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BVY 02-63

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: Vermont Yankee Nuclear Power Station
License No. DPR-28 (Docket No. 50-271)
Vermont Yankee Emergency Plan Implementing Procedure Change

In accordance with 10 CFR 50.54(q), enclosed is the latest changes to the Vermont Yankee Emergency Plan Implementing Procedures, the change memos and the 10 CFR 50.54(q) Evaluation Checklists for the following:

OP 3513, Rev. 21 OP 3505, LPC#1, Rev. 24
OP 3544, Rev. 2
OP 3504, LPC#2, Rev. 34 OP 3546, LPC#2, Rev. 1

These changes were determined to not need prior NRC review and approval.

If you have any questions, please contact Audra Williams, Emergency Planning Coordinator, in our Brattleboro office at (802) 258-4177.

Sincerely,

ENTERGY NUCLEAR NORTHEAST
VERMONT YANKEE

Lori Tkaczyk
Emergency Planning Manager

Attachments

cc: USNRC Region 1 Administrator
USNRC Resident Inspector – VYNPS
USNRC Project Manager – VYNPS
David M. Silk, Senior Emergency Preparedness Specialist,
USNRC Region 1
Vermont Department of Public Service

A045

Vermont Yankee Emergency Plan Implementing Procedures

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Emergency Plan Classification and Action Level Scheme	AP 3125	Rev. 18	"R"
Emergency Communications	OP 3504	Rev. 34	"R"
Emergency Preparedness Exercises and Drills	OP 3505	Rev. 24	"I"
Emergency Equipment Readiness Check	OP 3506	Rev. 41	"R"
Emergency Radiation Exposure Control	OP 3507	Rev. 29	"R"
On-Site Medical Emergency Procedure	OP 3508	Rev. 23	"R"
Environmental Sample Collection During an Emergency	OP 3509	Rev. 17	"R"
Off-Site and Site Boundary Monitoring	OP 3510	Rev. 26	"R"
Off-Site Protective Action Recommendations	OP 3511	Rev. 11	"R"
Evaluation of Off-Site Radiological Conditions	OP 3513	Rev. 21	"R"
Emergency Actions to Ensure Accountability and Security Response	OP 3524	Rev. 19	"R"
Radiological Coordination	OP 3525	Rev. 9	"R"
Emergency Call-In Method	OP 3531	Rev. 15	"R"
Emergency Preparedness Organization	AP 3532	Rev. 10	"I"
Post Accident Sampling of Reactor Coolant	OP 3533	Rev. 5	"C"
Post Accident Sampling of Plant Stack Gaseous Releases	OP 3534	Rev. 3	"C"
Post Accident Sampling and Analysis of Primary Containment	OP 3535	Rev. 4	"C"
In Plant Air Sample Analysis with Abnormal Condition	OP 3536	Rev. 1	"C"
Control Room Actions During an Emergency	OP 3540	Rev. 1	"R"
Activation of the Technical Support Center	OP 3541	Rev. 1	"R"
Operation of the Technical Support Center	OP 3542	Rev. 1	"R"
Operation of the Operations Support Center	OP 3544	Rev. 2	"R"
Activation of the Emergency Operations Facility/Recovery Center	OP 3545	Rev. 1	"R"
Operation of the Emergency Operations Facility/Recovery Center	OP 3546	Rev. 1	"R"
Security Actions During an Emergency	OP 3547	Rev. 1	"R"
Emergency Plan Training	OP 3712	Rev. 16	"I"

VERMONT YANKEE NUCLEAR POWER STATION

OPERATING PROCEDURE

OP 3513

REVISION 21

EVALUATIONS OF OFF-SITE RADIOLOGICAL CONDITIONS

USE CLASSIFICATION: REFERENCE

LPC No.	Effective Date	Affected Pages

Implementation Statement: N/A

Issue Date: 08/20/2002

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PURPOSE

To specify the methodology utilized to evaluate the off-site radiological consequences involving an elevated (stack) or ground level release of radioactivity during accident conditions.

DISCUSSION

This procedure consists of two sections as follows:

<u>SECTION</u>	<u>TITLE</u>	<u>RESPONSIBILITY</u>	<u>METHODS</u>
I	Initial Evaluation	CONTROL ROOM - Shift Supervisor/Plant Emergency Director (SS/PED)	ODPS (Off-Site Dose Projection System), Off-Site Dose Nomogram, or Measured Site Boundary Dose Rate
II	Subsequent Evaluation	EOF Radiological Assistant	METPAC Computer (Primary), ODPS (Backup), or Off-Site Dose Nomogram (Backup)

During the initial stages of an emergency where an actual release of radioactivity has occurred, the SS/PED will be responsible to perform the initial evaluation of off-site radiological conditions. For other emergencies involving a potential release of radioactivity, (e.g., high level activity in containment, but no actual release), the Radiological Assistant will be responsible to perform the initial evaluation of off-site radiological conditions should an actual release occur.

The initial evaluation of off-site radiological conditions will be accomplished by utilizing the Off-Site Dose Projection System (ODPS), the Off-Site Dose Nomogram or Measured Site Boundary Dose Rate (refer to Section I of this procedure).

Following the initial evaluation and upon activation of the EOF, a subsequent method to further evaluate and refine the initial off-site dose projections will be performed by appropriate personnel located at the EOF. The METPAC Computer System and field-data monitoring information will be utilized to perform subsequent evaluation of off-site radiological conditions (refer to Section II of this procedure).

In order to help qualitatively define plume width, a transparent overlay has been prepared for the area base map. This transparency consists of three colored angles as follows:

- Blue - For all unstable meteorological classes (Stability Class A, B, or C)
- Red - For neutral meteorology (Stability Class D)
- Orange - For all stable meteorological classes (Stability Class E, F, or G)

Included within each angle are areas lateral to the plume centerline having I^{131} concentrations of at least 5% of the plume centerline value. Centering the stability-dependent angles over the appropriate downwind direction on the area base map will help qualitatively define the plume width. Using the sector/zone designation appropriate to the plume width, Vermont Yankee can provide State officials with the affected area and corresponding off-site radiological dose projections out to ten miles.

Off-site protective action recommendations shall be made based on the guidelines established in OP 3511.

In accordance with AP 6002, Preparing 50.59 Evaluations, the results of an Applicability Determination (AD) has determined that an AD is not required for future changes provided the scope of the procedure or program is not revised to include a different type of activity. The basis for this conclusion is that this document is an Emergency Implementing Procedure and is subject to 10CFR50.54(q) to determine if the changes decrease the effectiveness of the Emergency Plan and if they have the potential to affect our ability to meet the standards of 10CFR50.47(b) and the requirements of 10CFR50 Appendix E.

ATTACHMENTS

- | | | |
|-----|---------------|--|
| 1. | Table I | Deleted |
| 2. | Table II | VY Primary and Backup Towers ΔT /Stability Criteria |
| 3. | Table III | Air Sample Codes for I-131 Air Concentrations |
| 4. | VYOPF 3513.01 | Dose Assessment Status Form |
| 5. | VYOPF 3513.02 | Isotopic Analysis |
| 6. | VYOPF 3513.03 | Field Data Status Log |
| 7. | VYOPF 3513.04 | Doses at Selected Locations |
| 8. | VYOPF 3513.05 | Deleted |
| 9. | Figure I | Initial Dose Assessment & PAR Sequence |
| 10. | Figure II | Vermont Yankee Emergency Dose Rate Nomogram |
| 11. | Figure III | Field Sample Thyroid Dose Nomogram |
| 12. | Appendix A | Deleted |
| 13. | Appendix B | Off-Site Dose Projection Methodology When ODPS is Inoperable |
| 14. | Appendix C | Field Data Monitoring |
| 15. | Appendix D | METPAC Computer Input Sequence and Instructions |
| 16. | Appendix E | Description of METPAC Options and Operational Features |
| 17. | Appendix F | Deleted |
| 18. | Appendix G | Off-Site Dose Projection System (ODPS) Input Sequence and Format |
| 19. | Appendix H | Manual Source Term Data Acquisition |
| 20. | Appendix I | Manual Meteorological Data Acquisition |

- 21. Appendix J Multiple Release Assessment
- 22. Appendix K Guidelines for "What If" Projection of Potential Radioactive Material Releases

REFERENCES AND COMMITMENTS

- 1. Technical Specifications
 - a. None
- 2. Codes, Standards, and Regulations
 - a. 10 CFR 50, Appendix E
- 3. Commitments
 - a. None
- 4. Supplemental References
 - a. VY Meteorology System Manual
 - b. METPAC, Technical Reference Manual
 - c. DP 0530, Report #51
 - d. OP 2611, Stack Effluent Sampling and Analysis
 - e. AP 3125, Emergency Plan Classification and Action Level Scheme
 - f. OP 3510, Off-Site and Site Boundary Monitoring
 - g. OP 3511, Off-Site Protective Action Recommendations
 - h. AP 6807, Collection, Temporary Storage and Retrieval of QA Records

PRECAUTIONS/LIMITATIONS

- 1. Since significant changes in meteorological, plant radiological, and plant status conditions can occur, frequent checks on conditions are important.
- 2. Meteorological data obtained from Met Data History 1 and 2 on ERFIS are data averaged over 15-minute intervals, presented over the past six hours. A separate screen, METPAC PARAMETERS (MPP), represents instantaneous readings at the designated time.
- 3. The Off-Site Dose Nomogram method will conservatively provide higher dose predictions at the site boundary than the ODPS or METPAC method due to model sophistication involving the effective stack height and formulation of meteorological parameters. The Off-Site Dose Nomogram basic purpose is to initially scope the magnitude of the release rather than provide a precise site boundary dose rate.

4. Comparison between dose projection methods and off-site monitoring measurements should be reviewed carefully. The user should realize that dose projection methods use meteorological conditions that reflect a 15-minute average condition. However, wide variation in wind speed and direction can occur during that time interval which real-time off-site monitoring measurements would reflect.
5. Accurate reported locations of off-site monitoring team data are necessary, given the significance of these data in the evaluation of off-site radiological conditions.
6. To run ODPS for an unmonitored (ground) release, a site boundary dose rate and the estimated time of release are necessary input.

RESPONSIBILITIES

1. Shift Supervisor/Plant Emergency Director (SS/PED):

Responsible for performing the initial dose calculations within this procedure until relieved by the appropriate personnel at the Emergency Operations Facility (EOF).

2. Radiological Assistant:

Responsible for performing the subsequent dose calculations and evaluations within this procedure.

PROCEDURE

- I. Initial Evaluation

- A. Immediate Action by the SS/PED or Designated Plant Staff Member

1. Upon receiving an indication of a significant release of radioactivity is occurring and the EOF has not been activated, initiate or assign a qualified individual to perform the appropriate calculations in this procedure to evaluate the off-site radiological conditions.

NOTE

Figure I is a flow chart available to assist in the identification of dose assessment activities to be considered and implemented.

2. For an actual ground release, dispatch a Site Boundary Team to obtain a whole body dose rate reading at the fence line in the downwind direction of the release in accordance with OP 3510, and record field data on VYOPF 3513.03.

3. If the Stack High Range Monitor equals or exceeds 20 mR/hr, request the Chemistry Technician to obtain a silver zeolite cartridge air sample from the main stack sample point for an iodine release rate determination.
4. If ODPS is operable, then implement Appendix G to access off-site dose projection information from ODPS.
5. If ODPS is inoperable, then implement Appendix B to perform the applicable off-site dose projections.

B. Subsequent Actions

1. If significant changes occur in meteorological or radiological conditions, repeat applicable steps in Section I.A to re-evaluate off-site radiological conditions.
2. Upon activation of the EOF, the TSC Coordinator or designated individual will forward applicable dose assessment results and data to the Radiological Assistant if necessary or required.

II. Subsequent Evaluation

A. Actions by the Radiological Assistant or Designated Qualified Individual

1. If release has started before EOF activation, determine the status of actions performed in Section I of this procedure from the TSC Coordinator or designated individual.

NOTE

Appendix H and Appendix I provide methods to acquire radiological (source term) and meteorological data, respectively.

2. Obtain information on radiological (source term) and meteorological data to evaluate off-site radiological conditions to include as needed the following information (refer to VYOPF 3513.01):
 - a. Time and date of the reactor scram.
 - b. Time and date of start of any release(s).
 - c. Type of any release(s).
 - d. Duration of any release(s).

- e. Stack High Range Monitor reading, stack flow rate, and site boundary dose rate.
 - f. Quarter-hour meteorological data from the beginning of any release(s).
 - g. Latest estimated projected doses and plume arrival time at the site boundary, 2, 5, 10 miles.
 - h. In-plant chemistry sample information (if available) to include reactor coolant, drywell, and plant stack sample results.
 - i. Containment High Range Monitor readings, in-plant area and process rad monitor readings, and SBGTS status information.
 - j. Protective Action Recommendation(s) if any were made to state authorities.
3. Based on plant conditions and information obtained from radiological and meteorological data, coordinate the assessment of off-site dose projections and calculations by using one or more of the following methods:
- a. METPAC (Primary) - Refer to Appendix D.
 - b. ODPS - Refer to Appendix G.
 - c. Nomogram - Refer to Appendix B.
 - d. Field Data Monitoring Results - Refer to Appendix C.
 - e. Multiple Release Assessment - Refer to Appendix J.
 - f. Guidelines for "What If" Projection of Potential Radioactive Material Releases - Refer to Appendix K.
4. Review dose assessment calculation results and dose calculation parameters/assumptions utilized.

5. As dose projection information becomes available, perform the following actions:
 - a. Implement Section II of OP 3511 to formulate Protective Action Recommendations for that state's authorities.
 - b. Review AP 3125 to evaluate the emergency classification based on site boundary radiological dose conditions and immediately inform the EOF Coordinator if site boundary radiological dose condition EALs have been reached or exceeded.
 - c. Forward applicable information on VYOPF 3513.01.
 - d. Post appropriate dose assessment information on status boards.
 - e. Maintain a file of printouts and completed input data forms.
6. Contact the Chemistry Manager for status of in-plant chemistry sample information to include isotopic breakdown of reactor coolant, drywell air, and effluent release data (e.g., plant stack), and utilize the results of these samples to determine source term release rate information as needed.
7. Periodically brief the EOF Coordinator on off-site dose assessment results and pertinent changes, especially updates regarding protective action recommendations.
8. Brief the Radiological Assistant staff periodically on the status of plant conditions, meteorological changes, plant radiological effluent conditions and dose assessment results.
9. As new or additional information becomes available, ensure that status boards and forms are updated and the updated information is forwarded to the EOF Coordinator for distribution.
10. Continue to update and evaluate off-site dose projections as required.

FINAL CONDITIONS

1. Turn in all data log sheets, calculations, and printouts to the Emergency Plan Coordinator for proper filing in accordance with AP 6807.

TABLE II

VY PRIMARY AND BACKUP TOWERS ΔT /STABILITY CRITERIAPRIMARY TOWER
 ΔT (°F)

Ground Release	Elevated Release	Stability Class	Stability Category	Use Angle
$\Delta T \leq -1.72$	$\Delta T \leq -2.74$	A	Extremely Unstable	Blue
$-1.71 \leq \Delta T \leq -1.54$	$-2.73 \leq \Delta T \leq -2.45$	B	Moderately Unstable	Blue
$-1.53 \leq \Delta T \leq -1.36$	$-2.44 \leq \Delta T \leq -2.16$	C	Slightly Unstable	Blue
$-1.35 \leq \Delta T \leq -0.46$	$-2.15 \leq \Delta T \leq -0.72$	D	Neutral	Red
$-0.45 \leq \Delta T \leq +1.35$	$-0.71 \leq \Delta T \leq +2.15$	E	Slightly Stable	Orange
$+1.36 \leq \Delta T \leq +3.62$	$+2.16 \leq \Delta T \leq +5.74$	F	Moderately Stable	Orange
$+3.63 \leq \Delta T$	$+5.75 \leq \Delta T$	G	Extremely Stable	Orange

BACKUP TOWER (33 ft. - 135 ft.)
 ΔT (°F)

RANGE	CLASS	METPAC LOWER ΔT^*	METPAC UPPER ΔT^*
$\Delta T \leq -1.07$	A	-2.0	-3.0
$-1.06 \leq \Delta T \leq -0.96$	B	-1.6	-2.5
$-0.95 \leq \Delta T \leq -0.84$	C	-1.4	-2.2
$-0.83 \leq \Delta T \leq -0.28$	D	-1.0	-1.0
$-0.27 \leq \Delta T \leq +0.83$	E	+1.0	+1.0
$+0.84 \leq \Delta T \leq +2.23$	F	+2.0	+3.0
$+2.24 \leq \Delta T$	G	+4.0	+6.0

* Input this number into missing delta temperature field to obtain appropriate stability class.

TABLE III

AIR SAMPLE CODES FOR I-131 AIR CONCENTRATIONS

Air Code	Net CPM	*I-131 Air Concentration $\mu\text{Ci}/\text{cc}$	Air Code	Net CPM	*I-131 Air Concentration $\mu\text{Ci}/\text{cc}$
0	<40	N/A	24	1750	1.11E-06
1	40	2.55E-08	25	2000	1.27E-06
2	60	3.82E-08	26	2250	1.43E-06
3	80	5.09E-08	27	2500	1.59E-06
4	100	6.37E-08	28	2750	1.75E-06
5	125	7.96E-08	29	3000	1.91E-06
6	150	9.55E-08	30	3250	2.07E-06
7	175	1.11E-07	31	3500	2.23E-06
8	200	1.27E-07	32	3750	2.39E-06
9	225	1.43E-07	33	4000	2.55E-06
10	250	1.59E-07	34	4250	2.71E-06
11	275	1.75E-07	35	4500	2.87E-06
12	300	1.91E-07	36	5000	3.18E-06
13	325	2.07E-07	37	7500	4.78E-06
14	350	2.23E-07	38	10000	6.37E-06
15	375	2.39E-07	39	12500	7.96E-06
16	400	2.55E-07	40	15000	9.55E-06
17	425	2.71E-07	41	17500	1.11E-05
18	450	2.87E-07	42	20000	1.27E-05
19	500	3.18E-07	43	25000	1.59E-05
20	750	4.78E-07	44	30000	1.91E-05
21	1000	6.37E-07	45	35000	2.23E-05
22	1250	7.96E-07	46	40000	2.55E-05
23	1500	9.55E-07	47	50000	3.18E-05

* These I-131 air concentration values are only to be used when a "standard" air sample has been taken (i.e., flow rate = 1CFM;; collection time = 10 min.; RM-14 used to count the silver zeolite cartridges). The I-131 air concentration values for all other air samples will be calculated by using the equation in Method 2 of Appendix C.

