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Coley C. Chappell
Manager, Licensing and CA&A

10 CFR 50.4

BVY 16-008

April 28, 2016

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

SUBJECT: Permanently Defueled Emergency Plan Change, Revision 0
Vermont Yankee Nuclear Power Station
Docket No. 50-271
License No. DPR-28

REFERENCE: Letter, NRC to Entergy Nuclear Operations, Inc., "Vermont Yankee Nuclear Power Station – Issuance of Amendment RE: Changes to the Emergency Plan and Emergency Action Levels (TAC NO. MF4279)" dated December 11, 2015

Dear Sir or Madam:

In accordance with 10 CFR 50.54(q) Entergy Nuclear Operations, Inc. is providing Revision 0 of the Vermont Yankee Nuclear Power Station Permanently Defueled Emergency Plan (Plan) as an attachment to this letter. This revision of the Plan incorporates changes approved by the NRC in the referenced letter. This revision also includes several changes that were evaluated pursuant to 10 CFR 50.54(q)(3) that were determined not to require prior NRC approval. Included with this revision is a description of the changes and the 10 CFR 50.54(q) Screening and Evaluation Forms for those changes performed pursuant to 10 CFR 50.54(q)(3).

There are no new regulatory commitments contained in this submittal.

Should you have any questions concerning this submittal, please contact me at 802-451-3374.

Sincerely,

CCC/jha

Attachments: 1. Permanently Defueled Emergency Plan, Revision 0
2. 50.54(q) Screening

AX45
NRR

cc: Mr. Daniel H. Dorman
Regional Administrator, Region 1
U.S. Nuclear Regulatory Commission
2100 Renaissance Blvd, Suite 100
King of Prussia, PA 19406-2713

Mr. Jack D. Parrott, Sr. Project Manager
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Mail Stop T-8F5
Washington, DC 20555

Mr. Christopher Recchia, Commissioner
VT Department of Public Service
112 State Street – Drawer 20
Montpelier, Vermont 05620-2601

Director Spent Fuel Project Office
Office of Nuclear Material Safety & Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

BVY 16-008

Docket No. 50-271

Attachments

Vermont Yankee Nuclear Power Station

Permanently Defueled Emergency Plan Change, Revision 0

10CFR50.54(q) Screening

Procedure/Document Number: Permanently Defueled Emergency Plan	Revision: 0
Equipment/Facility/Other: Vermont Yankee	
Title: Vermont Yankee Permanently Defueled Emergency Plan (PDEP)	

Part I. Description of Activity Being Reviewed (event or action, or series of actions that may result in a change to the emergency plan or affect the implementation of the emergency plan):

Cover Page

- Changed "Emergency Planning Manager" to "Manager, Emergency Preparedness"
- Changed "On-Site Safety Review Committee" to "Review Committee"
- Deleted "General Manager"
- Changed "Site Vice President" to "Decommissioning Director"

Section 1.0, Introduction

- Changed "Updated Final Safety Analysis Report (UFSAR)" to "Defueled Safety Analysis Report (DSAR)"
- Changed "PAG Manual" to "EPA PAG Manual

Section 3.9, Mitigation of Consequences of Beyond Design Basis Events

- Changed "AP-10049" to "AP-10090"

Figure 4.1, Vermont Yankee Site

- Replaced figure 4.1 with an updated figure

Section 5.0, Emergency Classification System

- Changed "emergencies at the VY" to "emergencies at VY"

Section 6.1, Control Room

- Change title from "Control Room" to "Control Room/Administration Building"
- Change "The Control Room" to "The Control Room and Administrative Building" at beginning of 5th paragraph
- Added "In the Control Room/Administration Building" to the end of the sixth paragraph

Section 6.2.2, Radiological Monitors

- Changed "discharge route" to "discharge routes"
- Changed "UFSAR" to "DSAR"

Section 6.2.3, Meteorological Capability

- Changed "data is used" to "data are used"

Section 7.8, Mutual Aid Radio

- Changed "Hospital and the State EOCs" to "Hospital; and the State EOCs"

Section 7.9, Emergency Power Supply for Communications

- Changed "Currently there are several telephone and other emergency communication channels (Gai-Tronics, radio network, and Internet Protocol (IP) telephones) located within the plant that are connected to an emergency or redundant power supply. All emergency communications (including all emergency phones) located within the plant are connected to an emergency or redundant supply."

  To:

  Currently there are several telephone and other emergency communication channels (radio network and Internet Protocol (IP) telephones) located within the plant that are connected to an emergency or redundant power supply. All emergency communications (Gai-Tronics, radio network, and IP telephones) located within the plant have a backup communications system or are connected to a redundant power supply.

Table 7.1, Vermont Yankee Emergency Communications Matrix

- Changed "Offsite and Site Boundary Monitors" to "Site Boundary Monitors" to reflect the absence of offsite monitoring following implementation of the PDEP.

Section 8.1, Normal Point Organization

- Changed "by the engineering and management organizations located offsite." to "by engineering and management resources available offsite.

Procedure/Document Number: Permanently Defueled Emergency Plan	Revision: 0
Equipment/Facility/Other: Vermont Yankee	
Title: Vermont Yankee Permanently Defueled Emergency Plan (PDEP)	

Section 8.2.3.1, Normal Plant Organization

- Change "Appendix E" to "Appendix D"

Section 8.2.3.3, Additional Support

- Changed "Corporate Support procedures" to VY procedures"

Section 9.2.1, Unusual Event Response

- Changed "a Unusual Event" to "an Unusual Event"

Section 10.4.2, Medical Transportation

- Changed "personnel are provided with specific training by VY" to "personnel are offered training by VY"

Section 11.2, Public Information

- Added period at end of 4th paragraph

Section 12.4, Maintenance and Inventory of Equipment and Supplies

- Changed "...the Control Room is..." to "...the Control Room and Administration Building is..."
- Changed "checklist in Emergency Equipment Readiness Check" to "checklist in the Emergency Equipment Readiness Check procedure"

Section 12.5, Responsibility for the Planning Effort

- Changed 3 instances of "Emergency Planning Manager" to "Manager, Emergency Preparedness"

Appendix A, Emergency Classification System and Emergency Action Levels

- Changed procedure reference in the note on the cover page from "AP 3125" to "EPAP-EAL-10106"

Appendix B, Emergency Equipment

- Changed "MAIN CONTROL ROOM" to "CONTROL ROOM AND ADMINISTRATION BUILDING"
- Changed procedure reference in the note below the Emergency Equipment Inventory table from "EPOP-EQUIP-3506" to "EPOP-EQUIP-10115"

Appendix E, Index of Emergency Plan Implementing Procedures and Support Plans

- Changed title to "Index of Emergency Plan Implementing Procedures and Support Documents"
- Eliminated the following reference to corporate procedures that are not applicable to VY:
  - EN-EP-309
  - EN-EP-310
  - EN-EP-606
  - EN-EP-401
- Added the following procedures because it was determined that these procedures would be maintained:
  - EPAP-ERO-10103
  - EPAP-EIEP-10097
  - EPAP-SWRES-10104

Appendix E, Index of Emergency Plan Implementing Procedures and Support Documents

- Revised the following procedure numbers:
  - AP 3125 to EPAP-EAL-10106
  - EPOP-COMM-3504 to EPOP-COMM-10113
  - EPOP-EQUIP-3506 to EPOP-EQUIP-10115
  - OP 3507 to EPOP-EREC-10116
  - OP 3508 to EPOP-MED-10117
  - OP 3509 to EPOP-SAMP-10123
  - OP-3510 to EPOP-OSMT-10118
  - EPOP-RAD-3513 to EPOP-RAD-10119

Procedure/Document Number: Permanently Defueled Emergency Plan	Revision: 0
Equipment/Facility/Other: Vermont Yankee	
Title: Vermont Yankee Permanently Defueled Emergency Plan (PDEP)	

- EPOP-URI-10095 to EPOP-URI-10122
- AP 3532 to EPAP-ERO-10110
- OP 3536 to EPOP-SAMP-10124
- EPOP-CR-3540 to EPOP-CR-10114
- OP-3547 to EPOP-SEC-10120
- OP 3548 to EPOP-TERM-10121
- AP 3554 to EPAP-TEAM-10107
- EPOP-TRNG-3712 to EPAP-TRNG-10112
- AP-10049 to EPAP-EIEP-10108
- EPAP-INFORM-10076 to EPAP-INFORM-10111
- EN-EP-303 to EPAP-SWREC-10105
- EN-EP-305 to EPAP-5054Q-10098
- EN-EP-306 to EPAP-DRILL-10099
- EN-EP-308 to EPAP-CRIT-10100

- Added the following to the list of support documents:
- Conduct of Operations and Operator Rounds (OP0150)
- Changed the following title in the list of support documents:
  - Vermont Yankee Fire Protection and Safe shutdown (SEP-FP-VTY-003) to VY Fire Protection Program (SEP-FP-VTY-003)

Part II. Activity Previously Reviewed?
Is this activity fully bounded by an NRC approved 10 CFR 50.90 submittal or Alert and Notification System Design Report?

If YES, identify bounding source document number/approval reference and ensure the basis for concluding the source document fully bounds the proposed change is documented below:

☐ YES 50.54(q)(3) Evaluation is NOT required. Enter justification below and complete Part VI.

☒ NO Continue to next part

Justification:

☐ Bounding document attached (optional)

Part III. Applicability of Other Regulatory Change Control Processes

Check if any other regulatory change processes control the proposed activity.(Refer to EN-LI-100)

NOTE: For example, when a design change is the proposed activity, consequential actions may include changes to other documents which have a different change control process and are **NOT** to be included in this 50.54(q)(3) Screening.

APPLICABILITY CONCLUSION

☒ If there are no controlling change processes, continue the 50.54(q)(3) Screening.

☐ One or more controlling change processes are selected, however, some portion of the activity involves the emergency plan or affects the implementation of the emergency plan; continue the 50.54(q)(3) Screening for that portion of the activity. Identify the applicable controlling change processes below.

☐ One or more controlling change processes are selected and fully bounds all aspects of the activity. 50.54(q)(3) Evaluation is NOT required. Identify controlling change processes below and complete Part VI.

CONTROLLING CHANGE PROCESSES

10 CFR 50.54(q)

Procedure/Document Number: Permanently Defueled Emergency Plan	Revision: 0
Equipment/Facility/Other: Vermont Yankee	
Title: Vermont Yankee Permanently Defueled Emergency Plan (PDEP)	

Part IV. Editorial Change Is this activity an editorial or typographical change such as formatting, paragraph numbering, spelling, or punctuation that does not change intent? **Justification:**	☒YES 50.54(q)(3) Evaluation is NOT required. Enter justification and complete Part VI.	☐ NO Continue to next part

Part V. Emergency Planning Element/Function Screen (Associated 10 CFR 50.47(b) planning standard function identified in brackets) Does this activity affect any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II?

1. Responsibility for emergency response is assigned. [1]	☐
2. The response organization has the staff to respond and to augment staff on a continuing basis (24/7 staffing) in accordance with the emergency plan. [1]	☐
3. The process ensures that on shift emergency response responsibilities are staffed and assigned. [2]	☐
4. The process for timely augmentation of onshift staff is established and maintained. [2]	☐
5. Arrangements for requesting and using off site assistance have been made. [3]	☐
6. State and local staff can be accommodated at the EOF in accordance with the emergency plan. [3]	☐
7. A standard scheme of emergency classification and action levels is in use. [4]	☐
8. Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing follow-up notifications. [5]	☐
9. Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway. [5]	☐
10. The public ANS meets the design requirements of FEMA-REP-10, Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants, or complies with the licensee's FEMA-approved ANS design report and supporting FEMA approval letter. [5]	☐
11. Systems are established for prompt communication among principal emergency response organizations. [6]	☐
12. Systems are established for prompt communication to emergency response personnel. [6]	☐
13. Emergency preparedness information is made available to the public on a periodic basis within the plume exposure pathway emergency planning zone (EPZ). [7]	☐
14. Coordinated dissemination of public information during emergencies is established. [7]	☐
15. Adequate facilities are maintained to support emergency response. [8]	☐
16. Adequate equipment is maintained to support emergency response. [8]	☐
17. Methods, systems, and equipment for assessment of radioactive releases are in use. [9]	☐
18. A range of public PARs is available for implementation during emergencies. [10]	☐
19. Evacuation time estimates for the population located in the plume exposure pathway EPZ are available to support the formulation of PARs and have been provided to State and local governmental authorities. [10]	☐
20. A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.[10]	☐

Procedure/Document Number: Permanently Defueled Emergency Plan	Revision: 0
Equipment/Facility/Other: Vermont Yankee	
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21. The resources for controlling radiological exposures for emergency workers are established. [11]	☐
22. Arrangements are made for medical services for contaminated, injured individuals. [12]	☐
23. Plans for recovery and reentry are developed. [13]	☐
24. A drill and exercise program (including radiological, medical, health physics and other program areas) is established. [14]	☐
25. Drills, exercises, and training evolutions that provide performance opportunities to develop, maintain, and demonstrate key skills are assessed via a formal critique process in order to identify weaknesses. [14]	☐
26. Identified weaknesses are corrected. [14]	☐
27. Training is provided to emergency responders. [15]	☐
28. Responsibility for emergency plan development and review is established. [16]	☐
29. Planners responsible for emergency plan development and maintenance are properly trained. [16]	☐

APPLICABILITY CONCLUSION

✓ If no Part V criteria are checked, a 50.54(q)(3) Evaluation is NOT required; document the basis for conclusion below and complete Part VI.

☐ If any Part V criteria are checked, complete Part VI and perform a 50.54(q)(3) Evaluation.

