09	П		17:20		33	STL	
				19:43		12	STL Poss.	Riverdale
	09	11		21:06		. 25	GSC	
	10	tt .		15:14		22	OSB	
	10	Ħ		16:11		19	STL	
	11			16:00		12		
_	11	111111111111111111111111111111111111111		17:15			OSB	•
	11	19	•			24	STL	
	11	Ħ		18:27		21	STL	-
	ŤŤ		•	19:11		7	STL Poss.	Mt. Hope
	12 12		•	17:12		20	STL	-
	12	11	·	17:48		44	GSC	
	14	H	•	14:10	*	24	STL	
	14	19		15:00		13	OSB	
	14	17	;	16:00				
	16	Ħ		12:50		24	OSB	
	16	<b>tr</b> .		12.10	•	24	GOB	
_	10	11		13:12	•	21	GOB	
	16		•	15:57		13	GOB	
	16	П	•	16:54		24	GSC	
	16	n e e		17:00		15	GSC	* * * * * * * * * * * * * * * * * * *
<del>-</del> , · ,	16	Ħ		18:00		20	GSC	
	17	e de <b>m</b> erce de percent		15:57		20		
•	17	11		16.25		25	GOB	•
	7.7	11		16:35		22	STL	•
	17			16:46		12	STL Poss.	Riverdale
-	17			17:33		21	STL	
	* * * * * * * * * * * * * * * * * * * *					•		

TABLE IVA (continued)

Date	Time (UTC)	S-P at Nearest Stations	
18 August 1978	12.50		
18 "	13:59	14 GOB	•
18 "	19:01	26 GSC	•
. 18 "	19:09	24 STL	
19 "	20:07	54 GSC	
21 "	20:13	45 GSC	
21 "	13:56	24 GOB	
21 "	14:10	19 GOB	
21 "	15:58	8 GOB	
21 "	17:47	25 GOB	
22 "	20:09	25 GOB	
22 "	14:30	21 GOB	
22 "	16:13	25 CHR	
22 "	16:34	21 CHR	
22 "	17:01	20 CHR	
23 "	17:15	21 GSC	
23 "	14:13	18 CHR	
23 "	16:16	14 GSC	
23 "	16:42	20 CHR	
23 "	20:14	44 CHR	
24 "	21:36	20 GOB	
24 "	13:33	27 GSC	*
24 "	15:01	20 GSC	
24 "	15:15	18 GOB	
24	15:56	13 GOB	
25 "	16:15	. 19 GOB	
25 "	15:18	22 CHR	
25 "	15:25	21 CHR	
26 "	21:36	20 GOB	•
28 "	19:33	26 GOB	
28 "	17:44	18 SRM	
28 "	19:02	12 STL Poss. Riverd	ale
39 n	21:40	20 GOB	
39 "	15:15	22 GOB	
30 "	15:27	23 CHR	
30 "	14:59	22 SRM	
30 "	15:09	20 CHR	
30 "	16:00	20 GOB	
30 "	16:14	19 GOB	
31 "	21:41	17 WGL	
31 "	12:49	16 CHR	
	15:04	24 CHR	

TABLE IVB

# PROBABLE QUARRY OR OTHER MAN-MADE BLASTS WITH INDISTINCT PHASES

<u>Date</u>	Time (UTC)	Date	Time (UTC)
01 June 1978	16:15	13 June 1978	13:54
01 "	17:00	13 "	13:56
01 "	17:55	13 "	16:31
01 "	21:54	13 "	17:56
02 "	13:59	13 "	19:19
02 "	14:43	13 "	20:10
02 "	15:12	14 "	15:05
02 "	16:00	14 "	15:45
02 "	16:03	74	15:52
02 "	16:23	T.4	15:53
02 "	16:31	T.43	16:07
02 "	20:31	T 4	16:26 17:19
03 "	15:12	14	19:27
05 "	16:10	14 " 15 "	13:08
0.5	16:29	15 "	13:46
0.0	19:03 21:27	15 "	14:25
0.5	14:45	15 "	14:34
06 " 06 "	15:07	15 "	14:59
06 "	16:12	15 "	15:59
06 "	17:22	15 "	20:29
07 "	12:28	15 "	22:27
07 "	13:45	16 "	14:02
07 "	14:04	16 "	14:29
07 "	14:16	16 "	15:42
07 "	14:49	16 "	15:45
07 "	16:13	16 "	15:47
08 "	11:35	16 "	16:15
08 "	13:16	16 "	16:59
08 "	15:30	16 "	17:00
08 "	16:22	10	17:49
08 "	16:55	10	20:39
08 "	17:11	19 " 19 "	04:57 14:45
Vo	19:50	19	14:45
00 .	22:27	19 " 19 "	15:30
09 " 09 "	15:52 16:07	19 "	16:19
09 "	18:15	19 "	17:02
10 "	20:37	19 "	17:58
12 "	14:58	19 "	19:57
<b></b>	14.50	<b>-</b>	