DOSE ASSESSMENT STATUS FORM

Time of Shutdown: _____ Form Prepared By: _____

RELEASE INFORMATION Date: _____ Time: _____

Stack: _____ Ground: _____ Combination: _____

Release Started At: _____ hr Anticipated: _____ hr

Estimated Release Duration: _____ hrs SBTG: On Off

CLASSIFICATION

Unusual Event Alert Site Area General

METEOROLOGICAL/STACK/DATA AT: Date: _____ Time: _____

PARAMETER (15 MIN. AVE.)	UNITS	UPPER (for Stack Release)	LOWER (for Ground Release)
Wind Speed	mph		
Wind Direction	deg		
Delta T	deg (F)		
Stability Class	A,B,C = Blue Angle D = Red Angle E,F,G = Orange Angle		
Precipitation	in/15 min.		
Stack High Range (Use instantaneous reading.)	mR/hr		
Stack Flow (use instantaneous)	scfm		
Site Boundary Dose Rate (Measured)	mR/hr		
Sample Analysis Performed? <input type="checkbox"/> YES <input type="checkbox"/> NO			
Weather Forecast:			

CALCULATED DOSE OR DOSE ASSESSMENT RESULTS ATTACHED: ODPS METPAC

DISTANCE	PLUME ARRIVAL TIME	ELEVATED		GROUND		COMBINATION	
		TEDE (R)	CDE THYROID (R)	TEDE (R)	CDE THYROID (R)	TEDE (R)	CDE THYROID (R)
At 0.35-Mile							
At 2-Mile							
At 5-Mile							
At 10-Mile							

Reviewed By: _____
Rad Assistant (Print/Sign)

- DISTRIBUTION**
- Rad. Ass't to EOF Coord., EOF States' Reps
 - EOF Coord. to SRM
 - SRM to NRC, ESC and NMC

ISOTOPIC ANALYSIS

A. SAMPLE DESCRIPTION

Sample Location: _____

Sample Time: _____

Sample Date: _____

B. ISOTOPIC SAMPLE RESULTS

I¹³¹ _____ μCi/cc Xe¹³³ _____ μCi/cc

I¹³² _____ μCi/cc Xe¹³⁵ _____ μCi/cc

I¹³³ _____ μCi/cc Xe^{135m} _____ μCi/cc

I¹³⁴ _____ μCi/cc

I¹³⁵ _____ μCi/cc

Other Isotopes: _____

C. DOSE ASSESSMENT RESULTS

Dose Projections Attached? YES NO

Comments: _____

Performed By: _____

Reviewed By: _____

(Print/Sign)

- DISTRIBUTION - Rad. Ass't to EOF Coordinator
- EOF Coordinator to SRM
- SRM to EOF States' Reps., NRC, ESC, and NMC

FIELD DATA STATUS LOG

INFO Current at: Time _____ Date _____

Team Name: _____

Sample Location: _____

A. WHOLE BODY DOSE RATE RESULTS

1. Dose Rate Readings:

a. Waist Height _____ RM-14 PIC-6

b. 2" Above Ground _____ RM-14 PIC-6

NOTE

To ensure that the Radiological Assistant receives the whole body dose rate results expeditiously, forward whole body dose rate results to Radiological Coordinator in EOF before an air sample is taken.

B. AIR SAMPLE RESULTS

1. "Standard" Air Sample:

a. Air Code _____

b. Sample Collection Time _____

c. I-131 Concentration (Table III) _____ $\mu\text{Ci/cc}$

OR

2. "Non-Standard" Air Sample:

a. Air Sample "Time ON" _____

b. Air Sample "Flow ON" _____ LPM CFM

c. Air Sample "Time OFF" _____ or Total minutes _____

d. Air Sample "Flow OFF" _____ LPM CFM

e. Air Sample "NET cpm" _____

f. I-131 Concentration (Appendix C - Method 2) _____ $\mu\text{Ci/cc}$

C. FIELD SAMPLE THYROID DOSE NOMOGRAM RESULTS

1. I-131 Concentration _____ $\mu\text{Ci/cc}$

2. Inhalation Time _____ hours

3. Adult Thyroid CDE (Figure III) _____ REM

Performed By: _____

Reviewed By: _____

(Print/Sign)

Copies Distributed To: Radiological Coordinator

VYOPF 3513.03

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FIGURE I

INITIAL DOSE ASSESSMENT & PAR SEQUENCE

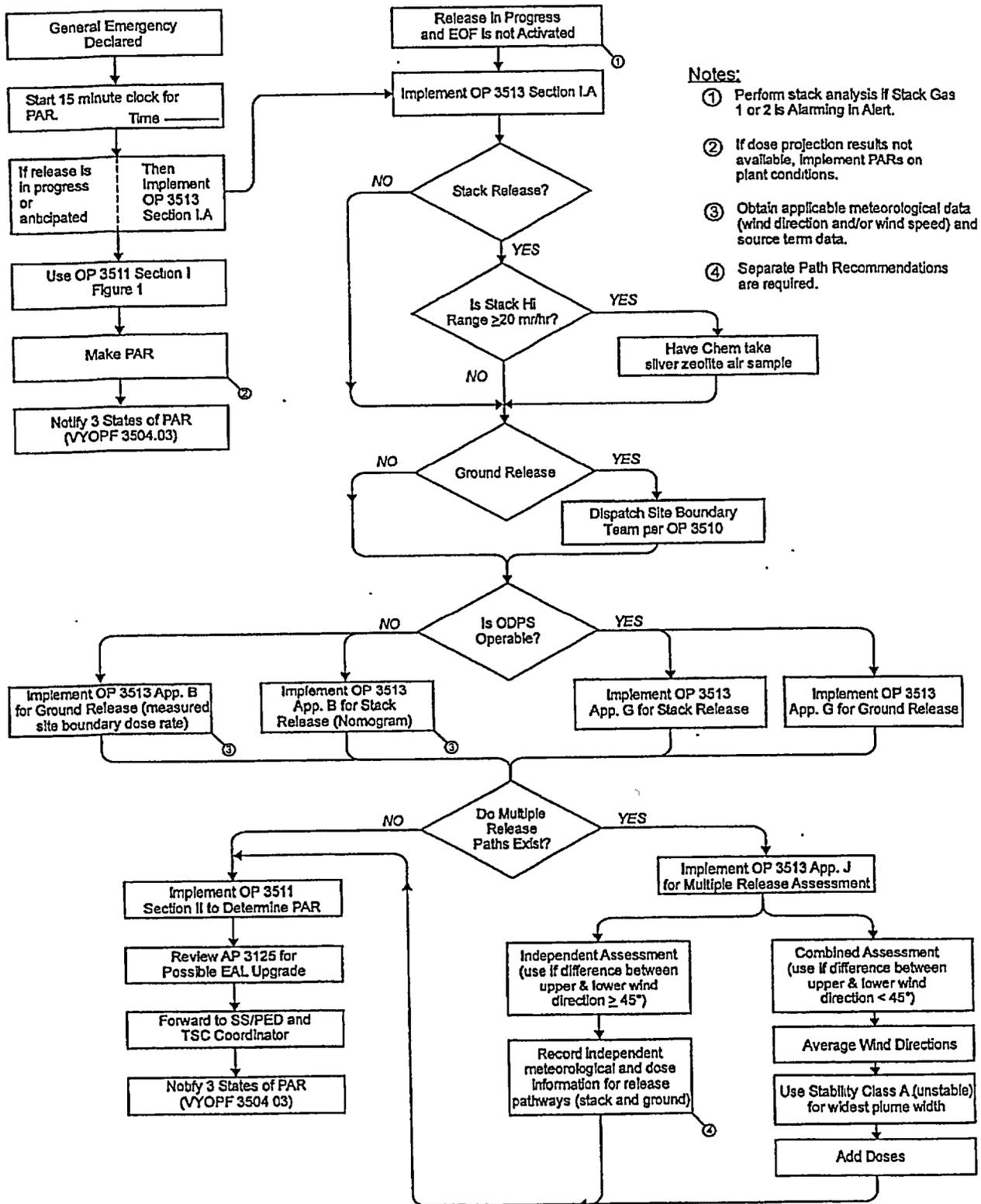


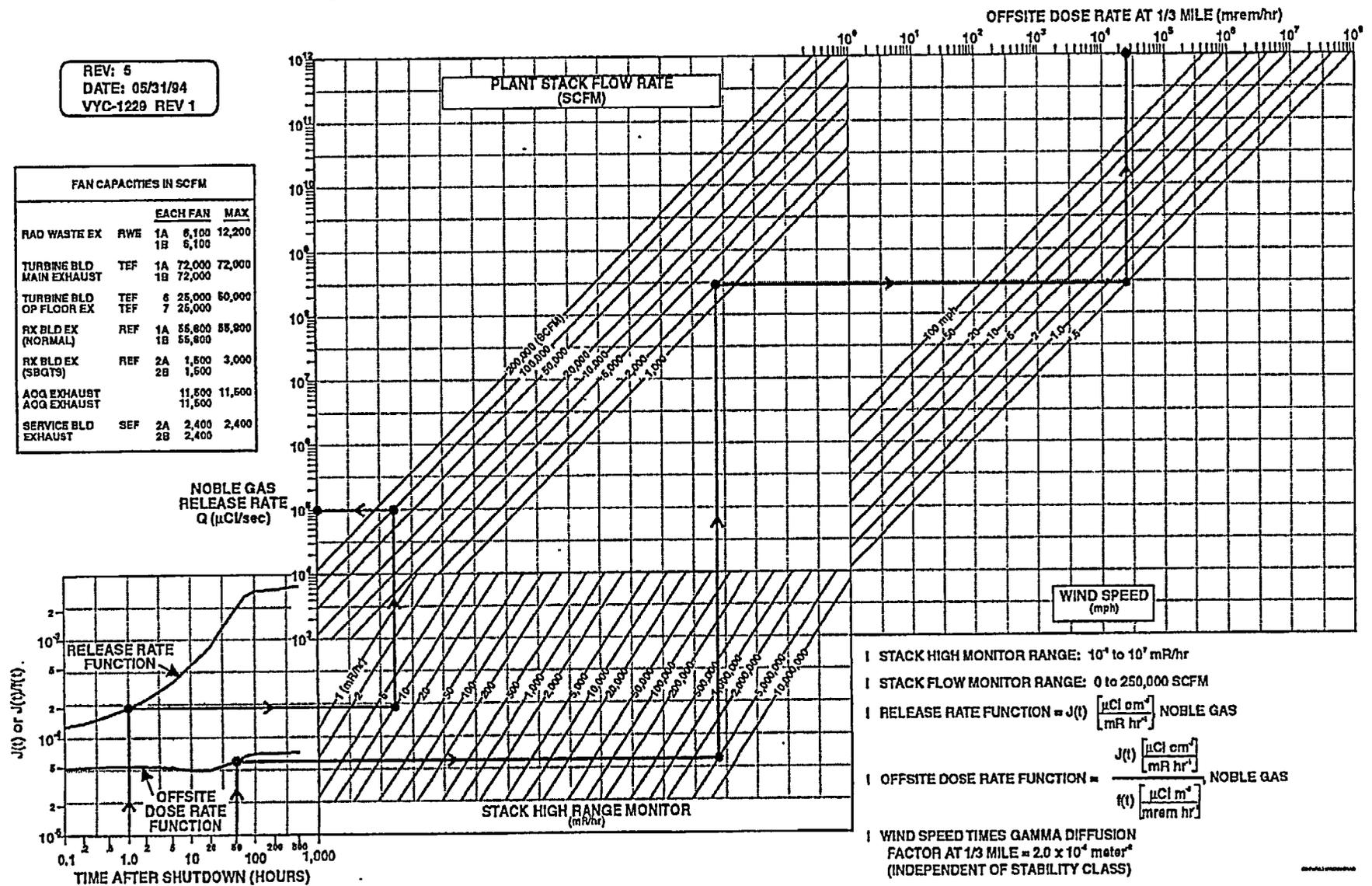
Figure I
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FIGURE II

VERMONT YANKEE EMERGENCY DOSE RATE NOMOGRAM

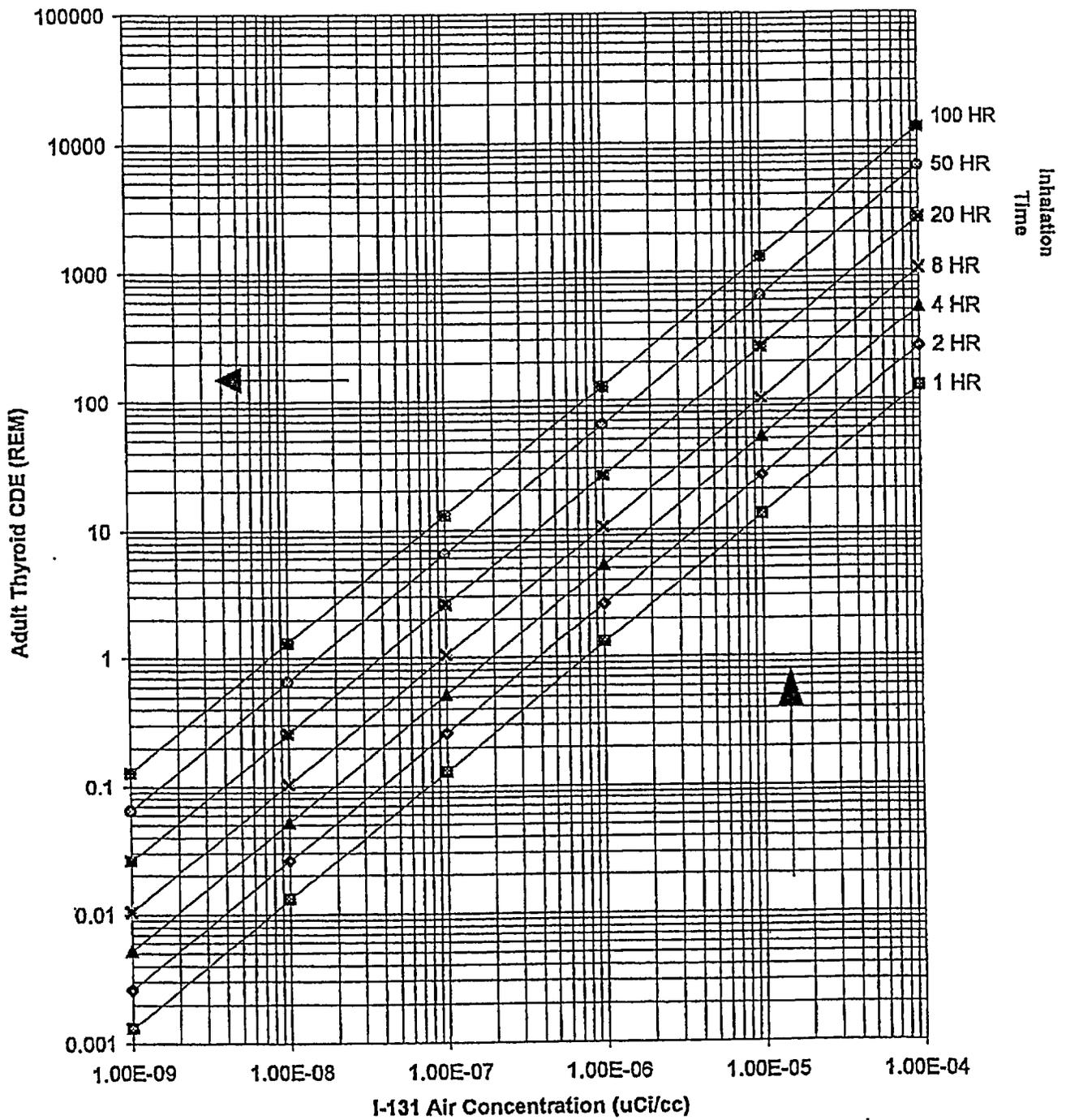
REV: 5
DATE: 05/31/94
VYC-1229 REV 1

FAN CAPACITIES IN SCFM			
		EACH FAN	MAX
RAD WASTE EX	RWE	1A	6,100
		1B	6,100
TURBINE BLD MAIN EXHAUST	TEF	1A	72,000
		1B	72,000
TURBINE BLD OP FLOOR EX	TEF	6	25,000
		7	26,000
RX BLD EX (NORMAL)	REF	1A	55,800
		1B	55,800
RX BLD EX (SBGT9)	REF	2A	1,600
		2B	1,600
ACQ EXHAUST		11,600	11,600
ACQ EXHAUST		11,600	11,600
SERVICE BLD EXHAUST	SEF	2A	2,400
		2B	2,400



- I STACK HIGH MONITOR RANGE: 10² to 10⁵ mR/hr
- I STACK FLOW MONITOR RANGE: 0 to 250,000 SCFM
- I RELEASE RATE FUNCTION = $J(t) \left[\frac{\mu\text{Ci cm}^3}{\text{mR hr}^2} \right]$ NOBLE GAS
- I OFFSITE DOSE RATE FUNCTION = $\frac{J(t) \left[\frac{\mu\text{Ci cm}^3}{\text{mR hr}^2} \right]}{f(t) \left[\frac{\mu\text{Ci m}^3}{\text{mrem hr}^2} \right]}$ NOBLE GAS
- I WIND SPEED TIMES GAMMA DIFFUSION FACTOR AT 1/3 MILE = $2.0 \times 10^4 \text{ meter}^2$ (INDEPENDENT OF STABILITY CLASS)

FIGURE III
FIELD SAMPLE THYROID DOSE NOMOGRAM



APPENDIX B

OFF-SITE DOSE PROJECTION METHODOLOGY WHEN ODPS IS INOPERABLE

1. Obtain the necessary off-site dose projection information for stack and ground release as follows:

a. IF A STACK RELEASE IS OCCURRING: (NOMOGRAM METHOD - FIGURE II)

1) Obtain and record input data as follows:

a) Date/Time _____ / _____

b) Elapsed time following reactor shutdown _____ hrs

NOTES

- For elevated release use upper wind speed and direction, or as directed if necessary by Appendix I.
- Wind direction and stability class are used in OP 3511 to determine towns affected by possible Protective Action Recommendation.

c) Upper Wind Speed _____ mph
(Use 15 min avg data from MET DATA HISTORY-1 or use alternate methods on Appendix I)

d) Upper Wind Direction _____ °
(Use 15 min avg data from MET DATA HISTORY-1 or use alternate methods on Appendix I)

e) Assume Stability Class is as follows: A (Unstable)

NOTE

Appendix H provides alternate methods to obtain source term data.

f) Stack High Range Monitor _____ mR/hr
(Use instantaneous data from METPAC PARAMETERS (MPP) or RM 17-155 on CRP 9-2)

g) Stack Flow _____ scfm
(Use instantaneous data from METPAC PARAMETERS (MPP) or FI-108-22 on CRP 9-2)

APPENDIX B (Continued)

- 2) Use full scale Nomogram (if available) with appropriate input data information from above to determine the Site Boundary Dose Rate (.35 miles) and record below Stack Site Boundary Dose Rate.