BASIS FOR CONCLUSION

The following changes are editorial or administrative in nature and no further evaluation is required:

- Changes to the signatures on the cover page
- Changed from "UFSAR" to DSAR" in Sections 1.0 and 6.2.2
- Changing "PAG Manual" to "EPA PAG Manual" in Section 1.0
- Changing "AP-10049" to "AP-10090" in Section 3.9 to correct the referenced procedure. AP-10049 does not describe the equipment, resources, procedures and strategies. Reference to the incorrect procedure in the PDEP was a typographical error.
- Replacing Figure 4.1 with an updated figure that does not include the Power Uprate Building. The change is administrative in nature to reflect accurate facility layout. The revision does not change any facilities or equipment.
- Changing "emergencies at the VY" to "emergencies at VY" in section 5.0
- Adding references to "Administration Building" in Sections 6.1, 12.4 and Appendix B are appropriate in that the revision clarifies the location of the emergency equipment and supplies. Because the NRC-approved exemptions eliminated the need for an OSC and TSC, the equipment was assigned to the Control Room as the only remaining emergency response facility. However, the physical location of the communications equipment, emergency radiation monitoring equipment, emergency respiratory devices, protective clothing, emergency kit and other supplies will remain unchanged from the current locations, which are also the locations that were used during operation at VY. These locations are known to staff and have proven to be effective locations for use during emergency conditions, as demonstrated during numerous drills and exercises. Identification of the Control Room as the sole emergency response facility was not intended to imply that the location of the equipment would be moved to the Control Room. This location would be inappropriate and not efficient for all equipment and supplies identified. The equipment is not intended for use by Control Room staff. But, rather, is intended for use by augmented ERO personnel (Radiation Protection and Field Monitoring Teams).
- The addition of "Administration Building" to the section clarifies the location of the equipment.

Procedure/Document Number: Permanently Defueled Emergency Plan	Revision: 0
Equipment/Facility/Other: Vermont Yankee	
Title: Vermont Yankee Permanently Defueled Emergency Plan (PDEP)	

Changing "checklist in Emergency Equipment Readiness Check" to "checklist in the Emergency Equipment Readiness Check procedure" is an editorial change.

- Adding "in the Control Room/Administration Building" provides additional clarification as to the location of the assembly area.
- Changing "discharge route" to discharge routes" in Section 6.2.2. The change is administrative in nature. The revision does not change any facilities or equipment.
- Changing "these meteorological data is used" to "these meteorological data are used" in section 6.2.3
- Adding ";" after Hospital in Section 7.8
- Revised text in section 7.9 to clarify that in the permanently defueled condition, the Gai-Tronics does not have a redundant power supply. However, a backup up communications system (plant radio) does provide redundant communications capabilities.
- Changing "Offsite and Site Boundary Monitors" to "Site Boundary Monitors" in Table 7.1. Offsite monitors are not required in the PDEP and inclusion was in error. *Exemptions from Certain Emergency Planning Requirements and Related Safety Evaluation (ADAMS No. ML15180A054)*, dated December 10, 2015, stated that "there is no longer any possibility of an offsite radiological release from a design basis accident that could exceed the EPA PAGs." Additionally, as described in the Safety Evaluation, the NRC granted exemption from portions of the rule language that would otherwise require the capability for monitoring offsite consequences (10 CFR 50.47(b)(9)).
- The change in Section 8.1 clarifies that the offsite engineering and management organizations are not part of the pre-designated ERO.
- Change from "Appendix E" to "Appendix D" in Section 8.2.3.1 is editorial
- The change from "Corporate Support Procedures" to "VY Procedures" in Section 8.2.3.3 is editorial. VY disassociated itself from the corporate procedures upon implementation of the Post-Shutdown Emergency Plan
- Changing "a Unusual Event" to "an Unusual Event" in Section 9.2.1
- Adding a period at the end of the 4th paragraph in Section 11.2
- Changing "the Control Room is" to "the Control Room and Administration Building is" in Section 12.4. Refer to discussion above related to Section 6.1.
- Changing "Emergency Planning Manager" to "Manager, Emergency Preparedness" in Section 12.5 (3 instances)
- Changing "AP3125" to "EPAP-EAL-10106" in appendix A is editorial and corrects an updated procedure number.
- Changing "EPOP-EQUIP-3506" to "EPOP-EQUIP-10115" in Appendix B is editorial and corrects an updated procedure number.
- Changing the title of Appendix E from "Index of Emergency Plan Implementing Procedures and Support Plans" to "Index of Emergency Plan Implementing Procedures and Support Documents"
- The revisions to renumber the procedures listed in Appendix E, "Index of Emergency Plan Implementing Procedures and Support Plans," of the PDEP do not impact any of the 10 CFR 50.47(b) planning standard functions or program elements listed in Part V of this form. The implementing procedures were developed following submittal of the PDEP to the NRC and those listed in the current PDEP fully implement the PDEP. EN-EP-309, Fatigue Management for Hurricane Response Activities was removed from the implementing procedure list because this procedure is only applicable to Waterford 3. EN-EP-606, Pandemic Flu Response, was removed from the implementing procedure list because this procedure is not applicable to VY and has VY

Procedure/Document Number: Permanently Defueled Emergency Plan	Revision: 0
Equipment/Facility/Other: Vermont Yankee	
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listed as NA on the cover page in the reference library. These procedures should not have been included in the PDEP and removal is an editorial change. EN-EP-310, Emergency Response Organization Notification System, is not required to implement the PDEP because in the PDEP condition, Everbridge will not be used and pagers have been designated as the primary notification method for the emergency response organization. EN-EP-310 provided instructions and guidance for use of the Everbridge system.

Reference to these procedures is administrative in nature and no further evaluation is required.

Renumbering procedures does not impact any of the 10 CFR 50.47(b) planning standard functions or program elements listed in Part V of this form. The changes are administrative in nature and no further evaluation is required.

- Changing the title from "Vermont Yankee Fire Protection and Safe Shutdown (SEP-FP-VTY-003)" to "VY Fire Protection Program (SEP-FP-VTY-003)" address permanent cessation of operations and elimination of the need to address safe shutdown.
- Added "Conduct of Operations and Operator Rounds (OP0150)" to the list of supporting documents adequately satisfies the Cask FSAR which states that the emergency plan will include provisions to address removal of material blocking air inlet ducts. (See Cask FSAR Table 9.2.1)

Part VI. Signatures:

Preparer Name (Print) David L. Daigle	Preparer Signature	Date: 03/30/2016
(Optional) Reviewer Name (Print) Justine Anderson	Reviewer Signature	Date: 3/30/16
Reviewer Name (Print) Tom Sowdon Nuclear EP Project Manager	Reviewer Signature	Date: 4-5-2016
Approver Name (Print) Mike McKenney EP manager or designee	Approver Signature	Date: 4/5/16

Procedure/Document Number: Permanently Defueled Emergency Plan (PDEP), Permanently Defueled Emergency Action Level Technical Bases & Emergency Plan Implementing Procedures (EPIP)	Revision: Various
Equipment/Facility/Other: Vermont Yankee	
Title: Permanently Defueled Emergency Plan (PDEP), Permanently Defueled Emergency Action Level Technical Bases & Emergency Plan Implementing Procedures (EPIP) (Listed below under Part I)	

Part I. Description of Activity Being Reviewed (event or action, or series of actions that may result in a change to the emergency plan or affect the implementation of the emergency plan):

The VY Permanently Defueled Emergency Plan (PDEP) reflects the permanently defueled condition of VY. A copy of this document was submitted to the NRC for review and approval under a license amendment on June 12, 2014 (Ref: BVY 14-033). The NRC approved the PDEP upon issuance of License Amendment 264 dated December 11, 2015.

In addition to the PDEP, the Permanently Defueled Emergency Action Level Technical Bases and the following procedures have been issued to support the implementation of the PDEP.

EPAP-EIEP-10097	EQUIPMENT IMPORTANT TO EMERGENCY PREPAREDNESS
EPAP-5054Q-10098	EMERGENCY PLANNING 10CFR50.54(Q) REVIEW PROGRAM
EPAP-DRILL-10099	DRILLS AND EXERCISES
EPAP-CRIT-10100	EMERGENCY PLANNING CRITIQUES
EPAP-ERO-10103	EMERGENCY RESPONSE ORGANIZATION
EPAP-SWRES-10104	SEVERE WEATHER RESPONSE
EPAP-SWREC-10105	SEVERE WEATHER RECOVERY
EPAP-EAL-10106	EMERGENCY PLAN CLASSIFICATION AND ACTION LEVEL SCHEME
EPAP-TEAM-10107	EMERGENCY PLAN TEAMS
EPAP-EIEP-10108	EQUIPMENT IMPORTANT TO EMERGENCY RESPONSE
EPAP-ERO-10110	EMERGENCY PREPAREDNESS ORGANIZATION
EPAP-INFORM-10111	INFORM NOTIFICATION SYSTEM
EPAP-TRNG-10112	EMERGENCY PLAN TRAINING
EPOP-COMM-10113	EMERGENCY COMMUNICATIONS
EPOP-CR-10114	CONTROL ROOM ACTIONS DURING AN EMERGENCY
EPOP-EQUIP-10115	EMERGENCY EQUIPMENT READINESS CHECK
EPOP-EREC-10116	EMERGENCY RADIATION EXPOSURE CONTROL

Procedure/Document Number: Permanently Defueled Emergency Plan (PDEP), Permanently Defueled Emergency Action Level Technical Bases & Emergency Plan Implementing Procedures (EPIP)	Revision: Various
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EPOP-MED-10117	ON-SITE MEDICAL EMERGENCY
EPOP-OSMT-10118	SITE BOUNDARY MONITORING
EPOP-RAD-10119	EVALUATION OF OFF-SITE RADIOLOGICAL CONDITIONS
EPOP-SEC-10120	SECURITY ACTIONS DURING AN EMERGENCY
EPOP-TERM-10121	EMERGENCY TERMINATION AND RECOVERY
EPOP-URI-10122	OFFSITE DOSE ASSESSMENT USING THE UNIFIED RASCAL INTERFACE
EPOP-SAMP-10123	ENVIRONMENTAL SAMPLE COLLECTION DURING AN EMERGENCY
EPOP-SAMP-10124	IN-PLANT AIR SAMPLE ANALYSIS WITH ABNORMAL CONDITIONS

Procedure/Document Number: Permanently Defueled Emergency Plan (PDEP), Permanently Defueled Emergency Action Level Technical Bases & Emergency Plan Implementing Procedures (EPIP)	Revision: Various
Equipment/Facility/Other: Vermont Yankee	
Title: Permanently Defueled Emergency Plan (PDEP), Permanently Defueled Emergency Action Level Technical Bases & Emergency Plan Implementing Procedures (EPIP) (Listed below under Part I)	

Part II. Activity Previously Reviewed?
Is this activity fully bounded by an NRC approved 10 CFR 50.90 submittal or Alert and Notification System Design Report?

If YES, identify bounding source document number/approval reference and ensure the basis for concluding the source document fully bounds the proposed change is documented below:

☒YES 50.54(q)(3) Evaluation is NOT required. Enter justification below and complete Part VI.

☐ NO Continue to next part

Justification:

The PDEP has been approved by the NRC upon issuance of License Amendment 264. No further evaluation required.

☐ Bounding document attached (optional)

Part III. Applicability of Other Regulatory Change Control Processes

Check if any other regulatory change processes control the proposed activity.(Refer to EN-LI-100)

NOTE: For example, when a design change is the proposed activity, consequential actions may include changes to other documents which have a different change control process and are **NOT** to be included in this 50.54(q)(3) Screening.

APPLICABILITY CONCLUSION

☐ If there are no controlling change processes, continue the 50.54(q)(3) Screening.

☐ One or more controlling change processes are selected, however, some portion of the activity involves the emergency plan or affects the implementation of the emergency plan; continue the 50.54(q)(3) Screening for that portion of the activity. Identify the applicable controlling change processes below.

☐ One or more controlling change processes are selected and fully bounds all aspects of the activity. 50.54(q)(3) Evaluation is NOT required. Identify controlling change processes below and complete Part VI.

CONTROLLING CHANGE PROCESSES
10CFR50.54(q)

Part IV. Editorial Change
Is this activity an editorial or typographical change such as formatting, paragraph numbering, spelling, or punctuation that does not change intent?

Justification:

☐YES 50.54(q)(3) Evaluation is NOT required. Enter justification and complete Part VI.

☒ NO Continue to next part

Part V. Emergency Planning Element/Function Screen (Associated 10 CFR 50.47(b) planning standard function identified in brackets) Does this activity affect any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II?

1. Responsibility for emergency response is assigned. [1]	☐
2. The response organization has the staff to respond and to augment staff on a continuing basis (24/7 staffing) in accordance with the emergency plan. [1]	☐
3. The process ensures that on shift emergency response responsibilities are staffed and assigned. [2]	☐
4. The process for timely augmentation of onshift staff is established and maintained. [2]	☐
5. Arrangements for requesting and using off site assistance have been made. [3]	☐

Procedure/Document Number: Permanently Defueled Emergency Plan (PDEP), Permanently Defueled Emergency Action Level Technical Bases & Emergency Plan Implementing Procedures (EPIP)	Revision: Various
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6. State and local staff can be accommodated at the EOF in accordance with the emergency plan. [3]	☐
7. A standard scheme of emergency classification and action levels is in use. [4]	☐
8. Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing follow-up notifications. [5]	☐
9. Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway. [5]	☐
10. The public ANS meets the design requirements of FEMA-REP-10, Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants, or complies with the licensee's FEMA-approved ANS design report and supporting FEMA approval letter. [5]	☐
11. Systems are established for prompt communication among principal emergency response organizations. [6]	☐
12. Systems are established for prompt communication to emergency response personnel. [6]	☐
13. Emergency preparedness information is made available to the public on a periodic basis within the plume exposure pathway emergency planning zone (EPZ). [7]	☐
14. Coordinated dissemination of public information during emergencies is established. [7]	☐
15. Adequate facilities are maintained to support emergency response. [8]	☐
16. Adequate equipment is maintained to support emergency response. [8]	☐
17. Methods, systems, and equipment for assessment of radioactive releases are in use. [9]	☐
18. A range of public PARs is available for implementation during emergencies. [10]	☐
19. Evacuation time estimates for the population located in the plume exposure pathway EPZ are available to support the formulation of PARs and have been provided to State and local governmental authorities. [10]	☐
20. A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.[10]	☐
21. The resources for controlling radiological exposures for emergency workers are established. [11]	☐
22. Arrangements are made for medical services for contaminated, injured individuals. [12]	☐
23. Plans for recovery and reentry are developed. [13]	☐
24. A drill and exercise program (including radiological, medical, health physics and other program areas) is established. [14]	☐
25. Drills, exercises, and training evolutions that provide performance opportunities to develop, maintain, and demonstrate key skills are assessed via a formal critique process in order to identify weaknesses. [14]	☐
26. Identified weaknesses are corrected. [14]	☐
27. Training is provided to emergency responders. [15]	☐
28. Responsibility for emergency plan development and review is established. [16]	☐
29. Planners responsible for emergency plan development and maintenance are properly trained. [16]	☐

Procedure/Document Number: Permanently Defueled Emergency Plan (PDEP), Permanently Defueled Emergency Action Level Technical Bases & Emergency Plan Implementing Procedures (EPIP)	Revision: Various
Equipment/Facility/Other: Vermont Yankee	
Title: Permanently Defueled Emergency Plan (PDEP), Permanently Defueled Emergency Action Level Technical Bases & Emergency Plan Implementing Procedures (EPIP) (Listed below under Part I)	

APPLICABILITY CONCLUSION

☐ If no Part V criteria are checked, a 50.54(q)(3) Evaluation is NOT required; document the basis for conclusion below and complete Part VI.