# TABLE IVB (continued)

	•		•	
	• .	Time		Time
	Date	(UTC)	Date	(TIMC)
	Date	10.007	<u>Da ce</u>	(17.112)
	· · · · · · · · · · · · · · · · · · ·		7 1079	3 7 00
	12 July 1978	15:59	25 July 1978	17:20
	12 "	17:13	25 "	17:23
-	12 "	20:08	25 "	17:53
	12 "	20:26	25 "	19:37
	13 "	13:27	26 "	13:13
		16:15	26 "	16:05
	13			
	13	18:45	26 "	19:31
	13 "	20:10	. 21	05:48
	14 "	13:54	21	14:57
<b>-</b> ₹	14 "	14:05	27 "	15:29
	14 "	16:17	27 "	16:07
		20:21	27 "	16:13
	14 "		27 "	19:06
	T0	03:28		19:33
	Τρ	13:45	27 "	
	17 "	17:43	27	20:02
	17 "	17:45	28.	14:00
	17 "	17:54	28	14:45
	18 "	16:05	28 "	15:08
	18 "	17:44	28 "	15:49
_		13:46	28 "	16:14
	19 "			16:25
	19	15:14	28 "	
	19	17:35	28	17:28
	<b>1</b> 9 "	18:28	28	17:41
	19 "	18:35	28 "	18:03
	19 "	19:45	28 "	18:23
	19.	20:08	28	23:55
		20:28	29	14:36
	19 "			13:45
	20	13:14	31 "	
_	20	14:00	31 "	14:30
	20 "	15:51	31	17:11
	20 "	16:22	31 "	17:12
	20 "	18:12	31 "	18:24
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_	21 "	19:04	01	17:14
	24 "	14:11	01	18:32
	24	15:15	01	18:34
		16:08	01	18:36
	24 "			19:50
	24	16:18	01	
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_	24 "	18:59	02	14:25
	24	19:27	02	15:56
	24	19:35	02	16:00
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-	4 T	13:26		16:29
	25		02	17:48
	23	15:24	02	17:58
•	25 "	15:59	02	18:01
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	•			,

# TABLE IVB (continued)

	\$			
		Time		Time
	Date	(UTC)	Date	(UTC)
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	mid dam			
	19 June 1978	21:48	29 June 1978	15:39
	20	14:07	29 "	16:03
	20 "	14:58	29 "	17:48
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	20 "	16:30	30 "	13:09
	20 "	17:45	30 "	14:57
		18:04	30 "	14:58
_	20 "			15:46
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	20	19:23	30	15:47
-	21	14:47	30 "	20:08
	21 "	14:54	•	
	21 "	19:03	01 July 1978	16:23
	21 "	22:44	03 "	16:05
_	22 "	02:45	03 "	16:14
•	22 "	12:29	03 "	20:52
	22 "	14:37	05 "	14:58
_	22 "	16:13	05 "	16:01
		16:19	05 "	16:28
	22. "			17:05
	22	16:41	US	
_	23	13:18	05	17:18
	23	14:32	UO .	15:10
	23	15:27	00	15:42
	23 "	15:29	06 "	15:54
	23 "	17:29	06 <b>"</b>	16:18
	23 "	19:56	06 <b>"</b>	18:03
	23 "	20:27	06 <b>"</b>	18:15
	24 "	13:34	06 "	18:30
	24 "	17:11	06 "	18:46
	25 "	13:40	06 "	20:45
	26 "	12:59	07 "	13:58
	26 "	14:37	07 <b>"</b>	20:09
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	26	18:09	TO	16:24
	21	14:41	10	17:22
	21	14:44	10	18:40
	. 21	15:55	10 "	19:59
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	27· "	16:11	11 "	16:05
7	27 "	16:16	11	16:14
	27 "	17:01	11 "	16:16
-	27 "	19:46	11 "	16:18
	28 "	18:19	11 "	18:25
	28 "	19:34	11 "	19:44
_	29 "	21:15	11 "	19:52
			11 "	
	29	13:49		20:45
	29	14:59	11	21:30
-	29 "	15:24	12 "	14:28

