

THE COMMONWEALTH OF VIRGINIA

**RADIOLOGICAL EMERGENCY
RESPONSE PLAN
(COVRERP)**

Volume III

The Commonwealth of Virginia
Emergency Operations Plan
Peacetime Disasters

May 2007

Originally published
June 1983

TABLE OF CONTENTS

	<u>Page</u>
NUREG-0654 Cross Reference.....	x
I. Authorities and References.....	1
II. Definitions.....	2
III. Purpose.....	2
IV. Scope.....	3
V. Situation.....	3
A. Potential Sources of Radiological Emergencies.....	3
B. Nature of the Hazard.....	5
1. Plume Exposure Pathway.....	5
2. Ingestion Exposure Pathway.....	5
3. Radiation Effects.....	6
C. Scope of Probable Radiological Emergencies.....	7
1. Plume Exposure Pathway (10-Mile EPZ).....	7
2. Ingestion Exposure Pathway (50-Mile EPZ).....	8
3. Emergency Planning Zones for Other Nuclear Facilities.....	8
4. Time Factors Associated with Release.....	9
D. Protection Against the Hazard.....	9
VI. Mission.....	10
VII. Organization.....	11
VIII. Concept of Operations and Procedures.....	12
A. Emergency Classification Levels for Nuclear Facilities.....	12
B. Accident Assessment.....	13
C. Notification and Warning.....	14

D. Concept of Operations 14

 1. Accidents at Fixed Nuclear Facilities 14

 2. Transportation Accidents Involving Radioactive
 Materials 16

E. Evacuation During An Emergency 16

F. Immunity From Liability 16

G. Direction and Control 19

IX. Responsibilities 19

X. Execution 19

FIGURES:

1. Fixed Nuclear Facilities in Virginia or Within 50 Miles of
a Virginia Border 25

2. Highway Transportation Routes for Shipment
of High Level (Spent Fuel) and Low Level Waste 26

3. Emergency Planning Zones 27

4. Railroads Operating in Virginia 28

APPENDICES:

1.	Direction and Control.....	1-1
	Tab A - Action Checklist.....	1-4
	Attachment 1 - Report of Conference Call Notification.....	1-10
	Attachment 2 - Report of Protective Action Recommendations	1-11
	Attachment 3 - Report of Protective Action Decision.....	1-12
	Attachment 4 - Report of KI Decision and Administration.....	1-13
	Attachment 5 - Report of Emergency for Use by Commonwealth of Virginia	1-14
	Tab B - Functional Chart - Radiological Emergency Response from the Virginia Emergency Operations Center.....	1-16
	Tab C - Support of Federal Response and expected role in a response to a Commercial Nuclear Power Plant Accident	1-17
	Tab D - Emergency Response Personnel for Naval Shipyard Accident	1-29
	Tab E - Notifications for Nuclear Accidents/Contact Information for Federal Assistance.....	1-31
2.	Task Assignments2-1	
	Tab A - Summary of Primary and Support Responsibilities	2-28
	Tab B - Support of Federal Response.....	2-29
3.	Organization	3-1
	Tab A - Radiological Emergency Response from the State Emergency Operations Center	3-3
	Tab B - Radiological Response Organization	3-4
4.	Notification and Warning.....	4-1
	Tab A - Report of Emergency For Use by Commonwealth of Virginia	4-5
	Tab B - Report of Protective Action Decision	4-7
	Tab C - Report of Radiological Conditions for Use by Commonwealth of Virginia.....	4-8
	Tab D - Report of KI Decision and Administration	4-9
	Tab E – Initial Notification Report Form - North Anna Hydroelectric Dam Project.....	4-10

Tab F - Siren Alerting System.....	4-11
Attachment 1 - Surry Siren Locations	4-14
Attachment 2 - North Anna Siren Locations	4-20
Tab G - Adjacent States and Jurisdictions Within 50-Mile Ingestion Pathway	4-26
Attachment 1 - Surry Power Station Ingestion Pathway - Adjacent Jurisdictions (In-State & Out-of-State).....	4-27
Figure 1 - Surry Ingestion Pathway, Map.....	4-28
Attachment 2 - North Anna Power Station Ingestion Pathway - Adjacent Jurisdictions (In-State & Out-of-State).....	4-29
Figure 1 - North Anna Ingestion Pathway, Map.....	4-30
Attachment 3 - Calvert Cliffs Power Station (Maryland) Virginia Jurisdictions Within Ingestion Pathway	4-31
Figure 1 - Calvert Cliffs Ingestion Pathway (Maryland), Map.....	4-32
5. Emergency Response	5-1
Tab A - Evacuation Assembly Center Registration Form.....	5-5
Tab B - Population at Risk and Protective Actions.....	5-6
Attachment 1 - SPS Evacuation Centers and Routes	5-9
Attachment 2 - NAPS Evacuation Centers and Routes	5-10
Attachment 3 - SPS Protective Action Zones, Routes, and Evacuation Centers	5-11
Figure 1 - SPS 10-Mile Protective Action Zones, Zone Descriptions and EAC's.....	5-12
Attachment 4 - NAPS Protective Action Zones, Routes, and Evacuation Centers	5-18
Figure 1 - NAPS 10-Mile Protective Action Zones, Zone Descriptions and EAC's.....	5-19
Attachment 5 - Surry Power Station (SPS).....	5-24
Figure 1 - SPS Evacuation Roadway Network.....	5-35
Figure 2 - 2000 Census Population Within 10-Mile EPZ of SPS.....	5-36
Figure 3 - SPS Population Data by PAZ.....	5-38

Figure 4 - SPS 10-mile EPZ Population Grouped by County/City	5-39
Figure 5 - Surry 10 Mile EPZ Population Grouped by Protective Action Zones	
Table 1 - Network Clearance Times for SPS EPZ	5-40
Attachment 6 - North Anna Power Station (NAPS)	5-41
Figure 1 - NAPS Evacuation Roadway Network	5-44
Figure 2 - 2000 Census Population Within 10-Mile EPZ of NAPS	5-45
Figure 3 - NAPS Student/School Population Within 10-Mile EPZ	5-46
Figure 4 – Resident Population Data by PAZ	5-47
Figure 5 – Population within 10-Mile EPZ by County/City	5-48
Figure 6 – North Anna Population Grouped by Protective Action Zones	
Table 1 - Network Clearance Times for EPZ	5-49
Tab C - School Reception Centers for SPS	5-51
Tab D - School Reception Centers for NAPS	5-52
6. Accident Assessment	6-1
Tab A - Environmental Monitoring TLD Locations - Surry Power Station	6-6
Tab B - Environmental Monitoring TLD Locations - North Anna Power Station	6-7
Tab C - Water Treatment Plants Within 50 Miles of Nuclear Power Stations	6-8
7. Radiological Exposure Control	7-1
Tab A - Protective Action Guides for the General Population	7-5
Tab B - Emergency Worker Exposure Limits	7-6
Tab C - Form REC-1, Emergency Worker Radiation Exposure Record	7-7
Tab D - Form REC-2, Individual Radiation Exposure Record	7-8
Tab E - Radiological Monitoring Equipment Issued to Local Governments	7-9
Tab F - Radiological Monitoring Equipment Controlled by State Agencies	7-10
Tab G - Worker Exposure Control - Use of Personal Dosimetry	7-11

8.	Potassium Iodide (KI) Administration	8-1
	Tab A - Recommended Doses of KI and Trigger Points.....	8-7
	Tab B - Potassium Iodide (KI) Receipt Form (non-emergency)	8-8
	Tab C - Potassium Iodide (KI) Receipt Form (emergency)	8-9
	Tab D - Recipient Information Sheet	8-10
	Tab E - Report of KI Decision and Administration.....	8-12
	Tab F - Evacuation Assembly Centers (EACs) - SPS and NAPS	8-13
9.	Public Information.....	9-1
	Tab A - Emergency Communications Committees and Operational Areas	9-5
10.	Communications	10-1
	Tab A - Radiological Emergency Response Operations	10-8
	Tab B - Radiological Data Collection, Interpretation and Dissemination.....	10-9
	Tab C - Emergency Medical Communications	10-10
11.	Decontamination, Re-Entry, Return, and Recovery	11-1
	Tab A - Evacuation Assembly Centers	11-9
	Tab B - Sample Re-Entry Briefing Outline.....	11-11
	Tab C - Re-Entry Log.....	11-12
	Tab D - Re-Entry Pass.....	11-13
12.	Emergency Highway Operations.....	12-1
13.	Training and Exercises	13-1
14.	Fixed Nuclear Facilities.....	14-1
	Tab A - North Anna Power Station	14-3
	Tab B - Surry Power Station	14-4
	Tab C - Calvert Cliffs (Maryland) Power Station	14-7
	Attachment 1 - Map, Calvert Cliffs Ingestion Pathway.....	14-8
15.	Transportation Accidents	15-1

	Tab A - Transportation Accidents Involving Radioactive Materials	15-10
	Tab B - Response Organization For Transportation Accidents.....	15-15
16.	Nuclear Weapons Accident	16-1
	Tab A - Naval Weapons Station (NWS), Yorktown, Virginia.....	16-4
17.	Naval Nuclear Propulsion Program Facilities and Ships.....	17-1
	Tab A - Overall NNPP Emergency Response Organization	17-17
	Tab B - Report of Emergency For Use By Commonwealth of Virginia	17-18
	Tab C - Report of Radiological Conditions.....	17-20
	Tab D - Protective Actions.....	17-21
	Tab E - Emergency Response Procedures.....	17-22
	Tab F - Accident Assessment.....	17-31
	Tab G - Areas of Planning Attention.....	17-35
	Attachment 1 - Norfolk Naval Shipyard Areas of Planning Attention.....	17-35
	Attachment 2 - Norfolk Naval Station Areas of Planning Attention	17-36
	Attachment 3 - Northrop Grumman Newport News Areas of Planning Attention.....	17-37
	Attachment 4 - Norfolk Naval Shipyard Affected Population in the Areas of Planning Attention.....	17-38
	Attachment 5 - Norfolk Naval Station Affected Population in the Areas of Planning Attention.....	17-39
	Attachment 6 - Northrop Grumman Newport News Affected Population in the Areas of Planning Attention	17-40
	Tab H - Medical Services.....	17-41
18.	Definitions and Acronyms.....	18-1
<u>ANNEXES:</u>		
A.	ESF #1 - Transportation	A-1
	Tab A - Surry Power Station Area Traffic Control Points	A-5

	Tab B - North Anna Station Area Traffic Control Points.....	A-12
	Tab C - North Anna Power Station Area Access Control Points	A-31
	Tab D - Surry Power Station Area Access Control Points	A-57
B.	ESF #2 - Communications	B-1
	Tab A - Action Checklist, Communications and Warning, VEOC.....	B-4
	Attachment 1 - Report of Emergency	B-5
	Attachment 2 - Report of Radiological Conditions	B-7
	Tab B - Action Checklist, Other Nuclear Facility	B-8
	Tab C - Early Warning System Activation.....	B-10
	Attachment 1 - Siren Alerting System.....	B-11
	Attachment 2 - Surry Power Station Sirens.....	B-14
	Attachment 3 - North Anna Power Station Sirens.....	B-20
	Attachment 4 - Spurious Siren Activations	B-26
C.	ESF #3 - Public Works and Engineering.....	C-1
D.	ESF #4 - Firefighting.....	D-1
E.	ESF #5 - Emergency Management.....	E-1
F.	ESF #6 - Mass Care, Housing, and Human Services	F-1
	Tab A - Evacuation Assembly Centers (EAC): Surry Power Station	F-3
	Tab B - Evacuation Assembly Centers (EAC): North Anna Power Station.....	F-4
G.	ESF #7 - Resource Support	G-1
H.	ESF #8 - Public Health and Medical Services.....	H-1
	Tab A - Hospitals	H-5
	Tab B - Radiological Laboratories	H-7
I.	ESF #9 - Urban Search and Rescue.....	I-1
J.	ESF #11 - Agriculture and Natural Resources	J-1
K.	ESF #12 - Energy	K-1

L. ESF #13 - Safety and SecurityL-1

 Tab A - Surry Power Station Area Traffic Control PointsL-3

 Tab B - North Anna Power Station Area Traffic Control PointsL-10

 Tab C - North Anna Power Station Area Access Control PointsL-29

 Tab D - Surry Power Station Area Access Control PointsL-55

M. Public Information.....M-1

 Tab A - Prescribed Emergency Activation System (EAS) MessagesM-5

 Attachment 1 - Evacuation Zones North Anna Power StationM-9

 Attachment 2 - Evacuation Zones Surry Power StationM-15

 Attachment 3 - Shelter North Anna Power Station.....M-23

 Attachment 4 - Shelter Surry Power Station.....M-28

 Tab B - Prescribed Emergency News ReleaseM-34

 Tab C - Responsibilities and Assignments of the VDEM Office of Public AffairsM-39

Element	Description	Citation
A. ASSIGNMENT OF RESPONSIBILITY		
A.1.a	Each plan shall identify the state, local, federal, & private sector organizations, that are intended to be part of the overall response organization for Emergency Planning Zones.	Appendix 3
A.1.b	Each organization & sub-organization having an operational role shall specify it's concept of operations, & it's relationship to the total effort.	Appendix 3
A.1.c	Each plan shall illustrate these interrelationships in a block diagram.	Appendix 3, Tabs A, B, & C
A.1.d	Each organization shall provide for 24-hour per day emergency response, including 24-hour per day manning of communications links.	Basic Plan
A.2.a	Each organization shall specify the functions and responsibilities for major elements and key individuals by title of emergency response, including the following: Command & Control, Alerting & Notification, Communications, Public Information, Accident Assessment, Public Health & Sanitation, Social Services, Fire & Rescue, Traffic Control, Emergency Medical Services, Law Enforcement, Transportation, Protective Response (including authority to request Federal Assistance & to initiate other protective actions) and Radiological Exposure Control. The description of these functions shall include a clear and concise summary such as a table of primary & support responsibilities using the agency as one axis, & the function as the other.	Appendix 2
A.2.b	Each plan shall contain (by reference to specific acts, codes, or statutes) the legal basis for such authorities.	Basic Plan
A.3	Each plan shall include written agreements referring to the concept of operations developed between federal, state, & local agencies & other support organizations having an emergency response role within the Emergency Planning Zones (EPZs). The agreements shall identify the emergency measures to be provided & the mutually acceptable criteria for their implementation, & specify the arrangements for the exchange of information. These agreements may be provided in an appendix to the plan or the plan itself may contain descriptions of these matters & a signature page in the plan may serve to verify the agreements. The signature page format is appropriate for organizations where response functions are covered by laws, regulations, or executive orders where separate written agreements are not necessary.	Basic Plan
A.4	Each principal organization shall be capable of continuous 24-hour operations for a protracted period. The individual in the principal organization who will be responsible for assuring continuity or resources (technical, administrative, & material) shall be specified by title.	Basic Plan

C. EMERGENCY RESPONSE SUPPORT & RESOURCES		
C.1	Each state & licensee shall make provisions for incorporating the federal response capability into its operation plan, including the following:	
C.1.a	Persons by title authorized to request federal assistance (see A.1.d & A.2.a).	Appendix 2
C.1.b	Specific Federal resources expected, including expected times of arrival at specific nuclear facility sites.	Appendix 2
C.1.c	Specific licensee, state, & local resources available to support the federal response, e.g., air fields, command posts, telephone lines, radio frequencies, & telecommunications centers.	Appendix 2
C.2.a	Each principal offsite organization may dispatch representatives to the licensee's near site Emergency Operations Facility. (State technical analysis representatives at the near site EOF are preferred.)	Basic Plan; Appendix 2; Appendix 5; Appendix 6
C.3	Each organization shall identify radiological laboratories & their general capabilities & expected availability to provide radiological monitoring & analyses services which can be used in an emergency	Appendix 5
C.4	Each organization shall identify nuclear & other facilities, organizations, or individuals that can be relied upon in an emergency to provide assistance. Such assistance shall be identified & supported by appropriate letters of agreement.	Appendix 5 Attachment 1 & 2
D. EMERGENCY CLASSIFICATION SYSTEM		
D.3	Each state & local organization shall establish an emergency classification & emergency action level scheme consistent with that established by the facility licensee.	Appendix 5
D.4	Each state & local organization should have procedures in place that provide for emergency actions to be taken which are consistent with the emergency actions recommended by the nuclear facility licensee, taking into account local offsite conditions that exist at the time of the emergency	Appendix 5
E. NOTIFICATION METHODS & PROCEDURES		
E.1	Each organization shall establish procedures that describe mutually agreeable bases for notification of response organizations consistent with the emergency classification & action level scheme set forth in Appendix 1. These procedures shall include means for verification of messages. The specific details of verification need not be included in the plan.	Appendix 4
E.2	Each organization shall establish procedures for alerting, notifying, & mobilizing emergency response personnel.	Appendix 5
E.3	State & local government organizations shall establish a system for disseminating to the public appropriate information contained in initial & follow-up messages received from the licensee including the appropriate notification to appropriate broadcast	Appendix 9

	media, e.g., the Emergency Alert System (EAS).	
E.4	Each organization shall establish administrative & physical means, & the time required for notifying & providing prompt instruction to the public within the plume exposure pathway Emergency Planning Zone. It shall be the licensee's responsibility to demonstrate that such means exist, regardless of who implements the requirement. It shall be the responsibility of the state & local government to activate such a system.	Appendix 4
E.5	Each organization shall provide written messages intended for the public, consistent with the licensee's classification scheme. In particular, draft messages to the public giving instructions with regard to specific protective actions to be taken by occupants of affected areas shall be prepared & included as part of the state & local plans. Such messages should include the appropriate aspects of sheltering, ad hoc respiratory protection, e.g., handkerchief over the mouth, thyroid blocking or evacuation. The role of the licensee is to provide supporting information for the message. For ad hoc respiratory protection see "Respiratory Protective Devices Manual" American Industrial Hygiene Association, 1963 pp. 123 – 126.	Appendix 9
F. EMERGENCY COMMUNICATIONS		
F.1	The communication plans for emergencies shall include organizational titles & alternates for both ends of the communication links. Each organization shall establish reliable primary & back-up means of communication for licensees, local, & state response organizations.	
F.1.a	Provision for 24-hour/day notification to & activation of the state/local emergency response network; & at a minimum, a telephone link & alternate, including 24-hour/ day manning of communications links that initiate emergency response actions.	Basic Plan, Appendix 10
F.1.b	Provision for communications with contiguous state/local governments within the Emergency Planning Zones.	Appendix 4, Appendix 10
F.1.c	Provision for communications, as needed, federal emergency response organizations	Appendix 10
F.1.d	Provision for communications between the nuclear facility and the licensee's near-site Emergency Operations Facility, state & local emergency operations centers, & radiological monitoring teams.	Appendix 10
F.1.e	Provision for alerting or activating emergency response personnel in each response organization.	Basic Plan; Appendix 4; Appendix 10
F.2	Each organization shall ensure that a coordinated communication link for fixed & mobile medical support facilities exists.	Appendix 10
F.3	Each organization shall conduct periodic testing of the entire emergency communication system.	Appendix 10, Appendix 13
G. PUBLIC EDUCATION & INFORMATION		