☐ If any Part V criteria are checked, complete Part VI and perform a 50.54(q)(3) Evaluation.

BASIS FOR CONCLUSION

Part VI. Signatures:

Preparer Name (Print) Justine Anderson	Preparer Signature JAnderson	Date: 3/24/16
(Optional) Reviewer Name (Print)	Reviewer Signature	Date:
Reviewer Name (Print) Tom Sowdon Nuclear EP Project Manager	Reviewer Signature Thomas L Sowdon	Date: 3-25-2016
Approver Name (Print) MP McKenney	Approver Signature MP McKenney	Date: 3/28/16

PERMANENTLY DEFUELED EMERGENCY PLAN

ENTERGY VERMONT YANKEE

VERNON, VERMONT

REVISION 0

PREPARER:	MP McKENNEY	3/30/16
	Manager, Emergency Preparedness (Print/Sign)	Date
REVIEWED:	TW Boyle	3/30/16
	Review Committee (Print/Sign)	Date
APPROVED:	TW Boyle	3/30/16
	Decommissioning Director (Print/Sign)	Date

Effective Date 04/19/16

ENTERGY VERMONT YANKEE PERMANENTLY DEFUELED EMERGENCY PLAN

REVISION SUMMARY

DATE	REVISION	DESCRIPTION
4/19/16	0	The analyses of the potential radiological impact of accidents while the plant is in a permanently defueled condition indicate that no design basis accident or reasonably conceivable beyond design basis accident will be expected to result in radioactive releases that exceed Environmental Protection Agency (EPA) Protective Action Guides (PAGs) beyond the site boundary. The slow progression rate of postulated event scenarios indicate sufficient time is available to initiate appropriate mitigating actions to protect the health and safety of the public. Therefore, the Permanently Defueled Emergency Plan adequately addresses the risk associated with VY's permanently defueled condition and continues to provide adequate protection for plant personnel and the public. Exemptions from the applicable portions of 10 CFR 50.47(b), Appendix E to 10 CFR Part 50 and 10 CFR 50.47(c)(2) were previously approved by the Nuclear Regulatory Commission (NRC). A copy of this document was submitted to the NRC for review and approval under a license amendment on June 12, 2014 (Ref: BVY 14-033). The NRC approved the PDEP upon issuance of License Amendment 264 dated December 11, 2015. Following License Amendment approval, changes were made prior to issuance. These include: • Update to procedure numbers to reflect new procedures issued to implement the PDEP • Update to Figure 4.1 to remove the Power Uprate Building • Various editorial changes through the PDEP

TABLE OF CONTENTS

APPENDICES Page

LIST OF TABLES

LIST OF FIGURES

1.0 INTRODUCTION

The Permanently Defueled Emergency Plan (PDEP) describes the station's plan for responding to emergencies that may arise at the Vermont Yankee Nuclear Power Station (VY) while in a permanently shutdown and defueled configuration. VY has provided certification to the Nuclear Regulatory Commission (NRC) required by 10 CFR 50.82(a)(1)(i) and (ii) that the station has permanently ceased operations and that all fuel has been permanently removed from the reactor vessel. In this configuration, all irradiated fuel is stored in the Independent Spent Fuel Storage Installation (ISFSI) and in the Spent Fuel Pool (SFP). In this condition, no reactor operations can take place and the station is prohibited from emplacement or retention of fuel in the reactor vessel. An analysis of the possible design basis events and consequences is presented in the evaluation of the Defueled Safety Analysis Report (DSAR) accident assessment. This PDEP adequately addresses the risks associated with VY's current conditions.

The analysis of the potential radiological impact of design basis accidents in a permanently defueled condition indicates that any releases beyond the Site boundary are below the Environmental Protection Agency (EPA) Protective Action Guide (PAG) exposure levels, as detailed in the EPA's "Protective Action Guide and Planning Guidance for Radiological Incidents," Draft for Interim Use and Public Comment dated March 2013 (EPA PAG Manual). Exposure levels, which warrant pre-planned response measures, are limited to onsite areas. For this reason, radiological emergency planning is focused onsite.

1.1. Purpose

The purpose of the PDEP is to assure an adequate level of preparedness by which to cope with a spectrum of emergencies that could be postulated to occur, including the means to minimize radiation exposure to plant personnel. This plan integrates the necessary elements to provide effective emergency response considering cooperation and coordination of organizations expected to respond to potential emergencies.

1.2. Scope

The PDEP has been developed to respond to potential radiological emergencies at VY considering the permanently shutdown and defueled status. Because there are no postulated design basis accidents that would result in dose consequences that are large enough to require offsite emergency planning, the overall scope of this plan delineates the actions necessary to safeguard onsite personnel and minimize damage to property. If determined appropriate by government officials, protective actions may be implemented to protect the public using an all hazards approach to emergency planning.

The concepts presented in this plan address the applicable regulations stipulated in 10 CFR 50.47, "Emergency Plans" and 10 CFR Part 50, Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities."

Exemptions to selected portions of 10 CFR 50.47(b), 10 CFR 50.47(c)(2) and 10 CFR Part 50, Appendix E were previously approved by the NRC.

2.0 DEFINITIONS

Alert – Events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of HOSTILE ACTION. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.

Assessment Actions – Those actions which are taken to effectively define the emergency situation necessary for decisions on specific emergency measures.

Code Red – A Security related contingency requiring the activation of the Security Response Team. This contingency shall, as a minimum cause an Unusual Event to be announced.

Committed Dose Equivalent (CDE) – The dose equivalent to organs or tissues of reference (e.g., thyroid) that will be received from an intake of radioactive material by an individual during the 50 year period following the intake.

Confinement Boundary – The barrier(s) between areas containing radioactive substances and the environment.

Corrective Actions – Those emergency measures taken to ameliorate or terminate an emergency situation.

Emergency Action Levels – A pre-determined, site-specific, observable threshold for an Initiating Condition that, when met or exceeded, places the plant in a given emergency classification level.

Emergency Classification – One of a set of names or titles established by the US Nuclear Regulatory Commission for grouping off-normal events or conditions according to (1) potential effects or consequences, and 2) resulting onsite and offsite response actions. The emergency classification levels, in ascending order of severity, are: UNUSUAL EVENT and ALERT.

Emergency Implementing Procedure – Specific action taken by the plant staff to activate and implement this Emergency Plan.

Emergency Operating Procedures – The outline of specific corrective actions to be taken by plant operators in response to abnormal operating conditions.

Emergency Response Organization – Organization comprised of assigned Vermont Yankee personnel who would respond and assist in a classified emergency situation.

Gai-Tronics – An intra-site station operation and public address system which consists of speakers and microphones located in areas vital to the operation of the station. The system has four channels which provide separate and independent page and intercommunication capabilities.

Hostile Action – An act toward an NPP or its personnel that includes the use of violent force to destroy equipment, takes hostages, and/or intimidates the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. HOSTILE ACTION should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the NPP. Non-terrorism-based EALs should be used to address such activities, (e.g., violent acts between individuals in the owner controlled area).

Independent Spent Fuel Storage Installation (ISFSI) – A complex that is designed and constructed for the interim storage of spent nuclear fuel and other radioactive materials associated with spent fuel storage.

Initiating Condition – An event or condition that aligns with the definition of one of the two emergency classification levels by virtue of the potential or actual effects or consequences.

Notification of Unusual Event – Events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs. Also referred to as an Unusual Event.

Projected Dose – The amount of radiation dose estimated at the onset of any accidental radiological release. It includes all the radiation dose the individual would receive for the duration of the release assuming that no protective measures were undertaken.

Protective Action – Those emergency measures taken to effectively mitigate the consequences of an accident by minimizing the radiological exposure that would likely occur if such actions were not undertaken.

Recovery Actions – Those actions taken after the emergency has been controlled in order to restore safe plant conditions.

Site – That property within the fenced boundary of Vermont Yankee which is owned by the Company.

Total Effective Dose Equivalent (TEDE) – The sum of the deep dose equivalent from external sources and the committed effective dose equivalent from internal exposures.

3.0 SUMMARY OF EMERGENCY PLAN

3.1. Overview of Permanently Defueled Emergency Plan

In the event of an emergency at the plant, actions are required to identify and assess the nature of the emergency and to bring it under control in a manner that protects the health and safety of plant personnel.

This plan describes the organization and responsibilities for implementing emergency measures. It describes interfaces with Federal, States of Vermont and New Hampshire, the Commonwealth of Massachusetts and local organizations which may be notified in the event of an emergency, and may provide assistance. Emergency services are provided by local public and private entities. Fire support services are provided by the Vernon and Brattleboro Fire Departments and Tri-State and Southwestern Fire Mutual Aid Networks. Law enforcement support services are provided by local, county, state, and federal law enforcement authorities, as appropriate. Ambulance service is provided by Rescue, Inc. Medical services are provided by Brattleboro Memorial Hospital.

Because there are no postulated design basis accidents that would result in off-site dose consequences that are large enough to require off-site emergency planning, emergencies are divided into two classifications: 1) Notification of Unusual Event (Unusual Event); and 2) Alert. This classification scheme has been discussed and agreed upon with responsible offsite organizations and is compatible with their respective emergency plans. According to the EPA PAG Manual, "Emergency Planning Zones (EPZs) are not necessary at those facilities where it is not possible for PAGs to be exceeded off-site." If determined appropriate by government officials, protective actions may be implemented to protect the public using an all hazards approach to emergency planning.

VY is responsible for planning and implementing emergency measures within the Site. This plan is provided to meet that responsibility. To carry out specific emergency measures discussed in this Plan, detailed emergency plan implementing procedures are established and maintained.

In addition to the description of activities and steps that can be implemented during an emergency, this Plan also provides a general description of the steps taken to recover from an emergency situation. It also describes the training, drills, planning, and coordination appropriate to maintain an adequate level of emergency preparedness.

3.2. Objectives

The basic objectives of this plan are:

1) To establish a system for identification and classification of the emergency condition and initiation of response actions;

2) To establish an organization for the direction of activity within the plant to limit the consequences of the incident;

3) To establish an organization for control of surveillance activities to assess the extent and significance of any uncontrolled release of radioactive material;

4) To identify facilities, equipment and supplies available for emergency use;

5) To establish an engineering support organization to aid the plant personnel in limiting the consequences of and recovery from an event;

6) To establish the basic elements of an emergency recovery program;

7) To specify a system for coordination with federal, state/commonwealth, and local authorities and agencies for offsite support organizations;

8) To develop a communications network between the plant and offsite authorities to provide notification of emergency situations;

9) To develop a training and Emergency Plan exercise program to assure constant effectiveness of the plan.

3.3. Actions in an Emergency

This Plan is activated by the Shift Manager upon identification of an emergency situation based upon Emergency Action Level (EAL) criteria. The emergency measures described in the subsequent sections and emergency plan implementing procedures are implemented in accordance with the classification and nature of the emergency at the direction of the Shift Manager. Regulatory authorities and offsite support organizations are notified in accordance with this Plan. The Shift Manager has authority and responsibility for control and mitigation of the emergency, including emergency response resources, coordination of radiological assessment activities, and recovery implementation.

If an emergency condition develops, the Shift Manager assumes the role of Emergency Director, including responsibilities for initiating emergency actions to limit the consequences of the incident and to bring the plant into a stable condition. The individual must:

1) Recognize the emergency condition by observation of EALs;

2) Classify the accident in accordance with the emergency classification system;

3) Initiate emergency procedure(s) applicable to the event;

4) Activate the plant emergency alarm system;

5) Notify authorities in Vermont, New Hampshire and Massachusetts using the InForm Notification System;

6) Notify the NRC using the Emergency Notification System (ENS);

7) Use the notification plan to notify appropriate personnel as set forth in Figure 9.1; and

8) Direct and coordinate all emergency response efforts until overall responsibility is assumed by the Emergency Director.

3.4. Emergency Response Facilities

The emergency response facilities, which are utilized by the Emergency Response Organization (ERO), are described in Section 6.0. Key site personnel are dispatched to perform accident assessments, implement corrective actions, and analyze accident data.

3.5. Mobilization

The mobilization scheme is based on the emergency notification system shown in Figure 9.1. The notification system utilizes the plant public address system (Gai-Tronics), dedicated telephone lines, and the ERO notification system to notify and mobilize plant personnel. The mobilization scheme ensures that specific technical disciplines can be augmented within appropriate time frames. On-site staff are informed of an emergency condition through the use of the plant public address system, office telephone and/or wireless devices capable of receiving telephone calls and text messages. In the event that personnel required to staff emergency positions are not on-site at the time an emergency is declared, they may be contacted by commercial telephone including land lines and/or wireless devices capable of receiving telephone calls and text messages. Mobilization of the ERO will be conducted under the direction of the Emergency Director, according to personnel assignments and telephone numbers maintained in various telephone directories. Section 8.2, Figure 8.1 and Table 8.1 outline the minimum staffing requirements for the ERO at VY.

3.6. State and Local Government Notification and Response

VY's Emergency Plan interfaces with the emergency response plans of Vermont, New Hampshire and the Commonwealth of Massachusetts. Vernon, Vermont, in coordination with the emergency management agencies of Vermont, maintains the capability to communicate on a 24-hour per day basis.

VY conveys specific accident information to the States of Vermont and New Hampshire and the Commonwealth of Massachusetts using the InForm Notification System.

A cooperative arrangement exists among the Vermont and New Hampshire and the Commonwealth of Massachusetts authorities and VY concerning radiological emergency preparedness. VY's emergency classification system and notification messages are reviewed with these States/Commonwealth on an annual basis.

3.7. Federal Government Notification and Response

Notification to the NRC is made using the ENS as soon as possible after State/Commonwealth notifications and within 60 minutes of event classification or change in classification. Once notified of an emergency, the NRC evaluates the situation and determines the appropriate NRC response. Depending on the severity of the accident and the emergency classification declared, the NRC activates their incident response operations in accordance with the NRC Incident Response Plan. If the emergency warrants, the NRC notifies the Federal Emergency Management Agency (FEMA) and other appropriate federal agencies to activate the federal emergency response organization in accordance with the National Response Framework (NRF). The NRF makes available the resources and capabilities of federal agencies to support plant, state and local governments, as necessary to respond to the specific nature of the emergency. Principal participants are the NRC, FEMA, Department of Energy (DOE), and Environmental Protection Agency (EPA).