Stack Site Boundary Dose Rate: _____ mR/hr

NOTE

Unless a more definitive number is available for the release duration, a value of 8 hours will be used.

- 3) Calculate the Stack Site Boundary Dose (R) and record below as follows:

$$\text{Dose (R)} = \frac{\text{Stack Site Boundary Dose Rate in mR/hr}}{1000 \frac{\text{mR}}{\text{R}}} \times \text{Release Duration in Hours}$$

Stack Site Boundary Dose: _____ R

- 4) If no ground release is occurring, skip Appendix B, Step 1.b and then continue with Appendix B, Step 2.

b. **IF A GROUND RELEASE IS OCCURRING: (MEASURED SITE BOUNDARY DOSE RATE)**

- 1) Obtain and record input data as follows:

NOTES

- For ground release, use lower wind direction.
- Wind direction and stability class are used in OP 3511 to determine towns affected by possible Protective Action Recommendation.

- a) Lower Wind Direction _____ °
(Use 15 min avg data from MET DATA HISTORY-1 or use alternate methods on Appendix I)
- b) Assume Stability Class is as follows: A (Unstable)

APPENDIX B (Continued)

- c) Obtain and record below the Whole Body Dose Rate (waist height reading) from the Site Boundary Team.

Whole Body Dose Rate: _____mR/hr

NOTE

Unless a more definitive number is available for the release duration, a value of 8 hours will be used.

- 2) Calculate the Ground Site Boundary Dose (R) and record below as follows:

$$\text{Dose (R)} = \frac{\text{Site Boundary Whole Body Dose Rate in mR/hr}}{1000 \frac{\text{mR}}{\text{R}}} \times \text{Release Duration in Hours}$$

Ground Site Boundary Dose: _____R

- 3) Continue with Appendix B, Step 2.

2. Use the applicable meteorological data (wind direction and stability class) and Site Boundary Dose results from above to do the following:

- a. If multiple release points exist (stack and ground), then analyze information using Appendix J, "Multiple Release Assessment."
- b. If only one release point exists (stack or ground), then continue with the following actions:
- 1) Implement OP 3511 Section II, Step A.2 to formulate Protective Action Recommendations for State authorities.
 - 2) Review AP 3125 to determine whether site boundary radiological dose EALs have been reached or exceeded.
 - 3) Forward results to the SS/PED and TSC Coordinator.

APPENDIX C

FIELD DATA MONITORING

Receipt and Logging of Field Data Information

1. As monitoring teams report air sample and dose rate information, the Rad Assistant's radio operator will record this information on VYOPF 3513.03 and forward to the Rad Coordinator.
2. The Rad Coordinator will interpret the "Air Code" numbers into air concentration by one of the following methods:

a. Method 1:

If a "standard" air sample was taken, use Table III to determine the corresponding air concentration.

NOTE

Unless otherwise specified, a "standard" sample is as follows:

Counting efficiency (RM-14) = 0.25%

Flow rate = 1CFM

Collection Time = 10 minutes

b. Method 2:

If a "non-standard" air sample was taken, use the following equation to calculate air concentration:

$$\text{Conc } (\mu\text{Ci/cc}) = \frac{C \times CF}{E \times V \times T}$$

Where:

C	=	Net cpm from air sample
CF	=	Conversion Factor (4.5×10^{-10} $\mu\text{Ci-L/dpm-cc}$ for flow rate in LPM or 1.6×10^{-11} $\mu\text{Ci-ft}^3/\text{dpm-cc}$ for flow rate in CFM)
E	=	Efficiency (0.0025 for RM-14)
V	=	Flow rate of sample in LPM or CFM
T	=	Sample collection time in minutes

- c. Record results on VYOPF 3513.03.
3. Proceed to Figure III to determine thyroid dose at the sample location and record results on VYOPF 3513.03.
4. Ensure that field monitoring information on dose rates and I-131 concentrations are recorded on VYOPF 3513.04.

APPENDIX D

METPAC COMPUTER INPUT SEQUENCE AND INSTRUCTIONS

A. Initial Start-up and Operation

1. Turn on the computer, line printer, and monitor.

NOTES

- The computer will boot-up by executing a RAM memory test and loading appropriate start-up files and mouse driver. When the computer has completed its booting process, the monitor screen will be at the DOS prompt (i.e., C:\>).
- MM = current month, DD = current day, YY = current year, HH = current hour, mm = current minutes.
- "(Enter)" indicates that user inputs are entered by depressing the "Enter" key.

2. Type "Date" (Enter). Enter current date in format MM-DD-YY (Enter).
3. Type "Time" (Enter). Enter the current time in format: HH:mm (Enter).
4. Type "METPAC" (Enter) to start program.

NOTES

- The current analysis condition and Main Menu will be displayed on the screen at this time.
- Refer to Appendix E for information on METPAC options and operational features of the program.

5. Select the desired option from the Main Menu (as shown below) by typing the number (letter) or using the cursor control (arrow) keys, then (Enter).

1	=	START NEW ACCIDENT
2	=	CONTINUE ACCIDENT
3	=	ELIMINATE LAST 1/4 HOUR ANALYSIS
4	=	OBTAIN OUTPUT
5	=	BATCH EXECUTION
Q	=	QUIT

APPENDIX D (Continued)

NOTE

If the "START NEW ACCIDENT" is selected, the program will respond with: Are You Sure? If Y is entered, a new accident analysis will be initiated and the previous data base will be deleted. If N is entered, the program will return to the Main Menu screen to allow user to select another option.

6. Type and enter a "1" if starting a new analysis, or a "2" if continuing an analysis.
7. Upon entering the desired option (1 or 2), the date screen will be displayed. Enter appropriate information on date and time of reactor shutdown and date and time of release occurring, as necessary.

NOTES

- METPAC does not use a negative value for time-after-shutdown. Any time-after-shutdown which is negative is reassigned the value of zero. Time-after-shutdown is calculated as the difference between the end time of analysis and the time of shutdown.
- The program accepts only 2 characters. Backspace may be used to edit input.
- With the exception of exiting from the displayed screen, it is not necessary to press the "Enter" key; moving the cursor to next location makes the previous input value accepted.
- If there are errors with the input, the terminal will beep, a message will appear above the input screen, and the cursor will automatically move to the input location that is in error. The corrected values must be inputted and followed by a RETURN.
- If this is the start of a new analysis and there are both a ground and an elevated release, then the hour and minute of both releases must be in the same fifteen-minute period.

8. Using arrow keys, move the cursor to "RAD SCREEN" (Enter). The radiological data input screen will appear (only input for the designated release paths will be displayed).

APPENDIX D (Continued)

9. Using arrow keys, position the cursor and enter the following appropriate radiological data using information from VYOPF 3513.01, Dose Assessment Status Form, or as directed by the Radiological Assistant:

NOTE

An estimated flow rate for the unmonitored release pathway is required only if isotopic data for that pathway are used.

- a. Stack high range monitor (mR/hr), if release is from the stack, or measured field data (i.e., centerline dose rate, I-131 air concentration, and location of measurement), if release is from an unmonitored pathway.
 - b. Stack flow rate (scfm), if release is from the stack.
 - c. If requested and available, enter isotopic data for the release pathway using information obtained from in-plant samples, and implement the following steps:
 - 1) Type and enter "Y" at the "ISOTOPICS" prompt.
 - 2) Position the cursor and input data for detected isotopes.
 - 3) Record isotopic information used in program on VYOPF 3513.02 or print out the METPAC isotopic report after running dose calculation by accessing the report function key F1.
 - 4) Move the cursor to "EXIT" (Enter) to return to Rad Screen.
10. Move the cursor to "MET SCREEN" (Enter). The meteorological data input screen will appear.

APPENDIX D (Continued)

NOTE

Data from backup Met tower are not required if primary Met tower data are available.

11. Using arrow keys, position the cursor and enter the following meteorological data using information from VYOPF 3513.01, Dose Assessment Status Form, or as directed by the Radiological Assistant.
 - a. Enter upper or lower wind speed (mph), depending on release pathway selected.
 - b. Enter upper or lower wind direction (deg. from), depending on release pathway selected.
 - c. Enter upper or lower ΔT (deg. F), depending on release pathway selected.
 - d. Enter amount of precipitation (inches/quarter hr) or if no precipitation, then enter zero.
12. Ensure that the release condition for release pathway is correct (0 = release stopped, 1 = release continuing).
13. Move cursor to "RUN" (Enter).

NOTES

- The dose rates indicated are projected rates at the end of a 15 minute period located at ground level relative to the plume centerline. The outside boundaries of the plume parallel to the centerline are the 1% projected dose rates.
- After the dispersion and dose projection calculations are completed, a color background map with the plume and a function key menu will appear on the monitor.
- The description of the function keys are as follows:

F1 - Allows user to obtain METPAC reports. Selecting this option brings up the following menu.

- F1 - Tracking Report
- F2 - PAG Comparison Report
- F3 - TID and other reports. Selecting this option brings up the following menu:

- F1 - total dose (TEDE and thyroid CDE) accumulated since start of release.
- F2 - dose (EDE) rate due to accumulated ground deposition.
- F3 - total accumulated ground deposition ($\mu\text{Ci}/\text{m}^2$) report.
- F4 - accumulated ground deposition by isotope report.
- F5 - accumulated external dose (EDE) due to plume.
- F6 - accumulated dose (EDE) due to inhalation.
- F7 - accumulated dose (EDE) due to ground deposition.
- F8 - TEDE and thyroid CDE for last 15 min. time period.
- F9 - all of the above reports.
- F10- exit to previous menu.

- F4 - Isotopic Report
- F5 through F9 - No function
- F10 - Exit to previous menu.

(NOTE Continued on Next Page)

APPENDIX D (Continued)

(NOTE Continued from Previous Page)

- F2 - Displays the ground plume.
- F3 - Displays the elevated plume.
- F4 - No function.
- F5 - No function.
- F6 - Provides the following options for modifying the plume plot:
 - F1 - Draws/removes 5 and 10 mile radius circles and 16 cardinal direction sectors.
 - F2 - Draws/removes evacuation roads.
 - F3 - Displays/removes locations for points of interest. Utilize Table I for additional points of interest. Depress Return to exit.
 - F4 - Displays/removes town names.
 - F5 - Zooms in on a specified area of the map.
 - F6 - Toggles between the boundaries legend and the plume legend.
 - F7 - Displays/removes TID plot.
 - F8 - Provides dose rates at selected points on the plume plot and ground deposition plot, and doses at selected points on the TID plot.
 - a. Move and click the mouse to the point of interest to obtain:
 - 1) distance from site,
 - 2) angle in degrees from site.
 - b. Repeat for other points.
 - c. To exit, move mouse to EXIT location and click on Exit.
- F9 - Displays/removes the ground deposition plot.
- F10 - Exit to previous menu.

(NOTE Continued on Next Page)

APPENDIX D (Continued)

(NOTE Continued from Previous Page)

- F7 - Displays summary table for plume points. Selecting this feature brings up the following menu:
- F1 - allows user to obtain METPAC reports (see F1 above).
 - F2 - displays summary table for ground level release.
 - F3 - displays summary table for elevated release.
 - F4 through F6 - no function.
 - F7 - return to plume plot (exit to previous menu).
 - F8 and F9 - no function.
 - F10 - exit graphics program to Main Menu.
- F8 - Allows user to obtain a dose rate for a location of interest on the map (see F8 description under plot modifying feature above).
- F9 - Makes a hard copy of the graphics screen.
- F10 - Exit to Main Menu.
- Space bar - user to switch plume display between TEDE and thyroid CDE.

14. From the displayed function key menu on monitor, select the specific function desired by pressing the appropriate function key on keyboard.
15. Repeat above data entry steps for each 15 minute interval to the current time period if needed.

NOTE

Line printer must be on-line now.

16. Print out appropriate reports and graphic plume plots as directed by the Radiological Assistant.
17. As METPAC dose projection information becomes available, provide the dose projection printouts and associated data to the Radiological Assistant for evaluation.

APPENDIX D (Continued)

NOTE

METPAC is intended to run on a real time basis and analysis should be updated and run at 15 minute intervals if possible.

18. Continue to update METPAC dose projections as information becomes available, especially for the next quarter hour analysis.

NOTE

The total integrated dose feature automatically calculates and accumulates doses and ground deposition during each quarter hour analysis. TID reports can be obtained from the function menu option. Also, since the TID estimates are dependent on METPAC input data, they are subject to the same conservatisms and assumptions that apply to dose rate projections.

B. Batch Execution Mode

1. If requested to run the METPAC Batch Execution mode, implement the following steps:
 - a. Select option 5 from the Main Menu, then press (Enter).
 - b. Select the appropriate batch option displayed (refer to Appendix E for option descriptions).
 - c. Enter the following, depending on selected batch option:
 - 1) Dates and time for shutdown and release.
 - 2) Number of quarter hours to project.
 - 3) Radiological and meteorological data.

NOTE

Upon entry of last data, the program begins dispersion and dose calculations, followed by the display of the plume plot for the batch execution.

- d. Depress the F10 key when ready to exit the plot.

APPENDIX D (Continued)

- e. Enter "Y" if the batch execution is to be saved as part of the current analysis, or "N" if it is not.

C. METPAC Termination

NOTE

METPAC should be terminated by returning to the Main Menu screen to prevent loss of data files.

1. Select "Q" from the Main Menu, then press (Enter) (The program will terminate with the data files being saved for future use).

APPENDIX E

DESCRIPTION OF METPAC OPTIONS AND OPERATIONAL FEATURES

I. METPAC OPTIONS

A. Continuing an Accident

To continue the analysis of the accident and obtain a new printout of protective action guideline comparisons, the user must enter a 2 (Enter) in response to the Main Menu (Screen 1). This allows the user to update the release based on the next 15-minute radiological and meteorological data.

The second screen, the Date Screen, appears with the time of shutdown and the time of the chosen release path displayed at the top. An inactive release pathway and the date and time of analysis appears in the middle of the screen. The date and time of analysis is filled in, and the time is already incremented by 15 minutes. To continue, hit "Enter" key.

The third screen, the Rad Screen, appears with the data fields filled in from the previous quarter hour input. If the data has not changed, hit "Enter" key. If new data must be entered, the data can be modified, as in the previous section. Position the cursor to "MET SCREEN" and hit "Enter" key. The fourth screen, the Met Screen, appears with all data fields filled in from the previous quarter hour input. If the data have not changed, hit "Enter" key. If new data must be entered, the data can be modified, as in the previous section. Position the cursor to "RUN" and hit "Enter" key. The program calculates dispersion and dose and display the graphics, as in the previous section.

B. Eliminate Last Quarter Hour

Starting at Main Menu, to eliminate a quarter hour analysis, the user should type "3" (Enter). The Main Menu Screen updates with the "END TIME OF ANALYSIS" reduced by 15 minutes. This option eliminates the last 15-minute database record from the database file.

C. Viewing a Plot and Obtaining a Printout

Starting from the Main Menu, to view a plot or obtain an output report from a previous time period, the user should type "4" (Enter). At the bottom of the Main Menu, the user is asked to enter the time of interest. If the user does not wish to execute this option, hit "Enter" key. If a valid time is entered followed by a (Enter), the program displays the requested plot. Valid times are between the start time of analysis and the end of time of analysis.

The user can now design the plot screen or obtain the desired report as in Appendix D. To exit, depress the F10 key. This returns the user to the Main Menu.

APPENDIX E (Continued)

D. Editing Data

To edit a mistake in a previous quarter hour data record, the user proceeds through the Main Menu as if continuing an accident. When the Date Screen is presented, the user enters the quarter hour that the error occurred in the time of analysis input line. This is done by entering the hour and the minute on the "EDIT QUARTER HR" line. When the time has been edited, the user moves the cursor to "RAD SCREEN" and hits the "Enter" key.

The user may change any value on the Rad Screen by moving the cursor to the error location and typing the corrected value. After all editing has been completed, move the cursor to "MET SCREEN" and hit "Enter" key. The fourth screen is displayed. The user may edit any value by moving the cursor to the error location, and entering the correct value. After editing has been completed, position the cursor to "RUN", and hit "Enter" key. Since the program uses persistence when continuing an analysis, the program may have continued that the error in subsequent quarter hours. To verify subsequent quarter hours, position the cursor on "NEXT QTR HR" rather than on "RUN". The program presents the Rad Screen, then the Met Screen for the subsequent quarter hours, but does not change the field that was corrected. If the user finds that the error persists, it can be corrected at this time. The program does this for all quarter hours from the time of the error to the last time analyzed.