G.1	<p>Each organization shall provide a coordinated periodic (at least annually) dissemination of information to the public regarding how they will be notified & what their actions should be in an emergency. This information shall include, but not necessarily limited to:</p> <ul style="list-style-type: none"> a. educational information on radiation; b. contact for additional information; c. protective measures, e.g., evacuation routes & relocation centers, sheltering, respiratory protection, radioprotective drugs; & d. special needs of the handicapped. <p>Means for accomplishing this dissemination may include, but are not necessarily limited to: information in the telephone book; periodic information in utility bills; posting in public areas; and publications distributed on an annual basis.</p>	Appendix 9
G.2	<p>The public information program shall provide the permanent & transient adult population within the plume exposure EPZ an adequate opportunity to become aware of the information annually. The programs should include provision for written material that is likely to be available in a residence during an emergency. Updated information shall be disseminated at least annually. Signs or other measures (e.g., decals, posted notices or other means, placed in hotels, motels, gasoline stations & phone booths) shall also be used to disseminate to any transient population within the plume exposure pathway EPZ appropriate information that would be helpful if an emergency or accident occurs. Such notices should refer the transient to the telephone directory or other source of local emergency information & guide visitors to appropriate television & radio frequencies.</p>	Appendix 9
G.3.a	<p>Each principal organization shall designate the points of contact & physical locations for use by news media during an emergency.</p>	Appendix 9
G.4.a	<p>Each principal organization shall designate a spokesperson who should have access to all necessary information.</p>	Appendix 9
G.4.b	<p>Each organization shall establish arrangements for timely exchange of information among designated spokespersons.</p>	Appendix 9
G.4.c	<p>Each organization shall establish coordinated arrangements for rumors.</p>	Appendix 9
G.5	<p>Each organization shall conduct coordinated programs at least annually to acquaint news media with the emergency plans, information concerning radiation, & points of contact for release of public information in an emergency.</p>	Appendix 9
H. EMERGENCY FACILITIES & EQUIPMENT		
H.3	<p>Each organization shall establish an emergency operations center for use in directing and controlling response functions</p>	Basic Plan

H.4	Each organization shall provide for timely activation & staffing of the facilities & centers provided in the plan.	Basic Plan
H.7	Each organization, where appropriate, shall provide for offsite radiological monitoring equipment in the vicinity of the nuclear facility.	Appendix 7
H.10	Each organization shall make provisions to inspect, inventory, and operationally check emergency equipment/instruments at least once each calendar quarter & after each use. There shall be sufficient reserves of the instruments/equipment to replace those that are removed from emergency kits for calibration or repair. Calibration of equipment shall be at intervals recommended by the supplier of the equipment.	Appendix 7
H.11	Each plan shall, in an appendix, include identification of emergency kits by general category (protective equipment, communications equipment, radiological monitoring equipment & emergency supplies.	Appendix 7
H.12	Each organization shall establish a central point (preferably associated with the licensee's near-site Emergency Operations Facility), for the receipt & analysis of all field monitoring data & coordination of sample media.	Appendix 6
<u>I. ACCIDENT ASSESSMENT</u>		
I.7	Each organization shall describe the capability & resources for field monitoring within the plume exposure Emergency Planning Zones which are an intrinsic part of the concept of operations for the facility.	Appendix 6
I.8	Each organization, where appropriate, shall provide methods, equipment, & expertise to make rapid assessments of the actual or potential magnitude & locations of any radiological hazards through liquid or gaseous release pathways. This shall include activation, notification means, field team composition, transportation, communication, monitoring equipment, & estimated deployment times.	Appendix 5, Appendix 6
I.9	Each organization shall have a capability to detect & measure radioiodine concentrations in air in the plume exposure EPA as low as 10^{-7} $\mu\text{Ci/cc}$ (microcuries per cubic centimeter) under field conditions. Interference from the presence of noble gas & background radiation shall not decrease the stated minimum detectable activity.	Appendix 6

I.10	Each organization shall establish means for relating the various measured parameters (e.g., contamination levels, water & air activity levels) to dose rates for key isotopes (i.e., those given in Table 3, Page 18) & gross radioactivity measurements. Provisions shall be made for estimating integrated dose from the projected & actual dose rates & for comparing these estimates with the protective action guides. The detailed provisions shall be described in separate procedures.	Appendix 6
I.11	Arrangements to locate & track the airborne radioactive plume shall be made, using either or both federal & state resources.	Appendix 6
J. PROTECTIVE RESPONSE		
J.2	Each licensee shall make provisions for evacuation routes & transportation for on site individuals to some suitable off site location, including alternatives for inclement weather, high traffic density, & specific radiological conditions.	Appendix 5
J.9	Each state & local organization shall establish a capability for implementing protective measures based upon protective action guides and other criteria. This shall be consistent with the recommendations of EPA regarding exposure resulting from passage of radioactive airborne plumes, (EPA – 520/1 – 75 – 001) & with those of DHEW (DHHS)/FDA regarding the contamination of human food & animal feeds as published in the Federal Register of December 15, 1978 (43 FR 58790).	Appendix 5
J.10	The organization's plan to implement protective measures for the plume exposure pathway shall include:	
J.10.a	Maps showing evacuation routes, evacuation areas, pre-selected radiological monitoring & sampling points, relocation centers in host areas, & shelter areas; (identification of radiological sampling & monitoring points shall include the designators in Table J – 1 or an equivalent uniform system described in the plan).	Appendix 5
J.10.b	Maps showing population distribution around the nuclear facility. This shall be by evacuation area (licensees shall also present the information in a sector format).	Appendix 5
J.10.c	Means for notifying all segments of the transient & resident population.	Appendix 5, Appendix 9
J.10.d	Means for protecting those persons whose mobility may be impaired due to such factors as institutional or other confinement.	Appendix 5
J.10.e	Provisions for the use of radioprotective drugs, particularly for emergency workers & institutionalized persons within the plume exposure EPZ whose immediate evacuation may be infeasible or very difficult, including quantities, storage, & means of distribution.	Appendix 7

J.10.f	State & local organizations' plans should include the method by which decisions by the State Health Department for administering radioprotective drugs to the general population are made during an emergency & the pre-determined conditions under which such drugs may be used by offsite emergency workers.	Appendix 7
J.10.g	Means of relocation.	Appendix 5
J.10.h	Relocation centers in host area that are at least 5 miles, preferably 10 miles, beyond the boundaries of the plume exposure emergency planning zone.	Appendix 5
J.10.i	Projected traffic capacities of evacuation routes under emergency conditions.	Appendix 5
J.10.j	Control of access to evacuated areas & organization responsibilities for such control.	Appendix 11, Appendix 12
J.10.k	Identification of & means for dealing with potential impediments (e.g., seasonal impassability of roads) to use of evacuation routes, & contingency measures.	Appendix 5
J.10.l	Time estimates for evacuation of various sectors & distances based on a dynamic analysis (time-motion study under various conditions) for the plume exposure pathway emergency planning zone.	Appendix 5
J.10.m	The bases for the choice of recommended protective actions from the plume exposure pathway during emergency conditions. This shall include expected local protection afforded in residential units or other shelter for direct & inhalation exposure, as well as evacuation time estimates.	Appendix 5
J.11	Each state shall specify the protective measures to be used for the ingestion pathway, including the methods for protecting the public from consumption of contaminated food stuffs. This shall include criteria for deciding whether dairy animals should be put on stored feed. The plan shall identify procedures for detecting contamination, for estimating the dose commitment consequences of uncontrolled ingestion, & for imposing protection procedures such as impoundment, decontamination, processing, decay, product diversion, and preservation. Maps for recording survey & monitoring data, processing plants, water sheds, water supply intake & treatment plants & reservoirs shall be maintained. Provisions for maps showing detailed crop information may be by including reference to their availability & location & a plan for their use. The maps shall start at the facility & include all of the 50-mile ingestion pathway EPZ. Up-to-date lists of the names & locations of all facilities which regularly process milk products & other large amounts of food or agricultural products originating in the ingestion pathway Emergency Planning Zone, but located elsewhere, shall be maintained.	Appendix 8

J.12	Each organization shall describe the means for registering & monitoring of evacuees at relocation centers in host areas. The personnel & equipment available should be capable of monitoring within about a 12 hour period all residents & transients in the plume exposure EPZ arriving at relocation centers.	Appendix 5
K. RADIOLOGICAL EXPOSURE CONTROL		
K.3.a	Each organization shall make provision for 24-hour-per-day capability to determine the doses received by emergency personnel involved in any nuclear accident, including volunteers. Each organization shall make provisions for distribution of dosimeters, both self-reading & permanent record devices.	Appendix 7
K.3.b	Each organization shall ensure that dosimeters are read at appropriate frequencies & provide for maintaining dose records for emergency workers involved in any nuclear accident.	Appendix 7
K.4	Each state & local organizations shall establish the decision chain for authorizing emergency workers to incur exposures in excess of the EPA General Public Guidelines (i.e., EPA PAGs for emergency workers & lifesaving activities).	Appendix 7
K.5.a	Each organization, as appropriate, shall specify action levels for determining the need for decontamination.	Appendix 7
K.5.b	Each organization, as appropriate, shall establish the means for radiological decontamination of emergency personnel wounds, supplies, instruments & equipment, & for waste disposal.	Appendix 11
L. PUBLIC HEALTH SUPPORT		
L.1.	Each organization shall arrange for local & backup hospital & medical services having the capability for evaluation of radiation exposure & uptake, including assurance that persons providing these services are adequately prepared to handle contaminated individuals.	Appendix 5
L.3	Each state shall develop lists indicating the location of public, private, & military hospitals & other emergency facilities within the state or contiguous states considered capable of providing medical support for any contaminated individual. The listing shall include the name, location, type of facility, & capacity & any special radiological capabilities. These emergency medical services should be able to radiologically monitor contaminated personnel, & have the facilities & trained personnel that are able to care for contaminated injured persons.	Appendix 5
L.4	Each organization shall arrange for transporting victims of radiological accidents to medical support facilities.	Appendix 5
M.RECOVERY & RE - ENTRY PLANNING & POST - ACCIDENT OPERATIONS		

M.1	Each organization, as appropriate, shall develop general plans & procedures for re-entry & recovery & describe the means by which decisions to relax protective measures (e.g., allow re-entry into an evacuated area) are reached. This process should consider both existing & potential conditions.	Appendix 11
M.3	Each licensee & state plan shall specify the means for informing members of the response organizations that a recovery operation is to be initiated, of any changes in organizational structure that may occur.	Appendix 5
M.4	Each plan shall establish a method for periodically estimating total population exposure.	Appendix 11
N. EXERCISES & DRILLS		
N.1.a	An exercise is an event that tests the integrated capability & a major portion of the basic elements existing within emergency preparedness plans & organizations. The emergency preparedness exercise shall simulate an emergency that results in off site radiological releases that would require response by off site authorities. Exercise shall be conducted as set forth in NRC & FEMA rules.	Appendix 13
N.1.b	An exercise shall include mobilization of state & local personnel & resources adequate to verify the capability to respond to an accident scenario requiring response. The organization shall provide for a critique of the annually by federal & state observers/evaluators. The scenario should be varied from year to year such that all major elements of the plans & preparedness organizations are tested within a five-year period. Each organization should make provisions to start an exercise between 6:00 p.m. & 6:00 a.m. once every six years. Exercises should be conducted under various weather conditions. Some exercises should be unannounced.	Appendix 13
N. 2	A drill is a supervised instruction period aimed at testing, developing, & maintaining skills in a particular operation. A drill is often a component of an exercise. A drill shall be supervised & evaluated by a qualified drill instructor. Each organization shall conduct drills, in addition to the annual exercise at the frequencies indicated below.	
N.2.a	Communications Drill: Communications with state & local governments within the plume exposure pathway Emergency Planning Zone shall be tested monthly. Communications with federal emergency response organizations & states within the ingestion pathway shall be tested quarterly. Communications between the nuclear facility, state, & local emergency operations centers, field assessment teams shall be tested annually. Communications drills shall also include the aspect of understanding the content of messages.	Appendix 13

N.2.d	<p>Radiological Monitoring Drills: Plant environs & radiological monitoring drills (on site and off site) shall be conducted annually. These drills shall include collection & analysis of all sample media (e.g., water, vegetation, soil, & air) & provisions for communications & record keeping. The state drills need not be at each site. Where appropriated local organizations shall participate.</p>	Appendix 13
N.2.e	<p>Health Physics Drills: Health physics drills shall be conducted semi-annually which involve response to, & analysis of, simulated elevated airborne & liquid samples & direct radiation measurements of the environment. The state drills need not be at each site.</p>	Appendix 13
N.3	<p>Each organization shall describe how exercises & drills are to be carried out to allow free play for decision-making & to meet the following objectives. Pending the development of exercise scenarios & exercise evaluation guidance by NRC & FEMA the scenarios for use in exercise & drills shall include but not be limited to, the following:</p>	

N.3.a	The basic objective(s) of each drill & exercise & appropriate evaluation criteria.	Appendix 13
N.3.b	The date(s), time period, place(s), & participating organizations.	
N.3.c	The simulated events.	
N.3.d	A time schedule of real & simulated initiating events.	
N.3.e	A narrative summary describing the conduct of the exercises or drills, to include such things as simulated casualties, off site fire department assistance, rescue of personnel, use of protective clothing, deployment of radiological monitoring teams, & public information activities.	
N.3.f	A description of the arrangements for & advance materials to be provided to official observers.	
N.4	Official observers from federal, state, or local governments will observe, evaluate, & critique the required exercises. A critique shall be scheduled at the conclusion to evaluate the ability of organizations to respond as called for in the plan. The critique shall be conducted as soon as practicable after the exercise, & a formal evaluation should result from the critique.	Appendix 13
N.5	Each organization shall establish means for evaluating observer & participant comments on areas needing improvement, including emergency plan procedural changes, & for assigning responsibility for implementing corrective actions. Each organization shall establish management control used to ensure that corrective actions are implemented.	Appendix 13
<u>O. RADIOLOGICAL EMERGENCY RESPONSE TRAINING</u>		
O.1	Each organization shall assure the training of appropriate individuals.	
O.1.a	Each facility to which the plant applies shall provide site-specific emergency response training for those off site emergency organizations who may be called upon to provide assistance in the event of an emergency.	Appendix 13
O.1.b	Each off site response organization shall participate in & receive training. Where mutual aid agreements exist between local agencies such as fire, police, & ambulance/rescue, the training shall also be offered to the other departments who are members of the mutual aid district.	Appendix 13
O.4	Each organization shall establish a training program for instructing & qualifying personnel who will implement radiological emergency response plans. The specialized initial training & periodic retraining programs (including the scope, nature, & frequency) shall be provided in the following categories:	
O.4.a	Directors or coordinators of the response organizations.	
O.4.b	Personnel responsible for accident assessment.	
O.4.c	Radiological monitoring teams & radiological analysis personnel.	
O.4.d	Police, security, & fire-fighting personnel.	

O.4.e	Repair & damage control/correctional action teams (on site).	Appendix 13
O.4.f	First aid & rescue personnel.	
O.4.g	Local support services personnel including Civil Defense/Emergency Services personnel.	
O.4.h	Medical support personnel.	
O.4.i	Licensee's headquarter support personnel.	
O.4.j	Personnel responsible for transmission of emergency information & instructions.	
O.5	Each organization shall provide for the initial & annual retraining of personnel with emergency response responsibilities.	Appendix 15
P. RESPONSIBILITY FOR THE PLANNING EFFORT: DEVELOPMENT, PERIODIC REVIEW & DISTRIBUTION OF EMERGENCY PLANS		
P.1	Each organization shall provide for the training of individuals responsible for the planning effort.	Appendix 13
P.2	Each organization shall identify the title of the individual with the overall authority & responsibility for radiological emergency response planning.	Basic Plan
P.3	Each organization shall designate an Emergency Planning Coordinator with responsibility for the development & updating of emergency plans & coordination of these plans with other response organizations.	Basic Plan; Appendix 2
P.4	Each organization shall update its plan & agreements as needed, & review & certify it to be current on an annual basis. The update shall take into account changes identified by drills & exercises.	Basic Plan
P.5	The emergency response plans & approved changes to the plans shall be forwarded to all organizations & appropriate individuals with responsibility for implementation of the plans. Revised pages shall be dated & marked to show where changes have been made.	Basic Plan
P.6	Each plan shall contain a detailed listing of supporting plans & their source.	Basic Plan
P.7	Each plan shall contain as an appendix listing, by title, procedures required to implement the plan. The listing shall include the section(s) of the plan to be implemented by each procedure.	Table of Contents
P.8	Each plan shall contain a specific table of contents. Plans submitted for review should be cross-referenced to these criteria.	Table of Contents
P.10.	Each organization shall provide for updating telephone numbers in emergency procedures at least quarterly.	Basic Plan

BASIC PLAN

I. AUTHORITIES AND REFERENCES

A. Authorities

1. Commonwealth of Virginia Emergency Services and Disaster Law of 2000, Title 44, Chapter 3.2, Code of Virginia, as amended.
2. Radiation Control Act, Title 32.1, Chapter 6, Article 8, Code of Virginia.

B. References

1. Title 10, Chapter 1, Code of Federal Regulations.
 - a. Part 20 - Standards for Protection Against Radiation.
 - b. Part 50 - Licensing of Production and Utilization Facilities.
 - c. Part 71 - Packaging of Radioactive Material for Transport and Transport of Radioactive Materials Under Certain Conditions.
 - d. Part 73 - Physical Protection of Plants and Materials.
2. Title 44, Chapter 1, Code of Federal Regulations.
 - a. Part 350 - Review and Approval of State and Local Radiological Emergency Plans and Preparedness.
 - b. Part 357 - Radiological Emergency Planning and Preparedness.
 - c. Part 352 - Commercial Nuclear Power Plants: Emergency Preparedness Planning.
3. NUREG-0654/FEMA-REP-1 - Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, U.S. Nuclear Regulatory Commission/Federal Emergency Management Agency, Revision 1, November 1980.
4. EPA 400-R-92-001 - Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, United States Environmental Protection Agency, May 1992.

5. Radiological Emergency Preparedness: Exercise Evaluation Methodology; Federal Emergency Management Agency, September 2001, Federal Register Notice.
6. Commonwealth of Virginia Emergency Operations Plan, Volumes I, February 2004, Volume II March 2004, Volume IV December 2001, Volume VII, March 2004, Volume VIII April 1999.
7. National Response Plan (NRP), December 2004.
8. Nuclear Weapon Accident Response Procedures (NARP) Manual, Defense Nuclear Agency (DNA), September 1990.
9. Department of Defense (DOD) Directive 5100.52, "DOD Response to An Accident or Significant Incident Involving Radioactive Materials," December 21, 1989.
10. See Attachment 1 for a listing of supporting plans and Standing Operating Procedures.