### TABLE IVB

### (continued)

· · · · · · · · · · · · · · · · · · ·	Date		Time (UTC)	Date		Time (UTC)
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	02 August	1978	20:31	11 August	1978	16:25
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	03 "		14:49	11 "	•	17:45
	03 "		16:09	11 "		18:32
	03 "		16:17	. 11 "		20:24
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	03 "		18:06	14 "		17:04
	03 "		18:54	14 "		18:11
	04 "		03:45	14 "	•	20:19
	04 "		05:27	14		22:05
	04 "		05:28	12	•	16:14
	04		06:11	12		17:47
	04		14:13	13		21:01
	04 "		14:24	70		13:59
	04 "		14:45	10		15:00
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	04		16:17	10		16:18
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•	04		20:03	16 "		19:29
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_	. 06		15:29	17		14:10
	0 /		06:50 07:04	17 "		15:00
	07		07:04	17 "		15:51
	07		14:33	17 "		16:08
	07 "		15:59	17 "		16:15
	07 "· 07 "		16:20	17 "		19:44
	07		17:39	17 "	•	20:05
	07		17:41	18 "		14:15
	07 "	•	17:49	18 "		15:00
	08 "		01:45	18 "		16:04
	08 "		14:14	18 "		16:05
	08 "		14:45	18 "		16:08
	08 "		17:43	18 "		16:16
	08 "		21:46	19 "		17:30
	09 "		15:25	21 "		08:48
	09 "		15:44	21 "		14:27
_	09 "		15:47	21 "		14:30
	09 "		16:18	21 "		15:49
	09 "		18:16	21 "	,	15:53
-	09 "		21:52	21		16:02
	10 "		16:03	2.1		16:21
	10 "		16:05	21		16:23
-	10 "	*.	16:43	21		20:02
	10 "		20:13	. 21		20:45
	10 "		21:36	21		20:51
	11 "		14:29	44		15:16
	11 "		14:35	22		16:05
	7.7	•	15:00	22		16:19
	11		15:03	22 " 22 "	5. T	17:19
	11 "		15:06	22	•	18:00

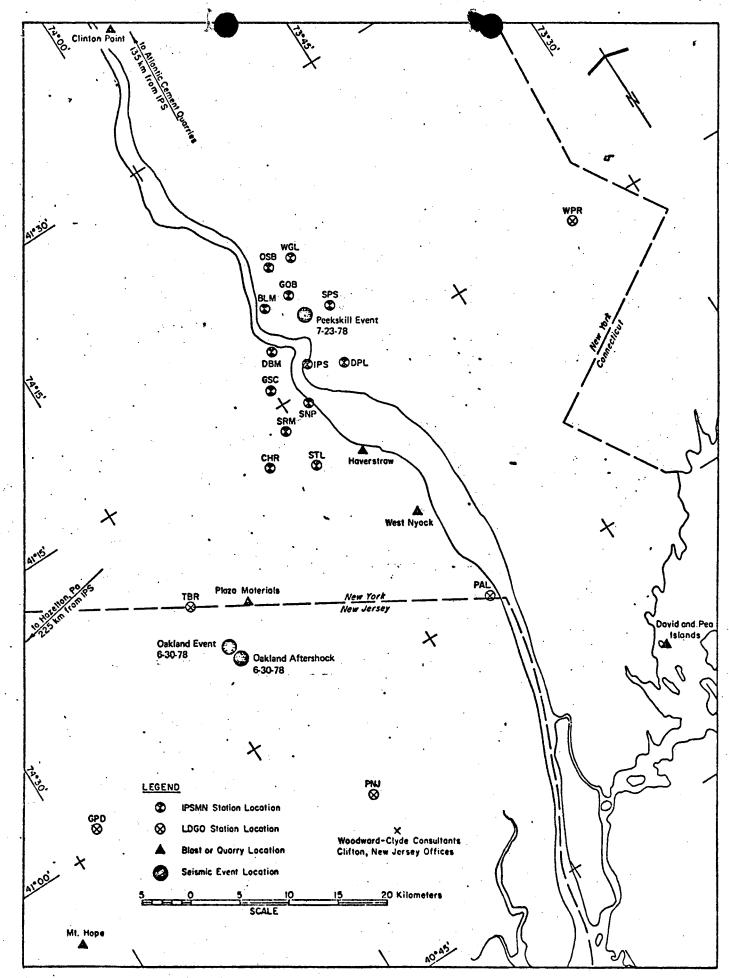
# TABLE IVB (continued)