After the last quarter hour has been verified, the program continues as in Appendix D. All quarter hours from the time of the error to the last analysis time are reanalyzed, but only the last quarter hour is displayed. Hit the "F10" key to continue.

E. Viewing Input

To view a previous quarter hour input screen, the user proceeds through the Main Menu as if continuing an accident. When the Date Screen is presented, the user enters the quarter hour that is desired in the time of analysis input line. The user moves the cursor to "RAD SCREEN" and hits "Enter" key. The Rad Screen appears for review. After reviewing the rad data, verify that the cursor is positioned on "MET SCREEN", then hit "Enter" key. When the user is done reviewing the Met Screen, move the cursor to "DATE SCREEN" and hit "Enter" key. This brings the user back to the second screen. At this time, the user may continue the accident, edit data, view another input screen or return to the Main Menu.

APPENDIX E (Continued)

F. Starting Another Release Path

To start a second release path, the user proceeds through the Main Menu as if continuing an accident. When the Date Screen is presented, the user moves the cursor to the line on which entry of the release path date and time occurs. The user can then enter the data for the date and time, as is done in Appendix D. This date and time must be after the date and time of the first release and before the date and time of the current analysis. The user moves the cursor to "RAD SCREEN" and hit "Enter" key.

When the Rad Screen appears, it contains data for the first time of analysis in which the release started. The user may update this record to contain the appropriate radiological measures, then choose "MET SCREEN". The meteorological data values can be updated appropriately. Once this has been done and the "RUN" option has been chosen, the program displays the input screen for the next time of analysis. This continues until the user has had a chance to update all input screens up to the current time of analysis.

After the last quarter hour has been updated, the program continues as in Appendix D. All quarter hours from the time of the start of the new release path to the current analysis time are reanalyzed, but only the last quarter is displayed. Hit "F10" key to continue.

G. Batch Execution

To execute the batch feature, the user selects option 5 from the Main Menu and hits "Enter" key. This action brings up the Batch Menu Input Screen, which allows the user to specify one of three ways the batch execution will take place.

Batch option 1 is chosen when the user wishes to add quarter hours which are exactly the same as the last quarter hour to an existing accident. After the number of quarter hours to be projected has been entered, the program performs the dispersion and dose calculations, then displays the plume plot. The operator can now modify the plot screen, print the plot, or go to report processing. To exit, hit the "F10" key. The program asks the operator whether or not to save the batch generated data. Entering "Y" saves the batch data. Entering "N" keeps the accident analysis as it was before batch execution.

APPENDIX E (Continued)

Batch option 2 is used to add quarter hours with different data from the last quarter hour of the current analysis. After entering the number of quarter hours to be projected, the radiological and meteorological screens are presented. Data values for these screens can remain the same or be modified as described above. After the operator enters the data values for the Met Screen, "NEXT QTR HR" must be selected to enter data for the subsequent time period. This selection must be made for all subsequent time periods in order to enter different values. The Met Screen for the last quarter hour period in a batch execution does not display "NEXT QTR HR". If the operator wishes to use current values for all remaining quarter hour periods in a batch execution, the "RUN" option on the Met Screen can be selected. After positioning the cursor on "RUN" in the final quarter hour and hitting the "Enter" key, the dispersion and dose calculations are performed, followed by the display of the plume plot. The operator can now modify the plot screen, print the plot, or go to report processing. To exit, hit the "F10" key. The program asks the operator whether or not to save the batch generated data. Entering "Y" saves the batch data. Entering "N" keeps the accident analysis as it was before batch execution.

Batch option 3 is selected when an entirely different analysis, separate from the current accident, is to be performed. Selection of this option results in the display of the Date Screen which requires the user to enter the dates and times of reactor shutdown and release. After the dates and times have been entered, the user is requested to enter the number of quarter hours over which the projection is to occur. Next, the Rad and Met Screens are presented in the same manner as continuing an accident. After entering data for the first quarter hour, the operator selects "NEXT QTR HR" if data values differ for subsequent quarter hour time periods, or "RUN" if the data values are to remain the same in subsequent time periods. After positioning the cursor on "RUN" in the final quarter hour of the batch execution and hitting the "Enter" key, the dispersion and dose calculations are performed and the Output Main Menu is displayed. The operator can now modify the plot, print the plot, or go to report processing.

The program asks the operator whether or not to save the batch generated data. Entering "Y" saves the batch data. Entering "N" keeps the accident analysis as it was before batch execution.

APPENDIX E (Continued)

II. METPAC OPERATIONAL FEATURES

A. Stack Release Pathway

For the stack release pathway, METPAC allows the user to define whether the program should use a default isotopic mix (monitor reading) or user-defined mix (isotopic input) for calculating the release rate. The stack release rate options with the define flag settings are as follows:

1. Entering Stack Monitor Reading and Stack Flow Rate (Flag Setting of 0 - Assumed)

(User-defined stack monitor reading and stack flow rate is used. User-defined isotopic mixture in the isotopic input screen is not used or included).

METPAC uses the stack monitor reading and stack flow rate to calculate the release rate for determining the TEDE and CDE to the thyroid.

2. Entering Stack Monitor Reading and Measured Stack Iodine Isotopic Data with Stack Flow Rate (Flag Setting of 1 - Combo)

(User-defined stack monitor reading and measured stack iodine isotopic data with stack flow rate is used. User-defined isotopic mixture in the isotopic input screen includes only iodine).

METPAC uses the default noble gas isotopic mixture based on the stack monitor reading to calculate the release rate for determining its contribution to the TEDE. METPAC also uses the user-defined iodine mixture in the isotopic input screen to calculate the iodine release rate for determining its contribution to the TEDE and CDE to the thyroid.

3. Entering Measured Stack Isotopic Data with Stack Flow Rate (Flag Setting of 2 - Measure)

(User-defined measured stack isotopic data with stack flow rate is used. User-defined isotopic mixture includes noble gas or particulate radionuclides in the isotopic input screen).

METPAC uses the user-defined isotopic mixture to calculate the release rate for determining the TEDE and CDE to the thyroid. However, if no iodine isotopic mixture is included in the isotopic screen, then the I-131 dose equivalent to noble gas ratio is used in order to calculate the iodine release rate for determining the CDE to the thyroid. This I-131 dose equivalent release rate is based on the user-defined total noble gas isotopic mixture (concentration).

APPENDIX E (Continued)

B. Unmonitored Release Pathway

For the unmonitored release pathway, METPAC allows the user to define whether the program should use field measurements (dose rate/I-131 conc., distance and sector) or user-defined mix (isotopic input) from the release point for calculating the release rate. The unmonitored release rate options with the define flag settings are as follows:

NOTE

User must enter a dose rate, distance, and sector to run the unmonitored release option. The "Sector" is the compass direction where the field sample was taken and defined as a number. The compass "Sector" number designations are as follows:

N=1, NNE=2, NE=3, ENE=4, E=5, ESE=6, SE=7, SSE=8, S=9,
SSW=10, SW=11, WSW=12, W=13, WNW=14, NW=15, and
NNW=16.

The limitation of this feature is that the field measurements must be taken at or beyond site boundary. Field measurements as input are treated as centerline values by the model. Only one dose rate measurement and one airborne I-131 measurement is accepted by model during a quarter hour period.

1. Entering Field Team Data (Flag Setting of 0 - Field)

(User-defined dose rate meter reading, distance and sector is used with the option to enter I-131 concentration, distance and sector).

METPAC uses the dose rate reading, distance, and sector to back-calculate the noble gas release rate for determining the TEDE. If an I-131 concentration is entered, then METPAC back-calculates the iodine release rate for determining its contribution to the TEDE and CDE to the thyroid.

2. Entering Field Team Dose Rate Data and Measured Iodine Isotopic Data with Estimated Flow Rate From Release Point (Flag Setting of 1 - Combo)

(User-defined dose rate meter reading, distance and sector is used and also the user-defined iodine isotopic mixture and estimated flow rate is used.

METPAC uses the dose rate meter reading, distance and sector to back-calculate the noble gas release rate for determining its contribution to the TEDE. METPAC also uses the user-defined iodine mixture in the isotopic input screen to calculate the iodine release rate for determining its contribution to the TEDE and CDE to the thyroid.

APPENDIX E (Continued)

3. Entering Measured Isotopic and Estimated Flow Rate Data from Release Point (Flag Setting of 2 - Isotopic)

(User-defined isotopic mixture and estimated flow rate from the measured isotopic concentrations at the release point is used).

METPAC uses the user-defined isotopic mixture to calculate the release rate for determining the TEDE and CDE to the thyroid. If the iodine mixture in the isotopic input screen is entered, then METPAC uses the iodine mixture for determining its contribution to the TEDE and CDE to the thyroid.

APPENDIX G

OFF-SITE DOSE PROJECTION SYSTEM (ODPS) INPUT SEQUENCE AND FORMAT

1. Obtain the necessary off-site dose projection information for stack and ground release as follows:

a. **IF A STACK RELEASE IS OCCURRING:**

NOTE

Meteorological and source term data are automatically input to model.
Manual input of data is not necessary.

- 1) Press the "ODPS" ERFIS terminal key to access the "ODPS Menu" screen.
- 2) Click on the "SOURCE TERM DATA" box to display screen.

NOTE

ERFIS Printer must be on-line now.

- 3) Click on the PRINTER icon to obtain record of stack release projection information (Reactor Trip Status and Stack).
- 4) Press the "ODPS" ERFIS terminal key to return to the "ODPS Menu" screen.
- 5) Click on the "PROTECTIVE ACTION RECOMMENDATIONS LIVE STACK MR/HR" box to display screen.
- 6) If ODPS aborts due to bad input (as indicated on screen display), refer to Appendix G - Table G.1.
- 7) When "PROTECTIVE ACTION RECOMMENDATION" screen is displayed, click on the PRINTER icon to obtain stack release off-site dose projection information.
- 8) Press the "ODPS" ERFIS terminal key to return to the "ODPS Menu" screen.
- 9) If no ground release is occurring, skip Appendix G, Step 1.b for ground release and then continue with Appendix G, Step 2.

APPENDIX G (Continued)

b. IF A GROUND RELEASE IS OCCURRING:

NOTE

Meteorological data are automatically input to model. Manual input of meteorological data is not necessary.

- 1) Press the "ODPS" ERFIS terminal key to access the "ODPS Menu" screen.
- 2) Click on the "INPUT SITE BOUNDARY MR/HR (UNMONITORED)" box which will display the password entry screen.
- 3) Leave the User Name entry field blank then type the password currently designated for Control Room use and click on OK.
- 4) Enter the appropriate site boundary dose rate (MR/HR) reading from the Site Boundary Team (team dispatched per OP 3510) in field space provided.

NOTE

This reading is assumed to be taken in the downwind sector at a distance of 0.35 miles.

- 5) Next, enter the estimated time that the release started in field spaces provided (Format in HH and MM).

NOTE

ERFIS Printer must be on-line now.

- 6) Click on the PRINTER icon to obtain record of input data.
- 7) Press the "Enter" button on the display to update the input data.
- 8) When "ODPS MENU" screen is displayed, click on "PROTECTIVE ACTION RECOMMENDATIONS BOUNDARY MR/HR" box to display screen.
- 9) If ODPS aborts due to bad input (as indicated on screen display), refer to Appendix G - Table G.1.

APPENDIX G (Continued)

- 10) When "PROTECTIVE ACTION RECOMMENDATIONS" screen is displayed, click on the PRINTER icon to obtain ground release off-site dose projection information.

NOTE

"ADULT THY" values are not calculated for a ground release.

- 11) Press the "ODPS" ERFIS terminal key to return to the "ODPS Menu" screen.
- 12) Continue with Appendix G, Step 2 below.

2. Use printed screen information from above to do the following:

- a. If multiple release points exist (stack and ground), then analyze information using Appendix J, "Multiple Release Assessment."
- b. If only one release point exists (stack or ground), then continue with the following actions:
 - 1) Implement OP 3511 Section II, Step A.2 to formulate Protective Action Recommendations for State authorities.
 - 2) Review AP 3125 to determine whether site boundary radiological dose EALs have been reached or exceeded.
 - 3) Forward results to SS/PED and TSC Coordinator.

APPENDIX G (Continued)

TABLE G.1

If ODPS aborts due to bad input (as indicated by screen display), do the following:

1. Press the "CAV" key which will bring up the password entry screen.
2. Leave the User Name entry field blank.
3. Type the password currently designated for Control Room use and click on OK.
4. Use the "Tab" key to tab to the PTID input field, then press the "Enter" key.
5. Type the PTID (See below) of the point to be overridden into the Point Search Text field.

Release Type	PTID	Description
Stack	U014	Stack Gas III Monitor High Range
	C198	Average Stack Flow FT-108-22
	C179	Upper Wind Speed (15 min. ave.)
	C187	Upper Wind Direction (15 min. ave.)
	C181	Upper Delta T (15 min. ave.)
	C192	Precipitation (15 min. total)
Ground	C178	Lower Wind Speed (15 min. ave.)
	C186	Lower Wind Direction (15 min. ave.)
	C180	Lower Delta T (15 min. ave.)
	C192	Precipitation (15 min. total)

6. Click on "FIND/FIND NEXT" until the point is found, then click on OK.
7. Use the "Tab" key to tab to the SCAN STATUS toggle field.
8. Press the "ENTER" key to toggle from ACTIVE to INACTIVE.
9. Use the "Tab" key to tab to the VALUE input field.
10. Type in the override value to be used and press the "ENTER" key.
 - a. To manually access back-up meteorological data, refer to Appendix I, Step 2.
 - b. To manually access back-up source term data, refer to Appendix H, Step 5.
11. Press the "ODPS" key, go back to Appendix G, Step 1.

APPENDIX H

MANUAL SOURCE TERM DATA ACQUISITION

To determine the source term data for dose assessment, perform the following steps and record applicable data (refer to VYOPF 3513.01):

1. Obtain and record the time and date of reactor shutdown.
2. Determine and record the type of release(s) (i.e., stack, ground, or combination).
3. Determine and record the time and date of the identified release(s).
4. Determine and record the release duration of the identified release(s).

NOTE

Unless a more definitive number is available for release duration, a value of 8 hours duration will be used.

5. Obtain and record release pathway monitoring data as delineated below:
 - a. FOR ELEVATED RELEASE (stack)

NOTE

The stack high range monitor is a Victoreen ion chamber which measures the radiation in the base of the stack. The monitor has a readout in the Control Room on CRP 9-2 with a range from 0.1 mR/hr to 1×10^7 mR/hr.

CAUTION

Use instantaneous reading, not the 15 minute average.

- 1) Stack High Range Monitoring Reading (mR/hr) from one of the following:
 - a) Control Room Panel (RM 17-155 on CRP 9-2), or
 - b) METPAC PARAMETERS display on ERFIS monitor (depress "ODPS" key, then select METPAC PARAMETERS (MPP) poke box).

APPENDIX H (Continued)

- 2) Stack Flow Rate (scfm) from one of the following:
 - a) Control Room panel (FI-108-22 on CRP 9-2), or
 - b) Local readout in the stack monitoring room, or
 - c) ERFIS Data Point C198 (15-minute average), or
 - d) METPAC PARAMETERS display on ERFIS monitor (depress "ODPS" key, then select METPAC PARAMETERS (MPP) poke box), or
 - e) OP 2611, Section entitled, "Determine Stack Flow Rate".

b. FOR GROUND RELEASE

- 1) Site boundary whole body dose rate (mR/hr) at the fence line downwind location.
6. If the Stack High Range Monitor equals or exceeds 20 mR/hr, request the Chemistry Technician to obtain a silver zeolite cartridge air sample from the main stack sample point for an iodine release rate determination.
 7. If available, obtain and utilize stack sample analysis or field data monitoring information. Record isotopic information on VYOPF 3513.02 and field data on VYOPF 3513.03.

APPENDIX I

MANUAL METEOROLOGICAL DATA ACQUISITION

To determine the meteorological data for dose assessment, obtain and record applicable information as delineated below:

NOTES

- FOR ELEVATED RELEASE (stack), ensure that upper meteorological values are obtained and utilized.
- FOR GROUND RELEASE, ensure that the lower meteorological values are obtained and utilized.

CAUTION

Use 15 minute average met data, not the instantaneous data.

1. Access MET DATA HISTORY-1 display on ERFIS monitor by depressing the "ODPS" key and then selecting the MH1 poke box.
2. If the primary meteorological tower instrumentation is not functioning, but ERFIS is operable, obtain meteorological data from the secondary tower. Access MET DATA HISTORY-2 display on the ERFIS monitor by depressing the "ODPS" key and then selecting the MH2 poke box.
3. If the primary meteorological tower instrumentation is functioning, but the MET DATA HISTORY-1 display on the ERFIS monitor is not available, determine the required meteorological data from the video graphic recorders in the Relay House.
4. If the primary meteorological tower instrumentation is not functioning, and the MET DATA HISTORY-1 and MET DATA HISTORY-2 displays on the ERFIS monitor are not available, obtain readouts of wind speed, wind direction, ambient temperature, and one value of delta T from the secondary (backup) tower from CRP 9-48.
5. If primary and secondary meteorological tower instrumentation is not available, consult Albany National Weather Service Station (Tel. No.'s 800-833-9880 [Primary] or 518-435-9574 [Backup], and ask for "Public Forecaster") regarding meteorological observations.

APPENDIX I (Continued)

6. Stability Class can be determined from one of the following:

- a. If a delta T value was obtained from either the primary or back-up tower, use the appropriate section of Table II.
- b. If a delta T value is not available from either the primary or back-up tower, a generalized determination of atmospheric stability may be made by observing the cloud cover as follows:
 - B = Clear sky in daytime
 - D = Heavy overcast day or night
 - F = Clear sky at night
- c. Obtain from ODPS or METPAC printout.