II. DEFINITIONS

See Appendix 18.

III. PURPOSE

The purposes of this Plan are to:

- A. Provide the State organization for direction and control of emergency operations in the event of:
 1. A radiological emergency at a fixed nuclear facility.
 2. Other radiological emergencies, to include those caused by a transportation accident involving radiological materials.
 3. Terrorist events involving radiological materials.
 4. A radiological emergency involving a Naval Nuclear Propulsion Program (NNPP) facility or ship.
- B. Provide for warning the public and for the implementation of protective actions to be taken during a radiological emergency.

- C. Provide guidance to agencies of the State government and to the political subdivisions as to their emergency preparedness and operating responsibilities in preparing for and coping with a radiological emergency to minimize radiation exposure and environmental contamination.
- D. Provide a basis for preparation of detailed Radiological Emergency Response Plans, procedures, and training programs by agencies of the state government and the political subdivisions.

IV. SCOPE

This Plan applies to off-site radiological emergencies caused by events at fixed nuclear facilities, NNPP facilities and ships, and to other radiological emergencies, to include transportation accidents involving radioactive materials and terrorist events involving radiological materials. The Plan:

- A. Assigns responsibilities to State agencies and local governments in radiological emergency response and preparedness.
- B. Sets forth procedures for reporting and disseminating warning of radiological emergencies.
- C. Specifies immediate response procedures by State and local governments to the four NRC/FEMA-defined emergency action levels.
- D. Delineates the policies and concepts under which the State and local governments will operate in radiological emergency response.

V. SITUATION

A. Potential Sources of Radiological Emergencies

1. The following fixed nuclear facilities are potential sources of radiological emergencies in Virginia. More detailed information on fixed nuclear facilities in Virginia is included in Appendix 14.
 - a. Nuclear Power Plant Reactors
 - (1) Surry Power Station, located on the James River in Surry County, is owned and operated by Dominion Generation, hereafter called Dominion. There are two pressurized water nuclear reactors in operation, which generate an electrical output of 855 megawatts each.
 - (2) North Anna Power Station, located on Lake Anna in Louisa County, is owned and operated by Dominion. There are two pressurized water

nuclear reactors in operation, which generate an electrical output of 947 megawatts each.

- (3) Calvert Cliffs Power Station, operated by Baltimore Gas and Electric Company, is located in Lusby, Maryland. There are two pressurized water nuclear reactors in operation, which generate an electrical output of 845 megawatts each. This site is about 22 miles from the Virginia border.

2. The following Naval Nuclear Propulsion Program (NNPP) facilities and ships in the Greater Hampton Roads area are potential sources of radiological emergencies. More detailed information on NNPP facilities and ships is provided in Appendix 17.

- a. Naval Station Norfolk (NSN)

Naval Station Norfolk (NSN) is in Norfolk, Virginia on the Elizabeth River. NSN is homeport to both nuclear-powered aircraft carriers and submarines. These nuclear-powered vessels are under the radiological regulatory authority of the Naval Nuclear Propulsion Program (NNPP) - A joint program of the U.S. Navy and U.S. Department of Energy/National Nuclear Security Administration.

- b. Norfolk Naval Shipyard, Portsmouth (NNSY)

Norfolk Naval Shipyard (NNSY) performs repair, overhaul, testing and decommissioning of naval nuclear-powered vessels on the Elizabeth River in Portsmouth, Virginia. All nuclear-powered vessels and their support facilities at NNSY are under the radiological regulatory authority of the Naval Nuclear Propulsion Program (NNPP),-a joint program of the U.S. Navy and U.S. Department of Energy/National Nuclear Security Administration.

- c. Northrop Grumman Newport News Shipyard, Newport News (NGNN)

Northrop Grumman Newport News Shipyard (NGNN) performs repair, overhaul, testing, new construction, and decommissioning of naval nuclear-powered vessels on the James River in Newport News, Virginia. All nuclear-powered vessels and their support facilities at NNSY are under the radiological regulatory authority of the Naval Nuclear Propulsion Program (NNPP),-a joint program of the U.S. Navy and U.S. Department of Energy/National Nuclear Security Administration.

3. Transportation Accidents (See Appendix 15)

Shipment of radioactive materials within the State in support of fixed nuclear facilities, other users of radioactive materials, and the Department of Defense facilities raises the possibility of radiological emergencies caused by transportation accidents. The primary mode of transporting radioactive materials is by truck, although shipments may be made by rail, ship, or aircraft.

4. Nuclear Weapon Accident

In a nuclear weapon accident, health and safety, public affairs, classified information security, and weapons recovery are the critical concerns facing response organizations. Other radiological emergency response aspects that must be addressed include medical assistance, security, logistics, legal implications, site restoration, communications and response forces integration and coordination. Overall coordination of these operations will be managed by the Commonwealth of Virginia Department of Emergency Management in conjunction with the lead or Lead Federal Agency (LFA).

5. Terrorist Events involving Radiological Materials

A Radiological Dispersion Device (RDD) or “dirty bomb” could spread radioactive material over a wide area requiring a sizeable cleanup. Such a dispersion could contaminate people in the immediate vicinity, some of which would require medical treatment.

B. Nature of the Hazard

Radiation cannot be detected by the human senses. Awareness of its presence must rely on instrumentation for warning of a release to the environment. Radioactive materials released into the environment find their way to persons by two broad pathways.

1. Plume Exposure Pathway

a. The principal exposure sources from this pathway are:

- (1) Whole body external exposure to gamma radiation from deposited material.
- (2) Inhalation exposure from the passing radioactive plume.

b. The duration of the release leading to potential exposure could range from one-half hour to several days. For the plume exposure pathway, evacuation would likely be the principal immediate protection action recommended for the general public. Sheltering would be considered for special populations, such as hospital patients, incarcerated inmates where

evacuation represents a greater risk for either the individuals or the community.

2. Ingestion Exposure Pathway

The principal exposure from this pathway would be from ingestion of contaminated water or foods such as milk or fresh vegetables. The duration of potential exposure could range from hours to several months. Early protective actions to minimize exposure or subsequent contamination of milk and other supplies could include area monitoring to detect contamination and putting cows on stored feed and protected sources of water.

3. Radiation Effects

a. Radiation-induced health hazards to man vary depending on the magnitude of the exposure and may fall into two categories.

(1) Early Effects

These occur shortly after exposure to high doses of radiation and may include nausea, fatigue, vomiting, diarrhea, loss of appetite, loss of hair, temporary sterility, and clinically-detectable changes such as chromosomal changes. For whole body exposure, these effects and the range of exposure within which they may occur in a general population include:

- (a) 5 - 35 rad - Anxiety.
- (b) 35 - 75 rad - Anxiety, nausea, mild headache. Mild lymphocyte depression within 24 hours.
- (c) 75 - 125 rad - Transient mild nausea. Vomiting in 5 - 30% of the population. Moderate drop in lymphocyte, platelet and granulocyte counts. Increased susceptibility to opportunistic pathogens.
- (d) 125 - 300 rad - Transient to moderate nausea and vomiting in 20 - 70% of exposed. Mild to moderate fatigability and weakness in 25 - 60%. Significant medical care may be required at 3 - 5 weeks for 10 - 50% of exposed. Anticipated problems include infection, bleeding and fever. 5 - 50% of those exposed will die in 60 days.
- (e) 300 - 500 rad - 50 - 100% of exposed individuals will die within 60 days.

(2) Late Effects

Cancer, including leukemia, has been clearly linked with exposure to ionizing radiation, and is likely the most important effect at absorbed doses below 100 rad. These do not appear until years after exposure to radiation and may include other somatic effects such as increased prenatal mortality or heredity defects in future generations. In general, one rem whole body dose in a large population could result in a 0.04 percent increase in total cancer mortality. Fetal absorbed doses in excess of 10 rad during the period of 8 to 25 weeks may result in a decrease of intelligence quotient (IQ). Fetal absorbed doses in the range below 10 rad appear to present no substantial risk of fetal death, malformation or impairment of mental development. The lifetime risk of radiogenic induction of childhood cancer or leukemia at 10 rad is about 1 in 170. no hereditary effects have been seen in human studies, however, the NCRP has endorsed a risk coefficient for severe genetic effects of 0.01% for a 1 rem dose based on animal studies.

- b. Effects on animals, vegetation, or real estate are possible, but may be controlled or alleviated to the extent that decontamination is employed or the affected item is destroyed.

C. Scope of Probable Radiological Emergencies

- 1. The Nuclear Regulatory Commission has defined two Emergency Planning Zones (EPZ's) for pre-planned emergency response actions surrounding fixed, commercial nuclear power stations.

- a. Plume Exposure Pathway (or Ten-Mile Emergency Planning Zone)

A short-term plume exposure pathway EPZ of about a ten-mile radius surrounding the facility. The size of this EPZ is based on the following considerations:

- (1) Projected doses from the traditional design basis accident would not exceed protective action guide levels outside of the zone.
- (2) Projected doses from most core melt sequences would not exceed protective action guide levels outside of the zone.
- (3) For the worst core melt sequences, immediate life-threatening doses would generally not occur outside of the zone.

- (4) Detailed planning within ten miles would provide a substantial base for expansion of response efforts in the event that this proved necessary.
- (5) The NRC/EPA Task Force has concluded that it would be unlikely that any protective actions for the plume exposure pathway would be required beyond this distance. Also, the Task Force concluded that the ten-mile plume exposure pathway EPZ is of sufficient size for actions within this zone to provide for substantial reduction in early severe health effects (injuries or death) in the event of the worse case core melt accident.

b. Ingestion Exposure Pathway (or 50-Mile Emergency Planning Zone)

A longer-term ingestion exposure pathway EPZ of about a 50-mile radius surrounding the facility. The size of this EPZ was selected because:

- (1) The downwind range within which significant contamination could occur would generally be limited to about 50 miles from a commercial nuclear power station because of wind shifts during the release and travel periods.
- (2) There may be conversion of atmospheric-suspended iodine to chemical forms that do not readily enter the ingestion pathway.
- (3) Much of any particulate material in a radioactive plume would have been deposited on the ground within 50 miles of the facility.
- (4) The likelihood of exceeding ingestion pathway protective action guide levels at 50 miles is comparable to the likelihood of exceeding plume exposure pathway protective action guide levels at 10 miles.

c. Emergency Planning Zones for Other Nuclear Facilities

Other fixed nuclear facilities located within the State are of much lower power or have much lower radioactive inventories than fixed commercial nuclear power stations. These features tend to reduce the consequences of accidents at these facilities. Except for the size of the protective action zones, State, local, and facility planning and response to accidents, which could occur at these facilities, will be the same as for commercial nuclear power stations.

d. Naval Nuclear Propulsion Program Facilities and Ships

This section is currently under review and revision by the U.S. Navy, Northrop-Grumman, State and local officials.

2. Time Factors Associated with Release

The range of times between the onset of accident conditions and the start of a major release is of the order of one-half hour to several hours. The subsequent time period over which radioactive material may be expected to be released is of the order of one-half hour (short-term release) to a few days (continuous release). The table below summarizes the guidance on time of the release.

Guidance on Initiation and Duration of Release

Time from initiating event to start of atmospheric release.	0.5 hour to 1 day.
Time period over which radioactive material may be continuously released.	0.5 hour to several days.
Time at which major portion of release may occur.	0.5 hour to 1 day after start of release.
Travel time for release exposure point (time after release).	5 miles - 0.5-2 hrs. 10 miles -1 hour

D. Protection Against the Hazard.

1. The projected dose a person at any point might receive is dependent, among other factors, upon:
 - a. The quantity and the isotopic and chemical composition of the radioactive material released.
 - b. The distance the person is from the source or release point.
 - c. The length of time exposed to the radiation.
 - d. Atmospheric conditions, to include wind speed and direction.
2. Protective measures could include:
 - a. Evacuation.
 - b. Shelter and relocation.
 - c. Access control.
 - d. Pasture and feed control for animals.

- e. Control of milk.
 - f. Food and water control (See Appendix 8).
 - g. Decontamination (See Appendix 11).
 - h. Respiratory protection for emergency workers.
 - i. Use of radio-protective drugs (stable iodine to reduce radioactive iodine in the thyroid).
3. The most urgent action in terms of response time after a radiological emergency caused by an airborne release of radioactive materials at a nuclear facility is to protect people from inhalation of radioactive materials and from direct whole body exposure to gamma radiation. Early follow-on action is also required to reduce exposure through the ingestion pathway. One or several of the protective actions (D.2. above) may be taken to avoid or reduce the projected dose. The goal is maximum protection of the public with the least cost and disruption. This Plan provides for immediate protective action whenever the projected dose for the sum of the effective dose equivalent resulting from exposure to external sources and the committed effective dose equivalent incurred from all significant inhalation pathways during the early phase to the general public exceeds 1 Rem or the committed dose equivalents to the thyroid exceeds 5 Rem.

VI. MISSION

- A. The mission of the Commonwealth of Virginia is to plan and prepare for and conduct emergency operations in response to radiological emergencies at fixed nuclear facilities, shipboard reactors, and transportation accidents involving radioactive materials. For NNPP facilities and ships, the Commonwealth of Virginia is responsible for making Protective Action Decisions (PADs) and implementing appropriate protective measures to protect persons within its jurisdiction, but outside of the Naval Nuclear Propulsion Program facility's boundary.
- B. The mission of Commonwealth of Virginia political subdivisions is to develop plans and prepare for radiological emergency response in accordance with this Plan. This applies particularly to those subdivisions within the emergency planning zones of fixed nuclear power stations (See Attachment 1, Supporting Plans and SOPs for jurisdictions within the plume exposure EPZ); test, research, and university reactors; naval nuclear propulsion reactors; shipyards; and fuel fabrication plants. Subdivisions within NNPP designated Areas of Planning Attention should assess the need for pre-planning; however, special emergency response plans are not necessary (see Appendix 17).

- C. Each local government within the State should plan for and be prepared to respond to radiological emergencies caused by transportation accidents involving radioactive materials that might occur within its jurisdiction.

VII. ORGANIZATION (See Appendix 3)

- A. The nuclear facility or site operator plays a key role in on-site emergency response, damage control, accident assessment, warning, and public affairs.
- B. The State organization for response to radiological emergencies is the same as that for other peacetime disaster operations. It is based on normal governmental structures and channels of communication with the Governor in his role as Director of Emergency Management directing the response through the State Coordinator of Emergency Management.
- C. The State Coordinator (administrative head) of the Virginia Department of Emergency Management (VDEM) coordinates the overall response, and the Virginia Department of Health (VDH) through the Radiological Health Program (RPH) provides technical advice and assistance on radiological exposure control, and radiological monitoring.
- D. The VDEM State On-Scene Coordinator (SOSC) at the utility's Emergency Operations Facility (EOF) or other appropriate location will serve as the state's representative to provide the interface with the utility's Recovery Manager and to facilitate receipt and transmission of appropriate information between the utility, the state and local governments. Similarly, the SOSC will provide the interface with the Naval Nuclear Propulsion Program's local Emergency Control Center (ECC). See IX.D. and IX.E. for additional functions of the SOSC.
- E. Other State agencies provide support and assistance, on request, in accordance with their responsibilities and capabilities.
- F. The State organization will be supported by Federal response teams represented in the EOF or ECC, Virginia Emergency Operations Center (Virginia EOC), and/or other appropriate locations. (See Section II to Appendix 2). Additional Federal assistance may be obtained from or through the Department of Homeland Security, the Department of Energy, the Nuclear Regulatory Commission, and the Federal Emergency Management Agency through the Virginia EOC.

VIII. CONCEPT OF OPERATIONS AND PROCEDURES

- A. Emergency Classification Levels
 - 1. Emergency Classification Levels for Fixed Nuclear Facilities

- a. The following four classes of emergency classification levels have been established for the purpose of reporting and defining pre-planned actions to be taken in response to emergencies at fixed nuclear facilities:

(1) Class: NOTIFICATION OF UNUSUAL EVENT

Class Description: Unusual events are in process 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 off-site response or monitoring are expected unless further degradation of safety systems occurs.

NOTE: This Emergency Class applies to Commercial Nuclear Power Stations.

(2) Class: ALERT

Class Description: Events are in process 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 intentional malicious dedicated efforts of hostile action. Any releases expected to be limited to small fractions of the EPA Protective Action Guidelines exposure levels.

NOTE: This Emergency Class applies to Commercial Nuclear Power Stations.

(3) Class: SITE AREA EMERGENCY

Class Description: Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or security events that result in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to the likely failure of or; (2) prevent effective access to, equipment needed for the protection of the public. Any releases not expected to exceed EPA Protective Action Guidelines exposure levels except near site boundary.

NOTE: This Emergency Class applies to Commercial Nuclear Power Stations.

(4) Class: GENERAL EMERGENCY

Class Description: Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity. Releases can be reasonably expected to exceed EPA Protective Action Guidelines exposure levels off-site for more than immediate site area.

NOTE: This Emergency Class applies to Commercial Nuclear Power Stations.

- b. These classes of emergency classification levels could develop sequentially. However, the first indication of a problem could be at Site Area Emergency or General Emergency.
 - c. The Recovery, Relocation and Reentry Phase will begin when the utility or facility operator terminates the Alert, Site Area Emergency or General Emergency Phase or when events at the site have been down-graded and conditions stabilized. Off-site radiological monitoring, assessment, and environmental sampling will be continued until terminated by the State Radiological Assessment Officer, VDH officials, and the State Coordinator or when missions have been completed. State and local government officials will continue to take whatever actions necessary to provide for the safety and economic well being of the population and to return impacted areas to normalcy.
2. Emergency Classification and Action Levels for NNPP Facilities and Ships (See Appendix 17)
- a. The Naval Nuclear Propulsion Program (NNPP) uses the four classes of Emergency Action Levels (EALs) specified in NUREG-0654/FEMA-REP-1. While the NNPP uses the same four classes as commercial nuclear power plants, the NNPP's methodology for establishing the EALs is different. The Nuclear Regulatory Commission (NRC) and Federal Emergency Management (FEMA) guidance for establishing EALs contained in NUREG-0654/FEMA-REP-1 is primarily based on plant or site conditions (e.g., loss of offsite power, loss of one or more fission product barriers). Because of the differences in the design and operation of NNPP nuclear propulsion plants, the NRC/FEMA guidance is not applicable to NNPP nuclear propulsion plants.

The NNPP EALs are normally classified based on a conservative estimate of total radiation exposure to a hypothetical member of the public located near the Federal Government property boundary (or nearest public residence) in terms of dose to the whole body (i.e., Total

Effective Dose Equivalent (TEDE)) or dose to the thyroid (Committed Dose Equivalent (CDE)) during the plume phase. The NNPP used the Protective Action Guides (PAGs) specified by the Environmental Protection Agency (EPA), in EPA 400-R-92-001 of October 1991, to establish the General Emergency threshold doses (1 Rem TEDE, 5 Rem CDE thyroid). The dose thresholds for the lower tier event classes (Site Emergency, Alert, and Unusual Event) were then established using fractions of the EPA PAGs.