3.8. Technical Support

In the event of an emergency that requires personnel and other support resources beyond those available within the VY organization, augmentation is available from other Entergy facilities and can be requested from various contractors. Additional technical and manpower support are provided to VY through support plans listed in Appendix E.

3.9. Mitigation of Consequences of Beyond Design Basis Events

Strategies to mitigate a loss of SFP inventory and prevent a zirconium fire are contained within AP-10090, "Loss of Large Areas of the Plant Due to Fire or Explosion." AP-10090 describes the equipment, resources (such as water supplies), procedures and strategies in place for movement of any necessary portable equipment that will be relied upon for prevention of a zirconium fire in the SFP. These mitigative strategies were developed as a result of NRC Order on Mitigative Strategies (EA-02-026) and implement the requirements of License Condition 3.N, "Mitigation Strategy License Condition."

4.0 SITE DESCRIPTION

4.1. Facility Description

VY is located on the west bank of the Connecticut River immediately upstream of the Vernon Hydrostation, in the town of Vernon, Vermont. VY consists of a permanently shutdown boiling water reactor having a thermal rated power of 1912 MWt. An ISFSI is located on the plant site. The station, shown in Figure 4.1, is located on about 125 acres in Windham County, and is owned by Entergy, with the exception of a narrow strip of land between the Connecticut River and the VY property for which it has perpetual rights and easements from the owner, New England Power Company.

The 10 CFR Part 50 license for VY no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel, as specified in 10 CFR 50.82(a)(2).

4.2. Area Characteristics and Land Use

The site is bounded by the Connecticut River (Vernon Pond) on the east, by farm and pasture land mixed with wooded areas on the north and south, and by the town of Vernon on the west. Most of the land around the site is undeveloped. The developed land is used for agriculture, dairying, and for residential areas within small villages. The nearest residence is 1,300 feet from the Reactor Building and is one of several west of the site. The Vernon Elementary School (approximate enrollment of 250 pupils) is about 1,500 feet from the Reactor Building. The nearest hospital, Brattleboro Memorial, is approximately five (5) miles north-northwest from the site.

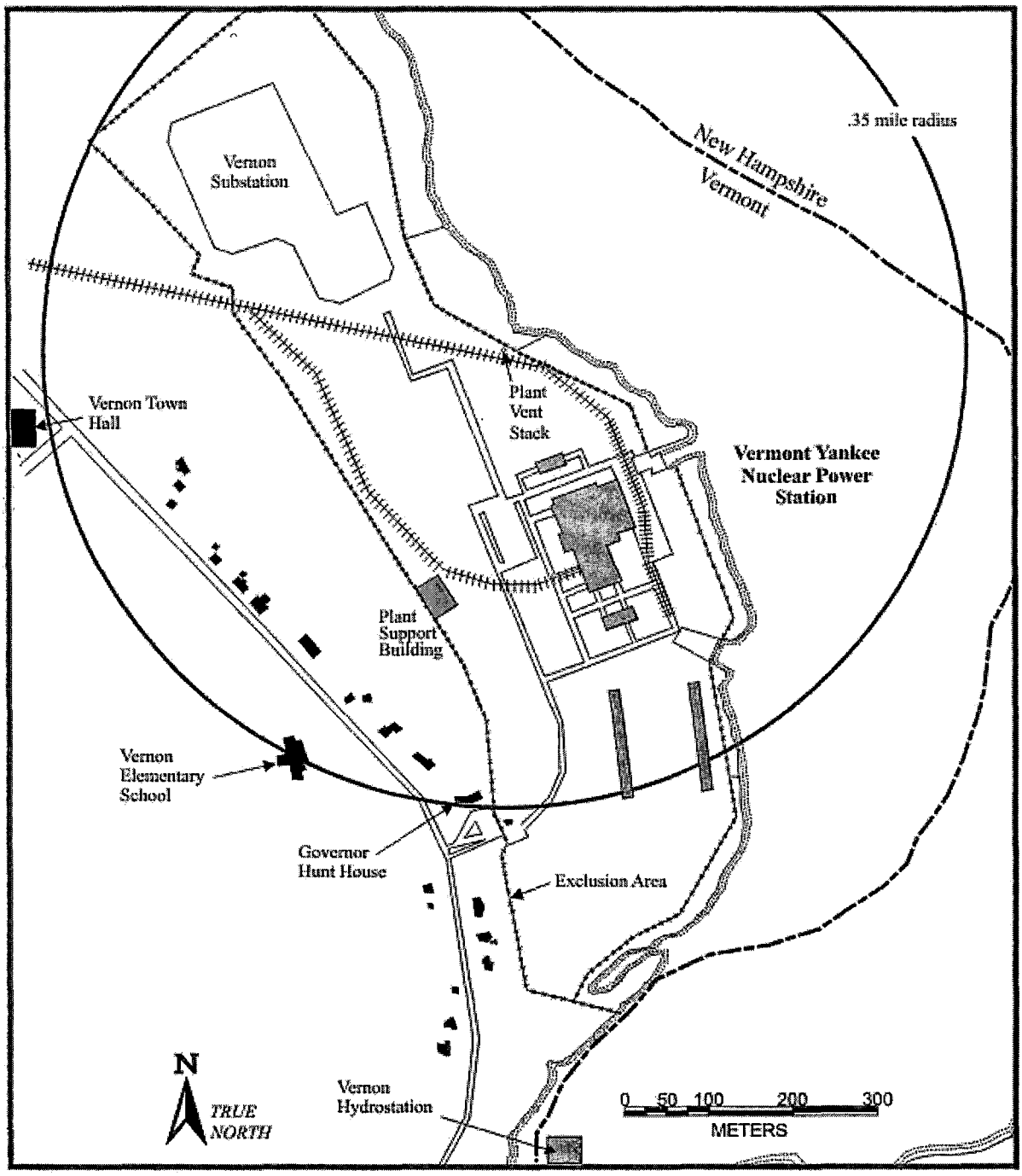

Figure 4.1

Vermont Yankee Site

5.0 EMERGENCY CLASSIFICATION SYSTEM

The emergency classification system covers an entire spectrum of possible radiological and non-radiological emergencies at VY. The emergency classification system categorizes accidents and emergency situations, according to severity, into two emergency classification levels: Unusual Event and Alert.

The incidents leading to each of the emergency classifications are further identified by certain measurable and observable indicators of plant conditions (EALs). EALs addressed in Appendix A aid the operator in recognizing the potential of an incident immediately and assure that the first step in the emergency response is carried out. The classification of the event may change as the conditions change. VY maintains the capability to assess, classify and declare an emergency condition in accordance with site procedures.

EALs and EAL bases were derived from NEI 99-01, "Development of Emergency Action Levels for Non-Passive Reactors" Rev. 6, for classifying emergencies. Specifically, Appendix C of NEI 99-01, Rev. 6 contains a set of Initiating Conditions/EALs for permanently defueled nuclear power plants that had previously operated under a 10 CFR Part 50 license and have permanently ceased operations. The classification system referenced in NEI 99-01, Rev. 6 has been endorsed by the NRC and provides a standard method for classifying emergencies.

5.1. Unusual Event

EVENTS ARE IN PROGRESS OR HAVE OCCURRED WHICH INDICATE A POTENTIAL DEGRADATION OF THE LEVEL OF SAFETY OF THE PLANT OR INDICATE A SECURITY THREAT TO FACILITY PROTECTION HAS BEEN INITIATED. NO RELEASES OF RADIOACTIVE MATERIAL REQUIRING OFFSITE RESPONSE OR MONITORING ARE EXPECTED UNLESS FURTHER DEGRADATION OF SAFETY SYSTEMS OCCURS.

Unusual Event conditions do not cause serious damage to the plant. The purpose of the Unusual Event declaration is to: 1) provide for an increased awareness of abnormal conditions; 2) ensure that the first step in any response later found to be necessary has been carried out; 3) bring the ERO to a state of readiness; 4) provide for systematic handling of information and decision-making, and 5) augment on-shift personnel, if deemed necessary by the Emergency Director.

See Appendix A for a complete list of EALs corresponding to an Unusual Event.

5.2. Alert

EVENTS ARE IN PROGRESS OR HAVE OCCURRED WHICH INVOLVE AN ACTUAL OR POTENTIAL SUBSTANTIAL DEGRADATION OF THE LEVEL OF SAFETY OF THE PLANT OR A SECURITY EVENT THAT INVOLVES PROBABLE LIFE THREATENING RISK TO SITE PERSONNEL OR DAMAGE TO SITE EQUIPMENT BECAUSE OF HOSTILE ACTION. ANY RELEASES ARE EXPECTED TO BE LIMITED TO SMALL FRACTIONS OF THE EPA PAG EXPOSURE LEVELS.

The purpose of the Alert declaration is to: 1) activate the Emergency Response Organization to perform event mitigation and radiation monitoring, if required, 2) provide the offsite authorities and the NRC with current information on plant status, and 3) ensure that all necessary resources are being applied to accident mitigation.

Plant responses associated with this event classification assure that sufficient emergency response personnel are mobilized and respond to event conditions. Actual releases of radioactivity which exceed Technical Specification limits may be involved, thus radiation monitoring and dose projection may be required.

See Appendix A for a complete list of EALs corresponding to an Alert.

5.3. Emergency Classification System Review by State Authorities

The emergency classification system specified above and the EALs presented in Appendix A, are reviewed with the authorities of Vermont, New Hampshire and Massachusetts annually.

6.0 EMERGENCY RESPONSE FACILITIES AND EQUIPMENT

Following the declaration of an emergency, the activities of the emergency response organization are coordinated in the Control Room. Descriptions of VY facilities and assessment capabilities are presented below.

6.1. Control Room/Administration Building

The Control Room is where plant systems and equipment parameters are monitored. Control Room personnel assess plant conditions, evaluate the magnitude and potential consequences of abnormal conditions, initiate preventative, mitigating and corrective actions and perform notifications. The Control Room is the onsite center for emergency command and control.

The Control Room crew coordinates all phases of emergency response and corrective action required to restore the plant to a safe condition. Classification and subsequent declaration of the appropriate emergency condition by the Shift Manager results in activation of the ERO. The Control Room staff's attention focuses on mitigating the emergency as the ERO reports and is delegated emergency functions.

When activated, the ERO reports to the Emergency Director to assist the on-shift staff in the assessment, mitigation and response to an emergency and to support the dispatch of emergency teams. The composition of the ERO is addressed in Section 8.2.

ERO activation may be modified or suspended if the safety of personnel may be jeopardized by a security event or other event hazardous to personnel.

The Control Room and Administration Building contain communications equipment, emergency radiation monitoring equipment, emergency respiratory devices, and an emergency kit containing protective clothing and other supplies. The ERO has access to up-to-date technical documentation, including drawings, system information and procedures to enable mitigation planning and support of Control Room staff.

A general assembly area for emergency mitigation and radiation protection personnel is maintained in the Control Room/Administration Building.

6.2. Assessment Capability

The activation of the Emergency Plan and the continued assessment of accident conditions require monitoring and assessment capabilities. VY maintains and operates on-site monitoring systems needed to provide data that is essential for initiating emergency measures and performing accident assessment, including dose assessment and assessing the magnitude of a release. This includes monitoring systems for plant processes, radiological conditions, meteorological conditions, and fire hazards. The essential monitoring systems needed are incorporated in the EALs specified in Appendix A. This section briefly describes monitoring systems as well as other assessment capabilities.

6.2.1. Process Monitors

Annunciator and computer alarms are provided for a variety of parameters including the SFP cooling system to indicate SFP level, temperature and pump status.

The manner in which process monitors are used for accident recognition and classification is given in the detailed EAL listings in Appendix A.

6.2.2. Radiological Monitors

A number of radiation monitors and monitoring systems are provided on process and effluent liquid and gaseous lines that serve directly or indirectly as discharge routes for radioactive materials. These monitors, which include Control Room readout and alarm functions, exist in order that appropriate action can be initiated to limit fuel damage and/or contain radioactive material. The equipment 1) provides radiological surveillance capabilities; 2) warns personnel of a radiological release; 3) provides warning of certain plant malfunctions which might lead to a radiological release; and 4) prevents, or minimizes, the effects of an accidental release of radioactivity to the environment.

Plant instrumentation provide personnel in the Control Room with the following parameters necessary to perform dose assessment and determine the magnitude of a potential release:

- Gaseous and liquid effluent monitor readings
- Radiation levels
- SFP area radiation levels

Specific details on these monitoring systems such as location, type, etc., are contained in the DSAR.

In addition to installed monitoring systems, VY has augmented onsite radiological assessment capability, including portable radiation and contamination monitoring instruments and sampling equipment.

6.2.3. Meteorological Capability

The meteorological equipment at the site consists of wind-speed and direction transmitters, signal translators, and recorders. In addition, the temperature measurement consists of recorders and resistance temperature detectors (RTDs). RTDs are used to monitor ambient temperature and calculate differential temperature.

Meteorological data is displayed in the Control Room. These meteorological data are used to determine the projected radiological conditions in the event of an accidental release of radioactivity to the environment.

In addition, VY has the capability to access additional meteorological information through offsite support services. This information can be forwarded to VY upon request.

6.2.4. Fire Detection and Suppression Equipment

The fire protection system has been designed to detect and extinguish potential fires. The system is designed in accordance with the standards of the National Fire Protection Association (NFPA) and recommendations of the Nuclear Electric Insurance Limited (NEIL). Fire detectors are located throughout the plant with alarms and indicators in the Control Room. The fire protection system is described in the Vermont Yankee Fire Protection Program.

6.2.5. Assessment Facilities and Equipment

Vermont Emergency Management provides reports concerning natural occurrences or severe weather conditions that may affect the plant area. Offsite fire departments of Vernon and Brattleboro notify the plant of any fire which might have an impact on the plant. Local Law Enforcement Agencies notify Plant Security of any situation in the area which might have an impact on the plant.

VY maintains an offsite environmental monitoring program. Radiological environmental monitoring stations for the site and surrounding area monitor the environment under normal and accident conditions. Radiological environmental monitoring stations have been established in accordance with Technical Specification requirements.

VY has access to outside analytical assistance and laboratory facilities from other non-affected Entergy nuclear sites, State and Federal agencies and other utilities. Environmental laboratory analytical and dosimetry services are described in Appendix C.