APPENDIX J

MULTIPLE RELEASE ASSESSMENT

NOTE

Wind direction and stability class are used in OP 3511 to determine towns affected by possible Protective Action Recommendation.

A. **COMBINED ASSESSMENT (USE THIS SECTION IF THE DIFFERENCE BETWEEN THE UPPER & LOWER WIND DIRECTION IS $<45^\circ$, IF $\geq 45^\circ$ PROCEED WITH SECTION B)**

1. Average the upper and lower wind directions to determine the wind direction applicable for the combined release pathway and record below.

Average Wind Direction for Combined Release Pathway: _____°

2. Assume Stability Class for the combined release pathway is as follows: A (Unstable)

3. Add doses from each pathway (stack and ground) to calculate the cumulative dose at the designated downwind distances and record information as indicated below:

NOTE

If Appendix B was used to calculate doses, assume the Site Boundary dose results are applicable out to 5 miles.

COMBINED DOSE CALCULATION RESULTS

DISTANCE	CUMULATIVE DOSES (STACK & GROUND)	
	TEDE (REM)	CDE THYROID (REM)
At Site Boundary (0.35 miles)		
At 2 Miles		
At 5 Miles		
At 10 Miles		

APPENDIX J (Continued)

4. Use the applicable meteorological data (wind direction and stability class) and dose calculation results recorded above to continue with the following actions:
 - a. Implement OP 3511 Section II to formulate Protective Action Recommendations for State authorities.
 - b. Review AP 3125 to determine whether site boundary radiological dose EALs have been reached or exceeded.
 - c. Forward results to SS/PED and TSC Coordinator.

B. INDEPENDENT ASSESSMENT (USE THIS SECTION IF THE DIFFERENCE BETWEEN THE UPPER & LOWER WIND DIRECTION IS $\geq 45^\circ$)

1. Record the independent wind direction and stability class from each release pathway (stack and ground) as indicated below:

Release Pathway	Wind Directions (deg ^o)	Stability Class*
Stack		
Ground		

* A, B, C, D, E, F, or G

NOTE

If Appendix B was used to calculate doses, assume the Site Boundary dose results are applicable out to 5 miles.

2. Record the independent dose information from each release pathway at the designated downwind distances (stack and ground) as indicated below:

INDEPENDENT DOSE CALCULATION RESULTS

DISTANCE	STACK		GROUND	
	TEDE (REM)	CDE THYROID (REM)	TEDE (REM)	CDE THYROID (REM)
At Site Boundary (0.35-Miles)				
At 2-Miles				
At 5-Miles				
At 10-Miles				

APPENDIX J (Continued)

3. Use the applicable meteorological data (wind direction and stability class) and dose calculation results recorded above to continue with the following actions:
 - a. Implement OP 3511 Section II to formulate Protective Action Recommendations for State authorities.
 - b. Review AP 3125 to determine whether site boundary radiological dose EALs have been reached or exceeded.
 - c. Forward results to SS/PED and TSC Coordinator.

APPENDIX K

GUIDELINES FOR "WHAT IF" PROJECTION OF
POTENTIAL RADIOACTIVE MATERIAL RELEASES

NOTE

The following series of calculations is one example of obtaining data for release projections. It is acceptable to use other methods as necessary based on the emergency situation.

1. Determine available source term by making an assumption of fuel conditions based on plant conditions.

NOTE

Figure 5.2 from the Core Damage Methodology Assessment [part of Severe Accident Management (SAM) Guideline] may be helpful in determining extent of fuel conditions.

Source Term (ST) - μCi

	Clad Failure	Fuel Overheat	Fuel Melt
Noble Gas	1E12	5E13	1E14
I-131	4E9	2E13	2E13
Particulate (Cs^{137})	4E8	2E12	2E12

Clad failure assumes a 1% noble gas, 0.01% iodine and particulate release. Fuel overheat assumes a 50% noble gas, iodine and particulate release. Fuel melt assumes a 100% noble gas, 50% iodine and particulate release. The available source term is assumed to be 1E14 μCi noble gas, 4E13 μCi I^{131} and 4E12 particulate (Cs^{137}).

2. Calculate the containment concentration (CC).

$$\text{CC}(\mu\text{Ci/cc}) = \frac{\text{ST}(\mu\text{Ci})}{\text{CV}(\text{cc})} = \frac{\text{ST}(\mu\text{Ci})}{6.7\text{E}9 \text{ cc}} = \text{_____} \mu\text{Ci/cc}$$

CV = Containment Volume which is 6.7E9 cc for combined Drywell and Torus Gas. See volumes list in information fact sheet for additional numbers.

APPENDIX K (Continued)

3. Postulate a release mechanism.

NOTE

Containment leakage is a percentage of the Design Containment Leakage. Containment leakage may be obtained from the TSC or an estimate may be obtained from the ESC.

- a. Slow containment leakage (<10%/day) to stack via Reactor Building (Elevated Release).
- b. Fast containment leakage (≥10%/day) to stack via Reactor Building (Elevated Release).
- c. Containment failure to environment via Reactor Building blowout panels (Ground Level Release).

4. Calculate Metpac/Nomogram input values.

- a. Slow containment leakage (<10%/day) to stack via Reactor Building (Elevated). Assumes Stack Release Rate (SRR) is equal to the containment release rate.

$$SRR(\mu\text{Ci}/\text{sec}) = CC(\mu\text{Ci}/\text{cc}) \times CLR(\text{cc}/\text{sec}) \times F = \underline{\hspace{2cm}} \mu\text{Ci}/\text{sec}$$

CLR = Containment release rate. The design containment release rate is 7.8E2 cc/sec.
See information fact sheet for additional information.

F = SBTG retention values.
F = 1, SBTG not in use
F = 1, SBTG noble gas retention
F = 0.05, SBTG iodine and particulate retention

APPENDIX K (Continued)

- b. Fast containment leakage ($\geq 10\%$ /day) to stack via Reactor Building (Elevated). Assumes immediate uniform mixing in the Reactor Building.

$$\begin{aligned} \text{SRR}(\mu\text{Ci}/\text{sec}) &= \frac{\text{CC}(\mu\text{Ci}/\text{cc}) \times \text{CV}(\text{cc}) \times \text{RBFR}(\text{cc}/\text{sec}) \times F}{\text{RV}(\text{cc}) + \text{CV}(\text{cc})} \\ &= \frac{\text{CC}(\mu\text{Ci}/\text{cc}) \times \text{RBFR}(\text{cc}/\text{sec}) \times F}{5.2} = \text{_____} \mu\text{Ci}/\text{sec} \end{aligned}$$

RV = Reactor Building volume which is $2.8\text{E}10$ cc.

RBFR = Reactor Building Flow Rate which depends upon a combination of SBGT and Reactor Building ventilation alignment. Ventilation alignment and number of fans may be obtained from the TSC. Flow rates are listed below and on the Nomogram.

F = SBGT retention values.
 F = 1, SBGT not in use
 F = 1, SBGT noble gas retention
 F = 0.05, SBGT iodine and particulate retention

- c. Fast or slow containment leakage when Reactor Building Air Concentrations are known.

$$\text{SRR}(\mu\text{Ci}/\text{sec}) = \text{RBC}(\mu\text{Ci}/\text{cc}) \times \text{RBFR}(\text{cc}/\text{sec}) \times F = \text{_____} \mu\text{Ci}/\text{sec}$$

RBC = Reactor Building air concentration.

- d. Containment failure to environment via Reactor Building blowout panels (Ground Level). Assumes immediate uniform mixing of the Reactor Building with Containment and 50% of the Reactor Building volume is released to the environment in 15 minutes.

GLRR = Ground Level release rate is $1.6\text{E}7$ cc/sec assuming 50% of the Reactor Building volume is released in 15 minutes.

$$\text{RBC}(\mu\text{Ci}/\text{cc}) = \frac{\text{CC}(\mu\text{Ci}/\text{cc}) \times \text{CV}(\text{cc})}{\text{RV}(\text{cc}) + \text{CV}(\text{cc})} = \frac{\text{CC}(\mu\text{Ci}/\text{cc})}{5.2} = \text{_____} \mu\text{Ci}/\text{cc}$$

5. If Elevated release, obtain Stack High Range Monitor reading SHRM from Nomogram for elevated release using SRR value calculated earlier.

SHRM = _____ mR/hr

APPENDIX K (Continued)

6. If requested, Stack air concentrations can be calculated using the following formula:

$$\text{Stack Air Concentration}(\mu\text{Ci/cc}) = \frac{\text{SRR}(\mu\text{Ci/sec})}{\text{Stack Flow Rate}(\text{cc/sec})}$$

7. Insert previously calculated values into Metpac or Nomogram as appropriate to complete release projection.
8. All "what if" dose projections must be clearly marked with appropriate stamp or label. "What if" dose projection stamp is available in the EOF Emergency Cabinet #3.

APPENDIX K (Continued)

INFORMATION FACT SHEET

VOLUMES:

Primary System	(Liquid)	7,700ft ³	=	2.2E8cc
Primary System	(Gas)	6,300ft ³	=	1.8E8cc
Drywell	(Gas)	131,850ft ³	=	3.7E9cc
Torus	(Liquid)	70,000ft ³	=	2.0E9cc
Torus	(Gas)	106,250ft ³	=	3.0E9cc
Reactor Building	(Gas)	1E6ft ³	=	2.8E10cc

FLOW RATES:

Reactor Building Ventilation	55,800 cfm	=	2.6E7 cc/sec
Standby Gas Treatment	3,000 cfm	=	1.4E6 cc/sec (2 fans running)
Turbine Building Ventilation	122,000 cfm	=	5.8E7 cc/sec (TEF1A or 1B and TEF 6 & 7)
Radwaste Ventilation	12,200 cfm	=	5.8E6 cc/sec (2 fans running)
AOG Building Ventilation	11,500 cfm	=	5.4E6 cc/sec
Stack with Normal Ventilation	206,000 cfm	=	9.7E7 cc/sec

MISCELLANEOUS FACTS:

Design Containment Leakage = 1% of the radioactive inventory/day
 = 2.4E3ft³/day = 6.7E7 cc/day = 7.8E2 cc/sec

RB Air Turnover Rate Using SBTG - 1/day

If blowout panel goes, assume 1/2 RB volume is released

CONVERSION FACTORS:

472 cc/sec/cfm

28,300 cc/ft³

10 CFR 50.54(q) Evaluation Checklist

List of Emergency Plan Section(s)/Emergency Plan Implementing Procedure(s) or any other document to be evaluated. (Include Title and Revision No.):

OP 3513 Rev. 21, Evaluation of Off-site Radiological Conditions

A. Screening Evaluation

Based on a review of the following questions, determine if the change has the potential to affect our ability to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50.

A "YES" answer to any part of the questions requires that a written evaluation be done to determine whether the effectiveness of the Emergency Plan was decreased as specified in Section B of this checklist.

A "NO" answer to all questions requires no written evaluation as specified in Section B of this checklist.

- 1. Could the proposed change affect our ability to meet the following standards of 10 CFR 50.47(b):
 - (1) Assignment of Emergency Response Organization responsibilities YES NO
 - (2) Assignment of on-shift Emergency Response Organization personnel YES NO
 - (3) Arrangements for Emergency Response Support and Resources YES NO
 - (4) Emergency Classification and Action levels, including facility system and effluent parameters YES NO
 - (5) Notification Methods and Procedures YES NO
 - (6) Emergency Communications among principal response organizations and the public YES NO
 - (7) Public Education and Information YES NO
 - (8) Adequacy of Emergency Facilities and Equipment YES NO
 - (9) Adequacy of Accident Assessment methods, systems and equipment YES NO
 - (10) Plume exposure pathway EPZ protective actions YES NO
 - (11) Emergency Worker Radiological Exposure Control YES NO
 - (12) Medical Services for contaminated injured individuals YES NO
 - (13) Recovery and Reentry Plans YES NO
 - (14) Emergency response periodic drills and exercises YES NO
 - (15) Radiological Emergency Response Training YES NO
 - (16) Plan development, review and distribution YES NO

10 CFR 50.54(q) Evaluation Checklist (Continued)

2. Could the change affect our ability to meet the following requirements of Appendix E to 10 CFR 50.

- | | | |
|---|-----|----|
| (1) Section IV. A - Organization | YES | NO |
| (2) Section IV. B - Assessment Actions | YES | NO |
| (3) Section IV. C - Activation of Emergency Organizations | YES | NO |
| (4) Section IV. D - Notification Procedures | YES | NO |
| (5) Section IV. E - Emergency Facilities and Equipment | YES | NO |
| (6) Section IV. F - Training | YES | NO |
| (7) Section IV. G - Maintaining Emergency Preparedness | YES | NO |
| (8) Section IV. H - Recovery | YES | NO |

B. Effectiveness Determination

For each applicable (i.e., a "yes" answer specified) standard to 10 CFR 50.47(b) and Appendix E to 10 CFR 50 identified from Section A above, complete the evaluation form below to determine whether the change decreases the effectiveness of the Emergency Plan and whether it continues to meet the stated applicable standard or requirement.

A facsimile of the evaluation form may be used as needed and attached to this checklist.

For applicable item 10 CFR 50.47(b) (1), (2), Appendix E, Section IV.A of Section A above, this change (DOES/DOES NOT) decrease the effectiveness of the Emergency Plan and (DOES/DOES NOT) continue to meet the stated applicable standard or requirement.

BASIS FOR ANSWER:

The change made to the Security Site Boundary Team becoming Site Boundary Team is in response to the Security ICM communicated in BVY-2002-015.
This addresses the issue of collateral duties and this transfers this duty from Security to Plant Staff. This does not decrease the effectiveness of the Emergency Plan and continues to meet the requirements.

10 CFR 50.54(q) Evaluation Checklist (Continued)

C. Conclusion (Fill out appropriate information)

- The changes made do not decrease the effectiveness of the Emergency Plan and continue to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50.
- The changes made do decrease the effectiveness of the Emergency Plan and decrease our ability to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50. The following course of action is recommended:
 - Revise proposed changes to meet applicable standards and requirements.
 - Cancel the proposed changes.
 - Process proposed changes for NRC approval prior to implementation in accordance with 10 CFR 50.54(q).

D. Impact on Other Documents (TRM, Tech Specs)

Keywords used in search: Site Boundary Teams, Security

This change does not affect any other documents.

This change does affect other documents.

Document(s) affected: _____

Section(s) affected: _____

E. Impact on the Updated FSAR

Use AP 6036 to determine if the proposed E-Plan change modifies existing UFSAR information or requires the addition of new UFSAR information and initiate UFSAR change(s) as required.

Keywords used in UFSAR search: Site Boundary Teams, Security

Additional Comments:

These changes are in response to the Interim Compensatory Measures communicated in BVY-2002-015

Prepared By: Audra Williams *Audra Williams* Date: 7/26/02
(Print/Sign)

Reviewed By: Lori A. Tkaczyk *Lori A. Tkaczyk* Date: 7/26/02
(Emergency Plan Coordinator) (Print/Sign)

VERMONT YANKEE NUCLEAR POWER STATION

OPERATING PROCEDURE

OP 3544

REVISION 2

OPERATION OF THE OPERATIONS SUPPORT CENTER (OSC)

USE CLASSIFICATION: REFERENCE

LPC No.	Effective Date	Affected Pages

Implementation Statement: N/A

Issue Date: 08/20/2002

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PURPOSE

To outline the operation of the Operations Support Center (OSC).

DISCUSSION

There are four emergency classifications, Unusual Event, Alert, Site Area Emergency, and General Emergency. The decision to make an immediate initial declaration rests with the Shift Supervisor/Plant Emergency Director, who, in turn, instructs Control Room personnel to activate the notification system. Notification of State authorities must be initiated within 15 minutes after the event has been classified. The NRC must be notified immediately after the States' notification, but not later than one (1) hour after the event has been classified.

An Unusual Event is defined as any plant-related event which indicates a potential degradation of plant safety margins which is not likely to affect personnel on-site or the public off-site or result in radioactive releases requiring off-site monitoring. Unusual Event conditions will not have caused serious damage to the plant and may not require a change in operation status.

The basic shift complement is able to deal with Unusual Event conditions. On-duty personnel are assigned to functions as required. Additional members of the plant organization, including top management, are notified by Plant Security, and augment on-duty personnel as necessary. The Duty On Call Officer who is available on an on-call basis must report to the site and will assume the role of the TSC Coordinator. Dissemination of public information and closure or escalation to a more severe classification will occur as conditions warrant.

An Alert event is defined as an indication of a substantial degradation of plant safety margins which could affect on-site personnel safety, could require off-site impact assessment, but is not likely to require off-site protective action.

An Alert event requires action beyond the normal capability of the basic shift complement. Plant response and off-site notification associated with this event classification ensure that sufficient emergency response personnel are mobilized to activate the Technical Support Center (TSC) and the Operations Support Center (OSC). The Emergency Operations Facility/Recovery Center (EOF/RC) is activated with the Site Recovery Manager (SRM), the EOF Coordinator and other EOF/RC staff members. Sufficient emergency assistance personnel to assess off-site radiological impact are assigned if the Alert event is producing releases off-site. Actual releases of radioactivity which substantially exceed Technical Specification limits may be involved and thus radiation monitoring and dose projection may be an integral portion of the emergency response required. Prompt notification is made to State authorities and follow-up information is provided as needed to off-site emergency organizations.

A Site Area Emergency indicates an event which involves likely or actual major failures of plant functions needed for the protection of the public. The possibility does exist for some releases of radioactive material and response to this event emphasizes the ability to monitor the releases and to provide action recommendations to State authorities and follow-up information as needed to off-site emergency organizations.

Plant resources are anticipated to be sufficient to cope with a Site Area Emergency. Outside resources, however, are mobilized and selected members are dispatched to the site. All emergency centers are activated following declaration of a Site Area Emergency. All non-essential personnel are evacuated from the site. Representatives from adjoining States are dispatched to the Emergency Operations Facility. Assessment of plant conditions and off-site radiological parameters determine the type of protective measures necessary for protection of the public sector. The public is notified of the event by local media facilities and periodic updates of information are released to ensure uniform, adequate response to real conditions.