See Appendix 17 for a comprehensive discussion of NNPP emergency action levels and event classification methodology.

(1) Class: UNUSUAL EVENT

Description: Unusual events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant. No releases of radioactive material requiring offsite response are expected unless further degradation of safety systems occurs. If minor releases of radioactivity off-site do occur, releases are expected to result in whole body radiation exposures of <0.01 Rem or thyroid exposures of <0.05 Rem at the Federal Government property boundary (or nearest public residence).

(2) Class: ALERT

Description: Events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant. Any releases are expected to be limited to small fractions of the EPA PAG exposure levels near the Federal Government property boundary (or nearest public residence). Radioactivity releases are expected to result in whole body radiation exposures of ≥ 0.01 to <0.10 Rem or thyroid exposures of ≥ 0.05 to <0.50 Rem at the Federal Government property boundary (or nearest public residence).

(3) Class: SITE EMERGENCY

Description: Events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public. Any releases are not expected to exceed EPA PAG exposure levels beyond the Federal Government property boundary. Releases are expected to result in whole body radiation exposures of ≥ 0.1 to <1.0 Rem or thyroid exposures of ≥ 0.5 to <5 Rem at the Federal Government property boundary.

(4) Class: GENERAL EMERGENCY

Description: Events are in progress or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity. Releases can be expected to exceed EPA PAG exposure levels near the Federal Government property boundary. Releases are expected to result in whole body radiation exposures ≥ 1.0 Rem or thyroid exposures of ≥ 5.0 Rem at the Federal Government property boundary.

- b. These classes of emergency classification levels could develop sequentially. However, the first indication of a problem could be at Site Emergency or General Emergency.
- c. The Recovery, Relocation and Reentry Phase will begin when the NNPP Emergency Control Center (ECC) terminates the Alert, Site Emergency or General Emergency Phase or when events at the site have been down-graded and conditions stabilized. Off-site radiological monitoring, assessment, and environmental sampling will be continued until terminated by the State Radiological Assessment Officer, VDH officials, and the State Coordinator or when missions have been completed. State and local government officials will continue to take whatever actions necessary to provide for the safety and economic well being of the population and to return impacted areas to normalcy.

B. Accident Assessment (See Appendices 6, 17 & Annex I)

The initial assessment and report of an emergency classification level at a nuclear facility will be made by the facility operator, based on instrumentation within the facility control room. This initial assessment will include a projection of off-site consequences; and if indicated, immediate protective actions will be recommended to State and local government officials. This initial on-site assessment will be verified and refined as soon as possible and on a continuing basis by the RHP, VDH in cooperation with facility health physics personnel assessments and recommendations will be based on on-site radiation monitoring, off-site reports provided by the local governments and the State Radiological Emergency Response Team (RERT), field units, and laboratory analyses. The initial assessment and report of an emergency classification level for radiological and reactor accidents involving NNPP facilities and ships will be made by the NNPP Area Commander (see Appendix 17).

C. Notification and Warning (See Appendices 4, 17 & Annex C)

- 1. The facility operator, or Area Commander for NNPP facilities and ships, will immediately notify the affected local governments and the Virginia EOC whenever any one of the four emergency classification levels has been

reached at the facility. The initial notification will include the emergency classification, whether or not there has been a release of radioactive material and remarks and description of events, in accordance with the format shown at Tab A to Appendix 4, or Tab B to Appendix 17.

2. When notified of a Notification of Unusual Event, Alert, Site Area Emergency, or General Emergency, the Virginia EOC and the local governments will first verify the report (if not received by "insta-phone" circuit system), and take actions as outlined in this plan and in local government Radiological Emergency Response Plans (RERPs). Subsequent reports need not be verified. The Virginia EOC will notify RHP, other State agencies assigned emergency tasks in this Plan, and the affected local governments as appropriate.
3. If a Site Area Emergency occurs at the North Anna Nuclear Power Station, the State of Maryland EOC will be notified; and if a Site Area Emergency occurs at the Surry Power Station, the State of North Carolina EOC will be notified. The Virginia EOC may notify affected adjacent states during an earlier phase, if warranted.
4. The local government EOC's or communications centers will notify local government officials and supporting organizations and carry out emergency responsibilities and implement procedures in accordance with the local government RERP's.
5. For transportation accidents involving radioactive materials, See Appendix 15.
6. For information on radiological and reactor emergencies involving NNPP facilities or ships, see Appendix 17.

D. Concept of Operations

1. Accidents at Fixed Nuclear Facilities
 - a. Protective actions within the facility site boundary will be the responsibility of the operator. The State and neighboring local governments will provide on-site assistance as requested and as mutually agreed to with the facility operator.
 - b. The implementation of protective actions beyond the site boundary but within the ten-mile plume exposure Emergency Planning Zone (EPZ) and within the fifty-mile Ingestion Pathway Zone (IPZ) for commercial nuclear power stations is the primary responsibility of the elected officials of the local governments. As time may be a critical factor in

providing protection against plume exposure, initial response is based on the implementation of preplanned actions outlined in the State and local government plans upon receipt of notification of a radiological incident at a fixed nuclear facility (See Appendix 5). Follow-up action will be taken on advice of the Virginia EOC based on the results of evaluation and assessment of the accident. Local Directors of Emergency Services, based upon knowledge of weather conditions, evacuation routes, special populations, predicted arrival of the radioactive plume, etc., may take independent and preemptive action to implement protective actions within their jurisdictions. Jurisdictions implementing preemptive local protective actions will ensure that the Virginia EOC and surrounding jurisdictions are fully informed of all actions and decisions.

Note: Under certain conditions, e.g., loss of communications with the State, local Directors of Emergency Services may institute protective actions, based solely on the recommendation of the nuclear facility.

- (1) VDEM will activate and coordinate implementation of the State Plan, to include assistance to local governments and coordination of emergency response actions of Federal and State agencies.
 - (2) VDH will implement procedures to determine actual off-site radiation distribution to refine the projected dose (See Appendix 6 and Annex I). Based on this assessment, VDH representative will recommend protective actions to be taken. VDH will evaluate the radiological situation on a continuing basis from the time of initial notification until the radiological emergency is over. It will provide technical guidance and assistance relative to actions required, as indicated by the situation.
- c. Radiation assessment and coordination of protective actions within the ingestion pathway Emergency Planning Zone will be the primary responsibility of the VDEM and VDH in cooperation with the Virginia Department of Agriculture and Consumer Services and the Virginia Department of Environmental Quality (DEQ), Water Division.
 - d. VDH is responsible for the procurement, storage, and distribution of potassium iodide (KI). KI may be distributed to members of the general public and institutionalized persons as directed by the State Health Director. See Appendices 7 and 8.
2. Transportation Accidents Involving Radioactive Materials (See Appendix 15).

3. For information on radiological and reactor emergencies involving NNPP facilities or ships, see Appendix 17.

E. Evacuation During An Emergency

Under the provisions of Section 44-146.17 of the Commonwealth of Virginia Emergency Services and Disaster Law, the Governor may direct and compel evacuation of all or part of the populace from any stricken or threatened area if this action is deemed necessary for the preservation of life or other emergency mitigation, response or recovery; prescribe routes, modes of transportation and destination in connection with evacuation; and control ingress and egress at an emergency area, the movement of persons within the area and the occupancy of premises therein.

F. Immunity From Liability

In accordance with Paragraph 44-146.23 of the Commonwealth of Virginia Emergency Services and Disaster Law, "neither the State, nor any political subdivision thereof, nor Federal agencies, nor other public or private agencies, nor, except in cases of willful misconduct, public or private employees, nor representatives of any of them, engaged in any emergency management activities,...shall be liable for the death of, or any injury to, persons or damage to property as a result of such activities."

G. Direction and Control

At the local level, direction and control of radiological emergency response is the responsibility of the local Director of Emergency Services. At the State level, the Governor will direct the emergency response through the State Coordinator of Emergency Management who will coordinate implementation of the Commonwealth of Virginia Radiological Emergency Response Plan (COVRERP).

Refer to Appendix 1 for the complete Direction and Control procedure.

IX. RESPONSIBILITIES

- A. Responsibilities assigned to agencies of State government in radiological emergency preparedness and response are outlined in Appendix 2. State agencies are assigned responsibilities for preparation and maintenance of appendices to this Plan as stated in Attachment 1 to Appendix 2.
- B. State agencies assigned radiological emergency responsibilities will develop and keep current Standing Operating Procedures (SOPs) to assure a capability to fulfill their duties. Telephone numbers of key response personnel should be updated at least

quarterly and provided to the Virginia EOC Operations staff, telephone (804) 674-2400.

- C. Each local government is responsible for maintaining the capability to implement its Radiological Emergency Response Plan and for participating in periodic training exercises of its Radiological Emergency Response Plan.

X. EXECUTION

- A. This Plan is effective for execution upon notification of a radiological emergency within the State and as a basis for training and preparation of supporting plans and procedures upon receipt.
- B. State support to local governments and coordination of emergency operations in the event of a radiological emergency will be accomplished by selected State agencies and other support resources through VDEM.
- C. Plan Maintenance and Training
 - 1. The State Coordinator of Emergency Management will maintain, review, update, and certify this Plan annually. Letters of Agreement will be reviewed periodically and every two years.
 - 2. Responsible officials of State agencies and local government should recommend to the State Coordinator of Emergency Management, at any time, improvements and changes thereto which are appropriate.
 - 3. Training exercises of this Plan will be conducted annually with representatives of FEMA, NRC, and other interested Federal agencies invited to observe (See Appendix 13).
 - 4. Periodic training drills and exercises with NNPP sites will be conducted as specified in Appendix 17.

ATTACHMENT:

- 1 - Supporting Plans, Memoranda of Understanding, Standing Operating Procedures, and Public Affairs Publications

Figure 1 to Attachment 1 - Fixed Nuclear Facilities in Virginia or Within 50 Miles of a Virginia Border

Figure 2 to Attachment 1 - Highway Transportation Routes for Shipment of High Level (Spent Fuel) and Low Level Waste

Figure 3 to Attachment 1 - Emergency Planning Zones

Figure 4 to Attachment 1- Railroads Operating in Virginia

APPENDICES:

- 1 - Direction and Control
- 2 - Task Assignments
- 3 - Organization
- 4 - Notification and Warning
- 5 - Emergency Response
- 6 - Accident Assessment
- 7 - Radiological Exposure Control
- 8 - Agricultural Services
- 9 - Public Information
- 10 - Communications
- 11 - Decontamination and Re-Entry
- 12 - Emergency Highway Operations
- 13 - Training and Exercises
- 14 - Fixed Nuclear Facilities
- 15 - Transportation Accidents
- 16 - Nuclear Weapon Accident
- 17 - Naval Nuclear Propulsion Program Facilities and Ships
- 18 - Definitions

Annexes

- A - ESF #1 - Transportation
- B - ESF #2 - Communications
- C - ESF #3 - Public Works and Engineering
- D - ESF #4 - Firefighting
- E - ESF #5 - Emergency Management
- F - ESF #6 - Mass Care, Housing, and Human Services
- G - ESF #7 - Resource Support
- H - ESF #8 - Public Health and Medical Services
- I - ESF #9 - Urban Search and Rescue
- J - ESF #11 - Agriculture and Natural Resources
- K - ESF #12 - Energy
- L - ESF #13 - Public Safety and Security
- M - Public Information

Attachment 1 to COVERERP

SUPPORTING PLANS, MEMORANDA OF UNDERSTANDING, STANDING OPERATING
PROCEDURES AND PUBLIC AFFAIRS PUBLICATIONS

RADIOLOGICAL EMERGENCY PREPAREDNESS (REP) PLANS

1. Surry Power Station Emergency Plan, as currently revised.
2. Charles City County Radiological Emergency Response Plan, as currently revised.
3. City of Hampton Radiological Emergency Response Plan, as currently revised.
4. Isle of Wight County Radiological Emergency Response Plan, as currently revised.
5. James City County Radiological Emergency Response Plan, as currently revised.
6. New Kent County Radiological Emergency Response Plan, as currently revised.
7. City of Newport News Radiological Emergency Response Plan, as currently revised.
8. City of Poquoson Radiological Emergency Response Plan, as currently revised.
9. Surry County Radiological Emergency Response Plan, as currently revised.
10. City of Williamsburg Radiological Emergency Response Plan, as currently revised.
11. York County Radiological Emergency Response Plan, as currently revised.
12. North Anna Power Station Emergency Plan, as currently revised.
13. Caroline County Radiological Emergency Response Plan, as currently revised.
14. Hanover County Radiological Emergency Response Plan, as currently revised.
15. Louisa County Radiological Emergency Response Plan, as currently revised.
16. Orange County Radiological Emergency Response Plan, as currently revised.
17. Spotsylvania County Radiological Emergency Response Plan, as currently revised.
18. Amherst County Radiological Emergency Response Plan, as currently revised.
19. Campbell County Radiological Emergency Response Plan, as currently revised.

-
20. City of Chesapeake Radiological Emergency Response Plan, as currently revised.
 21. City of Norfolk Radiological Emergency Response Plan, as currently revised.
 22. City of Portsmouth Radiological Emergency Response Plan, as currently revised.
 23. City of Virginia Beach Radiological Emergency Response Plan, as currently revised.
 24. Dominion Corporate Emergency Response Plan, as currently revised.
 25. BWX Technologies Naval Nuclear Fuel Division Plan, as currently revised.

 26. The National Response Plan (NRP). The NRP is an all-discipline, all-hazards plan that establishes a single, comprehensive framework for the management of domestic incidents. The NRP supersedes the Federal Radiological Emergency Response Plan (FRERP).
 27. Shipyard Radiological Emergency Plan for Naval Nuclear Propulsion Plants, Naval Sea Systems Command, U.S. Department of the Navy; Radiological Emergency Planning Manual, Naval Sea Systems Command, NAVSEA S9211-05-MMA-000/(C). (Classified NNPP document with limited distribution)
 28. Local Government Ingestion Pathway RERP Plans (North Anna Power Station Area, as revised), see Appendix 3, Tab E.
 29. Local Government Ingestion Pathway RERP Plans (Surry Power Station, as revised), see Appendix 3, Tab E.
 30. Norfolk Naval Shipyard Radiological Emergency Response Plan, as currently revised.
 31. Northrop Grumman Newport News Radiological Emergency Response Plan, as currently revised.

REP Standing Operating Procedure:

Each State Agency with a tasking responsibility and each of the political subdivisions listed above have prepared detailed supporting Standing Operating Procedures (SOPs) outlining the functions to be performed, agencies or individuals responsible, and telephone numbers. Telephone numbers listed in the SOPs shall be updated at least quarterly.

Public Affairs Publications

1. Commonwealth of Virginia, "Radiological Information for Farmers, Growers and Food Producers", (Web Pamphlet), published by VDEM et al., Richmond, Virginia, 2006.

-
2. VDEM, "North Anna Power Station Emergency Planning Information Calendar", published annually and jointly by the Virginia Department of Emergency Management and Dominion, Richmond, Virginia.
 3. VDEM, "Surry Power Station Emergency Planning Information Calendar", published annually and jointly by the Virginia Department of Emergency Management and Dominion, Richmond, Virginia.
 4. VDEM, "Response to Emergency at Surry Power Station", published jointly by the Virginia Department of Emergency Management and Dominion, Richmond, Virginia.
 5. VDEM, "Response to Emergency at North Anna Power Station", published jointly by the Virginia Department of Emergency Management and Dominion, Richmond, Virginia.
 6. Commonwealth of Virginia, "What to do in an Emergency", published by VDEM, Richmond, Virginia, 1984.
 7. VDEM and Dominion, "Public Information for Radiological Emergency", (yellow pages insert) The Bell Atlantic Telephone Company of Virginia, Continental and Contel Telephone Directories, updated annually.

Memoranda of Understanding

1. Statement of Understanding between the Commonwealth of Virginia and the Salvation Army for Peacetime and War-Caused Disasters, Virginia Emergency Operations Plan Annex I-X, The Salvation Army.
2. Statement of Understanding between the Commonwealth of Virginia and the American Red Cross, Virginia Emergency Operations Plan Annex I-W, Annex E, Attachment 3.