Date	Time (UTC)	Date (UTC)
23 August 1978 23 " 23 " 23 " 23 " 23 " 23 "	13:43 13:56 14:10 14:34 14:55 16:07 16:18	31 August 1978 14:01 31 " 14:15 31 " 14:50 31 " 15:03 31 " 18:02 31 " 19:16
23 " 23 " 23 " 23 " 23 " 24 " 24 " 24 "	18:48 18:49 18:57 19:56 22:20 13:18 14:30	
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30 " 30 " 30 " 30 " 30 " 30 " 30 " 30 "	15:46 16:06 16:24 18:26 19:57 20:05 20:36 21:12 23:47	

# CONSCIDATED EDISON NETWORK STATIONS STATION LOCATION COORDINATE LISTING

	•	
IPS	41°N16.07'	73°W56.84
CHR	41°N12.49'	74°W03.26'
SPS	41°N18.12'	73°W53.44'
STL	41"N11.32'	74°W00.22'
GSC	41°N15.98'	74°W00.24'
SRM	41°N13.70'	74°W00.82'
DBM	41°N17.68'	73°W58.50'
BLM	41°N19.78'	73°W57.31'
OSB	41°N21.62'	73°W55.44'
GOB	41°N19.77'	73°W55.31'
SNP	41°N14.45'	73°W58.28'
WGL	41°N21.53'	73°W53.96'
DPL	41°N15.17'	73°W54.65'

makt a



INDIAN POINT SEISMIC MONITORING NETWORK



# UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

Docker 50.3

September 12, 1978

ALL POWER REACTOR LICENSEES

#### Gentlemen:

This letter is being sent to all licensees authorized to operate a nuclear power reactor and to all applicants with application for a license to operate a power reactor (FSAR docketed).

The NRC recently notified you that it had scheduled a series of meetings to discuss implementation of upgraded guard qualification, training and contingency planning requirements. The Region I meeting scheduled to be held on October 11, 1978 has been rescheduled to October 13, 1978. A revised schedule is enclosed.

For further information or comments, please contact Tom McKenna of my staff on (301) 492-7846.

Sincerely,

James R. Miller, Assistant Director for Reactor Safeguards

Division of Operating Reactors

< W Roz\_

Enclosure:

Meeting Schedule & Locations

cc: Service List

### REVISED SCHEDULE

9:30 to 3:30

Region II	September 27, 1978	Stadium Hotel* 450 Capitol Ave., SE Atlanta, GA 30312 (404) 688-1900
Region III	October 3, 1978	Ramada O'Hare 6600 North Mannheim Rd. Des Plains, IL 60018 (312) 827-5131
Region IV & V	October 5, 1978	San Francisco Airport Hilton P. O. 8355 San Francisco, CA 94128 (415) 589-0770
Region I	October 13, 1978	Valley Forge Holiday Inn 260 Goddard Blvd. King of Prussia, PA 19406 (215) 265-7500

<sup>\*</sup>Special rate for reservations received before September 15, 1978.

cc: White Plains Public Library
100 Martine Avenue
White Plains, New York 10601

Leonard M. Trosten, Esquire LeBoeuf, Lamb, Leiby & MacRae 1757 N Street, NW. Washington, D.C. 20036

Anthony Z. Roisman Natural Resources Defense Council 917 - 15th Street, NW Washington, D.C. 20005

Paul S. Shemin, Esquire Assistant Attorney General State of New York Department of Law Two World Trade Center New York, New York 10047

Sarah Chasis, Esquire Natural Resources Defense Council 122 East 42nd Street New York, New York 10017



# UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

August 25, 1978

#### ALL POWER REACTOR LICENSEES

#### Gentlemen:

This letter is being sent to all licensees authorized to operate a nuclear power reactor and to all applicants with application for a license to operate a power reactor (FSAR docketed).