A General Emergency is declared when substantial core degradation or melting has occurred, with a potential for loss of containment integrity. The possibility does exist for releases of radioactive material and response to this event emphasizes the ability to monitor the releases and to provide for protective action recommendations to State authorities.

Contracted service organizations, sponsor utilities, and other industry resources are alerted and requested to render assistance as appropriate. In addition, Federal resources are called upon for assistance. Assessment of plant conditions and off-site radiological parameters determine the type of protective action recommendations.

Plant representatives closeout or escalate the emergency classification, or move to recovery as conditions warrant. Written summaries of the event are provided to off-site authorities and other affected agencies.

The Operations Support Center Coordinator (OSCC) is responsible for initiating this procedure following appointment by the Technical Support Center Coordinator.

In accordance with AP 6002, Preparing 50.59 Evaluations, the results of an Applicability Determination (AD) has determined that an AD is not required for future changes provided the scope of the procedure or program is not revised to include a different type of activity. The basis for this conclusion is that this document is an Emergency Implementing Procedure and is subject to 10CFR50.54(q) to determine if the changes decrease the effectiveness of the Emergency Plan and if they have the potential to affect our ability to meet the standards of 10CFR50.47(b) and the requirements of 10CFR50 Appendix E.

ATTACHMENTS

- | | | |
|----|---------------|---|
| 1. | Appendix A | Radiological Habitability Assessment |
| 2. | Appendix B | On-Site Assistance Team Checklist |
| 3. | Appendix C | OSC Staff Responsibilities |
| 4. | Table 1 | Personnel Assignment List |
| 5. | VYOPF 3544.01 | Emergency Conditions Radiological Assessment Form |
| 6. | VYOPF 3544.02 | OSC Team Work Status Form |

REFERENCES AND COMMITMENTS

1. Technical Specifications and Site Documents
 - a. Vermont Yankee Nuclear Power Station Emergency Plan
2. Codes, Standards and Regulations
 - a. None
3. Commitments
 - a. EPEX86RP1
 - b. EPEX8803CPE1
 - c. INS9007CPE3
4. Supplemental References
 - a. AP 0009, Event Reports
 - b. AP 0010, Situational Reporting Requirements
 - c. AP 0021, Work Orders
 - d. AP 0140, Vermont Yankee Local Control Switching Rules
 - e. AP 0156, Notification of Significant Events
 - f. AP 0864, Fitness for Duty
 - g. AP 3125, Emergency Plan Classification and Action Level Scheme
 - h. OP 3504, Emergency Communications
 - i. OP 3507, Emergency Radiation Exposure Control
 - j. OP 3508, On-Site Medical Emergency Procedure
 - k. OP 3510, Off-Site and Site Boundary Monitoring
 - l. OP 3531, Emergency Call-In Method
 - m. OP 3540, Control Room Actions During an Emergency
 - n. OP 3541, Activation of the Technical Support Center (TSC)
 - o. OP 3542, Operation of the Technical Support Center (TSC)
 - p. OP 3545, Activation of the Emergency Operations Facility/Recovery Center (EOF/RC)
 - q. OP 3546, Operation of the Emergency Operations Facility/Recovery Center (EOF/RC)
 - r. OP 3547, Security Actions During an Emergency
 - s. AP 6807, Collection, Temporary Storage and Retrieval of QA Records

PRECAUTIONS/LIMITATIONS

1. Refer to OP 3504 for alternate methods of communication in the event that primary methods fail.

PROCEDURE

NOTES

- The responsible individual may assign actions required to other personnel as appropriate. The designated individual, however, has the overall responsibility for the execution of the checklist.
- Record time and initials as required.
- Steps may be performed concurrently or out of sequence.
- Some steps have multiple signature lines, based on event level. The step should be initialed for each event level it is completed for. If an event escalates, each step with that event level designator should be rechecked to ensure no further action is required.

OSC Coordinator Name (print): _____

Date: _____

Time/Date

Initials

1.0 Immediate Actions

- | | | | |
|------|--|---|-------------------------|
| 1.1. | Provide support to the Control Room as requested. | A _____ / _____
S _____ / _____
G _____ / _____ | _____

_____ |
| 1.2. | Assist in coordination of Operations relief planning. | A _____ / _____
S _____ / _____
G _____ / _____ | _____

_____ |
| 1.3. | Ensure that Operations Support Center (OSC) Staff is in place. (Complete Table 1) | (circle one)
A S G
_____ / _____ | _____
_____ |
| 1.4. | Assign an OSC Coordinator Assistant:

Name: _____ | _____ / _____ | _____ |
| 1.5. | IF there are indications that a stack release is in progress, THEN have OSC personnel obtain a stack sample immediately. (EPEX86RP1) | A _____ / _____
S _____ / _____
G _____ / _____ | _____

_____ |

- | | | <u>Time/Date</u> | <u>Initials</u> |
|-------|--|---|-------------------------|
| 1.6. | IF there is no indication of a stack release, THEN perform stack sampling as required. | A _____ / _____
S _____ / _____
G _____ / _____ | _____

_____ |
| 1.7. | Ensure that the names of personnel stationed at the OSC are reported to Security as soon as possible. (VYOPF 3524.02) | (circle one)
A S G
_____ / _____ | _____
_____ |
| 1.8. | Assign a qualified individual to implement Appendix A, Radiological Habitability Assessment.

Name: _____ | (circle one)
A S G
_____ / _____ | _____
_____ |
| 1.9. | Designate a qualified individual (Ops. SRO/Control Authority Qualified) to be Switching and Tagging Coordinator (see Appendix C).

Name: _____ | (circle one)
A S G
_____ / _____ | _____
_____ |
| 1.10. | Utilizing white board located in OSC hallway, designate qualified personnel to implement the following emergency team assignments as applicable and as they become available:

1.10.1. <u>Governor Hunt House Monitoring Team</u>

Names: _____ (Leader)

_____ | _____ / _____ | _____
_____ |

The Team Leader or designee opens the GHH Monitoring Kit located at the OSC, obtains the clipboard and follows instructions per OP 3510. (EPEX8803CPE1)

Time/Date

Initials

1.10.2. Site Boundary Survey Team

Names: _____ (Leader)

_____/_____

The Team Leader or designee opens the Site Boundary Kit located at the OSC, obtains the clipboard and follows instructions per OP 3510.

1.10.3. Off-Site Green Team

Names: _____ (Leader)

_____/_____

The Team Leader or designee opens one Off-Site Monitoring Kit located at the OSC, obtains the clipboard and follows instructions per OP 3510.

1.10.4. Off-Site Blue Team

Names: _____ (Leader)

_____/_____

The Team Leader or designee opens one Off-Site Monitoring Kit located at the OSC, obtains the clipboard and follows instructions per OP 3510.

1.10.5. Off-Site Black Team

NOTE

This additional off-site team may be deployed at the discretion of the Radiological Coordinator.

Names: _____ (Leader)

_____/_____

The Team Leader or designee opens one Off-Site Monitoring Kit located at the OSC, obtains the clipboard and follows instructions per OP 3510.

NOTE

All work assignments from the TSC to the OSC should be made through the phone to the Communicator. Do not use the ring down phone or Gaitronics.

- 1.11. Coordinate the implementation of on-site assistance team activities with the TSC Coordinator as follows:

NOTE

Depending on the nature of the task, teams will be assembled as appropriate. When more than one member is involved, a Work Coordinator will be assigned. The Work Coordinator or assigned individual has total responsibility for all work associated with the job.

- 1.11.1. Designate a Work Coordinator (if applicable) and team members based on job task requirements and conditions.

- 1.11.2. Maintain a continuous accountability of OSC on-site assistance team assignments and tasks as follows:

- 1.11.2.1. Complete the appropriate sections of VYOPF 3544.02, OSC Team Work Status Form.

_____ / _____

NOTE

Work Status forms (VYOPF 3544.02) are posted in the OSC hallway.

- 1.11.2.2. To help identify for OSC personnel the mission of the OSC Teams, ensure that VYOPF 3544.02, OSC Team Work Status Form is posted and updated in the OSC. (INS9007CPE3)

_____ / _____

Time/Date

Initials

1.11.3. For tasks involving on-site repair activities, instruct the Work Coordinator or assigned individual to implement Appendix B, On-Site Assistance Team Checklist.

_____/_____

1.11.4. For tasks involving injured personnel of search and rescue activities, instruct the team members to implement applicable steps in Appendix B, On-Site Assistance Team Checklist, and OP 3508, On-Site Medical Emergency Procedure.

_____/_____

1.11.5. Provide teams with the necessary instructions and pertinent plant status conditions to initiate and conduct job tasks.

_____/_____

1.11.6. When On-Site Assistance/Rescue Teams return from their assignments, ensure that the close out of the work effort is completed and documented.

_____/_____

2.0 Subsequent Actions

2.1. Assist in the coordination of recovery efforts as requested by the TSC.

A _____/_____
S _____/_____
G _____/_____

NOTE

Consideration should be given to the importance of assessing plant conditions, sample locations and sample activity.

2.2. Coordinate the implementation of post accident sampling, and prioritize the assignment of desired samples to be collected and analyzed with the Radiation Protection Coordinator (or designated alternate) at the TSC, as conditions warrant.

A _____/_____
S _____/_____
G _____/_____

- | | <u>Time/Date</u> | <u>Initials</u> |
|--|------------------|-----------------|
| 2.3. Periodically ensure that radiological assessment is performed according to Appendix A for the OSC, TSC, Control Room and Gates 1 and 2. | / | |
| 2.4. Ensure that unassigned OSC personnel remain within the OSC. | / | |
| 2.5. Periodically assess the personnel situation at the OSC, dispatch extra reserves to the EOF/RC as directed by the TSC Coordinator. | / | |
| 2.6. Report findings to and receive instruction from the Shift Supervisor/Plant Emergency Director and/or the TSC Coordinator. | | |

NOTE

The OSC Coordinator will base his operations in the OSC but may find it necessary to go to the TSC from time to time.

- | | | |
|--|-----------------------------|--|
| 2.7. If deemed necessary, assign as individual to the TSC who will remain in contact with the OSC. | (circle one)
A S G | |
| Name: _____ | / | |
| 2.8. Periodically brief OSC personnel on current plant conditions and significant developments. | / | |

FINAL CONDITIONS

- | | | |
|---|---|--|
| 1. Ensure the OSC is returned to pre-emergency status. | / | |
| 2. Submit completed copies of this procedure to the TSC Coordinator. | / | |
| 3. Send all dosimetry and records to the Radiological Assistant for evaluation. | / | |

APPENDIX A
RADIOLOGICAL HABITABILITY ASSESSMENT

1. Obtain a copy of OP 3507, Emergency Radiation Exposure Control.
2. Obtain a RM-14/20, a PIC-6, or other suitable dose rate instrument and a low volume air sampler. Perform the necessary function checks on the instrumentation.
3. If no multichannel analysis of the sample is available, utilize silver zeolite cartridges for quantitative iodine results.
4. Monitor conditions in the area(s) assigned:

NOTE

Security at Gatehouse 2 do not routinely wear dosimetry. The habitability technician will inform Security when to don dosimetry.

OSC Responsibility

OSC

TSC

Control Room

Gate 1, 2

Other Areas: _____, _____, _____

5. Ensure the placement of two (2) high range ion chamber or electronic dosimeters in a representative location for the assessment of total exposure for each of the above locations.
6. Relative to KI usage, implement OP 3507.
7. Report findings and recommendations on VYOPF 3544.01 and submit to the TSC Coordinator or EOF Coordinator (if applicable).

NOTE

Additional information, such as area surveys, should be recorded on the reverse side of VYOPF 3544.01.

APPENDIX B

ON-SITE ASSISTANCE TEAM CHECKLIST

NOTE

The Work Coordinator or assigned individual has total responsibility for all work associated with the job. Work Control process defined in AP 0021, Work Orders, must be used as appropriate.

1. Determine appropriate work controls, necessary equipment, spare parts, and services and their availability.
2. Receive status update and instructions from the OSC Coordinator or designated assistant.
3. Obtain appropriate radiation protection information and plant radiological conditions.
4. Ensure that a dose commitment for the job task is established in accordance with OP 3507, "Emergency Radiation Exposure Control".
5. Prior to team deployment, ensure that team members are briefed on the specific work controls and radiation protection controls to be followed for the job task.
6. Provide periodic updates on work effort status and other significant information to the OSC Coordinator or designated assistant especially area radiation levels and accrued exposure values.
7. Upon job completion, ensure that appropriate close out of the work effort is completed (i.e., job status notification, team debriefing, and work effort documentation).

APPENDIX C

OSC STAFF RESPONSIBILITIES

SWITCHING & TAGGING COORDINATOR (Control Authority):

NOTE

The Control Authority will perform the following Tagging evolutions from the OSC using a manual process or by computer from the Tagging Desk if assigned by the OSC Coordinator.

- Use current revision of AP 0140 for all Switching & Tagging requests.
- Maintain Equipment Status Index using VYAPF 0140.05.
- Use VYAPF 0140.01 to write tagging orders on which will be used by Switchman.
- Handwrite information on tags for Switchman and fill out VYAPF 0140.03 for Tagging Order.
- Issue Tagging Order to Switchman; have tags second verified by assigned Switchman.
- Once tags are hung, update Equipment Status Index, VYAPF 0140.05, and notify Work Party Leader that tags are hung.
- Sign Work Party Leader onto Tagging Order per telecom or in person per Control Authority discretion.
- Authorize Work Party Leader to commence work.
- Work Party Leader notifies Control Authority that work is complete by telecom or in person.
- Control Authority uses VYAPF 0140.03 to issue tags off restoration to Switchman.
- Control Authority has second Switchman perform verification of Tagging restoration.
- Control Authority updates Equipment Status Index, VYAPF 0140.05.

TABLE 1
PERSONNEL ASSIGNMENT LIST

Required for Activation	Personnel
OSC Coordinator	_____
Positions to be Staffed (not required for activation)	
OSC Coordinator's Assistant	_____
Switching and Tagging Coordinator	_____
Radiological Habitability Assessment	_____
Work Coordinator	_____

EMERGENCY CONDITIONS RADIOLOGICAL ASSESSMENT FORM

DATE _____

TIME _____

LOCATION OF SAMPLING _____

DATA

Maximum Dose Rate (W.B.) _____

Average Dose Rate (W.B.) _____

Air Sample Results (silver zeolite cartridge? YES NO) _____

RECOMMENDED ACTION (From sampling information and specifications in Appendices A and B of OP 3507, Emergency Radiation Exposure Control)

COMMENTS

NOTE

Additional information, such as area surveys, should be recorded on the reverse side of this form.

_____/_____
Surveyor (print/sign) Date

OSC TEAM WORK STATUS FORM

JOB NO. _____

JOB LOCATION _____

BRIEF JOB DESCRIPTION:

NAME OF OSC TEAM MEMBERS

Work Coordinator (if applicable)

Team Members:

EMERGENCY DOSE COMMITMENT REQUIRED? (VYOPF 3507.02 ATTACHED)

YES NO

RAD PROTECTION INITIALS: _____

TIME TEAM DISPATCHED: _____ TIME TEAM RETURNED: _____

DISPOSITION OF JOB:

OSC COORDINATOR'S FINAL INITIALS: _____

[Copy and post in OSC hallway]

10 CFR 50.54(q) Evaluation Checklist

List of Emergency Plan Section(s)/Emergency Plan Implementing Procedure(s) or any other document to be evaluated. (Include Title and Revision No.):

OP 3544, Rev. 2, Operation of the Operations Support Center (OSC)

A. Screening Evaluation

Based on a review of the following questions, determine if the change has the potential to affect our ability to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50.

A "YES" answer to any part of the questions requires that a written evaluation be done to determine whether the effectiveness of the Emergency Plan was decreased as specified in Section B of this checklist.

A "NO" answer to all questions requires no written evaluation as specified in Section B of this checklist.

1. Could the proposed change affect our ability to meet the following standards of 10 CFR 50.47(b):

- | | | |
|---|-----|--------------------------|
| (1) Assignment of Emergency Response Organization responsibilities | YES | <input type="radio"/> NO |
| (2) Assignment of on-shift Emergency Response Organization personnel | YES | <input type="radio"/> NO |
| (3) Arrangements for Emergency Response Support and Resources | YES | <input type="radio"/> NO |
| (4) Emergency Classification and Action levels, including facility system and effluent parameters | YES | <input type="radio"/> NO |
| (5) Notification Methods and Procedures | YES | <input type="radio"/> NO |
| (6) Emergency Communications among principal response organizations and the public | YES | <input type="radio"/> NO |
| (7) Public Education and Information | YES | <input type="radio"/> NO |
| (8) Adequacy of Emergency Facilities and Equipment | YES | <input type="radio"/> NO |
| (9) Adequacy of Accident Assessment methods, systems and equipment | YES | <input type="radio"/> NO |
| (10) Plume exposure pathway EPZ protective actions | YES | <input type="radio"/> NO |
| (11) Emergency Worker Radiological Exposure Control | YES | <input type="radio"/> NO |
| (12) Medical Services for contaminated injured individuals | YES | <input type="radio"/> NO |
| (13) Recovery and Reentry Plans | YES | <input type="radio"/> NO |
| (14) Emergency response periodic drills and exercises | YES | <input type="radio"/> NO |
| (15) Radiological Emergency Response Training | YES | <input type="radio"/> NO |
| (16) Plan development, review and distribution | YES | <input type="radio"/> NO |

10 CFR 50.54(q) Evaluation Checklist (Continued)

2. Could the change affect our ability to meet the following requirements of Appendix E to 10 CFR 50.

- | | | |
|---|-----|-------------------------------------|
| (1) Section IV. A - Organization | YES | <input checked="" type="radio"/> NO |
| (2) Section IV. B - Assessment Actions | YES | <input checked="" type="radio"/> NO |
| (3) Section IV. C - Activation of Emergency Organizations | YES | <input checked="" type="radio"/> NO |
| (4) Section IV. D - Notification Procedures | YES | <input checked="" type="radio"/> NO |
| (5) Section IV. E - Emergency Facilities and Equipment | YES | <input checked="" type="radio"/> NO |
| (6) Section IV. F - Training | YES | <input checked="" type="radio"/> NO |
| (7) Section IV. G - Maintaining Emergency Preparedness | YES | <input checked="" type="radio"/> NO |
| (8) Section IV. H - Recovery | YES | <input checked="" type="radio"/> NO |

B. Effectiveness Determination

For each applicable (i.e., a "yes" answer specified) standard to 10 CFR 50.47(b) and Appendix E to 10 CFR 50 identified from Section A above, complete the evaluation form below to determine whether the change decreases the effectiveness of the Emergency Plan and whether it continues to meet the stated applicable standard or requirement.