Figure 1 to COVERERP

FIXED NUCLEAR FACILITIES IN VIRGINIA
 OR WITHIN 50 MILES OF A VIRGINIA BORDER

FIXED NUCLEAR FACILITY

LOCATION

EXPOSURE PATHWAY
EPZ (Miles)
PLUME / INGESTION

1. NORTH ANNA	MINERAL, VA	10	50
2. SURRY	GRAVEL NECK, VA	10	50
3. CALVERT CLIFFS	LUSBY, MD	10	50
4. US NAVY FACILITIES	GREATER HAMPTON ROADS AREA		
5. BABCOCK & WILCOX	CAMPBELL CO.	1	5
6. UNIVERSITY OF VIRGINIA REACTOR FACILITY	ALBEMARLE CO.	0.3	1.5
7. US NAVAL WEAPONS STATION	YORKTOWN		

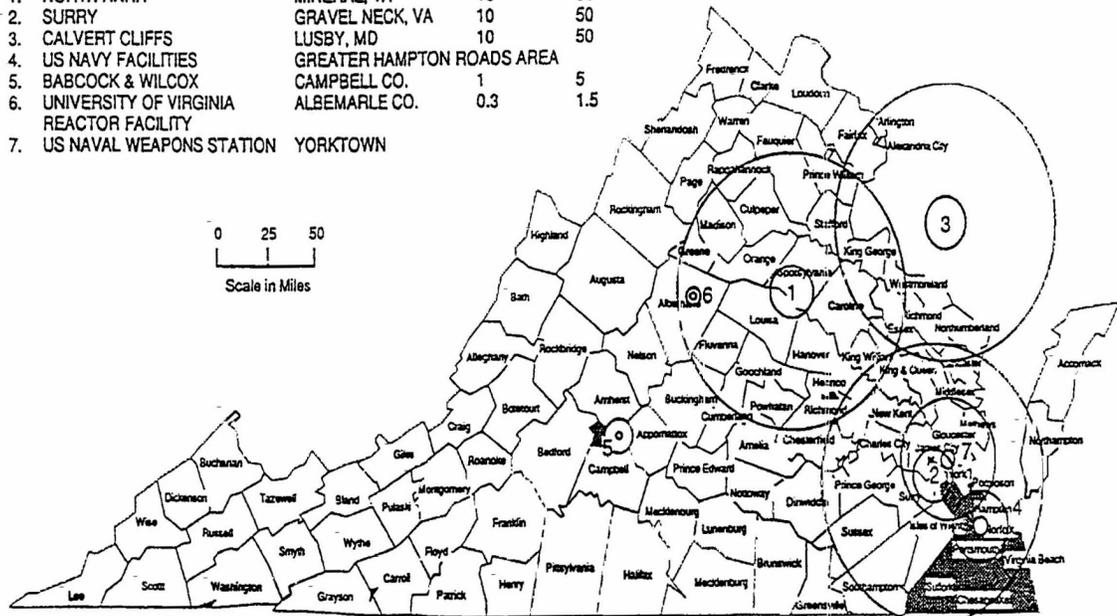


Figure 2 to COVRERP

**HIGHWAY TRANSPORTATION ROUTES FOR SHIPMENT OF
HIGH LEVEL (SPENT FUEL) AND LOW LEVEL WASTES**

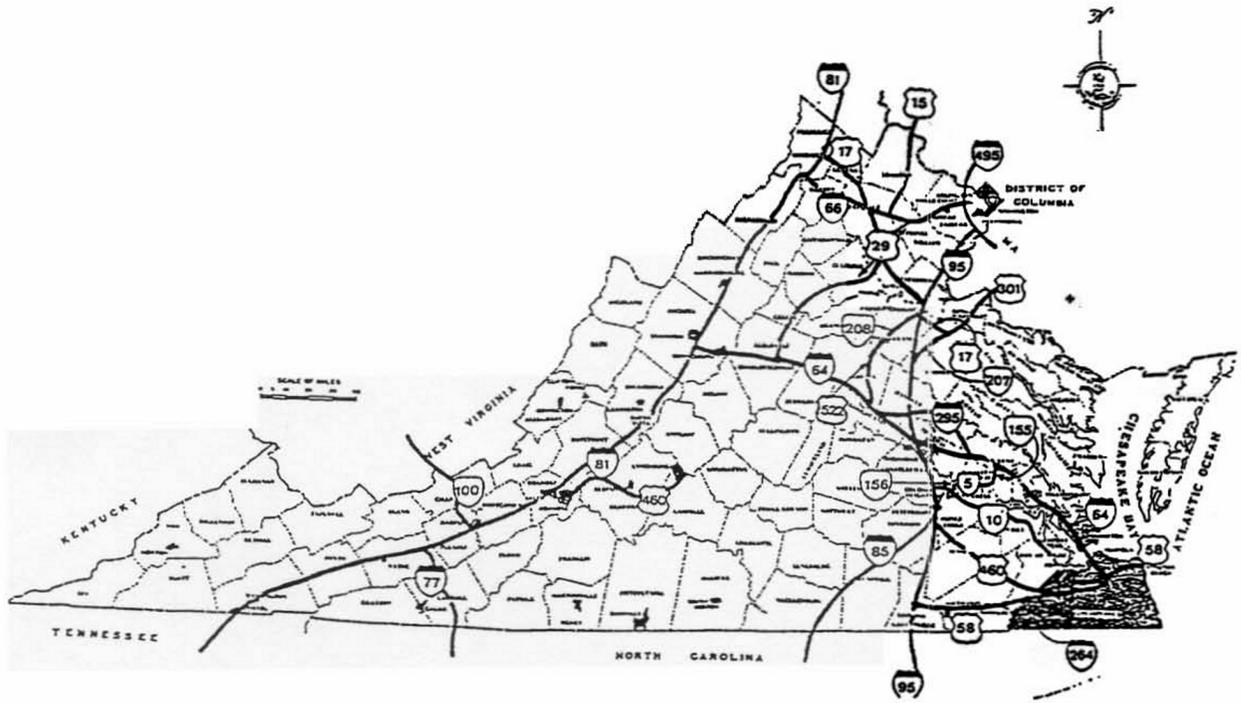
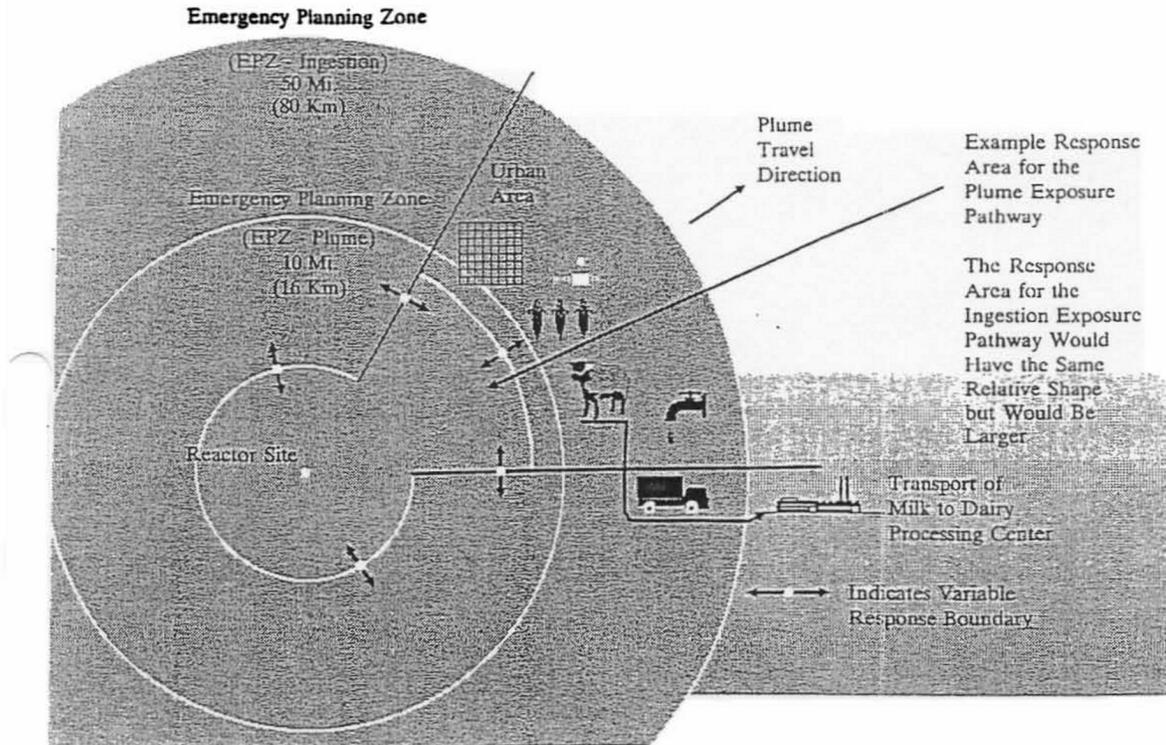


Figure 3 to COVERERP

EMERGENCY PLANNING ZONES



5

Figure 4 to COVERERP

RAILROADS OPERATING IN VIRGINIA

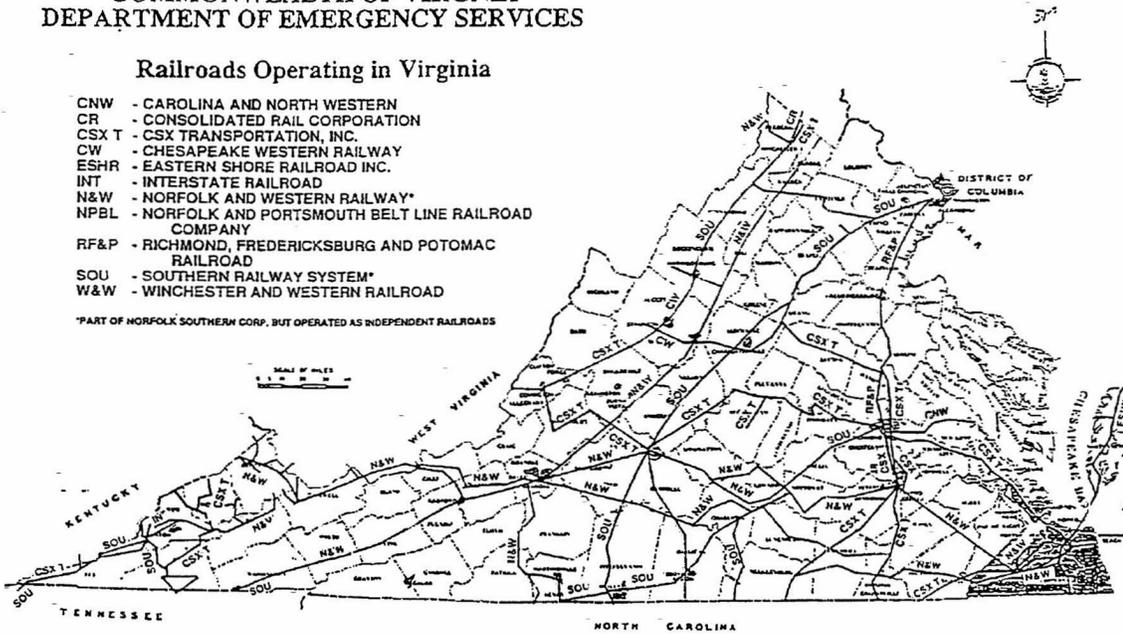
Structures and Systems which may be used for shipment of
 High Level (Spent Fuel) and Low Level Wastes

COMMONWEALTH OF VIRGINIA
 DEPARTMENT OF EMERGENCY SERVICES

Railroads Operating in Virginia

- CNW - CAROLINA AND NORTH WESTERN
- CR - CONSOLIDATED RAIL CORPORATION
- CSX T - CSX TRANSPORTATION, INC.
- CW - CHESAPEAKE WESTERN RAILWAY
- ESHR - EASTERN SHORE RAILROAD INC.
- INT - INTERSTATE RAILROAD
- N&W - NORFOLK AND WESTERN RAILWAY*
- NPBL - NORFOLK AND PORTSMOUTH BELT LINE RAILROAD COMPANY
- RF&P - RICHMOND, FREDERICKSBURG AND POTOMAC RAILROAD
- SOU - SOUTHERN RAILWAY SYSTEM*
- W&W - WINCHESTER AND WESTERN RAILROAD

*PART OF NORFOLK SOUTHERN CORP. BUT OPERATED AS INDEPENDENT RAILROADS



Appendix 1
DIRECTION AND CONTROL

A. Authority

At the local level, direction and control of radiological emergency response is the responsibility of the local Director of Emergency Services. At the State level, the Governor will direct the emergency response through the State Coordinator of Emergency Management who will coordinate implementation of the Commonwealth of Virginia Radiological Emergency Response Plan (COVRERP).

B. Line of Succession

The State Line of Succession is included in paragraph XI., Direction and Control, Volume I, Basic Plan. The local Line of Succession is included in each local government's Emergency Operations Plan.

C. Emergency Operations Center (EOC)

1. Off-site emergency operations will be coordinated from the Virginia EOC and respective local government Emergency Operations Centers. Each local government within the plume EPZ will receive reports of events occurring at fixed nuclear facilities at the local government Central Dispatch Offices which are manned 24 hours each day. Affected local government will receive reports of events occurring at NNPP sites at the local government Central Dispatch Offices. When a report of an emergency is classified as an Alert or more severe emergency classification level, local EOCs will be activated, unless otherwise indicated in the local RERP.
2. The Virginia EOC is manned 24 hours a day, 7 days a week. The Director of Operations for the VDEM is responsible for assuming continuity of resources at the EOC. Whenever notification is received of a radiological emergency classed as an Alert, Site Area Emergency, Virginia EOC staffing will immediately be increased to include, as a minimum, 24-hour staffing by two Operations Officers, a BRH Radiological Health Officer, and a Public Affairs (Operations Liaison) Officer.
3. The Virginia EOC will also dispatch liaison personnel to the EOF or local NNPP ECC, Joint Public Information Center (JPIC) and other locations and alert other State agencies assigned emergency tasks under this Plan to standby status at this time. A VDEM Regional Coordinator and BRH Liaison Officer will assist and support local governments from the Virginia EOC or other appropriate locations, as requested and as available.

4. When notified of a General Emergency, the Virginia EOC staff will be further augmented on a 24-hours-a-day basis with representatives of the Virginia State Police, the Department of Military Affairs, the Virginia Department of Agriculture and Consumer Services, the Division of Emergency Medical Services, Virginia Department of Transportation, Virginia Cooperative Extension, and other agencies as needed. VDEM will also augment its staff with additional communications personnel.
 5. All State agencies not reporting to the Virginia EOC but who have assigned emergency tasks under the Plan will man their normal duty stations on a 24-hour basis during a General Emergency.
- D. Emergency Operations Facility (EOF)
1. The EOF (See Tab C to Appendix 2) will be activated as soon as practical whenever there is a radiological incident at the Surry or North Anna Nuclear Power Station that reaches an emergency classification level classed as an Alert, Site Area Emergency, or General Emergency.
 2. The EOF provides the focal point for receipts of all off-site monitoring reports, for joint State-licensee accident assessment, and for exchange of information between the licensee and the State.
 3. State personnel assigned to the EOF include a SOSOC, a Radiation Assessment Officer, Radiation Field Team Coordinator, dose assessment personnel and other assistance. These personnel will keep the Virginia EOC constantly apprised of off-site radiation assessment and the on-site emergency situation.
- E. Naval Nuclear Propulsion Program Emergency Control Center
1. The Naval Nuclear Propulsion Program (NNPP) local Emergency Control Center (ECC) will be activated for radiological or reactor emergencies in accordance with NNPP protocols. There are local ECC's located at NNSY (utilized for emergencies at NNSY and NAVSTA Norfolk) and NGNN (used for emergencies at NGNN). Due to unforeseeable circumstances, each shipyard's ECC may serve as an alternate for the others ECC.
 2. The local ECC provides the focal point for receipts of all on-site and off-site monitoring reports, joint State-NNPP accident assessment, and for exchange of information between the NNPP and the State. The local NNPP ECC's are set-up to accommodate a SOSOC, a Radiation Assessment Officer, Radiation Field Team Coordinator, dose assessment personnel and other assistance.

3. For information on radiological and reactor emergencies involving NNPP facilities or ships, see Appendix 17.

F. Communications

Communication networks necessary for the adequate control and coordination of emergency operations to respond to a radiological emergency will be established, maintained, and operated as set forth in Appendix 10.

For communications information on radiological and reactor emergencies involving NNPP facilities or ships, see Appendix 17.

G. Public Affairs

1. In a General Emergency, the Office of the Governor may assume responsibility for coordination of all news releases. Otherwise, at the State level, the release of all information to the public through media channels will be coordinated by the VDEM Public Affairs Office (PAO).
2. The VDEM PAO will work closely and coordinate news releases with the appropriate Federal agencies as well as with the nuclear facility operator who will share facilities at the JIC or NNPP Facility.
3. Mass media representatives will be briefed on a scheduled basis at the JIC. The BRH Radiological Assessment Officer will provide technical information from the Virginia EOC, if necessary. The VDEM PAO located at the JIC will develop all news releases based on information received from the Virginia EOC and will coordinate all news releases with the PAO at the Virginia EOC and copy the local PAO of each jurisdiction involved in the emergency.
4. For public affairs information on radiological and reactor emergencies involving NNPP facilities or ships, see Appendix 17.

Attachments:

Tab A - ACTION CHECKLIST, Commercial Nuclear Power Plant Accident Operations, Virginia Emergency Operations Center (VEOC)

Attachment 1 - Report of Conference Call Notification

Attachment 2 - Report of Protective Action Recommendations

Attachment 3 - Report of Protective Action Decision

Attachment 4 - Report of KI Decision and Administration

Attachment 5 - Report of Emergency For Use by Commonwealth of Virginia

Tab B - Functional Chart – Radiological Emergency Response from the Virginia
Emergency Operations Center

Tab C - Support of Federal Response and expected role in a response to a Commercial
Nuclear Power Plant Accident

Tab D - Emergency Response Personnel for Naval Shipyard Accident

Tab E - Notifications for Nuclear Accidents

Tab A to Appendix 1

ACTION CHECKLIST, Operations, Virginia Emergency Operations Center (VEOC)

Notice of Unusual Event (NOUE)

- _____ Receive Report of Emergency (Comms Staff)
- _____ Page **NOUE** pager list of situation and prognosis (Comms Staff)
- _____ Place VEOC at increased readiness level (Operations)
- _____ Coordinate State assistance, if requested (Ops/SDO)
- _____ Notify FEMA Region III (Comms Staff)
- _____ Standby until verbal closeout received from utility. (Comms/Ops)
- _____ Prepare to escalate to a more severe level. (Comms/Ops)

Alert

- _____ Take actions as indicated above.
- _____ Receive Report of Emergency (Comms Staff)
- _____ Page **Alert** pager list (Comms Staff)
- _____ Place VEOC at response operations level. (VERT Chief)
- _____ Dispatch VDEM State On Scene Coordinator (Technological Hazards Division Director or appointee) to EOF. (Comms Staff)
- _____ Dispatch VDEM Radiological Protection Officer (Currently Region 1 Hazardous Materials Officer) to EOF. (Comms Staff)
- _____ Request siren poll be conducted as soon as VDEM assets arrive at EOF. (Ops Chief or Rad Planner)
- _____ Confirm RHP staff dispatched to State Staging Area/LEOF/CEOF/VEOC/ECC (Rad Planner)
- _____ Coordinate with PAO. Advise of situation, prognosis, and activities at local levels. (Plans Chief)
- _____ Dispatch PAO representative to the JPIC. (Director Public Affairs)
- _____ Request that the Governor authorize the use of National Guard assets. (VERT Chief)

-
- _____ *If* Governor declares an emergency, ensure significant page is sent, as well as local governments affected by the power station, via email, fax, VCIN. *(Ops Chief)*
- _____ Contact local governments affected by power station event, and determine EAC and EOC status. Inform *Ops Chief* and *Plans Chief* when all EOC's and EAC's are open/activated. *(Local Liaison Supervisor)*
- _____ Brief VDEM assets and state agencies assigned radiological emergency response tasks.