The NRC has scheduled regional meetings to discuss the upgraded guard qualification and training requirements published in the Federal Register on August 23, 1978 and the guidance on this requirement contained in NUREG 0219 as well as the contingency planning requirements published in the Federal Register on March 23, 1978. An agenda, the dates and locations of the meetings, and a registration form are enclosed. Please complete the registration form and return it to Mr. Frank G. Pagano, Jr., Chief, Reactor Safeguards Development Branch, Nuclear Regulatory Commission, Washington, D.C. 20555. Hotel arrangements are the responsibility of each attendee.

For further information or comments, please contact Tom McKenna of my staff on (301) 492-7846.

Sincerely,

James R. Miller, Assistant Director for Reactor Safeguards

Division of Operating Reactors

#### Enclosures:

1. Meeting Agenda

2. Meeting Schedule & Locations

3. Registration Form

CC: Service List

Wasc plat

ccp

### **ENCLOSURE 1**

## IMPLEMENTATION OF 10 CFR 73 APPENDICES B AND C GUARD TRAINING AND CONTINGENCY PLANNING

### Meeting Agenda

Sept. 27 - Atlanta; Oct. 3 - Chicago Oct. 5 - San Francisco; Oct. 11 - Philadelphia

TIME	SPEAKER	SUBJECT
9:00 - 9:10	J. Miller	Introduction
9:10 - 9:20	V. Stello	NRC Safeguards Responsibility
9:20 - 9:30	F. Pagano	Why We Adopted This Approach
9:30 - 9:45	*	Coffee Break
9:45 - 10:30	T. McKenna	The Approach
10:30 - 11:15	T. McKenna	10 CFR 73 Appendix B Guard Training
11:15 - 11:45	J. Roe	Contingency Plans
11:45 - 12:00	R. Clark	NRR Staff Reviews
12:00 - 1:30		Lunch
1:30 - 3:00		Question/Answer
3:00 - 3:30	J. Miller/ V. Stello	Closing Remarks

### ENCLOSURE 2

#### SCHEDULES AND LOCATIONS

Region II	September 27, 1978	Stadium Hotel* 450 Capitol Ave., SE Atlanta, GA 30312 (404) 688-1900
Region III	October 3, 1978	Ramada O'Hare 6600 North Mannheim Rd. Des Plains, IL 60018 (312) 827-5131
Region IV & V	October 5, 1978	San Francisco Airport Hilton P. 0. 8355 San Francisco, CA 94128 (415) 589-0770
Region I	October 11, 1978	Valley Forge Holiday Inn 260 Goddard Blvd. King of Prussia, PA 19406 (215) 265-7500

<sup>\*</sup>Special rate for reservations received before September 15, 1978.

# **ENCLOSURE 3**

# Registration Form

Implementation of 10 CFR 73 Appendix B
Security Personnel Qualification Training and
Equipment Requirements by Commercial Nuclear
Power Reactors

# Regional Meeting

Date		·
Place		
Utility Represented		
Individuals Attending:		
Name		,
Title		
Ossica Phana		
Name		
Office Phone	·	
Name		
Title		
Office Phone		
Name		÷
Title		
Office Phone		

RETURN THIS FORM BY SEPTEMBER 22, 1978 TO:

U. S. Nuclear Regulatory Commission Office of Nuclear Reactor Regulation ATTN: Frank G. Pagano, Jr. Washington, D. C. 20555 cc: White Plains Public Library 100 Martine Avenue White Plains, New York 10601

> Leonard M. Trosten, Esquire LeBoeuf, Lamb, Leiby & MacRae 1757 N Street, NW. Washington, D.C. 20036

Anthony Z. Roisman Natural Resources Defense Council 917 - 15th Street, NW Washington, D.C. 20005

Paul S. Shemin, Esquire Assistant Attorney General State of New York Department of Law Two World Trade Center New York, New York 10047

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# UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

Docketyle 50-3

August 9, 1978

ALL PWR LICENSEES

#### Gentlemen:

The Division of Operating Reactors, Office of Nuclear Reactor Regulation, has organized a two-day PWR Steam Generator Conference to be held at the Holiday Inn in Bethesda, Maryland on September 7 and 8, 1978. The purpose of the conference is to provide an opportunity for industry, government, national laboratory, foreign, and possible public representatives to present and discuss operating experience relevant to steam generators and to exchange ideas for integrating design, inspection and operating procedures to ensure more reliable, safe operation of steam generators at nuclear power facilities.