A facsimile of the evaluation form may be used as needed and attached to this checklist.

For applicable item 10 CFR 50 n/a of Section A above, this change ~~(DOES)~~(DOES NOT) decrease the effectiveness of the Emergency Plan and ~~(DOES)~~(DOES NOT) continue to meet the stated applicable standard or requirement.

BASIS FOR ANSWER: Items added were enhancements and formalization of
existing processes. These items do not decrease the
effectiveness of the Eplan and continues to meet
all requirements.

10 CFR 50.54(q) Evaluation Checklist (Continued)

C. Conclusion (Fill out appropriate information)

- The changes made do not decrease the effectiveness of the Emergency Plan and continue to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50.
- The changes made do decrease the effectiveness of the Emergency Plan and decrease our ability to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50. The following course of action is recommended:
 - Revise proposed changes to meet applicable standards and requirements.
 - Cancel the proposed changes.
 - Process proposed changes for NRC approval prior to implementation in accordance with 10 CFR 50.54(q).

D. Impact on Other Documents (TRM, Tech Specs)

Keywords used in search: Switching, tagging

- This change does not affect any other documents.
- This change does affect other documents.

Document(s) affected: _____

Section(s) affected: _____

E. Impact on the Updated FSAR

Use AP 6036 to determine if the proposed E-Plan change modifies existing UFSAR information or requires the addition of new UFSAR information and initiate UFSAR change(s) as required.

Keywords used in UFSAR search: Switching, tagging

Additional Comments:

Items added addressed formality.

Prepared By: Audra Williams *Audra Williams* Date: 7/25/02
(Print/Sign)

Reviewed By: Lori A. Thaczek *Lori A. Thaczek* Date: 7/26/02
(Emergency Plan Coordinator) (Print/sign)

VERMONT YANKEE NUCLEAR POWER STATION

OPERATING PROCEDURE

OP 3504

REVISION 34

EMERGENCY COMMUNICATIONS

USE CLASSIFICATION: REFERENCE

LPC No.	Effective Date	Affected Pages
1	05/14/02	Figure 6 Pgs 1 & 2 of 2
2	07/24/02	App. B Pgs 1 & 2 of 2

Implementation Statement: N/A

Issue Date: 04/02/02

APPENDIX B
OFF-SITE EMERGENCY TELEPHONE NUMBER LIST
(In Alphabetical Order)

	TELEPHONE NUMBER
American Nuclear Insurers (ANI)	860-561-3433
AT&T (NOAA radio phone lines to Ames Hill)	800-413-████ (prompt 4)
Brattleboro Memorial Hospital Emergency Room (Ref. OP 3508)	802-257-8222
CAN - Operations Manager (Ref. OP 3531) to verify operator and callback #'s	800-992-████ 800-552-████ or 877-786-████ 800-739-████ (in-dial) 800-794-████ (in-dial) 518-862-████ (Admin.)
Central Vermont Communications (Ref. OP 3531)	800-696-6474 802-775-████ (pager)
Consultation:	
Dave E. Drum, MD, Radiation Safety Officer (Ref. OP 3508)	617-732-████ Page 11161 781-235-████ (home) 617-323-████ 5939 Voice Mail
Department of Energy (DOE) Radiological Assistance, Brookhaven Lab	631-344-2200
Duke Engineering & Services, Marlborough, MA (Main Switchboard) (Ref. OP 3504, OP 3510, OP 3531)	508-229-2100
DE&S Pagers (Ref. OP 3531)	800-366-████
Franklin Medical Center (Ref. OP 3508)	413-772-0211
GE Emergency Support Assistance	408-971-1038
INPO	
Main Switchboard	770-644-8000
Emergency Network Telephone	800-321-████
ISO - New England (Ref. OP 3504, OP 3506)	413-535-4384
Keene Dispatch (Ref. OP 3506)	603-352-1100 (Primary) 603-352-1291 (Backup)
Maine Yankee - Wiscasset (Ref. OP 3504)	207-882-6321
LPC 2 Massachusetts Emergency Management Agency - (State EOC) (Ref. OP 3504, OP 3506, OP 3540, OP 3546)	508-820-2075 (Direct Line) 508-820-2000 (Switchboard)
Massachusetts State Police - Troop B, Northampton (Ref. OP 3504, OP 3540, OP 3542, OP 3546)	413-586-3166
National Weather Service, Albany, NY (Ref. OP 3504, OP 3513, OP 3540)	800-833-9880 (Primary) 518-435-9574 (Backup)
National Grid - Westboro (Ref. OP 3504) MUX Room (Ref. OP 3506)	508-389-2000 508-389-2104
LPC 2 New Hampshire Office of Emergency Management - (State EOC) (Ref. OP 3504, OP 3506, OP 3540, OP 3546)	603-223-3662 (Direct Line) 603-271-2231 (Switchboard)

APPENDIX B (Continued)

	TELEPHONE NUMBER
New Hampshire State Police (Ref. OP 3504, OP 3540, OP 3542)	603-271-3636
North Atlantic Energy Services Company - Seabrook (Ref. OP 3504)	603-474-9521
LPC 2 New York State Emergency Management Coordination Ctr. (Ref. OP 3506)	518-457-2200 or 518-457-2201 518-457-6811 (Backup)
NRC Operations Center (24 hours), Rockville, MD (Ref. OP 3504, OP 3506, OP 3540)	301-816-5100 301-951-0550 (Backup) 301-415-0550 (Backup) 301-816-5151 (Fax)
LPC 2 NRC, Region I	800-432-1156 or 610-337-5000
Public Service of New Hampshire - Manchester (Ref. OP 3504)	603-669-4000
Radiation Overexposure Treatment Assistance (Ref. OP 3508)	
Aaron B. Brill, MD U Mass Medical Center or Vanerbilt (NIAT Physician)	615-662-██████ (home) 615-343-7152 (work) 615-322-3190 (work)
Mr. Robert Hallisey (MDPH)	617-727-6214 (work) 781-729-██████ (home)
LPC 2 Mr. Robert Gallagher	617-727-6214 (work) 781-899-██████ (home, M-F) 413-339-██████ (home, Sat. & Sun.)
Mr. Thomas Matthews (MDPH)	617-727-6214 (work) 781-396-██████ (home)
Rescue Inc. (Ref. OP 3508)	802-254-2010 or 911
Shelburne Dispatch (Ref. OP 3506)	413-625-8200
Southwest Mutual Fire Aid	603-352-1100 or 603-352-1291
Tri-State Mutual Fire Aid	413-625-8200
National Weather Service (Burlington, VT) Forecasts	802-862-9883
VELCO Dispatcher (Rutland Office notification)	802-773-9161 (Switchboard) 802-770-6261 (Dispatch)
Vermont Department of Health	802-865-7730
LPC 2 Vermont Emergency Management Agency - (State EOC) (Ref. OP 3504, OP 3506, OP 3540, OP 3546)	802-241-5476 (Direct Line) 802-244-8721 (Switchboard) 800-347-0488
Vermont State Police (Ref. OP 3504, OP 3540, OP 3542, OP 3546)	802-244-8727
VY Physician (Ref. OP 3508)	
George Idelkope, MD	603-336-5948 (Work) 603-363-██████ (Home)
Vernon Hydro (Wilder Station) (Ref. OP 3547)	802-291-8000
Yankee Rowe (Ref. OP 3504)	413-424-5261

10 CFR 50.54(q) Evaluation Checklist

List of Emergency Plan Section(s)/Emergency Plan Implementing Procedure(s) or any other document to be evaluated. (Include Title and Revision No.):

OP 3504, Rev. 34, Emergency Communications LPC#2

A. Screening Evaluation

Based on a review of the following questions, determine if the change has the potential to affect our ability to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50.

A "YES" answer to any part of the questions requires that a written evaluation be done to determine whether the effectiveness of the Emergency Plan was decreased as specified in Section B of this checklist.

A "NO" answer to all questions requires no written evaluation as specified in Section B of this checklist.

- 1. Could the proposed change affect our ability to meet the following standards of 10 CFR 50.47(b):
 - (1) Assignment of Emergency Response Organization responsibilities YES NO
 - (2) Assignment of on-shift Emergency Response Organization personnel YES NO
 - (3) Arrangements for Emergency Response Support and Resources YES NO
 - (4) Emergency Classification and Action levels, including facility system and effluent parameters YES NO
 - (5) Notification Methods and Procedures YES NO
 - (6) Emergency Communications among principal response organizations and the public YES NO
 - (7) Public Education and Information YES NO
 - (8) Adequacy of Emergency Facilities and Equipment YES NO
 - (9) Adequacy of Accident Assessment methods, systems and equipment YES NO
 - (10) Plume exposure pathway EPZ protective actions YES NO
 - (11) Emergency Worker Radiological Exposure Control YES NO
 - (12) Medical Services for contaminated injured individuals YES NO
 - (13) Recovery and Reentry Plans YES NO
 - (14) Emergency response periodic drills and exercises YES NO
 - (15) Radiological Emergency Response Training YES NO
 - (16) Plan development, review and distribution YES NO

10 CFR 50.54(q) Evaluation Checklist (Continued)

2. Could the change affect our ability to meet the following requirements of Appendix E to 10 CFR 50.

- | | | |
|---|-----|-------------------------------------|
| (1) Section IV. A - Organization | YES | <input checked="" type="radio"/> NO |
| (2) Section IV. B - Assessment Actions | YES | <input checked="" type="radio"/> NO |
| (3) Section IV. C - Activation of Emergency Organizations | YES | <input checked="" type="radio"/> NO |
| (4) Section IV. D - Notification Procedures | YES | <input checked="" type="radio"/> NO |
| (5) Section IV. E - Emergency Facilities and Equipment | YES | <input checked="" type="radio"/> NO |
| (6) Section IV. F - Training | YES | <input checked="" type="radio"/> NO |
| (7) Section IV. G - Maintaining Emergency Preparedness | YES | <input checked="" type="radio"/> NO |
| (8) Section IV. H - Recovery | YES | <input checked="" type="radio"/> NO |

B. Effectiveness Determination

For each applicable (i.e., a "yes" answer specified) standard to 10 CFR 50.47(b) and Appendix E to 10 CFR 50 identified from Section A above, complete the evaluation form below to determine whether the change decreases the effectiveness of the Emergency Plan and whether it continues to meet the stated applicable standard or requirement.

A facsimile of the evaluation form may be used as needed and attached to this checklist.

For applicable item 10 CFR 50 n/a of Section A above, this change ~~(DOES/DOES NOT)~~ decrease the effectiveness of the Emergency Plan and ~~(DOES/DOES NOT)~~ continue to meet the stated applicable standard or requirement.

BASIS FOR ANSWER: ~~Represented~~ Phone numbers were added to supplement existing phone numbers for NYSEM and NRC. Changed a Rad overexposure Treatment Assist. to reflect new person in same position w/ respective phone numbers. Added direct line phone numbers to VEMA, MEMA and NHOEM.

10 CFR 50.54(q) Evaluation Checklist (Continued)

C. Conclusion (Fill out appropriate information)

- The changes made do not decrease the effectiveness of the Emergency Plan and continue to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50.
- The changes made do decrease the effectiveness of the Emergency Plan and decrease our ability to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50. The following course of action is recommended:
 - Revise proposed changes to meet applicable standards and requirements.
 - Cancel the proposed changes.
 - Process proposed changes for NRC approval prior to implementation in accordance with 10 CFR 50.54(q).

D. Impact on Other Documents (TRM, Tech Specs)

Keywords used in search: _____

- This change does not affect any other documents.
- This change does affect other documents.

Document(s) affected: _____

Section(s) affected: _____

E. Impact on the Updated FSAR

Use AP 6036 to determine if the proposed E-Plan change modifies existing UFSAR information or requires the addition of new UFSAR information and initiate UFSAR change(s) as required.

Keywords used in UFSAR search: _____

Additional Comments:

Editorial change in phon numbers.

Prepared By: Audra Williams Audra Williams Date: 7-10-02
(Print/Sign)

Reviewed By: Lori A. Tkaczyk Louisa Pass Date: 7/18/02
(Emergency Plan Coordinator) (Print/Sign)

VERMONT YANKEE NUCLEAR POWER STATION

OPERATING PROCEDURE

OP 3505

REVISION 24

EMERGENCY PREPAREDNESS EXERCISES AND DRILLS

USE CLASSIFICATION: **INFORMATION**, except for Appendix A,
which is classified as **CONTINUOUS**

LPC No.	Effective Date	Affected Pages
1	07/26/02	14 of 17; VYOPF 3505.01 Pg 4 of 4

Implementation Statement: N/A

Issue Date: 06/06/02

- e. Prior to the drill, the EPDETC ensures the following are notified:
 - 1) Director of Public Affairs & Human Resources
 - 2) Radiation Protection Manager
 - 3) Operations Manager
 - 4) Security Manager
 - 5) NRC Resident Inspector
 - 6) Safety Coordinator
- f. The EPDETC briefs controllers on the drill and issues Emergency Exercise/Drill Controller's Evaluation Form, VYOPF 3505.02.
- g. The EPDETC conducts a critique for controllers and participants to present their observations and comments. All weaknesses and deficiencies are documented and resolved as outlined in Section C.
- h. All Emergency Exercise/Drill Controller's Evaluation Forms are collected by the EPDETC at the conclusion of the critique.

2. Health Physics Drills

- a. A drill is conducted semi-annually which involves response to and analysis of, simulated elevated in-plant airborne and liquid samples, and direct radiation measurements in the environment (inside plant or outside of plant). The semi-annual Health Physics Drills are conducted as follows:
 - 1) One of the drills may be performed as part of the required Emergency Preparedness Exercise/Drill.
 - 2) One of the drills is performed separately, and following the guidelines outlined in this procedure.
 - 3) One of the drills should include use of the post-accident sampling system.

NOTE

Time frame to conduct the drill should allow enough time for obtaining and counting planned drill chemistry samples.

- b. In conjunction with the Chemistry Manager and the Radiation Protection Manager, the EPDETC directs the development of a drill scenario utilizing the Health Physics Drill Planning Form, VYOPF 3505.05.
- c. The EPDETC briefs controllers on the drill and distributes Emergency Exercise/Drill Controller's Evaluation Form, VYOPF 3505.02.

EMERGENCY PREPAREDNESS EXERCISE/DRILL PLANNING FORM (Continued)

LPC 1

P. Gouger's Market & Deli
Person Contacted: _____ Date: _____
Degree of Participation (if required)/Contract Valid: _____
Initials: _____

Q. Brattleboro Fire Department
Person Contacted: _____ Date: _____
Degree of Participation (if required)/Agreement Letter Valid: _____
Initials: _____

R. Town of Vernon
Person Contacted: _____ Date: _____
Degree of Participation (if required)/Agreement Letter Valid: _____
Initials: _____

S. Institute of Nuclear Power Operations
Person Contacted: _____ Date: _____
Degree of Participation (if required)/Agreement Letter Valid: _____
Initials: _____

T. Yankee Nuclear Power Station
Person Contacted: _____ Date: _____
Degree of Participation (if required)/Agreement Letter Valid: _____
Initials: _____

U. Department of Energy
Person Contacted: _____ Date: _____
Degree of Participation (if required)/Agreement Letter Valid: _____
Initials: _____

LPC 1

V. Framatome ANP DE&S (TLD Lab)
Person Contacted: _____ Date: _____
Degree of Participation (if required)/Agreement Letter Valid: _____
Initials: _____

10 CFR 50.54(q) Evaluation Checklist

List of Emergency Plan Section(s)/Emergency Plan Implementing Procedure(s) or any other document to be evaluated. (Include Title and Revision No.):

OP 3505, Rev. 24, LPC #1, Emergency Preparedness Exercises & Drills

A. Screening Evaluation

Based on a review of the following questions, determine if the change has the potential to affect our ability to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50.

A "YES" answer to any part of the questions requires that a written evaluation be done to determine whether the effectiveness of the Emergency Plan was decreased as specified in Section B of this checklist.

A "NO" answer to all questions requires no written evaluation as specified in Section B of this checklist.