The above facilities have the capability to perform laboratory analyses of various environmental samples (e.g., terrestrial, marine and air). It is also estimated that the analytical assistance and laboratory support will be able to respond within four (4) to eight (8) hours from initial notification.

7.0 COMMUNICATIONS

Various modes of communication are available to plant staff to transmit information within VY and to various locations offsite during normal and emergency conditions.

A summary of the communication systems is defined in the communication matrix provided in Table 7.1 and outlined below.

7.1. InForm Notification System

The InForm Notification System is located in the Control Room. InForm consists of source and destination computers that take advantage of the internet to send Emergency Notification Forms to the States of Vermont, New Hampshire and the Commonwealth of Massachusetts.

This system is staffed on a 24-hour basis on both ends – the Control Room and the State Police dispatching points. InForm performs self-checks at frequent intervals and has the ability to notify personnel of any problems identified during the self-check. InForm is tested monthly between the Control Room and the State/Commonwealth Police dispatching points.

Backup to the InForm Notification System is the Nuclear Alert System (NAS).

7.2. Nuclear Alert System

The NAS can be used to notify the State/Commonwealth Police of Vermont, New Hampshire and Massachusetts of any emergency. This system is a secure (dedicated) communications arrangement.

This system is staffed on a 24-hour basis in the Control Room and by the State/Commonwealth Dispatching Points. The NAS is tested monthly between the plant and the State/Commonwealth agencies.

The NAS links the Control Room and the Vermont Emergency Operations Center.

Backup to the NAS phone system is the commercial phone system.

7.3. ERO Notification System

The ERO notification system is the primary means to activate the ERO upon declaration of an emergency, as directed by the Emergency Director. In the event that personnel required to staff emergency positions are not on-site at the time an emergency is declared, they may be contacted by commercial telephone including land lines and/or wireless devices capable of receiving telephone calls and text messages. Telephone numbers are maintained in various telephone directories. This system is tested as described in Section 12.1.2.

7.4. Mobile UHF Radio System

The Mobile UHF Radio System is utilized as a primary means of communications for security personnel; it is the alternate means of communications between the Control Room and onsite response teams. The System consists of UHF repeaters with high gain antennas. These repeaters are activated by base radio stations. Also, the portable units activate the repeater. In the event the repeater fails, a "talk around" feature allows continued communications between portable units. This system is tested daily through operational use of the system.

Security also has the capability to contact the primary local law enforcement agency patrol vehicle(s), as defined in the VY Physical Security Plan, that are located in close proximity to the plant via radio.

7.5. Plant Intercom System

The Intercom System (Gai-Tronics) is located in many areas throughout the plant, including the Control Room and Security Gates. This system consists of five channels and is utilized as a paging system and for communications with the refuel bridge. During emergency situations, the system is used as the primary means for: (1) notifying plant personnel of the emergency, (2) coordinating the activities of onsite response teams with the Control Room; and (3) calling for any missing or unaccounted for personnel that may be in the plant. This system is in continuous daily use.

7.6. NRC Telephone System

The NRC has utilized the Federal Telecommunications System (FTS) telephone network for its emergency telecommunications system. The FTS system provides a separate (public cannot access) government telephone network which avoids potential public telephone blockage which may occur in the event of a major emergency.

The ENS utilizes an FTS line which exists between the NRC Operations Office in Rockville, Maryland and the Control Room. Emergency notification, plant status information and radiological information are communicated via the ENS. The ENS is tested daily by the NRC and has a 24-hour manning capability at both organizations.

7.7. Commercial Telephone System

The commercial telephone system is used as a primary and alternate means of communications for notification and coordination. For conditions involving telephone company equipment blockage in the local area, alternate external telephone line arrangements have been made available to the plant. This system is tested daily through operational use of the system.

7.8. Mutual Aid Radio

The Mutual Aid Radio is a multi-channel radio that can be utilized to contact Southwest Mutual Aid; Rescue, Inc.; Brattleboro Memorial Hospital; and the State EOCs in the event that all other offsite channels of communication fail. Periodic testing of this system is described in Section 12.1.2.

7.9. Emergency Power Supply for Communications

Currently there are several telephone and other emergency communication channels (radio network and Internet Protocol (IP) telephones) located within the plant that are connected to an emergency or redundant power supply. All emergency communications (Gai-Tronics, radio network, and IP telephones) located within the plant have a backup communications system or are connected to a redundant power supply.

There are power fail phones located in the Control Room, which will automatically activate if power is lost to the internal telephone system.

TABLE 7.1

VERMONT YANKEE EMERGENCY COMMUNICATIONS MATRIX

	CR
Site Boundary Monitors	1, 3
Nuclear Regulatory Commission	1, 4
State/Commonwealth Police (VT, NH, MA)	1, 2, 8
State/Commonwealth EOCs (VT, NH, MA)	1, 2, 7, 8
Vermont Yankee Plant Security	1, 3, 5
Vermont Yankee Emergency Response Personnel	1, 6

KEY

1. Commercial Telephone System
2. NAS
3. Mobile UHF Radio System
4. ENS (FTS)
5. Gai-Tronics
6. ERO notification system
7. Mutual Aid Radio
8. InForm

8.0 ORGANIZATION

This section describes how the normal plant and engineering support organization transform into an emergency response organization to effectively deal with any incident at VY.

8.1. Normal Plant Organization

The personnel and resources of VY's normal plant and management organization consist of the onsite facility organization supported by engineering and management resources available offsite. The relationship and content of these onsite and offsite organizations are specified in the plant Technical Specifications and the Vermont Yankee Nuclear Power Station Quality Assurance Program Manual.

The minimum staff required to conduct routine and immediate emergency mitigation is maintained at the station. During normal conditions, the minimum staff on duty at the plant during all shifts consists of one (1) Shift Manager, one (1) Non-Certified Operator, one (1) Radiation Protection Technician and security personnel as indicated in Figure 8.1 and Table 8.1. The responsibility for monitoring the status of the plant and approving all onsite activities is assigned to the Shift Manager. When an abnormal situation becomes apparent, the Shift Manager shall assume the position of Emergency Director once the emergency classification has been made. Additional personnel are available on an on-call basis to respond to plant emergencies.

8.1.1. Shift Manager/Emergency Director

The Shift Manager is at the station 24 hours a day and is the senior management position at the station during off-hours. The Shift Manager shall assume the position of Emergency Director once the emergency classification has been made.

This position is responsible for monitoring conditions and approving all onsite activities and has the requisite authority, management ability, technical knowledge, and staff to manage the site emergency and recovery organization. The Emergency Director is responsible for the direction of the total emergency response and has the company authority to accomplish this responsibility.

The Emergency Director cannot delegate the following responsibilities:

1. Classification of event

2. Approval of emergency notification (although the task of making notifications may be delegated)

3. Authorization of radiation exposures in excess of 10 CFR Part 20 limits

Other responsibilities assumed by the Emergency Director include:

1. Notification of the emergency classification to the NRC and States of Vermont, New Hampshire and the Commonwealth of Massachusetts
2. Management of available station resources
3. Initiation of mitigating actions
4. Initiation of corrective actions
5. Initiation of onsite protective actions
6. Decision to call for offsite police, fire or ambulance assistance
7. Augment the ERO staff as deemed necessary
8. Coordinate Security activities
9. Terminate the emergency condition when appropriate
10. Performance of initial Dose Assessment
11. Maintain a record of event activities

8.1.2. Non-Certified Operator

The Non-Certified Operator performs system and component manipulations. The organizational relationship to the Shift Manager/Emergency Director is the same during normal and abnormal situations.

8.1.3. Radiation Protection Technician

The Radiation Protection Technician is available to monitor personnel exposure, determine if radiological conditions preclude access to areas necessary to maintain SFP cooling, and to provide timely field survey results, if necessary.

8.1.4. Security

Security staffing is maintained in accordance with the Security Plan. The Security Force will report to the Emergency Director when implementing the PDEP.

During non-security events, Security will activate the station ERO callout system and perform accountability at the direction of the Emergency Director.

8.2. Emergency Response Organization

The VY ERO is activated at an Alert classification. However, it can be activated in part or in whole at the discretion of the Emergency Director for an Unusual Event.

Plans and procedures are in place to ensure the timely activation of the ERO. The goal of the ERO is to augment the on-shift staff within 2 hours of an Alert classification. Due to the slow rate of the postulated event scenarios in the accident analysis and the ability of the on-shift staff to implement the Emergency Plan, the ERO augmentation goal of 2 hours is appropriate. The designated on-shift and augmented VY ERO staff are capable of continuous (24-hour) operations for a protracted period.

The minimum augmented staff consists of a Technical Coordinator and a Radiation Protection Coordinator. Augmented staff provides the technical expertise required to assist the Emergency Director. The on-shift staff is augmented by additional personnel that report as directed after receiving notification of an emergency requiring augmented staff. Designated members of the on-shift staff fulfill roles within the ERO appropriate with their training and experience. For example, Radiation Protection personnel would be expected to undertake radiation protection activities, Security personnel would undertake security activities, engineering personnel would focus on plant assessment, provide technical support and assist in recovery operations as designated by the Technical Coordinator, and Operations personnel would focus on plant operations. The VY ERO is illustrated in Figure 8.1.

8.2.1. Technical Coordinator

The Technical Coordinator reports to the Emergency Director. During an emergency, the responsibilities of the Technical Coordinator include:

1. Evaluate technical data pertinent to plant conditions
2. Augment the emergency staff as deemed necessary
3. Designate engineering support, as necessary, to evaluate plant conditions and provide technical support
4. Recommend mitigating and corrective actions
5. Direct search and rescue operations
6. Coordinate maintenance and equipment restoration
7. Establish and maintain communications as desired by the Emergency Director
8. Maintain a record of event activities

8.2.2. Radiation Protection Coordinator

The Radiation Protection Coordinator reports to the Emergency Director. During an emergency, the responsibilities of the Radiation Protection Coordinator include:

1. Monitor personnel accumulated dose
2. Advise the Emergency Director concerning Radiological EALs
3. Augment the emergency staff as deemed necessary
4. Direct radiological monitoring and analysis
5. Dose Assessment
6. Establish and maintain communications as desired by the Emergency Director
7. Maintain a record of event activities

8.2.3. Extensions of the Vermont Yankee Emergency Response Organization

8.2.3.1. Local Services

Arrangements have been made for the extension of the ERO's capability to address emergencies. The following arrangements are in place through letters of agreement for ambulance services, treatment of contaminated and injured patients, fire support services, and law enforcement response as requested by the station:

1. Transportation of injured personnel using an ambulance service;
2. Treatment of radioactively contaminated and injured personnel at a local support hospital (Brattleboro Memorial) as specified in the local support hospital plans; and
3. Fire support services by the Vernon and Brattleboro Fire Departments and the Tri-State and Southwestern Fire Mutual Aid Networks.
4. Law enforcement support services provided by local, county, state, and federal law enforcement authorities as appropriate and response capabilities are documented in the letters of agreement maintained by Security.

Evidence of agreements with participating local services is addressed in Appendix D; the Vermont Yankee Fire Protection Program; and the Annual Law Enforcement Letters of Agreement (Safeguards Information) maintained by Security.

8.2.3.2. Federal Government Support

Resources of federal agencies appropriate to an emergency condition are made available in accordance with the National Response Framework. This plan and the resources behind it are activated through the plant notification of the NRC.

8.2.3.3. Additional Support

Dependent upon the emergency condition and response needs, the VY ERO can be augmented by manpower and equipment support from the remainder of the Entergy Nuclear organization. This support capability is outlined in the VY procedures referenced in Appendix E.

8.2.4. Recovery Organization

The emergency measures presented in this plan are actions designated to mitigate the consequences of the accident in a manner that affords the maximum protection to plant personnel. Planning for the recovery mode of operations involves the development of general principles and an organizational capability that can be adapted to any emergency situation. Upon termination of an emergency and transition into the recovery phase, the Emergency Director assembles the recovery organization to address the specific emergency circumstances of the terminated event.

The Emergency Director directs the recovery organization and is responsible for:

1. Ensuring VY is maintained in a safe condition;

2. Managing onsite recovery activities during the initial recovery phase;

3. Keeping corporate support apprised of VY activities and requirements.

The remainder of the recovery organization consists of the normal plant and emergency organizations described in Sections 8.1 and 8.2, as necessary, to provide the radiological and technical expertise required to assist the Emergency Director restore the plant to normal conditions.

The following is a brief summary of the recovery organization's responsibilities:

1. Maintain comprehensive radiological surveillance of the plant to assure continuous control and recognition of problems;

2. Control access to the area and exposure to workers;

3. Decontaminate affected areas and/or equipment;

4. Conduct clean-up and restoration activities;

5. Isolate and repair damaged systems;

6. Document all proceedings of the accident and review the effectiveness of the emergency organization in reducing public hazard and/or plant damage.

The organization relies on plant staff and/or resources to restore the plant to normal conditions. The expertise provided through the support plans is available to aid with the necessary corrective actions required to control and/or restore normal plant status.

When plant conditions allow a transition from the emergency phase to the recovery phase, the Emergency Director conducts a plant emergency management meeting to discuss the recovery organization. The actions taken by this organization concerning termination of the emergency proceeds in accordance with a recovery plan developed specifically for the accident conditions.

8.3. Coordination with State Government Authorities

Section 7.0 describes the communications network between VY and the States of Vermont, New Hampshire and the Commonwealth of Massachusetts as a means of promptly notifying appropriate authorities under accident conditions.

The Shift Manager initiates notification of Vermont, New Hampshire and Massachusetts authorities, providing them with applicable information utilizing an established message format that describes the accident status and response actions underway. The Emergency Director, or designee, issues periodic reports to State/Commonwealth authorities.