Local Liason

Branch Chiefs

Public Affairs

ESF 1 – Transportation

ESF 5 – Emergency Management *(Ops Chief/Plans Chief)*

ESF 8 – Health and Medical

ESF 10 – Haz Mat

ESF 12 – Energy

ESF 13 – Public Safety and Security

ESF 14 – Long-Term Community Recovery and Mitigation

- _____ Alert EAS to standby status. *(PAO)*
- _____ Notify Department of Homeland Security Operations Center (HSOC) *(VERT Chief)*
- _____ Notify FEMA Region III of current status *(VERT Chief)*
- _____ Confirm DOE Operations Center alerted (coordinate facility requirements such as requesting DOE Oakridge prepare RAP team for response, and requesting DOE Nevada prepare Phase I response from FRMAC) *(Rad Planner)*
- _____ Confirm communications established with National Atmospheric Release Advisory Center (NARAC) for plume modeling. *(Rad Planner)*
- _____ Begin drafting Executive Order *(Plans Chief)*

Site Area Emergency

- _____ Take actions as indicated above.
- _____ Receive Report of Emergency from utility *(Comms Staff)*

-
- _____ Page **Site Area Emergency** pager list *(Comms Staff)*
- _____ VERT Chief and Ops Chief receive briefing from technical advisors *(BRH/Rad Planner/Plans Chief)*
- _____ VERT Chief provide briefing to SCO, SPS, Governor on situation and prognosis
- _____ *If* Governor declares an emergency, ensure significant page is sent, as well as local governments affected by the power station, via email, fax, VCIN. *(Ops Chief)*
- _____ Plans Chief or Ops Chief provide briefing to floor on situation and prognosis:
- Brief on:
- plant status & rad cond (obtained from utility rep or State RO),
met conditions (obtained from BRH),
evacuation impediments (obtained from VDOT and/or VSP),
EAC availability (obtained from local liaison),
offsite monitoring capability
local needs (obtained from local liaison)
State Agency activities *(Ops Chief)*
- _____ Coordinate State agency on-site assistance, if requested. *(Ops Chief)*
- _____ Consider Protective Action Recommendations (conf with PAR Group)
- RHP Rep
Rad Planner
PAO
SCO
VERT
Utility Representative
*Others as required
- _____ Confirm DOE Operations Center alerted (coordinate facility requirements such as requesting DOE Oakridge deploy RAP team, and requesting DOE Nevada deploy Phase I response from FRMAC) *(Rad Planner)*
- _____ **If** the incident occurred at the **Surry** Power Station, notify: *(Ops Chief)*
- *Fort Eustis,
*North Carolina EOC,

*Commander, Fifth U.S. Coast Guard District, of a radiological emergency at the **Surry** Power Station and request establishment of traffic control of boats and ships on the James River in the vicinity of the Surry Power Station,

*Virginia Department of Rail and Public Transportation, at (804) 786-4440, and have them alert CSX System Railway Company of a radiological emergency at the **Surry** Power Station and request that rail service in the affected area be discontinued temporarily,

*FAA air controllers at Richmond and Norfolk International Airports of a radiological emergency and request that aircraft be instructed to avoid the contaminated airspace until notified otherwise,

*Request VDOT terminate ferry service on the James River.

_____ **If the incident occurred at the **North Anna** Power Station, notify:**

*Maryland EOC, *(Ops Chief)*

* Virginia Department of Rail and Public Transportation, at (804) 786-4440, and have them alert CSX System Railway Company of a radiological emergency at the **North Anna** Power Station and request that rail service in the affected area be discontinued temporarily,

*FAA air controllers at Richmond and Norfolk International Airports of a radiological emergency and request that aircraft be instructed to avoid the contaminated airspace until notified otherwise

_____ Update the Department of Homeland Security Operations Center (HSOC) *(VERT Chief)*

_____ Update FEMA, Region III *(VERT Chief)*

General Emergency

_____ Receive Report of Emergency *(Comms Staff)*

_____ Take action as indicated above.

_____ Page **General Emergency** pager list *(Comms Staff)*

_____ PAR group confers and prepares for conference call with Local Emerg. Mang's

RHP Rep

Rad Planner
PAO
SCO
VERT
Utility Representative
*Others as required

_____ Read purple “Report of Conference Call” over instaphone, and set time for instaphone conference call with Local Emergency Coordinators. (See Tab A) *(Plans Chief)*

_____ *If* Governor declares an emergency, ensure significant page is sent, as well as local governments affected by the power station, via email, fax, VCIN. *(Ops Chief)*

_____ Plans Chief or Ops Chief provide briefing to floor on situation and prognosis:

Brief on:

plant status & rad cond (obtained from utility rep or State RO),
met conditions (obtained from BRH),
evacuation impediments (obtained from VDOT and/or VSP),
EAC availability (obtained from local liaison),
offsite monitoring capability
local needs (obtained from local liaison)
State Agency activities *(Ops Chief)*

_____ Conduct instaphone conference call, utilizing orange “Report of Protective Action Recommendations,” with local Emergency Managers and receive comments and/or concurrence with PAR. (See Tab B) *(Plans Chief)*

_____ Present PAR to Governor and obtain the official Protective Action Decision. *(VERT Chief and SCO)*

_____ **Conduct Protective Action Decision (PAD) Conference Call, utilizing yellow**

“Report of Protective Action Decision” form. (Within a timely manner) *(Rad Planner)*

_____ **Activate the Alert and Notification System to inform public of emergency status, and provide periodic updates (EAS). (Within a timely manner)** *(PAO)*

_____ Notify State On Scene Coordinator (SOSC) at EOF of PAD and Siren Activation
(Rad Planner)

_____ Notify SOSC at EOF to poll sirens following siren activation (Rad Planner)

_____ Ensure Press Releases contain the PAD (PAO)

_____ Keep local governments in the plume exposure EPZ advised of the situation and
protective actions to be taken (Plans Chief)

_____ Advise local governments on results of siren poll (Rad Planner)

_____ Confirm DOE Operations Center alerted (coordinate facility requirements such as
requesting DOE Oakridge deploy RAP team, and requesting DOE Nevada deploy full
scale response from FRMAC) (Rad Planner)

_____ Confirm NARAC plume model requested (Rad Planner)

_____ Obtain status of evacuation/sheltering activities (Plans Chief)

_____ Monitor off site radiation detection activities (BRH)

_____ Update Department of Homeland Security Operations Center (HSOC) (VERT Chief)

_____ Update FEMA Region III (VERT Chief)

_____ **If the incident occurred at the Surry Nuclear Power Station**, notify the following of
the ECL upgrade: (Ops Chief)

*Fort Eustis,

*North Carolina EOC,

*Commander, Fifth U.S. Coast Guard District,

* Virginia Department of Rail and Public Transportation, at (804) 786-4440, and have
them alert CSX System Railway Company,

*FAA air controllers at Richmond and Norfolk International Airports

_____ **If the incident occurred at the North Anna Power Station**, notify the following of the
ECL upgrade:

*Maryland EOC, (Ops Chief)

* Virginia Department of Rail and Public Transportation, at (804) 786-4440, and have
them alert CSX System Railway Company,

*FAA air controllers at Richmond and Norfolk International Airports

Attachment 1 to Tab A to Appendix 1



REPORT OF CONFERENCE CALL NOTIFICATION

DELIVER BY INSTAPHONE TELEPHONE VCIN FAX OTHER _____

READ BOLD TYPE • READ BOLD TYPE • READ BOLD TYPE:

"ALL STATIONS, THIS IS VIRGINIA EMERGENCY OPERATIONS CENTER OTHER LOCATION: _____
"STAND BY FOR A ROLL CALL FOLLOWED BY AN EMERGENCY MESSAGE. USE THE PURPLE 'REPORT OF CONFERENCE CALL NOTIFICATION' TO COPY THIS MESSAGE." CHECK THIS BOX WHEN VERIFIED BY ROLL CALL

NAPS: CAROLINE CO. HANOVER CO. LOUISA CO. ORANGE CO. SPOTSYLVANIA CO.
SPS: ISLE OF WIGHT JAMES CITY CO. NEWPORT NEWS CITY SURRY CO. WILLIAMSBURG CITY YORK CO.
 CHARLES CITY CO. HAMPTON CITY NEW KENT COUNTY POQUOSON CITY

"THE EMERGENCY MESSAGE IS AS FOLLOWS:

ITEM 1. **"THE VIRGINIA EOC WILL CONDUCT A CONFERENCE CALL ON THIS LINE AT _____ ON _____ / _____ / _____**
(24 hr. time) (date)

ITEM 2. **NOTIFY YOUR EMERGENCY COORDINATOR OR DEPUTY THAT THEY SHOULD BE PRESENT FOR THIS CALL.**

ITEM 3. **LOCAL EMERGENCY COORDINATORS WILL BE ASKED FOR THEIR INPUT ON PROTECTIVE ACTION MEASURES RECOMMENDED BY THE VIRGINIA DEPARTMENT OF EMERGENCY MANAGEMENT CONCERNING THE EMERGENCY AT THE NORTH ANNA POWER STATION/ SURRY POWER STATION**

"THIS IS VIRGINIA EMERGENCY OPERATIONS CENTER OTHER LOCATION: _____

OUT AT _____
(date and 24 hr. time)

PLEASE ENSURE THAT THIS MESSAGE IS PASSED TO YOUR COORDINATOR OF EMERGENCY SERVICES AS SOON AS RECEIVED.

MESSAGE RECEIVED BY: _____ TITLE/POSITION: _____ TIME: _____
(24 hr. time)

TIME MESSAGE PASSED TO LOCAL COORDINATOR (OR REPRESENTATIVE) _____

MESSAGE AUTHORIZED BY: _____ AT _____ ON _____ / _____ / _____
(24 hr. time) (date)

JUNE 2005

Attachment 2 to Tab A to Appendix 1



REPORT OF PROTECTIVE ACTION RECOMMENDATIONS

DELIVER BY INSTAPHONE TELEPHONE VCIN FAX OTHER _____

READ BOLD TYPE • READ BOLD TYPE • READ BOLD TYPE:

**"ALL STATIONS, THIS IS VIRGINIA EMERGENCY OPERATIONS CENTER OTHER LOCATION: _____
 STAND BY FOR A ROLL CALL FOLLOWED BY AN EMERGENCY MESSAGE. USE THE ORANGE REPORT OF 'PROTECTIVE ACTION RECOMMENDATIONS' TO COPY THIS MESSAGE."**

NAPS: CAROLINE CO. HANOVER CO. LOUISA CO. ORANGE CO. SPOTSYLVANIA CO.
 SPS: ISLE OF WIGHT JAMES CITY CO. NEWPORT NEWS CITY SURRY CO. WILLIAMSBURG CITY YORK CO.
 CHARLES CITY CO. HAMPTON CITY NEW KENT COUNTY POQUOSON CITY

"THE EMERGENCY MESSAGE IS AS FOLLOWS:

ITEM 1. **THE VIRGINIA DEPARTMENT OF EMERGENCY MANAGEMENT RECOMMENDS THAT THE FOLLOWING PROTECTIVE ACTIONS OR ADDITIONAL PROTECTIVE MEASURES ARE NECESSARY FOR CERTAIN AREAS AROUND THE: NORTH ANNA POWER STATION/ SURRY POWER STATION.**

ITEM 2. **EVACUATION** YES NO

ITEM 3. **LOCAL GOVERNMENTS AFFECTED BY EVACUATION:** _____

ITEM 4. **PROTECTIVE ACTION ZONES TO BE EVACUATED (identify by numbered zones)** _____

ITEM 5. **SHELTER (IN PLACE)** YES NO

ITEM 6. **LOCAL GOVERNMENTS AFFECTED BY SHELTERING:** _____

ITEM 7. **PROTECTIVE ACTION ZONES TO BE SHELTERED:** _____

ITEM 8. **STANDBY FOR A ROLL CALL. AFTER EACH JURISDICTION IS CALLED, THE LOCAL COORDINATOR SHOULD EITHER CONCUR WITH THE PROTECTIVE ACTIONS RECOMMENDED BY THE VIRGINIA DEPARTMENT OF EMERGENCY MANAGEMENT OR PROVIDE AN ALTERNATE RECOMMENDATION.**

CHECK EACH LOCALITY THAT CONCURS

NAPS: CAROLINE CO. HANOVER CO. LOUISA CO. ORANGE CO. SPOTSYLVANIA CO.
 SPS: ISLE OF WIGHT JAMES CITY CO. NEWPORT NEWS CITY SURRY CO. WILLIAMSBURG CITY YORK CO.
 CHARLES CITY CO. HAMPTON CITY NEW KENT COUNTY POQUOSON CITY

DISSENTING LOCALITIES AND THEIR ALTERNATE RECOMMENDATIONS: _____

"THIS IS VIRGINIA EMERGENCY OPERATIONS CENTER OTHER LOCATION: _____

OUT AT _____,"
(date and 24 hr. time)

PLEASE ENSURE THAT THIS MESSAGE IS PASSED TO YOUR COORDINATOR OF EMERGENCY SERVICES AS SOON AS RECEIVED.

MESSAGE RECEIVED BY: _____ TITLE/POSITION: _____ TIME: _____
(24 hr. time)

TIME MESSAGE PASSED TO LOCAL COORDINATOR (OR REPRESENTATIVE) _____

MESSAGE AUTHORIZED BY: _____ AT _____ ON _____ / _____ / _____
(24 hr. time) (date)

JUNE 2005

Attachment 3 to Tab A to Appendix 1



REPORT OF PROTECTIVE ACTION DECISION

DELIVER BY INSTAPHONE TELEPHONE VCIN FAX OTHER _____

READ BOLD TYPE • READ BOLD TYPE • READ BOLD TYPE:

"THIS IS VIRGINIA EMERGENCY OPERATIONS CENTER OTHER LOCATION: _____
THIS IS A REPORT OF PROTECTIVE ACTIONS. "STAND BY FOR A ROLL CALL FOLLOWED BY AN EMERGENCY MESSAGE. USE THE YELLOW 'REPORT OF PROTECTIVE ACTION DECISION' TO COPY THIS MESSAGE." CHECK THIS BOX WHEN VERIFIED BY ROLL CALL

NAPS: CAROLINE CO. HANOVER CO. LOUISA CO. ORANGE CO. SPOTSYLVANIA CO.
 SPS: ISLE OF WIGHT JAMES CITY CO. NEWPORT NEWS CITY SURRY CO. WILLIAMSBURG CITY YORK CO.
 CHARLES CITY CO. HAMPTON CITY NEW KENT COUNTY POQUOSON CITY

"THE EMERGENCY MESSAGE IS AS FOLLOWS:

ITEM 1. **"THE GOVERNOR DETERMINED AT _____ ON ____/____/____ THAT PROTECTIVE ACTIONS OR**
(24 hr. time) (date)
ADDITIONAL PROTECTIVE MEASURES ARE NECESSARY FOR CERTAIN AREAS AROUND:
 NORTH ANNA POWER STATION/ SURRY POWER STATION

ITEM 2. **A STATE OF EMERGENCY WAS DECLARED BY THE GOVERNOR AT _____ ON ____/____/____.**
(24 hr. time) (date)

ITEM 3. **THE SIREN SYSTEM AND EAS WILL BE ACTIVATED IMMEDIATELY FOLLOWING THIS REPORT.**
 YES NO

ITEM 4. **IMPLEMENT PRIMARY ROUTE ALERTING IMMEDIATELY!**
 YES NO

ITEM 5. **EVACUATE YES NO. GO TO ITEM 9.**

ITEM 6. **LOCAL GOVERNMENTS AFFECTED BY EVACUATION: _____**

ITEM 7. **PROTECTIVE ACTION ZONES TO BE EVACUATED (identify by numbered zones) _____**

ITEM 8. **SHELTER (IN PLACE) YES NO**

ITEM 9. **LOCAL GOVERNMENTS AFFECTED BY SHELTERING: _____**

ITEM 10. **PROTECTIVE ACTION ZONES TO BE SHELTERED: _____**

ITEMS WILL BE REPEATED IF NECESSARY FOLLOWING SIREN SYSTEM ACTIVATION.

"THIS IS VIRGINIA EMERGENCY OPERATIONS CENTER OTHER LOCATION: _____

OUT AT _____
(date and 24 hr. time)

PLEASE ENSURE THAT THIS MESSAGE IS PASSED TO YOUR COORDINATOR OF EMERGENCY SERVICES AS SOON AS RECEIVED.

MESSAGE RECEIVED BY: _____ TITLE/POSITION: _____ TIME: _____
(24 hr. time)

TIME MESSAGE PASSED TO LOCAL COORDINATOR (OR REPRESENTATIVE) _____

MESSAGE AUTHORIZED BY: _____ AT _____ ON ____/____/____
(24 hr. time) (date)

JUNE 2005

Attachment 4 to Tab A to Appendix 1



REPORT OF KI DECISION AND ADMINISTRATION

TRANSMISSION VIA VEOC:
___VCIN ___FAX ___RADNET ___RACES ___OTHER: _____
(IDENTIFY)

MEMORANDUM

TO: LOCAL HEALTH DIRECTOR

THROUGH: LOCAL GOVERNMENT EMERGENCY SERVICES COORDINATOR

FROM: _____
(NAME OF HEALTH COMMISSIONER OR PERSON REPRESENTING THIS OFFICIAL)
OFFICE OF THE COMMISSIONER OF HEALTH
VIRGINIA DEPARTMENT OF HEALTH

SUBJECT: AUTHORIZATION TO DIRECT THE ADMINISTRATION AND IMPLEMENTATION OF POTASSIUM IODIDE-
THYROID GLAND PROTECTIVE MEASURES FOR THE GENERAL PUBLIC AND EMERGENCY WORKERS

TIME: _____

DATE: _____

BASED ON PROJECTED/ACTUAL RELEASES OF RADIATION TO THE ENVIRONMENT AS A RESULT OF THE
RADIOLOGICAL EMERGENCY AT THE _____
(NAME OF FACILITY OR LOCATION)

I, THE HEALTH COMMISSIONER FOR THE COMMONWEALTH OF VIRGINIA, HEREBY AUTHORIZE LOCAL HEALTH DIRECTOR(S) IN THE
AFFECTED LOCAL AREAS IDENTIFIED BELOW TO RECOMMEND THAT POTASSIUM IODIDE (KI) BE TAKEN BY THE GENERAL PUBLIC
AND EMERGENCY WORKERS RESIDING OR WORKING WITHIN THE 10-MILE EMERGENCY PLANNING ZONE OF

(NAME OF FACILITY OR LOCATION)

THIS RECOMENDATION INCLUDES THE GENERAL PUBLIC AND EMERGENCY WORKERS IN THE FOLLOWING LOCAL GOVERNMENTS:

THIS ORDER APPLIES TO FIELD TEAM PERSONNEL AND EMERGENCY WORKERS IN EOCs AND IN OTHER FACILITIES LOCATED
WITHIN THE 10-MILE EMERGENCY PLANNING ZONE OF _____
(NAME OF FACILITY OR LOCATION)

THE GENERAL PUBLIC SHOULD TAKE THE KI DOSEAGE IN ACCORDANCE WITH THE STATE AND LOCAL RADIOLOGICAL EMERGENCY
RESPONSE PLANS FOR KI ADMINISTRATION AND AS DIRECTED BY HEALTH DEPARTMENT PERSONNEL. WHEN USED EFFECTIVELY,
KI CAN BLOCK THE UPTAKE OF RADIOIODINES BY THE THYROID GLAND.

EMERGENCY WORKERS SHOULD TAKE ONE KI TABLET DAILY NOT TO EXCEED ONE TABLET PER DAY UP TO TEN DAYS. WHEN USED
EFFECTIVELY, KI CAN BLOCK THE UPTAKE OF RADIOIODINES BY THE THYROID GLAND.

THE COMMISSIONER OF HEALTH WILL MODIFY OR TERMINATE THIS ORDER BASED ON THE SEVERITY OR MITIGATION OF THIS
RADIATION ACCIDENT.