Attached for your use is a Notice of the Conference and a tentative agenda.

Please notify Dr. B. D. Liaw, Division of Operating Reactors, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, telephone (301) 492-8060 of your intent regarding attendance at the conference by August 25, 1978.

D. G. Eisenhut, Assistant Director

for Systems and Projects Division of Operating Reactors

#### Enclosures:

- 1. Notice of Conference
- 2. Tentative Agenda

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#### ENCLOSURE NO. 1

### CONFERENCE NOTICE

The Nuclear Regulatory Commission will sponsor a two-day Pressurized Water Reactor Steam Generator Workshop at the Holiday Inn in Bethesda, Maryland on September 7 and 8, 1978. The purpose of the workshop is to provide an opportunity for industry, government, national laboratory and foreign organizations, and possibly, public representatives to present and discuss operating experience relevant to steam generator tube degradation and to exchange ideas for integrating design, inspection and operating procedures to ensure safe operation of steam generators at nuclear power facilities. The workshop will be comprised of presentations by invited speakers followed by a panel discussion.

Requests for additional information, including requests to participate, should be addressed to Dr. B. D. Liaw, Division of Operating Reactors, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555. Telephone (301) 492-8060.

A tentative agenda of the workshop is attached.

#### ENCLOSURE NO. 2

# PRESSURIZED WATER REACTOR STEAM GENERATOR WORKSHOP

#### DIVISION OF OPERATING REACTORS

### OFFICE OF NUCLEAR REACTOR REGULATION

## U. S. NUCLEAR REGULATORY COMMISSION

# WASHINGTON, D. C. 20555

General Chairman: Darrell G. Eisenhut, Assistant Director for Systems and Projects

Division of Operating Reactors

September 7, 1978

8:00 a.m. - Registration

INTRODUCTORY SESSION: D. G. Eisenhut

9:00 a.m. - Opening and Welcome Remarks (V. Stello)

9:10 a.m. - Licensing Bases for Continued Operation of PWR Steam Generators (D. G. Eisenhut)

9:30 a.m. - NRC Confirmatory Research Programs (C. Z. Serpan)

- Coffee Break -

GENERAL SESSION: L. C. Shao

10:00 a.m. - Westinghouse Steam Generator Operating Experiences (Representative - Westinghouse Electric Corporation)

10:30 a.m. - Combustion Engineering Steam Generator Operating
Experiences (Representative - Combustion Engineering)

11:00 a.m. - B&W Steam Generator Operating Experiences (Representative - Babcock & Wilcox, Inc.)

- Lunch Break -

### TECHNICAL SESSION I: J. P. Knight

- 1:30 p.m. Eddy Current Inspection Method Evaluation (Representative Battelle Columbus)
- 2:00 p.m. Advanced ECT Probe Development (Representative ZETEC, Inc.)
- 2:30 p.m. PNL Steam Generator Tube Integrity Program
  (Representative Pacific Northwest Laboratory)

#### - Coffee Break -

- 3:30 p.m. BNL Stress Corrosion Tests
  (Representative Brookhaven National Laboratories)
- 4:00 p.m. DOE Chemical Cleaning Program
  (Representative U. S. Department of Energy)

#### September 8, 1978

#### TECHNICAL SESSION II: B. D. Liaw

- 9:00 a.m. Model Boiler Test for Reproducing Tube Denting (Representative Combustion Engineering, Inc.)
- 9:30 a.m. Improved Westinghouse Steam Generator Design to
  Avoid Various Forms of Tube Degradation
  (Representative Westinghouse Electric Corporation)
- 10:30 a.m. Experience with Condenser Failures, Retubing and Consequence (Representative Westinghouse Electric Corporation)
- 11:00 a.m. Turkey Point Steam Generator Replacement Program (Representative Bechtel Power Corporation)

- Lunch Break -

1:30 p.m. - PANEL DISCUSSIONS: D. G. Eisenhut

Panel Members: J. R. Weeks, L. Frank, J. Muscara, J. Scinto, F. Almeter, B. D. Liaw, and various industry representatives

- Need for Secondary Water Chemistry Control
- Steam Generator Tube Denting, Support Plate Cracking and Deformation
- Regulation and Regulatory Guide Interpretations Tube Plugging Criteria, ISI Requirements
  - Development ECT Inspection Techniques
- Additional Research Programs

cc: White Plains Public Library 100 Martine Avenue White Plains, New York 10601

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NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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# UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

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August 4, 1978

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#### Gentlemen:

This letter and enclosed NUREG-0219 titled "Nuclear Security Personnel for Power Plants, Content and Review Procedures for a Security Training and Qualification Program," dated July 1978, are being sent to all licensees authorized to operate a nuclear power reactor and to all applicants with applications for a license to operate or construct a power reactor.