1. Could the proposed change affect our ability to meet the following standards of 10 CFR 50.47(b):..

- | | | |
|---|-----|-------------------------------------|
| (1) Assignment of Emergency Response Organization responsibilities | YES | <input checked="" type="radio"/> NO |
| (2) Assignment of on-shift Emergency Response Organization personnel | YES | <input checked="" type="radio"/> NO |
| (3) Arrangements for Emergency Response Support and Resources | YES | <input checked="" type="radio"/> NO |
| (4) Emergency Classification and Action levels, including facility system and effluent parameters | YES | <input checked="" type="radio"/> NO |
| (5) Notification Methods and Procedures | YES | <input checked="" type="radio"/> NO |
| (6) Emergency Communications among principal response organizations and the public | YES | <input checked="" type="radio"/> NO |
| (7) Public Education and Information | YES | <input checked="" type="radio"/> NO |
| (8) Adequacy of Emergency Facilities and Equipment | YES | <input checked="" type="radio"/> NO |
| (9) Adequacy of Accident Assessment methods, systems and equipment | YES | <input checked="" type="radio"/> NO |
| (10) Plume exposure pathway EPZ protective actions | YES | <input checked="" type="radio"/> NO |
| (11) Emergency Worker Radiological Exposure Control | YES | <input checked="" type="radio"/> NO |
| (12) Medical Services for contaminated injured individuals | YES | <input checked="" type="radio"/> NO |
| (13) Recovery and Reentry Plans | YES | <input checked="" type="radio"/> NO |
| (14) Emergency response periodic drills and exercises | YES | <input checked="" type="radio"/> NO |
| (15) Radiological Emergency Response Training | YES | <input checked="" type="radio"/> NO |
| (16) Plan development, review and distribution | YES | <input checked="" type="radio"/> NO |

10 CFR 50.54(q) Evaluation Checklist (Continued)

2. Could the change affect our ability to meet the following requirements of Appendix E to 10 CFR 50.

- | | | |
|---|-----|-------------------------------------|
| (1) Section IV. A - Organization | YES | <input checked="" type="radio"/> NO |
| (2) Section IV. B - Assessment Actions | YES | <input checked="" type="radio"/> NO |
| (3) Section IV. C - Activation of Emergency Organizations | YES | <input checked="" type="radio"/> NO |
| (4) Section IV. D - Notification Procedures | YES | <input checked="" type="radio"/> NO |
| (5) Section IV. E - Emergency Facilities and Equipment | YES | <input checked="" type="radio"/> NO |
| (6) Section IV. F - Training | YES | <input checked="" type="radio"/> NO |
| (7) Section IV. G - Maintaining Emergency Preparedness | YES | <input checked="" type="radio"/> NO |
| (8) Section IV. H - Recovery | YES | <input checked="" type="radio"/> NO |

B. Effectiveness Determination

For each applicable (i.e., a "yes" answer specified) standard to 10 CFR 50.47(b) and Appendix E to 10 CFR 50 identified from Section A above, complete the evaluation form below to determine whether the change decreases the effectiveness of the Emergency Plan and whether it continues to meet the stated applicable standard or requirement.

A facsimile of the evaluation form may be used as needed and attached to this checklist.

For applicable item 10 CFR 50 n/a of Section A above, this change (DOES/DOES NOT) decrease the effectiveness of the Emergency Plan and (DOES/DOES NOT) continue to meet the stated applicable standard or requirement.

BASIS FOR ANSWER: Wording was added to clarify and correspond with the
Emergency Plan to specify that simulated elevated airborne samples are
in-plant and direct radiation measurements are in the environment (inside
plant or outside of plant). ~~Added wording to specify a written report~~
would be completed after drills and exercises. This was a formality *last 7/26/02*
enhancement as this was already being done. Editorial vendor name
changes to VYOPF 3505.01 Form. None of the changes decrease the
effectiveness of the Eplan and continues to meet the requirements.

10 CFR 50.54(q) Evaluation Checklist (Continued)

C. Conclusion (Fill out appropriate information)

- The changes made do not decrease the effectiveness of the Emergency Plan and continue to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50.
- The changes made do decrease the effectiveness of the Emergency Plan and decrease our ability to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50. The following course of action is recommended:
 - Revise proposed changes to meet applicable standards and requirements.
 - Cancel the proposed changes.
 - Process proposed changes for NRC approval prior to implementation in accordance with 10 CFR 50.54(q).

D. Impact on Other Documents (TRM, Tech Specs)

Keywords used in search: airborne samples, environment

- This change does not affect any other documents.
- This change does affect other documents.

Document(s) affected: _____

Section(s) affected: _____

E. Impact on the Updated FSAR

Use AP 6036 to determine if the proposed E-Plan change modifies existing UFSAR information or requires the addition of new UFSAR information and initiate UFSAR change(s) as required.

Keywords used in UFSAR search: airborne samples, environment

Additional Comments:

These changes are formality of practices already being performed.

Prepared By: Audra Williams *Audra Williams* Date: 7/26/02
(Print/Sign)

Reviewed By: Lori A. Tkaczyk *Lori A. Tkaczyk* Date: 7/26/02
(Emergency Plan Coordinator) (Print/Sign)

VERMONT YANKEE NUCLEAR POWER STATION

OPERATING PROCEDURE

OP 3546

REVISION 1

OPERATION OF THE
EMERGENCY OPERATIONS FACILITY/RECOVERY CENTER (EOF/RC)

USE CLASSIFICATION: REFERENCE

LPC No.	Effective Date	Affected Pages
1	07/24/02	6 & ADDED 6A of 6
2	07/31/02	5 of 6; App. A Pgs 4 & 7 of 7; ADDED TABLE 2 PG 1 OF 1

Implementation Statement: N/A

Issue Date: 06/06/02

	8.	Appendix H	EOF Engineering Support Group Assistant
	9.	Appendix I	Recovery Manager Staff Responsibilities
	10.	Appendix J	Response Check of RM-14/Frisker Probe
	11.	Appendix K	EOF Engineering Equipment Locations
	12.	VYOPF 3546.01	Plant Status Briefing Form
	13.	VYOPF 3546.02	Emergency Classification and PAR Notification Form
	14.	VYOPF 3546.03	Instructions to Personnel Prior to Being Released from the Assembly Area
	15.	VYOPF 3546.04	Technical Representative Escalation Checklist/Script
	16.	Table 1	Radiological Assistant's Organization
LPC 2	17.	Table 2	White Plains Recovery Support Group Corporate Call List

REFERENCES AND COMMITMENTS

1. Technical Specifications and Site Documents
 - a. Vermont Yankee Nuclear Power Station Emergency Plan
2. Codes, Standards and Regulations
 - a. None
3. Commitments
 - a. INS8722-01
 - b. E_Drill-98EOF3
 - c. LAI-801
 - d. EPEX97TSC-2
4. Supplemental References
 - a. AP 0009, Event Reports
 - b. AP 0010, Situational Reporting Requirements
 - c. AP 0021, Work Orders
 - d. AP 0156, Notification of Significant Events
 - e. AP 0864, Fitness for Duty
 - f. AP 3125, Emergency Plan Classification and Action Level Scheme
 - g. OP 3504, Emergency Communications
 - h. OP 3507, Emergency Radiation Exposure Control
 - i. OP 3508, On-Site Medical Emergency Procedure
 - j. OP 3509, Environmental Sample Collection During an Emergency
 - k. OP 3510, Off-Site and Site Boundary Monitoring
 - l. OP 3511, Off-Site Protective Action Recommendations
 - m. OP 3513, Evaluation of Off-Site Radiological Conditions
 - n. OP 3531, Emergency Call-In Method
 - o. OP 3540, Control Room Actions During an Emergency
 - p. OP 3541, Activation of the Technical Support Center (TSC)
 - q. OP 3542, Operation of the Technical Support Center (TSC)
 - r. OP 3544, Operation of the Operations Support Center (OSC)

- s. OP 3545, Activation of the Emergency Operations Facility/Recovery Center (EOF/RC)
- t. OP 3547, Security Actions During an Emergency
- u. AP 6807, Collection, Temporary Storage and Retrieval of QA Records
- v. PP 7019, Severe Accident Management Program

PRECAUTIONS/LIMITATIONS

1. Refer to OP 3504 for alternate methods of communication in the event that primary methods fail.

PROCEDURE

NOTE

With the exception of authorizing Protective Action Recommendations and classifications, actions required in each appendix may be assigned by the responsible individual to other personnel as appropriate. The designated individual, however, has the overall responsibility for the execution of the appendix.

1. Select the appropriate appendix:
 - a. Appendix A, Site Recovery Manager
 - b. Appendix B, Emergency Operations Facility Coordinator
 - c. Appendix C, Emergency Operations Facility Coordinator Assistant
 - d. Appendix D, Personnel & Equipment Monitoring Team
 - e. Appendix E, Communications Assistant
 - f. Appendix F, Radiological Assistant
 - g. Appendix G, Manpower & Planning Assistant

NOTES

- Some spaces have multiple signature lines, based on event level. The step should be initialed for each event level it is completed for. If an event escalates, each step with that designator should be rechecked to ensure no further action is required.
- Steps may be performed concurrently or out of sequence.

2. Complete the appropriate appendix and record time and initials as required.

3. Alternate Assembly and Staging Area

- LPC
1
- a. If a Code Red Security Event occurs during off-hours, the Emergency Operations Facility will be used as an alternate assembly and staging area for personnel who would normally report to emergency response facilities at the plant site. A pager code of "777" and a Community Alert Message notifies personnel to report to the EOF in an off-hours Code Red Security Event.
 - b. The warehouse (News Media Center) will be used for the alternate assembly and staging area. The News Media Center will be relocated in a Code Red Security Event occurring after hours.
 - c. EOF staff will activate the EOF per procedure. TSC/OSC personnel arriving at the EOF will be directed to the alternate assembly and staging area. Personnel will sign in at the assembly area to provide an available manpower list.
 - d. The TSC Coordinator and OSC Coordinator will organize response teams based on the nature of the emergency and release second shift personnel.

FINAL CONDITIONS

1. Return all completed Appendices and forms to the Emergency Plan Coordinator for filing per AP 6807.

APPENDIX A (Continued)

Time/Date

Initials

NOTE

States' notification must be initiated within 15 minutes of emergency classification declaration.

- | | | | |
|-------|--|---|-------|
| 16.3. | Ensure that the notification of the VT/NH/MA State EOCs is being implemented per VYOPF 3546.02, Emergency Classification and PAR Notification Form. (Compliance Advisor) | S _____ / _____
G _____ / _____ | _____ |
| 16.4. | If any State EOC is not manned, and the EOF/RC State representative is not present, notify the appropriate State Police agency per VYOPF 3546.02. (Compliance Advisor) | S _____ / _____
G _____ / _____ | _____ |
| 16.5. | Inform each EOF/RC State representative of the transition on the emergency class and the condition producing the change. (SRM State Advisor) | A _____ / _____
S _____ / _____ | _____ |
| 16.6. | After completion of the State's notification, SRM acknowledges that the States' notification has been completed. | A _____ / _____
S _____ / _____
G _____ / _____ | _____ |
| 16.7. | Notify White Plains Recovery Support Group Managers of escalation per Table 2. | A _____ / _____
S _____ / _____
G _____ / _____ | _____ |
| 17.0 | IF the State of Vermont issues an evacuation order for Brattleboro, THEN contact the Nuclear Information Director and discuss impact on the News Media Center (NMC). | (circle one)
S G

_____ / _____ | _____ |
| 18.0 | IF a decision is made to evacuate the NMC, THEN announce that, as a precautionary measure, all declared pregnant staff should evacuate the EOF. (E_Drill-98EOF3) | (circle one)
S G

_____ / _____ | _____ |
| 19.0 | Ensure VYOPF 3546.01 is faxed to the TSC to update the TSC Coordinator of any protective actions the States may be implementing. (Media Advisor Assistant) | | |

LPC
2

APPENDIX A (Continued)

Time/Date

Initials

5. Provide a verbal close-out of the event with off-site authorities and agencies as follows:

- a. NRC _____ / _____
- b. State of Vermont _____ / _____
- c. State of New Hampshire _____ / _____
- d. Commonwealth of Massachusetts _____ / _____

6. Site Recovery Manager will notify White Plains Recovery Managers of de-escalation to a recovery phase per Table 2.

_____ / _____

7. Initiate an Event Report per AP 0009 for the event that resulted in the declaration of the emergency.

_____ / _____

NOTE

Emergency Planning will sign off step 8.

8. When a written report is generated, ensure a copy is forwarded to the Emergency Plan Coordinator for the following off-site authorities:

- a. Director of Vermont Emergency Management, State of VT _____ / _____
- b. Director of Massachusetts Emergency Management, Commonwealth of MA _____ / _____
- c. Director of New Hampshire Emergency Management, State of NH _____ / _____

TABLE 2

WHITE PLAINS RECOVERY SUPPORT GROUP CORPORATE CALL LIST

LPC #2

RECOVERY SUPPORT GROUP MANAGERS (For notification of escalation)

NAME	HOME PHONE	WORK PHONE	PAGER #
G. Wilverding	(203) 938-0540	(914) 272-3375	718-3375*
M. Karasulu	(914) 245-0525	(914) 272-3442	718-3442*
G. Canavan	(212) 989-0449	(914) 272-3440	718-3440*
G. Rorke	(516) 767-7587	(914) 272-3428	718-3428*

RECOVERY MANAGERS (For notification of de-escalation to a recovery phase)

NAME	HOME PHONE	WORK PHONE	PAGER #
H. Salmon	(914) 734-7690	(914) 272-3220	800-734-9140
D. Robson	(914) 686-7284	(914) 272-3452	800-844-8084 Pin: 1487471
T. Dougherty	(718) 961-1907	(914) 272-3451	718-3451*
J. Kelly	(845) 947-2095	(914) 272-3370	888-593-5942

* 1-800-436-2732

10 CFR 50.54(q) Evaluation Checklist

List of Emergency Plan Section(s)/Emergency Plan Implementing Procedure(s) or any other document to be evaluated. (Include Title and Revision No.):

OP 3546, Rev. 1, LPC 1, Operation of the Emergency Operations Facility/Recovery Center (EOF/RC)

A. Screening Evaluation

Based on a review of the following questions, determine if the change has the potential to affect our ability to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50.

A "YES" answer to any part of the questions requires that a written evaluation be done to determine whether the effectiveness of the Emergency Plan was decreased as specified in Section B of this checklist.

A "NO" answer to all questions requires no written evaluation as specified in Section B of this checklist.

1. Could the proposed change affect our ability to meet the following standards of 10 CFR 50.47(b):
- (1) Assignment of Emergency Response Organization responsibilities YES NO
 - (2) Assignment of on-shift Emergency Response Organization personnel YES NO
 - (3) Arrangements for Emergency Response Support and Resources YES NO
 - (4) Emergency Classification and Action levels, including facility system and effluent parameters YES NO
 - (5) Notification Methods and Procedures YES NO
 - (6) Emergency Communications among principal response organizations and the public YES NO
 - (7) Public Education and Information YES NO
 - (8) Adequacy of Emergency Facilities and Equipment YES NO
 - (9) Adequacy of Accident Assessment methods, systems and equipment YES NO
 - (10) Plume exposure pathway EPZ protective actions YES NO
 - (11) Emergency Worker Radiological Exposure Control YES NO
 - (12) Medical Services for contaminated injured individuals YES NO
 - (13) Recovery and Reentry Plans YES NO
 - (14) Emergency response periodic drills and exercises YES NO
 - (15) Radiological Emergency Response Training YES NO
 - (16) Plan development, review and distribution YES NO

10 CFR 50.54(q) Evaluation Checklist (Continued)

2. Could the change affect our ability to meet the following requirements of Appendix E to 10 CFR 50.

- | | | |
|---|--------------------------------------|-------------------------------------|
| (1) Section IV. A - Organization | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| (2) Section IV. B - Assessment Actions | <input type="radio"/> YES | <input checked="" type="radio"/> NO |
| (3) Section IV. C - Activation of Emergency Organizations | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| (4) Section IV. D - Notification Procedures | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| (5) Section IV. E - Emergency Facilities and Equipment | <input type="radio"/> YES | <input checked="" type="radio"/> NO |
| (6) Section IV. F - Training | <input type="radio"/> YES | <input checked="" type="radio"/> NO |
| (7) Section IV. G - Maintaining Emergency Preparedness | <input type="radio"/> YES | <input checked="" type="radio"/> NO |
| (8) Section IV. H - Recovery | <input type="radio"/> YES | <input checked="" type="radio"/> NO |

B. Effectiveness Determination

For each applicable (i.e., a "yes" answer specified) standard to 10 CFR 50.47(b) and Appendix E to 10 CFR 50 identified from Section A above, complete the evaluation form below to determine whether the change decreases the effectiveness of the Emergency Plan and whether it continues to meet the stated applicable standard or requirement.

A facsimile of the evaluation form may be used as needed and attached to this checklist.

For applicable item 10 CFR 50.47(b) (1), (3), (5) (10) & App E.IV.A,C&D of Section A above, this change ~~(DOES/DOES NOT)~~ decrease the effectiveness of the Emergency Plan and ~~(DOES/DOES NOT)~~ continue to meet the stated applicable standard or requirement.

BASIS FOR ANSWER:

This revision includes considerations from the NRC Security Order. This includes having an alternate assembly & staging area if it is not prudent to staff the Technical Support Center (TSC). This does not decrease the effectiveness of the E-Plan. 10 CFR 50.47(b) (10) requires development of a range of protective actions for emergency workers. When an emergency is declared due to a security condition, staffing the TSC may put personnel at risk. Using an alternate assembly and staging area under these circumstances is a protective action for the emergency worker. This protective action precludes activation of the on-site emergency facilities, however, the Emergency Operations Facility would be staffed and assume the duties normally performed by on-site individuals.

10 CFR 50.54(q) Evaluation Checklist (Continued)

C. Conclusion (Fill out appropriate information)

- The changes made do not decrease the effectiveness of the Emergency Plan and continue to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50.
- The changes made do decrease the effectiveness of the Emergency Plan and decrease our ability to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50. The following course of action is recommended:
- Revise proposed changes to meet applicable standards and requirements.
 - Cancel the proposed changes.
 - Process proposed changes for NRC approval prior to implementation in accordance with 10 CFR 50.54(q).

D. Impact on Other Documents (TRM, Tech Specs)

Keywords used in search: emergency, staffing, communications

This change does not affect any other documents.

This change does affect other documents.

Document(s) affected: _____

Section(s) affected: _____

E. Impact on the Updated FSAR

Use AP 6036 to determine if the proposed E-Plan change modifies existing UFSAR information or requires the addition of new UFSAR information and initiate UFSAR change(s) as required.

Keywords used in UFSAR search: emergency, staffing, communications

Additional Comments:

Prepared By: Audra Williams Audra Williams Date: 7.23.02
(Print/Sign)

Reviewed By: Lori A. Tkaczyk Lori A. Tkaczyk Date: 7/22/02
(Emergency Plan Coordinator) (Print/Sign)