Attachment 5 to Tab A to Appendix 1

Message No.: _____
(For State Use Only)

***Report of Emergency -
For Use By Commonwealth of Virginia***

Message:

"This is (North Anna/Surry Power Station) Control Room TSC LEOF CEOF. Standby for a roll-call followed by an emergency message. (Check this box when indicated by roll-call.) **The emergency message is as follows:**

Item 1 - Emergency Class: Declared at _____ on ____/____/____.
 Notification of Unusual Event Alert (24 Hr. Time) (Date)
 Site Area Emergency General Emergency
 Emergency terminated

Item 2 - Release of Radioactive Material:
 Is within federal limits and not related to the event. Related to the event is presently occurring.
 Related to the event has occurred and is now terminated. Related to the event is projected to occur.

Item 3 - Remarks/Description of Event: _____

NOTE: Items 4 through 8 may be excluded from the initial message reporting an emergency class and termination reports.

Item 4 - Assistance Requested or Being Provided: Excluded from this message.
 None. _____ (number) Fire Units from _____. _____ (number) Police Units from _____.
 _____ (number) Rescue Units from _____. _____ Other: _____.

Item 5 - Emergency Response Actions Underway: Excluded from this message.
 None. _____ Station emergency personnel called in.
 _____ Station monitoring teams dispatched offsite. _____ Other: _____.

Item 6 - Evacuation or Company Dismissal of Onsite Personnel: Excluded from this message.
 No.
 Evacuated to: Primary Remote Assembly Area; Secondary Remote Assembly Area; Other: _____.
 Company Dismissal of non-essential station personnel: is planned; is in progress; has been completed.

Item 7 - Prognosis of Situation: Excluded from this message.
 Improving. Stable.
 Worsening. Other: _____.

Item 8 - Meteorological Data Is: Excluded from this message.
 Based on onsite measurements; Based on offsite regional data; Not available;
 Wind direction is from the _____; Wind speed is _____ miles per hour.

Item 9 - This is _____ / Emergency Communicator.
(Name)

Please acknowledge receipt of this message. (Check this box when identified by roll-call.)

This is (North Anna/Surry Power Station) Control Room TSC LEOF CEOF out at _____ on ____/____/____.
(24 Hr. Time) (Date)

ITEMS 10 - 13 CONTINUED ON REVERSE

NOTE: The following information is for State use only. It will be transmitted to the State EOC using the "ring-down" telephone circuit.

Item 10 - Recommended Offsite Protective Actions Are:

- None.
- Short-Duration Release: Shelter 360° from 0 miles to 5 miles.
- Standard: Evacuate 360° from 0 miles to 5 miles.
- Expanded:
 - Evacuate 360° from 0 miles to 5 miles.
 - Evacuate 360° from 5 miles to miles.
 - Evacuate sectors from miles to miles.
 - Shelter 360° from miles to miles.
 - Shelter sectors from miles to miles.
 - Shelter unaffected sectors from miles to miles.
- Potassium Iodide: Recommend implementation of Potassium Iodide (KI) strategies for the general public. The projected dose at the site boundary is equal to or greater than 5 Rem Thyroid Committed Dose Equivalent.

NOTE: A Report of Radiological Conditions is issued when a release of radioactive material related to the event:

- Is presently occurring.
- Has occurred and is now terminated.
- Is projected to occur.

The Report of Radiological Conditions describes the type release (airborne, waterborne, surface spill); the chemical and physical form of released material, including estimates of the relative quantities and concentration of noble gases, iodines and particulates; the estimated duration of the release, the estimated quantity of radioactive material released or being released; actual or projected dose rates at site boundary and at 2, 5 and 10 miles, etc. It is anticipated that any release related to a classified event may contain some iodines. Follow-up Reports of Radiological Conditions are provided approximately every 60 minutes or when there are changes in radiological conditions causing a modification to offsite protective actions in effect.

Item 11 - We: Will transmit a Report of Radiological Conditions to the State EOC.
 Will NOT issue a Report of Radiological Conditions.

Item 12 - Update Schedule: 60 minute; Other: _____.

This is (North Anna/Surry Power Station) Control Room TSC LEOF CEOF out at _____ on ____/____/____." (24 Hr. Time) (Date)

Message Received By: _____; Forwarded To: _____.

Insert Page 1-17, an 11" x 17" page, here.

Tab C to Appendix 1

Support of Federal Response and Expected Role in a Response to a
Commercial Nuclear Power Plant Accident

A. Purpose of the Nuclear/Radiological Incident Annex

1. The Nuclear/Radiological Incident Annex provides an organized and integrated capability for a timely, coordinated response by Federal agencies to terrorist incidents involving nuclear or radioactive materials (Incidents of National Significance), and accidents or incidents involving such material that may or may not rise to the level of an Incident of National Significance. The Department of Homeland Security (DHS) is responsible for overall coordination of all actual and potential Incidents of National Significance, including terrorist incidents involving nuclear materials.
2. This annex describes how the coordinating agencies and cooperating agencies support DHS's overall coordination of the response to a nuclear/radiological Incident of National Significance. In addition, this annex describes how the coordinating agencies lead the response to incidents of lesser severity. Nuclear/radiological incidents of "lesser severity" are considered below the threshold of an Incident of National Significance, as determined by DHS, and vary from lost radiography sources or discovery of orphan radiological sources to incidents/emergencies at nuclear power plants below the classification of General Emergency, as defined by the cognizant regulatory agency (e.g., Department of Energy (DOE) or Nuclear Regulatory Commission (NRC)).
3. *The Nuclear/Radiological Incident Annex to the National Response Plan is discussed in detail in Appendix 1 of this Volume.

B. Coordinating and Cooperating Agencies

1. *Coordinating Agencies:*

Department of Defense
Department of Energy
Department of Homeland Security
Environmental Protection Agency
National Aeronautics and Space Administration
Nuclear Regulatory Commission

2. *Cooperating Agencies:*

Department of Agriculture

Department of Commerce
Department of Defense
Department of Energy
Department of Health and Human Services
Department of Homeland Security
Department of the Interior
Department of Justice
Department of Labor
Department of State
Department of Transportation
Department of Veterans Affairs
Environmental Protection Agency
General Services Administration
Nuclear Regulatory Commission
American Red Cross

C. Federal Responsibilities

1. American Red Cross

Assesses the mass care consequences of a radiological incident, and in conjunction with State, local, and tribal (including private-sector) mass care organizations, develop and implement a sustainable short-term and long-term strategy for effectively addressing the consequences of an incident.

2. Department of Agriculture

- a. Inspects meat and meat products, poultry and poultry products, and egg products identified for interstate and foreign commerce to ensure that they are safe for human consumption.
- b. Assists, in conjunction with HHS, in monitoring the production, processing, storage, and distribution of food through the wholesale level to eliminate contaminated product or to reduce the contamination in the product to a safe level.
- c. Collects agricultural samples within the Ingestion Exposure Pathway Emergency Planning Zone (through the FRMAC). Assists in the evaluation and assessment of data to determine the impact of the incident on agriculture.
- d. Assesses damage to crops, soil, livestock, poultry, and processing facilities and incorporates findings in a damage assessment report.

- e. Provides emergency communications assistance to the agricultural community through the State Research, Education, and Extension Services electronic mail, or other USDA telecommunications systems.
 - f. Supports/advises on decontamination and screening of pets and farm animals that may be exposed to radioactive material.
 - g. Assists in animal carcass disposal.
3. Department of Commerce
- a. Provides operational weather observations and prepares forecasts tailored to support emergency incident management activities.
 - b. Provides plume dispersion assessment and forecasts to the IMAAC and/or coordinating agency, in accordance with established procedures.
 - c. Archives, as a special collection, the meteorological data from national observing and numerical weather analysis and prediction systems applicable to the monitoring and assessment of the response.
 - d. Ensures that marine fishery products available to the public are not contaminated.
 - e. Provides assistance and reference material for calibrating radiological instruments.
 - f. Provides radiation shielding materials.
 - g. In the event of materials potentially crossing international boundaries, serves as the agent for informing international hydrometeorological services and associated agencies through the mechanisms afforded by the World Meteorological Organization.
 - h. Provides radioanalytical measurement support and instrumentation.
4. Department of Defense
- a. Serves as a coordinating agency, coordinating Federal actions for radiological incidents involving DOD facilities, including U.S. nuclear-powered ships, or material otherwise under their jurisdiction (e.g., transportation of material shipped by or for DOD).

- b. Provides Defense Support of Civil Authorities (DSCA) in response to requests for assistance during domestic incidents. With the exception for support provided under Immediate Response Authority, the obligation of DOD resources to support requests for assistance is subject to the approval of the Secretary of Defense. Details regarding DSCA are provided in the NRP Base Plan.
 - c. Provides Immediate Response Authority under imminently serious conditions resulting from any civil emergency that may require immediate action to save lives, prevent human suffering, or mitigate great property damage. When such conditions exist and time does not permit prior approval from higher headquarters, local military commanders and responsible officials from DOD components and agencies are authorized by DOD directive, subject to any supplemental direction that may be provided by their DOD component, to take necessary action to respond to requests of civil authorities. All such necessary action is referred to as “Immediate Response.”
5. Department of Defense/U.S. Army Corps of Engineers
- a. Directs response/recovery actions as they relate to ESF #3 functions, including contaminated debris management.
 - b. For RDD/IND incidents, provides response and cleanup support as a cooperating agency.
 - c. Integrates and coordinates with other agencies, as requested, to perform any or all of the following:
 - 1) Radiological survey functions;
 - 2) Gross decontamination;
 - 3) Site characterization;
 - 4) Contaminated water management; and
 - 5) Site remediation.
6. Department of Energy
- a. Serves as a coordinating agency, coordinating Federal actions for radiological incidents involving DOE facilities or material otherwise under their jurisdiction (e.g., transportation of material shipped by or for DOE).

- b. Coordinates Federal offsite radiological environmental monitoring and assessment activities as lead technical organization in FRMAC (emergency phase), regardless of who is designated the coordinating agency.
- c. Maintains technical liaison with State and local agencies with monitoring and assessment responsibilities.
- d. Maintains a common set of all offsite radiological monitoring data in an accountable, secure, and retrievable form and ensures the technical integrity of FRMAC data.
- e. Provides monitoring data and interpretations, including exposure rate contours, dose projections, and any other requested radiological assessments, to the coordinating agency and to the states.
- f. Provides, in cooperation with other Federal agencies, the personnel and equipment to perform radiological monitoring and assessment activities, and provides on-scene analytical capability supporting assessments.
- g. Requests supplemental assistance and technical support from other Federal agencies as needed.
- h. Arranges consultation and support services through appropriate Federal agencies to all other entities (e.g., private contractors) with radiological monitoring functions and capabilities and technical and medical expertise for handling radiological contamination and population monitoring.
- i. Works closely with the Senior EPA representative to facilitate a smooth transition of the Federal radiological monitoring and assessment coordination responsibility to EPA at a mutually agreeable time and after consultation with the States and coordinating agency.
- j. Provides, in cooperation with other Federal and State agencies, personnel and equipment, including portal monitors, to support initial external screening and provides advice and assistance to State and local personnel conducting screening/decontamination of persons leaving a contaminated zone.
- k. Provides plume trajectories and deposition projections for emergency response planning assessments including source term estimates where limited or no information is available, including INDs and RDDs, to the IMAAC and/or coordinating agency, in accordance with established procedures.

- l. Upgrades, maintains, coordinates, and publishes documentation needed for the administration, implementation, operation, and standardization of the FRMAC.
- m. Maintains and improves the ability to provide wide-area radiation monitoring now resident in the AMS.
- n. Maintains and improves the ability to provide medical assistance, advisory teams, and training related to nuclear/radiological accidents and incidents now resident in the REAC/TS.
- o. Maintains and improves the ability to provide near-real time assessments of the consequences of accidental or potential radiation releases by modeling the movement of hazardous plumes, and to correct modeled results through integration of actual radiation measurement obtained from both airborne and ground sources, resident in the NARAC. The NARAC also maintains and improves their ability to model the direct results (blast, thermal, radiation, EMP) of a nuclear detonation.
- p. Maintains and improves the first-response ability to assess an emergency situation and to advise decision makers on what further steps can be taken to evaluate and minimize the hazards of a radiological emergency resident in the RAP.
- q. Maintains and improves the ability to respond to an emergency involving U.S. nuclear weapons resident in the ARG.
- r. Maintains and improves the ability of the Consequence Management Planning Team, CMHT, and CMRTs to provide initial planning, coordination, and data collection and assessment prior to or in lieu of establishment of a FRMAC.
- s. Maintains and improves the ability of the Nuclear/Radiological Advisory Team to provide advice and limited technical assistance, including search, diagnostics, and effects prediction, as part of a Domestic Emergency Support Team.
- t. Maintains and improves the ability of the Search Response Teams to provide covert search capability using local support for initial nuclear search activities.
- u. Maintains and improves the ability of the Joint Technical Operations Team to provide technical operations advisory support and advanced technical assistance to the Federal primary or coordinating agency, provide extended

technical support to other deployed operations through an emergency response home team; perform nuclear safety reviews to determine safe-to-ship status before moving a weapon of mass destruction (WMD) to an appropriate disposal location; and accept custody of nuclear radiological WMD on behalf of DOE and provide for the final disposition of these devices.

- v. Maintains and improves the ability of Radiological Triage to determine through remote analysis of nuclear spectra collected on-scene if a radioactive object contains special nuclear materials.
- w. Assign a Senior Energy Official (SEO) for any response involving the deployment of the DOE/NNSA emergency response assets. The SEO is responsible for the coordination and employment of these assets at the scene of a radiological event, and the deployed assets will work in support of and under the direction of the SEO.

7. Department of Health and Human Services

- a. In conjunction with USDA, inspects production, processing, storage, and distribution facilities for human food and animal feeds that may be used in interstate commerce to ensure the protection of the public health.
- b. Collects samples of agricultural products to monitor and assess the extent of contamination as a basis for recommending or implementing protective actions (through the FRMAC).
- c. Provides advice on proper medical treatment of the general population and response workers exposed to or contaminated by radioactive materials.
- d. Provides available medical countermeasures through the deployment of the Strategic National Stockpile.
- e. Provides assessment and treatment teams for those exposed to or contaminated by radiation.
- f. Provides advice and guidance in assessing the impacts of the effects of radiological incidents on the health of persons in the affected area.
- g. Manages long-term public monitoring and supports follow-on personal data collection, collecting and processing of blood samples and bodily fluids/matter samples, and advice concerning medical assessment and triage of victims. Tracks victim treatment and long-term health effects.

8. Department of Homeland Security/Emergency Preparedness and Response/Federal Emergency Management Agency
 - a. Serves as the annex coordinator for this annex.
 - b. In consultation with the coordinating agency, coordinates the provision of Federal resources and assistance to affected State, local, and tribal governments under the Stafford Act or Federal-to-Federal support provisions of the NRP.
 - c. Monitors the status of the Federal response to requests for assistance from the affected State(s) and provides this information to the State(s).
 - d. Keeps the coordinating agency informed of requests for assistance from the State(s) and the status of the Federal response.
 - e. Identifies and informs Federal agencies of actual or apparent omissions, redundancies, or conflicts in response activity.
 - f. Establishes and maintains a source of integrated, coordinated information about the status of all nonradiological resource support activities.
 - g. Provides other support to Federal agencies responding to the emergency.

9. Department of Homeland Security/National Communications System

Acting through its operational element, the National Coordinating Center for Telecommunications (NCC), the NCS ensures the provision of adequate telecommunications support to Federal radiological incident response operations.

10. Department of Homeland Security/Science and Technology

Provides coordination of Federal science and technology resources as described in the Science and Technology Support Annex. This includes organization of Federal S&T support as well as assessment and consultation in the form of Scientific and Technical Advisory and Response Teams (STARTs) and IMAAC.

11. Department of Homeland Security/Customs and Border Protection (DHS/CBP)

- a. For incidents at the border, maintains radiation detection equipment and nonintrusive inspection technology at ports of entry and Border Patrol

- checkpoints to detect the presences of radiological substances transported by persons, cargo, mail, or conveyance arriving from foreign countries.
- b. Through its National Targeting Center, provides extensive analytical and targeting capabilities to identify and interdict terrorists and WMD.
 - c. The CBP Weapons of Mass Destruction Teleforensic Center provides 24/7 support to DHS/CBP and other Federal law enforcement personnel in the identification of suspect hazardous material.
 - d. The CBP Laboratory and Scientific Services staffs WMD Response Teams in strategic locations nationwide.
 - e. Through the Container Security Initiative, DHS/CBP personnel are stationed at major foreign seaports in order to detect and prevent the transport of WMD on container vessels destined to the U.S.
 - f. Has extensive authority and expertise regarding the entry, inspection, and admissibility of persons, cargo, mail, and conveyances arriving from foreign countries.
12. Department of Homeland Security/U.S. Coast Guard
- a. Serves as coordinating agency for incidents that occur in certain areas of the coastal zone.
 - b. "Certain areas of the coastal zone," for the purpose of this document, means the following areas of the coastal zone as defined by the NCP:
 - Vessels, as defined in 33 CFR 160;
 - Areas seaward of the shoreline to the outer edge of the Economic Exclusion Zone; and
 - Within the boundaries of the following waterfront facilities subject to the jurisdiction of DHS/USCG; those regulated by 33 CFR 126 (Dangerous cargo handling), 127 (LPG/LNG), 128 (Passenger terminals), 140 (Outer Continental Shelf Activities), 1541-56 (Waterfront portions of Oil & Hazmat bulk transfer facilities - delineated as per the NCP), 105 (Maritime security - facilities).
- EPA is the coordinating agency for responses in areas of the coastal zone other than those defined above as certain areas of the coastal zone.

- c. For incidents that have cross-boundary impacts, work with the other affected agency to determine how best to cooperatively respond consistent with the NCP model.
 - d. Serves as the coordinating agency for these incidents only during the prevention and emergency response phase, and transfers responsibility for later response phases to the appropriate agency, consistent with the NCP.
 - e. Because of its unique maritime jurisdiction and capabilities, is prepared to provide appropriate security, command and control, transportation, and support to other agencies that need to operate in maritime domain.
13. Department of Housing and Urban Development
- a. Reviews and reports on available housing for disaster victims and displaced persons.
 - b. Assists in planning for and placing homeless victims in available housing.
 - c. Provides staff to support emergency housing within available resources.
 - d. Provides housing assistance and advisory personnel.
14. Department of the Interior (DOI)
- a. Advises and assists in evaluating processes affecting radioisotopes in soils, including personnel, equipment, and laboratory support.
 - b. Advises and assists in the development of geographic information systems databases to be used in the analysis and assessment of contaminated areas, including personnel and equipment.
 - c. Advises and assists in assessing and dealing with impacts to natural resources, including fish and wildlife, subsistence uses, public lands, Indian tribal lands, land reclamation, mining, minerals, and water resources. Further guidance is provided in the Tribal Relations Support Annex and ESF #11 - Agriculture and Natural Resources annex.
 - d. Provides liaison between federally recognized tribal governments and Federal, State, and local agencies for coordination of response activities. Additionally, DOI advises and assists DHS on economic, social, and political matters in the U.S. insular areas should a radiological incident occur in these areas.