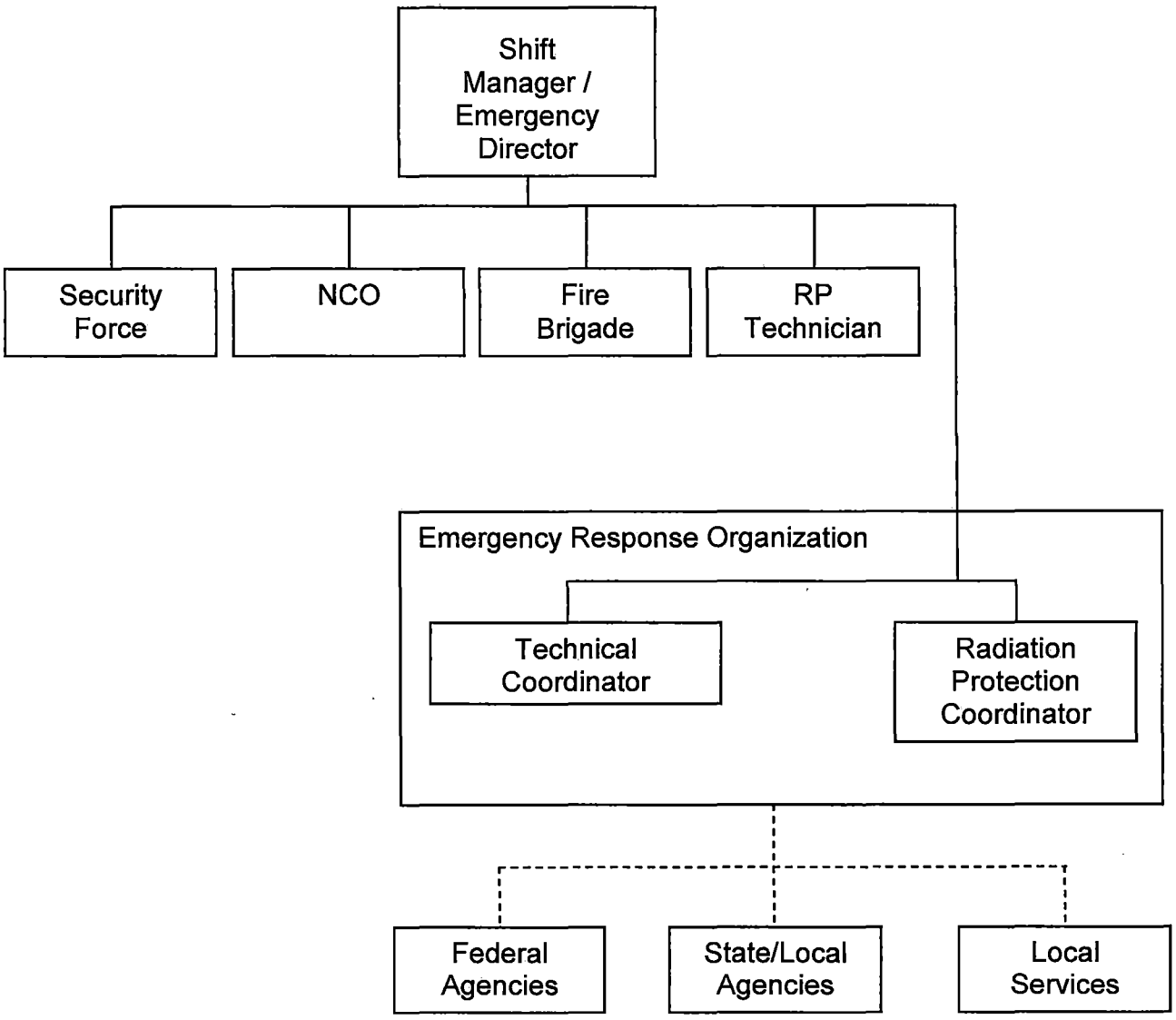

Figure 8.1

Normal On-Shift and Emergency Response Organization

Table 8.1

Minimum On-Shift and ERO Staffing Requirements

MAJOR FUNCTIONAL AREA	MAJOR TASKS	LOCATION	VY EMERGENCY POSITION, TITLE, OR EXPERTISE	ON-SHIFT	VY AUGMENTED STAFF CAPABILITY FOR RESPONSE IN 2 HOURS
Plant Operations and assessment of Operational Aspects / Fire Brigade	Plant Equipment	Control Room	Non-Certified Operator*	1	-
Emergency Direction and Control	Emergency Director	Control Room	Shift Manager*	1	-
Notification/Communication	Notify Licensee, State, local and Federal personnel and maintain communications	Control Room			-
Radiological Accident Assessment and Support of Operational Accident Assessment	Onsite Dose Assessment and Monitoring	As Directed by the Emergency Director	Radiation Protection Coordinator	-	1 (may augment the ERO with Radiation Monitoring Personnel as deemed necessary)
Protective Actions (In-Plant)	In-Plant Surveys Radiation Protection a. Access Control b. HP Coverage for Repair, Corrective Actions, Search and Rescue, First Aid, and Firefighting c. Personnel Monitoring d. Dosimetry	On-Scene	Radiation Protection Technician*	1	-
Plant Condition Evaluation, Repair, and Corrective Action	Technical Support Repair, Mitigation, and Corrective Action Develop strategies for search and rescue and firefighting	As Directed by the Emergency Director	Technical Coordinator	-	1 (may augment the ERO with technical support and emergency repair personnel as deemed necessary)
Firefighting	Firefighting	On-Scene	Fire Brigade	Per the Fire Protection Plan	-
Fire Team Leader Rescue Operations/ First Aid	Fire Fighting Rescue and First Aid	On- Scene	Fire Brigade	Per the Fire Protection Plan	-
Site Access Control and Accountability	Security, Firefighting, Communications, and Personnel Accountability	Per the Physical Security Plan	Security Personnel	Per the Physical Security Plan	-

* On-Shift personnel required to direct or perform site-specific mitigation strategies required for a catastrophic loss of SFP inventory

9.0 EMERGENCY RESPONSE

9.1. Emergency Condition Recognition and Classification

VY maintains the capability to assess, classify, and declare an emergency condition, in accordance with plant procedures, within 30 minutes after the availability of indications to plant operators that an emergency action level threshold has been reached.

Section 5.0 presents the emergency classification system used for categorizing the wide spectrum of possible emergency conditions into one of two emergency classes. The process of condition recognition, immediate response to correct the condition, event classification, and initiation of the appropriate emergency implementing procedures are critical responsibilities of the Shift Manager and the on-shift crew.

Site procedures contain the listing of conditions that represents each of the two emergency categories and the detailed EALs that allow the Shift Manager to determine the emergency classification. Once the emergency is classified, the applicable emergency implementing procedure is initiated, the ERO is activated and the notification of offsite authorities is initiated. The activation of the ERO brings to the assistance of the on-shift personnel the various support elements described in this plan. Specific support elements are implemented as detailed in the emergency implementing procedures. See Appendix E for a listing of these procedures.

9.2. Activation of the Emergency Response Organization

Classification of an accident condition requires that the plant staff recognize that pre-established EALs associated with an emergency condition, as defined in Appendix A, have been reached or exceeded. Depending upon the specific action levels attained, the Shift Manager declares one of the following: Unusual Event or Alert. The Shift Manager activates the ERO if plant conditions reach predetermined EALs.

9.2.1. Unusual Event Response

Appendix A defines the conditions that require the declaration of an Unusual Event. An Unusual Event does not activate the ERO, but may require augmentation of on-shift resources to address the event. Offsite emergency organizations are notified for informational purposes, and aid from offsite fire, medical, and security organizations may be required depending on the nature of the event.

The response required as a result of this declaration of an Unusual Event varies according to the specified event, but a general summary of actions taken is described below:

1. The emergency condition is recognized and classified by the Shift Manager who instructs Control Room personnel to announce the emergency classification over the plant page system;

2. The on-duty and selected plant personnel respond as directed by the Shift Manager and assume assigned functions;

3. Control Room personnel notify the Vermont, New Hampshire and Massachusetts authorities;

4. The NRC is notified;

5. Other support is requested as necessary;

6. The Emergency Call-in Method is implemented as shown in the notification plan (Figure 9.1);

7. Additional personnel report to the plant as requested by the Shift Manager;

8. The Shift Manager/Emergency Director directs the activities of emergency response personnel;

9. If necessary, appropriate emergency medical, fire department, or law enforcement agencies are notified and requested to respond;

10. The public information representative is notified and handles public information associated with the event; and

11. The Shift Manager/Emergency Director terminates the Unusual Event status and closes out the event with a verbal summary to offsite authorities or escalates to higher level emergency classification.

The Unusual Event status will be maintained until an escalation in emergency class occurs or the event is terminated. Offsite authorities will be informed of the change in the emergency status and the necessary documentation will be completed as specified in site procedures.

9.2.2. Alert Response

An Alert requires actions to assure that sufficient emergency response personnel are mobilized to respond to the accident conditions at the site. Notification is made to State/Commonwealth officials and follow-up information is provided as needed to offsite emergency organizations. In an Alert, the steps listed in the Unusual Event Response section (except for the termination process) and the following are performed:

1. ERO report to the Emergency Director;

2. The Emergency Director/Shift Manager directs the evacuation of all visitors and unnecessary contractors from the plant;

3. If sufficient personnel are not available onsite, off-duty personnel are called in as specified in the emergency implementing procedures;

4. The Emergency Director assumes total responsibility for overall emergency response actions and recovery;

5. The Emergency Director reaches agreement with offsite authorities concerning de-escalation or termination of the event, and closes out the event by verbal summary to offsite authorities. If an event is a reportable occurrence, a written summary is issued to these authorities in an appropriate time frame through distribution by the Emergency Director.

The Alert status shall be maintained until termination of the event or de-escalation in emergency class occurs. The plant may enter recovery operation without de-escalating from a declared Alert. Off-site authorities will be informed of the change in the emergency status and the necessary documentation shall be completed as specified in site procedures.

9.3. Emergency Termination Criteria

An extensive review of plant parameters including SFP parameters and process and radiation monitoring systems, in conjunction with the pre-established EALs is required to terminate an emergency.

When plant conditions allow de-escalation in the emergency class, the Emergency Director directs the emergency response organization to perform certain response actions prior to implementing any change. These actions include:

1. Notification of all plant emergency management personnel of the pending change;

2. Notification of offsite authorities of the pending change;

3. Notification of corporate support services of the pending change;

4. Coordination of media releases concerning the transition; and

5. Announcement of the transition over the plant page system.

Termination of an emergency status is the responsibility of the Emergency Director. The decision will be based on the following considerations:

1. Conditions no longer meet an EAL and it appears unlikely that conditions will deteriorate;

2. Plant releases of radioactive materials to the environment are under control (within Technical Specifications);

3. In-Plant radiation levels are stable or decreasing, and are acceptable given plant conditions;

4. Operability and integrity of power supplies, electrical equipment and plant instrumentation including radiation monitoring equipment is acceptable;

5. All required notifications have been made;

6. Radiological and plant conditions permit resumption of normal occupational exposure limits to continue mitigation/repair activities.

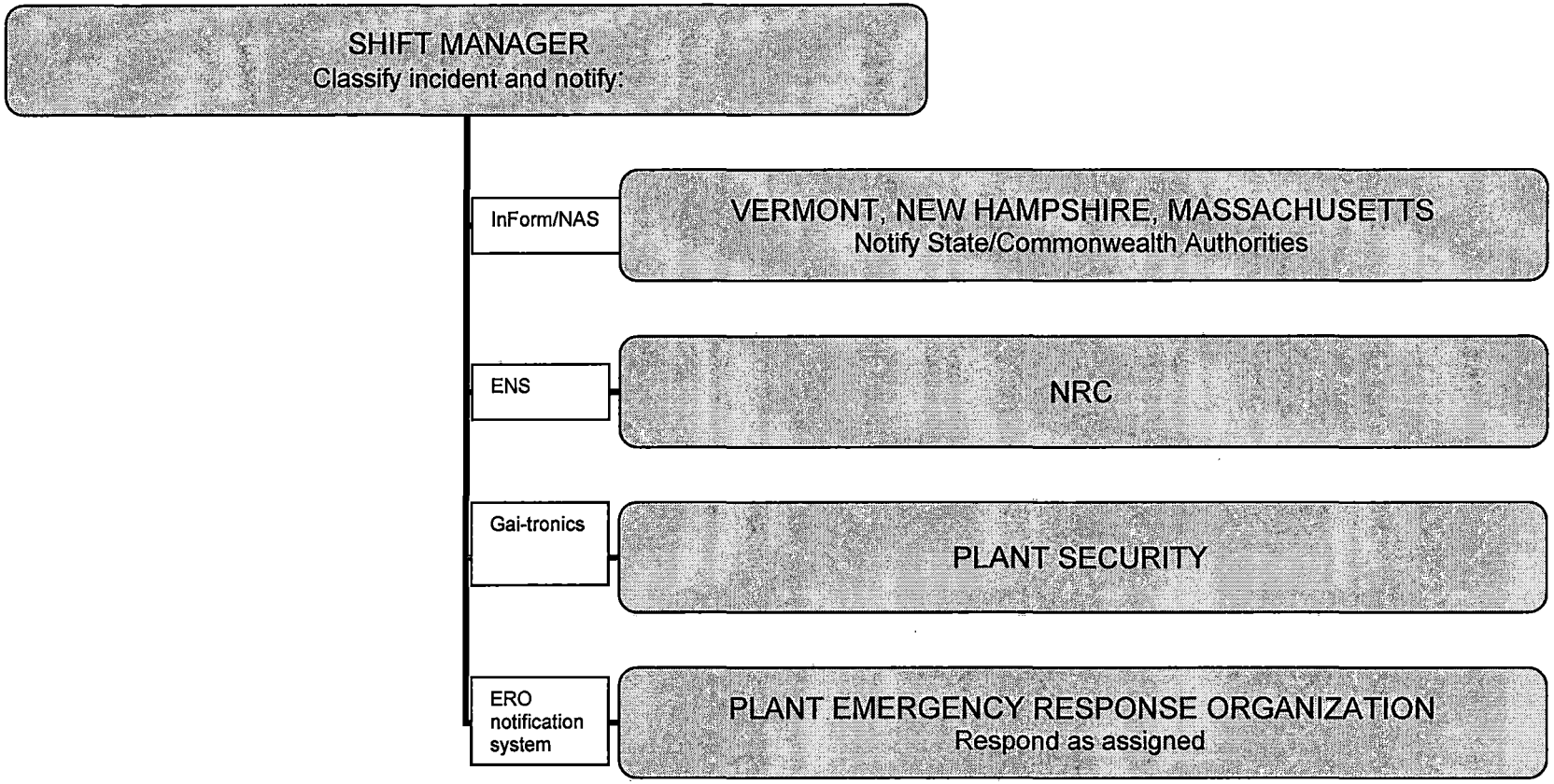

Figure 9.1

Notification Plan

10.0 RADIOLOGICAL ASSESSMENT AND PROTECTIVE MEASURES

10.1. Radiological Assessment

10.1.1. Initial Radiological Dose Projection

VY has developed a method to quickly determine the projected radiological conditions at the Site boundary. During the initial stages of an emergency, the Shift Manager or designated individual is responsible to perform the initial evaluation of radiological conditions. The initial evaluation is accomplished in accordance with site procedures.