Within the next few weeks the Commission is scheduled to publish in final form amendments to 10 CFR 73 to impose upgraded qualification, training, and equipping requirements for security personnel protecting against theft of special nuclear material and industrial sabotage of nuclear facilities or nuclear shipments. The enclosed document provides a basis on which commercial nuclear reactor applicants and licensees can develop acceptable programs to implement these new requirements.

A second draft of this document was published for comment on April 21, 1978 and as a result the staff has considered the comments received and incorporated many changes. The following summarizes the major comments received and how the NRR staff addressed them in preparing the final document:

1. Approximately one third of the 32 that commented stated that the sample plan indicated an excessive amount of detail and the guidance should not exceed that currently given for safety related training.

The final document contains only 25 pages of guidance (Parts 1&2); the remainder is a sample plan. The sample was provided to assist the applicants and licensees in preparation of a plan based on a new approach. As noted in item 3 below, the sample should not be considered a requirement.

The staff reformated the sample plan to reduce the amount of detail and removed many tasks based on the ratings submitted in response to the request in Draft 2. This resulted in a reduction of 46% in the number of pages devoted to performance objectives (173 vs. 94) and a reduction of 44% in the number of performance objectives (344 vs. 191). A further reduction should be realized when the site analysis is completed, since the sample plan includes many tasks that are not appropriate for all sites.

2. Many comments stated that the number of onsite evaluations by the NRC was excessive (i.e., 1 by NRR every 2 years and 3 each year by I&E).

The I&E schedule set forth in the draft was based on the established frequency of onsite I&E physical security inspections with the assumption that these inspections would be expanded to include training and personnel qualification. However, all references to I&E inspection have now been deleted from the final version since this document addresses NRR policy only.

3. Some commented that although we state that each site is required to develop a qualification program based on a site specific job analysis, that the NRR reviewers would treat the sample plan in NUREG-0219 as the only acceptable approach.

The NRR staff feels that the sample plan provides valuable guidance and should remain in the document. However, the final version was revised to stress that the sample is <u>not</u> a requirement. One example is found on page 1-1 and reads:

"It must be stressed that it is the responsibility of each site, using the methodology described in this document, to identify its site-specific tasks, elements, and performance objectives. The security program selected must evaluate each individual's ability to implement the site-approved physical security and contingency plans. Training and evaluation are not done for their own sake.

The sample qualification plan found in part 3 should not be considered a requirement, but only a guide; Each specific site plan is reviewed on its own merits."

4. Other comments stated that tasks shown in the sample were too extensive. They indicated that the sample program exceeded that required by most military and police organizations and/or the requirements to meet the 73.55 threat level. A few commented that the type of response indicated in the sample plan is outside the responsibility and capabilities of private security.

The applicants and licensees are required to identify in their qualification plan only those security tasks critical to successful implementation of the site contingency and physical security plans. If a licensee can develop acceptable contingency plans that meet the threat and do not require police or military tactics, then the tactical tasks can be deleted. However, it must be realized that the military and police are the only organizations with experience dealing with such problems. The vast majority of the military and police related tasks contained in the sample are at the basic training level.

5. Finally, a few commented that the NRC should hold working sessions with the utilities to develop its detailed requirements.

Although the actual development of training and qualification plans are the responsibility of each licensee, NRR is planning to hold a series of workshops with the utilities to develop a mutual understanding of how to implement the methodology described in NUREG-0219. These workshops will be small and devoted to actual plan development.

Additional copies of NUREG-0219 can be obtained from the National Technical Information Service, Springfield, Virginia 22161 at current prices.

Sincerely,

James R. Miller, Assistant Director

for Reactor Safeguards
Division of Operating Reactors

Enclosure: NUREG-0219

cc w/o enclosure: Service List

cc: White Plains Public Library
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