10.2. Radiological Exposure Control

During a plant emergency, abnormally high levels of radiation and/or radioactivity may be encountered by plant personnel. All reasonable measures shall be taken to control the radiation exposure to emergency response personnel providing rescue, first aid, decontamination, emergency transportation, medical treatment services, or corrective or assessment actions within applicable limits specified in 10 CFR Part 20.

Table 10.1 specifies the guidelines on emergency dose limits for personnel providing emergency response duties consistent with Table 2-2, "Response Worker Guidelines," provided in the EPA PAG Manual. The Shift Manager/Emergency Director has the responsibility to authorize emergency dose commitments in excess of 10 CFR Part 20 limits. This authorization is coordinated with the assistance of the Radiation Protection Coordinator. Exposure to individuals providing emergency functions will be consistent with the limits specified in Table 10.1 with every attempt made to keep exposures As Low As Reasonably Achievable (ALARA).

The Radiation Protection Coordinator is responsible for developing emergency radiological protection programs for ERO and augmented personnel. Emergency kits are provided with self-reading dosimeters. Each member reporting to the site will be provided a Dosimeter of Legal Record (DLR). Dose records will be maintained based upon the results of the self-reading dosimeters. This information is cross-referenced with the DLR data. The capability exists for the emergency processing of DLRs on a 24-hour per day basis. Emergency workers are instructed to read self-reading dosimeters frequently, and DLRs may be processed with increased periodicity.

10.3. Protective Measures

10.3.1. Site Personnel Accountability

The goal of the personnel accountability process is to account for personnel within 60 minutes of an Alert declaration. Accountability for an Unusual Event is at the discretion of the Emergency Director. Plant procedures require Security personnel to maintain a list of personnel entering or leaving the site during a site evacuation. In accordance with site procedures, following announcement of an emergency classification, plant personnel are responsible for reporting to designated areas and aiding Security in the accountability process.

The Emergency Director, Technical Coordinator and Radiation Protection Coordinator are responsible for accounting for their staff. An organizational sign-in method which enhances this reporting process is maintained. All reports are provided to the Emergency Director, who initiates search and rescue actions for any missing personnel. Plant security provides assistance for this accountability effort and aids in the control of personnel during extended emergency operations. If personnel are not accounted for, the Control Room is notified and announcements are made using the plant page system. If personnel are still unaccounted for following Control Room announcements, Security will initiate sweeps to locate the missing individuals.

Accountability may be modified or suspended if the safety of personnel may be jeopardized by a Security event or other event hazardous to personnel.

10.3.2. Site Egress Control Methods

All visitors and unnecessary contractors are evacuated from the plant upon an Alert declaration. All personnel are monitored for radioactive contamination prior to leaving the site. Portable radiation survey meters are available to frisk personnel for suspected contamination. If a Code Red Security event has been declared, evacuation and accountability may put personnel at risk. In these security situations, evacuation and accountability may be suspended until directed by Security.

Plant evacuees are advised of evacuation procedures prior to being released.

10.3.3. Contamination Control and Decontamination Capability

During emergency conditions, VY maintains normal plant decontamination and contamination control measures as closely as possible. However, these measures may be modified by the Emergency Director should conditions warrant.

VY maintains contamination control measures to address area access control, drinking water and food supplies, and the return of areas and items to normal use.

a. Contaminated areas are isolated as restricted areas with appropriate radiological protection and access control. Personnel leaving contaminated areas are monitored to ensure both themselves and their clothing are not contaminated. Supplies, instruments, and equipment that are in contaminated areas or have been brought into contaminated areas will be monitored prior to removal. Items found to be contaminated, will be decontaminated using normal plant decontamination techniques and facilities or may be disposed of as radioactive waste.

b. Should the potential exist for contamination of on-site food or drinking water supplies that renders these supplies non-consumable, VY will make arrangements for transport of non-contaminated off-site supplies.

c. VY permits areas and items to be returned to normal use following conduct of appropriate surveys and verification that contamination levels have returned to acceptable levels.

VY maintains an in-plant decontamination facility. Waste generated through the use of this system is collected and processed by the plant liquid radwaste system. Survey instrumentation for personnel "frisking" and sensitive body burden monitoring equipment are available in various plant locations. Decontamination is performed under the direction of the Radiation Protection Coordinator.

10.3.4. Use of Onsite Protective Equipment and Supplies

The plant supplies of personnel radiation protection equipment and gear are utilized to support the emergency response effort. Equipment such as respiratory protection gear and protective clothing is assigned to emergency response organization members and plant response personnel in accordance with established plant radiation protection criteria.

10.3.5. Fire Fighting

Strategies have been developed for firefighting and fire protection in specific critical areas of the plant. The Fire Protection Program describes the fire protection organization and individual responsibilities.

10.4. Aid to Affected Personnel

10.4.1. Medical Treatment

In-plant medical supplies are provided on-site. Initial on-site medical treatment is provided by on-site personnel.

Arrangements exist with Brattleboro Memorial Hospital as indicated in Section 8.2.3.1. The agreement includes a commitment by the hospital to accept and treat plant personnel with routine industrial injuries as well as injuries complicated by radioactive contamination or radiation exposure. The hospital maintains the capability and facilities to provide decontamination. The hospital participates in medical emergency drills.

10.4.2. Medical Transportation

Arrangements exist with Rescue, Inc., to provide 24-hour ambulance service for emergency transportation of plant personnel for offsite treatment. The ambulance service is capable of radio communications with the hospital while en route with a patient. Normal telecommunication channels are used in notifying the ambulance service dispatch center. Rescue, Inc. personnel are offered training by VY on the health physics considerations associated with radioactively contaminated personnel and site access control measures.

10.5. Protective Actions for Onsite Personnel

A range of protective actions to protect onsite personnel are provided in Sections 10.2 through 10.4 of this plan to ensure the continued ability to perform the functions of the emergency plan.

TABLE 10.1

EMERGENCY DOSE LIMITS

(refer to Note 1)

Guideline	Activity	Condition
5 rem	All occupational exposures	All reasonably achievable actions have been taken to minimize dose.
10 rem[(a)]	Protecting Valuable Property necessary for public welfare	Exceeding 5 rem unavoidable and all appropriate actions taken to reduce dose. Monitoring available to project or measure dose.
25 rem[(b)]	Lifesaving or Protection of Large Population	Exceeding 5 rem unavoidable and all appropriate actions taken to reduce dose. Monitoring available to project or measure dose.

NOTES:

1. Reference for this table is Table 2-2 of the EPA PAG Manual.

(a) For potential doses > 5 rem, medical monitoring programs should be considered.

(b) In the case of a very large incident, consider the need to raise the property and lifesaving Response Worker Guideline to prevent further loss.

11.0 EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

11.1. Emergency Notification

The Shift Manager is responsible for the notification of an emergency declaration to the States of Vermont and New Hampshire and the Commonwealth of Massachusetts. Notification is made within 60 minutes of emergency declaration or change in classification. Due to the slow rate of the postulated event scenarios in the accident analysis and the absence of immediate actions necessary to protect the public health and safety, the notification time of 60 minutes is appropriate.

The format and contents of the initial message between the plant and State/Commonwealth authorities are specified in notification procedures and have been established with the review and agreement of responsible state authorities.

The Department of Public Health of Vermont, New Hampshire and Massachusetts may request the following information from VY:

1. Date and time of the incident;
2. Emergency classification;
3. Status of the facility;
4. Whether a release has occurred, is occurring, or is anticipated to occur;
5. Actual or projected dose rates at the Site boundary;

Follow-up reports are provided as additional information describing the emergency situation becomes available and on an as-needed basis until such time that the emergency condition has been terminated.

11.2. Public Information

Any emergency generates a continuous and intensive demand for up-to-date information. The spokesperson function would typically be performed by Communications personnel. Communication personnel will be notified of an emergency declaration via the ERO notification system and would serve as a spokesperson. However, the function could also be performed by plant or corporate management. Upon receiving notification of an emergency declaration, the spokesperson contacts the Control Room and receives a brief description of the event.

The spokesperson monitors media activity and coordinates with senior management to address rumors and disseminate information to the public. The spokesperson will participate in news conferences as appropriate with Federal, State and local emergency response organizations conducted on site or at other locations, as necessary. The spokesperson is available for media inquiries and the positional duties include maintaining liaison with local media and coordinating with Federal, State and local emergency response organizations to disseminate appropriate information regarding an emergency at VY. Federal, State and local emergency response organizations maintain the capability to disseminate appropriate information regarding an emergency at VY.

As part of its normal corporate structure, Entergy maintains a corporate public affairs office that can be called upon to provide additional resources, as necessary.

VY maintains a public inquiry phone for media and public use. During an emergency, a pre-recorded message will provide up-to-date status reports regarding the situation.

12.0 MAINTAINING EMERGENCY PREPAREDNESS

12.1. Drills and Exercises

An exercise tests the execution of the overall plant emergency preparedness and the integration of this preparedness. A drill is a supervised instruction period aimed at testing, developing and maintaining skills in a particular response function.

Emergency exercises and drills are conducted to test and evaluate the adequacy of emergency facilities, equipment, procedures, communication channels, actions of emergency response personnel, and coordination between offsite organizations and the facility.

A summary of exercises and drills and associated elements is outlined below.

12.1.1. Radiation Emergency Exercises and Drills

Biennial exercises shall be conducted to test the timing and content of implementing procedures and methods; to test emergency equipment and communication networks; and to ensure that emergency personnel are familiar with their duties. VY offers the following organizations the opportunity to participate to the extent assistance would be expected during an emergency declaration; however, participation is not required:

1. State of Vermont
2. State of New Hampshire
3. Commonwealth of Massachusetts
4. Brattleboro Memorial Hospital
5. Brattleboro Fire Department
6. Law Enforcement
7. Rescue, Inc. Ambulance Service
8. Town of Vernon
9. Vernon Fire Department

At least one drill involving a combination of some of the principal functional areas of emergency response shall be conducted in the interval between biennial exercises.

Communication checks with offsite agencies, fire drills, medical drills, radiological monitoring drills and health physics drills are performed as indicated in the following sections.

12.1.2. Communication Tests

To ensure that emergency communications systems described in Section 7.0 of this plan are operable, communications tests are conducted as outlined below.

1. Communication channels with the state governments of Vermont, New Hampshire and the Commonwealth of Massachusetts, is tested monthly. These communications tests will include the aspect of understanding the content of messages.

2. The ENS is tested as described in subsection 7.6 of this plan.

3. The following communication systems, as detailed in Section 7.0 of this plan, are used on a frequent basis, therefore periodic testing of these systems is not necessary:

    - Mobile UHF Radio System
    - Plant Intercom System (Gai-Tronics)
    - Commercial Telephone System

To ensure the reliability of the plant's call-in procedure, a semi-annual functional test of the ERO notification system is performed to test system performance. This can be performed separately or during the Augmentation Capability Drill described in Section 12.1.3.

12.1.3. Augmentation Capability Drills

Semi-annual, off hours, unannounced, communications drill, utilizing both the ERO notification system and commercial telephone, to estimate emergency personnel response times. No actual travel is required. Participants provide an estimation of the time it would take to report to their designated ERO position. This drill shall serve to demonstrate the capability to augment the on shift staff after declaration of an emergency.

12.1.4. Fire Drills

To test and evaluate the response and training of the plant's fire brigade, fire drills are conducted in accordance with the Vermont Yankee Fire Protection Program.

To demonstrate the coordination between the plant's fire brigade and the Brattleboro and Vernon Fire Departments, the fire departments are annually offered the opportunity to participate in an onsite fire drill.

12.1.5. Medical Drills

To evaluate the training of the facility's medical response and offsite medical response (Rescue, Inc. Ambulance Service and Brattleboro Memorial Hospital), a medical drill is conducted annually with a simulated contaminated injured individual. This drill can be performed as part of an Emergency Plan drill or exercise.

12.1.6. Radiological Monitoring Drills

Plant environs and radiological monitoring drills are conducted annually. These drills include monitoring of accessible areas within the plant and include collection and analysis of airborne sample media, communications, and record keeping performed by members of the emergency team. This drill can be performed as part of an Emergency Plan drill or exercise.

12.1.7. Health Physics Drills

Health Physics drills are conducted semi-annually involving response to, and analysis of, simulated elevated in-plant airborne and liquid samples and direct radiation measurements in the environment. A drill can be performed as part of an Emergency Plan drill or exercise.

12.1.8. Security Drills

The purpose of the security drill is to maintain key skills, specifically the site-specific team skills necessary to mitigate security-based events. Security drills are conducted in accordance with the Vermont Yankee Physical Security Plan.

12.1.9. Scenarios

An Exercise/Drill Coordinator is responsible for an Emergency Plan drill or exercise. The Exercise/Drill Coordinator's responsibilities include developing the exercise/drill scenario, the accident time sequence, and the selection and training of the Controllers required to evaluate the effectiveness of the VY Emergency Preparedness Program.

A scenario is prepared by the Scenario Development Group for each exercise/drill to be conducted. The scenario varies year to year and is approved by Vermont Yankee Management. Within an eight-year period, the scenario content is varied to test all the major elements of the Emergency Preparedness Program.

The contents of the scenario include, but are not limited to, the following:

1. Basic objective(s);

2. Date, time period, place and participating organizations;

3. Simulation lists;

4. Time schedule of real and simulated initiating events;

5. A narrative summary describing the conduct of the drill or exercise to include such items as simulated casualties, search and rescue of personnel, deployment of radiological monitoring teams, and public information affairs; and

6. List of Controllers.

The scenarios are designed to allow free play in exercising the decision-making process associated with such emergency response actions as exposure control, emergency classification and de-escalation, and the ERO and additional staff augmentation process.

Security based scenarios to test and evaluate security response capabilities will be conducted in accordance with security drills and exercise procedures and may be conducted during Emergency Plan drills or exercises.

Starting times and pre-notification for exercises are coordinated with and agreed upon by all participating organizations.

12.1.10. Evaluation of Exercises

To evaluate the performance of participating facility personnel and the adequacy of emergency facilities, equipment and procedures during an exercise, the Exercise Coordinator obtains qualified controllers which includes resources outside the facility to evaluate and critique the exercise.

When feasible, personnel designated as controllers are assigned to an Emergency Plan area germane to their area of expertise. Controllers are provided general instruction concerning their specific observation function. Each controller is requested to observe the implementation of the emergency plan element assigned to him or her, and then to record and report observed inadequacies.

A critique is conducted at the conclusion of the exercise with facility personnel. After the critique, the controllers submit a written evaluation to the Exercise Coordinator in which the exercise performance is evaluated against the objectives. All comments and/or recommendations are documented.

Weaknesses and/or deficiencies identified in an exercise critique are processed in accordance with the site corrective actions program.

12.1.11. Emergency Plan Audit

The VY Emergency Plan is independently audited as part of the Vermont Yankee In-plant Audit Program. The audit is conducted as part of the Vermont Yankee Nuclear Power Station Quality Assurance Program Manual in accordance with 10 CFR 50.54(t). All aspects of emergency preparedness, including exercise documentation, capabilities, procedures, and interfaces with state and local governments are audited.

12.2. Training

All non-essential plant personnel receive annual instruction, in accordance with "Emergency Plan Training," concerning their expected response action during an emergency. Those members of the plant staff who have been assigned to the ERO receive annual training which includes, but is not limited to, the following:

1. Familiarize individuals with Emergency Plan and implementing procedures, especially where emergency response tasks are not part of their normal duties;

2. Define an individual's responsibilities associated with their designated function;

3. Familiarize individuals in emergency exposure control measures and guidelines, particularly those associated with an individual's designated emergency functions; and

4. Provide sufficient technical insight to maintain emergency functions.

A portion of this training is provided by personnel's participation in drills or exercises. During these drills and exercises, controllers check the performance of the personnel assigned, and provide critiques which could be incorporated in future training. Specific details of the training given on an annual basis are described in "Emergency Plan Training," and in the Emergency Plan Training Program Description.

Training is offered annually to offsite response organizations that may be requested to provide assistance in the event of an emergency at VY (e.g., law enforcement, fire-fighting, rescue, medical services, transport of injured, etc.). The training shall be structured to meet the needs of that organization with respect to the nature of their support. Topics such as event notification, site access procedures, basic radiation protection and interface activities between the offsite organization and VY are included in the training.

12.3. Review and Updating of Plan and Procedures

The Emergency Plan is reviewed at least annually and the associated implementing procedures are reviewed at least biennially. All recommendations for changes to the Emergency Plan or associated implementing procedures are reviewed in accordance with 10 CFR 50.54(q). The Emergency Plan is submitted to VY's On-Site Safety Review Committee for approval.

Written agreements with outside support organizations and government agencies are evaluated annually to determine if these agreements are still valid. If agreements are not valid, then they are renewed and updated. This agreement review is documented.

Revisions to the Emergency Plan are made in accordance with current regulations and guidelines. Changes to the Emergency Plan are forwarded to organizations and individuals with a responsibility for implementation of the Plan.

Telephone number listings associated with the emergency notification process are verified quarterly.

12.4. Maintenance and Inventory of Emergency Equipment and Supplies

The emergency equipment maintained in the Control Room and Administration Building is contained in a checklist in the Emergency Equipment Readiness Check procedure.

Designated personnel conduct a weekly test of certain emergency communications equipment. At least quarterly in accordance with the emergency equipment inventory procedure, and subsequent to each usage, designated VY personnel are assigned to inventory and maintain the emergency kits and/or equipment. Rotation of survey instruments normally used in the plant with instruments in the Emergency Kits assures that emergency equipment is calibrated and fully operable. There are sufficient reserve instruments and equipment to replace those that are removed from emergency kits for calibration purposes. Appendix B contains a list of emergency equipment by location.

12.5. Responsibility for the Planning Effort

The Senior Site Executive has overall responsibility for implementation of the Emergency Plan at VY. The Manager, Emergency Preparedness is responsible for emergency planning and the interface with offsite authorities and organizations. The duties of the Manager, Emergency Preparedness include, but are not limited to, the following:

1. Revise and update the Emergency Plan;

2. Maintain the Emergency Plan implementing procedures so that they are updated and current with the Emergency Plan;

3. Schedule and ensure the conduct of emergency equipment inventories and calibration;

4. Represent the plant in offsite Emergency Plan interfaces;

5. Represent the plant in NRC emergency planning appraisals and audits;

6. Interface with the Exercise Coordinator in preparing and coordinating Emergency Plan drills and exercises; and

7. Maintain drill and exercise documentation and coordinate implementation of corrective actions deemed necessary following drills and exercises.

The Manager, Emergency Preparedness is responsible for maintaining an adequate knowledge of regulations, planning techniques and the latest applications of emergency equipment and supplies. Training for this position includes, but is not limited to:

1. Training courses specific or related to emergency preparedness;

2. Observation of, or participation in, drills and/or exercises at other decommissioned nuclear power plants;

3. Participation in industry review and evaluation programs;

4. Participation in regional or national emergency preparedness seminars, conferences, committees, workshops or forums.

APPENDIX A

EMERGENCY CLASSIFICATION SYSTEM

AND

EMERGENCY ACTION LEVELS

[**NOTE:** Reference EPAP-EAL-10106, Emergency Plan Classification and Action Level Scheme for the most current revision of the EAL Charts.]

APPENDIX B

EMERGENCY EQUIPMENT

This Appendix contains a list of emergency equipment by location. Backup equipment is available at the Radiation Protection control point. In addition, the resources referenced in subsections 6.2.5 and 10.2 of this Plan are at the disposal of Vermont Yankee in an emergency.

APPENDIX B (Continued)

EMERGENCY EQUIPMENT INVENTORY

	LOCATION	
EQUIPMENT	CONTROL ROOM AND ADMINISTRATION BUILDING	INNER GATE HOUSE
Respiratory Protection	•	
Radiation Monitoring	•	•
Dosimetry	•	•
Sampling	•	
Communications	•	•
Dose Assessment	•	
Area Maps	•	
Emergency References	•	
Protective Clothing	•	
Decontamination Barrel	•	
Administrative Support	•	
Status Boards	•	
Stack Sampling	•	
Sampling Cartridges	•	•
Portable Lead Shielding	•	
Emergency Centers & Emergency Room Keys	•	•
Station Sampling Cartridges	•	
Environmental Station Keys	•	

(A more detailed listing of emergency equipment is provided in EPOP-EQUIP-10115, "Emergency Equipment Readiness Check")

EMERGENCY EQUIPMENT INVENTORY

	LOCATION
EQUIPMENT	Provided by other non-affected Entergy nuclear sites, as needed
Gamma Spectroscopy	•
High Pressure Ion Chamber	•
Mobile Processing DLR Unit	•
Personnel & Environmental DLR	•

APPENDIX C

ENVIRONMENTAL LABORATORY ANALYTICAL AND DOSIMETRY SERVICES

General

In the event of a radiological emergency at Vermont Yankee, laboratory services (as described in 6.2.5) are available, on a 24-hour emergency call basis, to perform gamma isotopic analyses on samples taken by the plant's emergency monitoring teams. Portable gamma spectroscopy equipment can be deployed to the plant site to determine the presence and level of contamination in samples of various media in the event of an accidental release of radioactive material.

Portable Emergency Analysis Equipment

Portable analysis equipment with computerized spectral analysis capability may be deployed to assist in an emergency response. A report of plant-related nuclide concentrations, standard deviation, and Minimum Detectable Concentration (MDC) is forwarded to assessment personnel.

Following a request from Vermont Yankee for assistance in assessing an emergency condition, laboratory personnel will be dispatched to a designated location within approximately four (4) to eight (8) hours. Upon arrival, laboratory personnel will determine the presence and level of contamination in samples of various media (air cartridges, air filters, vegetation, water).

Emergency DLR Services

The capability exists for the emergency processing of DLRs on a 24-hour per day basis. Emergency workers are instructed to read self-reading dosimeters frequently, and DLRs may be processed with increased periodicity.

Portable Body Burden Service

A WBC System is comprised of a portable detector, interfaced to a PC-based ADCI/MCA and IBM compatible portable computer may be acquired from the other industry facilities. The analytical methodology provides a whole body scan and identifies activity content of the lung, GI, and thyroid.

A result report is generated for those plant-related nuclides found to be present at the 99% confidence level.

APPENDIX D

LETTERS OF AGREEMENT

Letters of agreement in effect between Vermont Yankee and the offsite authorities are maintained in the Emergency Planning Department files. Entergy Operations, Inc. maintains agreements and/or contracts with the following organizations in support of Vermont Yankee Emergency Response.

Letters of Agreement have been ascertained with offsite groups to provide on-site aid in the event of an emergency situation at Vermont Yankee.

Ambulance Service: Twenty-four (24) hour ambulance service is provided by Rescue, Inc. Mutual aid backup from other ambulance services provides for additional emergency medical services, ambulances and EMS personnel. Onsite procedures contain instructions that cover the call for assistance and the handling of the ambulance service personnel. Radio communication exists between the ambulance and local hospitals.

Medical: Onsite procedures contain instructions, which cover the request for medical assistance and handling of patients.

Hospitals: Brattleboro Memorial Hospital has agreed to accept patients from Vermont Yankee who have been injured, contaminated or irradiated.

Fire: Offsite firefighting support is provided by the Vernon and Brattleboro Fire Departments, as resources permit, with mutual aid backup from other fire departments.

Law Enforcement: When notified that assistance is needed, Security will notify the Lead Local Law Enforcement Agency (LLEA). The handling of security matters, including those involving hostile action, is addressed in the Vermont Yankee Physical Security Plan and are classified as safeguards information.

APPENDIX D (Continued)

Letters of Agreement

1. State of Vermont
2. State of New Hampshire
3. Commonwealth of Massachusetts
4. Brattleboro Memorial Hospital
5. Rescue, Inc. Ambulance Service
6. Vernon Fire Department
7. Brattleboro Fire Department
8. Town of Vernon
9. Department of Energy
10. DOE - REAC/TS
11. Law Enforcement *

* All letters of agreement from Local Law Enforcement Authorities as required by the Physical Security Plan are classified as Safeguards Information and as such are maintained by Security.

APPENDIX E

INDEX OF EMERGENCY PLAN IMPLEMENTING PROCEDURES AND SUPPORT DOCUMENTS

I. EMERGENCY PLAN IMPLEMENTING PROCEDURES

EPAP-ERO-10103	Emergency Response Organization
EPAP-EIEP-10097	Equipment Important to Emergency Preparedness
EPAP-EAL-10106	Emergency Plan Classification and Action Level Scheme
EPOP-COMM-10113	Emergency Communications
EPOP-EQUIP-10115	Emergency Equipment Readiness Check
EPOP-EREC-10116	Emergency Radiation Exposure Control
EPOP-MED-10117	Onsite Medical Emergency Procedure
EPOP-SAMP-10123	Environmental Sample Collection during an Emergency
EPOP-OSMT-10118	Site Boundary Monitoring
EPOP-RAD-10119	Evaluation of Radiological Conditions
EPOP-URI-10122	Dose Assessment using the Unified Rascal Interface
EPAP-ERO-10110	Emergency Preparedness Organization
EPOP-SAMP-10124	In-plant Air Sample Analysis with Abnormal Conditions
EPOP-CR-10114	Control Room Actions During an Emergency
EPOP-SEC-10120	Security Actions During an Emergency
EPOP-TERM-10121	Emergency Termination and Recovery
EPAP-TEAM-10107	Emergency Plan Teams
EPAP-TRNG- 10112	Emergency Plan Training
EPAP-EIEP-10108	Equipment Important to Emergency Response
EPAP-INFORM-10111	InForm Notification System
EPAP-SWRES-10104	Severe Weather Response
EPAP-SWREC-10105	Severe Weather Recovery
EPAP-5054Q-10098	Emergency Planning 10 CFR 50.54(q) Review Program
EPAP-DRILL-10099	Drills and Exercises
EPAP-CRIT-10100	Emergency Planning Critiques

II. SUPPORT DOCUMENTS*

The Vermont Yankee Physical Security Plan
VY Fire Protection Program (SEP-FP-VTY-003)
Conduct of Operations and Operator Rounds (OP0150)
NRC Incident Response Plan (NUREG-0728)
National Response Framework (January 2008)
Procedure for Admission and Management of Radioactively Contaminated Patients at Brattleboro Memorial Hospital

*** This list does not reference any of the emergency plan arrangements specified in Appendices C and D of this plan.**

APPENDIX F

CROSS-REFERENCE BETWEEN THE PDEP, NUREG-0654/FEMA-REP-1, the 10 CFR 50.47(b) PLANNING STANDARDS, AND APPENDIX E.IV PLANNING REQUIREMENTS

APPENDIX F (Continued)

CROSS-REFERENCE BETWEEN THE PDEP, NUREG-0654/FEMA-REP-1, the 10 CFR 50.47(b) PLANNING STANDARDS, AND APPENDIX E.IV PLANNING REQUIREMENTS

NUREG-0654, Section II Evaluation Criteria	Planning Standard (10 CFR 50.47)**	Planning Requirement (Appendix E.IV)**	VY PDEP Section
A	(b)(1)	A.1, 2, 4, 7	7.0 8.0 8.1.1 Figure 8.1
B	(b)(2)	A.1, 2, 4, 9; C.1	8.0 8.1 8.1.1 8.2 8.3 Table 8.1 10.4 Appendix D
C	(b)(3)	A.6, 7	3.7 8.1.1 8.2.3 Appendix C Appendix D
D	(b)(4)	B.1, 2; C.1, 2	5.0 Appendix A
E	(b)(5)	A.6, 7; C.1, 2; D.1, 3; E	8.3 9.0 9.2 Table 9.1 11.1 Appendix D Appendix E
F	(b)(6)	C.1; D.1, 3; E	7.0 Table 7.1 9.2 Figure 9.1 12.1.2
G	(b)(7)	A.7; D.2	11.2
H	(b)(8)	E; G	6.1 6.2 8.2 9.2 12.4 Appendix B

APPENDIX F (Continued)

NUREG-0654, Section II Evaluation Criteria	Planning Standard (10 CFR 50.47)**	Planning Requirement (Appendix E.IV)**	VY PDEP Section
I	(b)(9)	A.4; B.1; C.2; E	6.2.5 10.0 Appendix A
J	(b)(10)	C.1; E; I	10.3
K	(b)(11)	E	10.2 10.3 10.4
L	(b)(12)	A.6, 7; E	Table 8.1 10.2 10.4
M	(b)(13)	H	8.2.4
N	(b)(14)	E9; F	12.1
O	(b)(15)	F	Table 8.1 10.4 12.0
P	(b)(16)	G	Table of Contents 12.0 Appendix E

**as exempted