15. Department of Justice/ Federal Bureau of Investigation

Coordinates all law enforcement and criminal investigative response to acts of terrorism, to include intelligence gathering, hostage negotiations, and tactical operations. Further details regarding the FBI response are outlined in the Terrorism Incident Law Enforcement and Investigation Annex.

16. Department of Labor/Occupational Safety and Health Administration

Provides advice and technical assistance to DHS, the coordinating agency, and State, local, and tribal governments concerning the health and safety of response workers implementing the policies and concepts in this annex.

17. Department of State

a. Coordinates foreign information-gathering activities and all contacts with foreign governments, except in cases where existing bilateral agreements permit direct agency-to-agency cooperation.

b. Conveys the U.S. Government response to foreign offers of assistance.

18. Department of Transportation

Provides technical advice and assistance on the transportation of radiological materials and the impact of the incident on the transportation infrastructure.

19. Department of Veterans Affairs

a. Provides medical assistance using the Medical Emergency Radiological Response Team.

b. Provides temporary housing.

20. Environmental Protection Agency

a. Serves as a coordinating agency.

b. Provides resources, including personnel, equipment, and laboratory support (including mobile laboratories) to assist DOE in monitoring radioactivity levels in the environment.

c. Assumes coordination of Federal radiological monitoring and assessment responsibilities after the transition from DOE.

- d. Assists in the development and implementation of a long-term monitoring plan and long-term recovery plan.
 - e. Provides nationwide environmental monitoring data from the Environmental Radiation Ambient Monitoring Systems for assessing the national impact of the incident.
 - f. Develops Protective Action Guides in coordination with the FRPCC.
 - g. Recommends protective actions and other radiation protection measures.
 - h. Recommends acceptable emergency levels of radioactivity and radiation in the environment.
 - i. Prepares health and safety advice and information for the public.
 - j. Estimates effects of radioactive releases on human health and the environment.
 - k. Provides response and recovery actions to prevent, minimize, or mitigate a threat to public health, safety, or the environment caused by actual or potential releases of radioactive substances, including actions to detect, identify, contain, clean up, and dispose of such substances.
 - l. Assists and supports the NIR, when activated.
 - m. Provides, in cooperation with other Federal agencies, the law enforcement personnel and equipment to conduct law enforcement operations and investigations for nuclear/radiological incidents involving criminal activity that are not terrorism related.
21. General Services Administration
- See the ESF #7 - Resource Support Annex for additional information.
22. National Aeronautics and Space Administration
- Serves as a coordinating agency.

Tab D to Appendix 1

1. Emergency Response Personnel for Naval Shipyard Accident

The following individuals are members of the emergency response organization or are key radiological accident personnel at U.S. Navy facilities and shipyards:

<u>Activity</u>	<u>Title</u>	<u>Telephone Number</u>
Commander, Submarine Force, U.S. Atlantic Fleet, Norfolk	Director, Radiological Emergency Planning, COMSUBLANT Watch Office	(757) 836-1094 (during duty hours) (757) 836-1000 (other than duty hours)
Norfolk Naval Shipyard, Portsmouth	Director, Radiological Control Office	(757) 396-5885 (duty hours) (757) 396-3222 (off-duty hours)
Northrup Grumman Shipbuilding and Dry Dock Company Department	Manager, Radiological Control	(757) 380-2223 Comms Center (757) 380-2616 (757) 380-2305
U.S. Naval Weapons Station, Yorktown	Command Duty Officer	(757) 396-5885

Tab D to Appendix 1 (continued)

2. Notification Procedures

Radiological incidents or accidents occurring aboard operational U.S. Navy nuclear-propelled ships, which require protective actions, will be reported to State and local governments by Commander, Submarine Force, U.S. Atlantic Fleet Norfolk Naval Shipyard (NNSY). Radiological accidents or incidents occurring at either shipyard or weapons station will be reported to State and local governments by the Radiological Control Office of the affected shipyard or weapons station. These offices will provide notification in accordance with the procedures contained in this Plan as follows:

- a. Site Area Emergency, notify:
 - (1) Virginia EOC, (804) 674-2400.
 - (2) Local government(s), if immediate protective actions are required.
- b. General Emergency, notify:
 - (1) Local government(s), if immediate protective actions are required.
 - (2) Virginia EOC, (804) 674-2400.
- c. Notification of Unusual Event and Alert Classifications will be reported to the Virginia EOC, (804) 674-2400.

Tab E to Appendix 1

Notifications for a Nuclear Weapons Accident

Notification on accidents involving nuclear weapons may be reported to the Commonwealth of Virginia and impacted local governments by one or more of the following agencies:

- A. Homeland Security Operations Center (HSOC) - (202) 282-8101
- B. FEMA Region III - (215) 931-5757
- C. Commander, Norfolk Naval Base (COMNAVBASENORVA) - (804) 444-7097 / 7098 (24hours) or (804) 444-2590 (duty hours).
- D. Commander in Chief, U.S. Atlantic Command, Submarine Fleet (CINCLANTFLT) – (757) 836-1094 (Off Duty Hours 757-836-1000)
- E. U.S. Department of Energy Operations Center - (202) 586-8100
- F. Federal Emergency Information Coordination Center (EICC) - (202) 898-6100 (24 hours).
- G. Joint Nuclear Accident Coordination Center (JNACC) Operations - (703) 325-2102 / 2103 / 2104.

Appendix 2:
TASK ASSIGNMENTS

I. STATE AGENCIES

In addition to the responsibilities set forth in Section X, Volume I, the Commonwealth of Virginia Emergency Operations Plan, and Annex I-A, Task Assignments, to Volume II, the Commonwealth of Virginia Emergency Operations Plan - Peacetime Disasters, State agencies with radiological emergency responsibilities will plan for and prepare for response to radiological emergencies in accordance with this Plan. State agencies tasked in the Plan will prepare detailed supporting Standing Operating Procedures. State agencies are also assigned the following specific tasks:

A. Agriculture and Consumer Services, Department of

1. Obtain milk samples from dairy farms, meat samples from packing firms, and food samples from retail and wholesale establishments located within fifty miles of the nuclear power station, as requested, and provide them to the Division of Consolidated Laboratory Services for analysis.
2. Coordinate the control and disposition of radiologically-contaminated food, milk, and animal feed.
3. Coordinate the provision of uncontaminated feed for dairy cattle and other farm animals, if required.
4. Coordinate the disposition of farm animals affected by radiological contamination.
5. Provide advice on and coordinate the disposition or use of farm crops, lands, and equipment that have been radiologically contaminated.
6. Assist the Department of Health in radiological monitoring and in obtaining samples for accident assessment.
7. Provide a decision-making official to the Virginia EOC.

- B. Conservation and Recreation, Department of
(Parks and Recreation Division)
 - 1. For radiological emergencies at the Surry Power Station, warn and evacuate all personnel in the Chippokes Plantation State Park when notified of an emergency affecting the Park.
 - 2. For radiological emergencies at the North Anna Power Station, warn and evacuate all personnel in the Lake Anna State Park when notified of an emergency affecting the Park.
 - 3. Provide a decision-making official at the agency office to be in continuous contact with the Virginia EOC.

- C. Consolidated Laboratory Services, Division of
(Department of General Services)
 - 1. Provide emergency laboratory services to State agencies and political subdivisions as required. (See Annex I-S, Volume II, COV EOP for capabilities.)
 - 2. Provide a decision-making official at the agency office to be in continuous contact with the Virginia EOC.

- D. Corrections, Department of
 - 1. Provide emergency clothing (shirts and trousers) for temporary use by individuals who are contaminated when arriving at the Evacuation Assembly Centers.
 - 2. Provide emergency bedding (including mattresses and blankets) for temporary use by individuals who will be staying at Evacuation Assembly Centers or shelters.
 - 3. Provide vehicular back-up support from Department of Corrections Central Garage Car Pool.
 - 4. Provide back-up communications to support emergency response activities.
 - 5. Provide a decision-making official at the agency office to be in continuous contact with the Virginia EOC.

- E. Emergency Management, Department of

1. Operate the Virginia Emergency Operations Center (EOC).
2. Provide a VDEM State On-Scene Coordinator to the EOF or the local Naval Nuclear Propulsion Program (NNPP) ECC.
3. Provide warning in coordination with the State Police and the operators of fixed nuclear facilities or the local NNPP ECC.
4. Provide emergency communications.
5. Assist political subdivisions in development and maintenance of local Radiological Emergency Response Plans.
6. Coordinate emergency response actions of Federal and State agencies.
7. Notify the following Federal agencies and Fixed Nuclear Facilities of a radiological emergency:
 - a. Notify Federal Aviation Administration air controllers at Richmond, Norfolk, or Newport News-Williamsburg International Airports of a radiological emergency and request that aircraft be instructed to avoid the contaminated airspace until notified otherwise.
 - b. Notify the Commander, Fifth U.S. Coast Guard District, Norfolk Naval Shipyard, Norfolk Naval Station, or Northrop Grumman Newport News Shipyard, of a radiological emergency at the Surry Power Station and request establishment of traffic control of boats and ships on the James River or the Elizabeth River in the vicinity of the Surry Power Station or the NNPP facilities. This action shall be coordinated with the Surry Power Station or the affected NNPP ECC as applicable.
 - c. Notify Fort Eustis of a radiological emergency (at Surry Power Station) that could affect the health and safety of personnel stationed at that installation.
8. Notify the Virginia Department of Rail and Public Transportation (804-786-4400, or 804-674-2400) of a radiological emergency at the North Anna Power Station or the Surry Power Station and request that rail service in the affected area be discontinued temporarily.
9. Notify the State Bureau of Radiological Health (day - 804-786-5932, night - 804-674-2400) immediately of all classes of accidents and incidents reported by operators of nuclear facilities.

10. Notify the Department of Transportation to establish roadblocks and to temporarily terminate ferry service between James City County and Surry County when appropriate.
 11. Notify all other State agencies and support organizations that have emergency task assignments identified in the State RERP.
 12. Notify the State of Maryland EOC of radiological accidents at the North Anna Power Station that result in either a Site Area Emergency or General Emergency. Notify the State of North Carolina EOC of radiological accidents at the Surry Power Station that result in either a Site Area Emergency or General Emergency.
 13. Monitor the transportation of hazardous radioactive materials in Virginia.
 14. Provide public information, assisted by the Department of Health and the nuclear facility operator; maintain and keep current a list of media representatives, including names and telephone numbers.
 15. Coordinate radiological emergency response training and conduct annual training exercises.
 16. Notify the Federal Emergency Management Agency (FEMA) when the emergency classification level at a nuclear power facility or at a NNPP facility is classed as an Alert or higher level and provide updated information and request assistance, if required, when the emergency classification level is classed as a Site Area Emergency or General Emergency.
 17. Request assistance from the Federal government in accordance with the Federal Radiological Emergency Response Plan.
 18. Provide regional Hazmat assistance to local subdivisions and governments for radiological monitoring when requests are received through the state EOC.
- F. Environmental Quality, Department of
1. Conduct and provide air quality monitoring data and analysis from existing air monitoring network to the Department of Health and Department of Emergency Management as requested.
 2. Provide assistance in collection and analysis of meteorological data.

-
3. Collect water samples from rivers and lakes located within the ingestion pathway EPZ for assessment.*
 4. Collect fish samples from waters adjacent to the nuclear facility for assessment.*
 5. Assist the State Department of Health in radiological monitoring and accident assessment.*
 6. Provide a decision-making official at the agency office to be in continuous contact with the Virginia EOC.

* Actions performed in the EPZs will be contingent upon radiation levels being deemed acceptable to the general populous by qualified persons from the Bureau of Radiological Health and in accordance with limits established in Appendix 6.

G. Forestry, Department of

1. Provide back-up communications to support emergency services activities for regional communications within the capability of the forestry network.
2. Determine initial damage assessment for state-owned forests.

H. Game and Inland Fisheries, Department of

1. Assist in collecting samples of wildlife and fish suspected of being radiologically-contaminated for analysis by the State Department of Health.
2. Provide back-up communications to support emergency response activities.
3. Provide small boats with motors for administrative, logistical, and operational use of waterways contiguous to nuclear power stations.
4. Assist the Department of Health in radiological monitoring and accident assessment.
5. Assist in warning people in boats on Lake Anna in the vicinity of the North Anna Power Station.
6. Assist in traffic control of boats and ships on the James River in the vicinity of the Surry Power Station.

-
7. Assist in evacuation of Surry Power Station personnel and other persons from Hog Island Wildlife Management Area, if necessary.
 8. Assist in traffic control of boats of Lake Anna in the vicinity of the North Anna Power Station.
 9. Assist in warning persons in the Hog Island Wildlife Management Area in the vicinity of Surry Power Station.
 10. Provide a decision-making official at the agency office to be in continuous contact with the Virginia EOC.
- I. Health, Department of
1. Perform accident assessment, to include:
 - a. Provision of the Radiological Emergency Response Team (RERT) for radiological assessment and response.
 - b. Radiological assessment, to include:
 - (1) Determining actual off-site radiological consequences.
 - (2) Recordkeeping and documentation of off-site effects of the accident.
 2. Advise State and local officials on the implementation of pertinent protective actions based on accident assessment.
 3. Task other State agencies for providing radiological monitoring teams and furnishing appropriate protective clothing, dosimeters, and monitoring equipment.
 4. Establish radiological exposure control for:
 - a. State and local government radiological emergency response personnel.
 - b. Other emergency response personnel.
 - c. The affected populace.
 5. Determine the availability of and coordinate the use of medical facilities that could accommodate and care for persons involved in a radiological emergency who may require medical care (See Tab D to Appendix 5).

6. Provide other emergency health services.
7. Develop criteria for establishing controlled areas or zones surrounding an accident site, including ingress/egress control provisions and perimeter radiological surveillance of persons entering or leaving controlled zones within the plume and ingestion pathways.
8. Request and coordinate Federal assistance for monitoring and assessment provided under the Federal Radiological Emergency Response Plan and provide administrative and logistical support and liaison to Federal personnel on request.
9. Develop criteria for re-entry into homes and evacuated areas and advise local governments when these criteria have been met.
10. Develop and conduct, in coordination with the Department of Emergency Management, training programs for medical support personnel who may be called upon to care for off-site victims of a radiological accident and assist in conducting other radiological training programs.
11. Define hazardous radioactive materials and promulgate rules and regulations for their transportation within the Commonwealth.
12. Procure, store, and administer the issuance of potassium iodide.
13. Provide BRH Radiological Operations Officers and advisors and a decision-making official from the Division of Emergency Medical Services (EMS) to the Virginia EOC.
14. Provide additional radiological monitoring survey instruments to local field monitoring teams, as needed.

J. Marine Resources Commission

In case of a radiological emergency at the Surry Power Station, provide boats and assist in warning and evacuation, as required.

K. Mental Health, Mental Retardation and Substance Abuse Services, Department of

The Department of Mental Health, Mental Retardation and Substance Abuse Services, will provide:

1. Assurance that the State facilities and community services boards are aware of their responsibilities in the event of a major disaster, participate in local emergency services planning activities, and have in place necessary procedures and plans for responding to major disasters.
2. Direction to the State facilities, in the event of a major disaster, to implement their emergency preparedness plans, including cooperative efforts and evaluation and relocation, as required.
3. Direction to the State facilities, in the event of a major disaster, to establish liaison with State and local emergency services offices and to make their facilities available for relief assistance.
4. Provision of back-up assistance, on a standby basis, to those community services board staffs who are providing crisis intervention services during a major disaster.
5. Crisis intervention services will be implemented according to provisions of the local emergency preparedness plan, but the Department will, at the request of the community services board(s) in the disaster area, coordinate with other community services boards in unaffected areas of the State to send additional crisis intervention staff into the designated disaster area(s).
6. Provision of any additional assistance as required by the State or local Office of Emergency Management, within the capability of the Department; this includes on-site visits to assess service needs and provision of needed technical assistance.

L. Military Affairs, Department of

1. Assist in the evacuation of civilian personnel located within the affected radius of a nuclear facility.
2. Provide air and ground transportation to assist in evacuation of civilians or for administrative or logistics support.
3. Provide equipment, supplies, and services within its capability in response to a radiological accident.

4. Assist State and local law enforcement authorities in traffic control, establishing roadblocks, and in providing security to property when evacuation of civilians is ordered.
 5. Establish back-up communication nets in the operational area.
 6. Conduct radiological monitoring and decontamination.
 7. Provide a decision-making official to the Virginia EOC.
- M. Motor Vehicles, Department of
1. Support the Department of State Police with personnel with arrest authority.
 2. Provide receptionist and registration personnel for Disaster Application Centers.
 3. Provide relief support personnel, as requested and available, for operation of computer networks and other emergency response needs.
- N. Social Services, Department of
1. Assist local governments in caring for people evacuated from their homes.
 2. Provide emergency financial assistance to the unemployed as a result of a radiological accident by providing general relief or other available funds.
 3. Provide food stamps to applicants who qualify as a result of a radiological emergency.
 4. Request and coordinate the assistance provided by quasi-government and volunteer relief organizations (Red Cross and Salvation Army) in accordance with the procedures outlined in the Red Cross Emergency Response Plan for Peacetime Radiological Emergencies/Nuclear Accidents.
 5. Provide a decision-making official at the agency office to be in continuous contact with the Virginia EOC.

O. State Police, Department of

1. Assist local officials in disseminating warning.
2. Assist in evacuation, in coordination with local officials.
3. Enforce access/egress provision in controlled areas, when established, in coordination with local officials.
4. Provide traffic control.
5. Conduct radiological monitoring of vehicles and personnel at traffic control points.
6. Provide a decision-making official to the Virginia EOC.
7. Assist Game and Inland Fisheries with warning of boaters on Lake Anna.

P. Transportation, Virginia Department of

1. Provide back-up communications to support emergency response activities.
2. Barricade State-maintained roads in those areas affected by a Radiological Emergency (See Appendix 12).
3. Suspend operation of the Jamestown Ferry near the Surry Power Station, when so advised by the Virginia EOC, until the radiological condition warrants resumption of services.
4. Provide a decision-making official at the agency office to be in continuous contact with the Virginia EOC.

Q. Virginia Cooperative Extension

1. Provide advice to State and Local Officials on how to minimize losses to agricultural resources from radiation effects.
2. Provide information and assistance to farmers and others to aid them in preparing for, and returning to normal after a radiological emergency.
3. Conduct damage assessments in potentially affected areas and inform farmers, growers and producers of any actions which should be undertaken.

4. Serve as a member of both the State and Local Food and Agriculture Council, and respond to both Local and State requests for help in preventing damage, assessing damage, and providing information to help people recover from a disaster.

II. FEDERAL AGENCIES

The complex and emerging threats and hazards of the 21st century demand a unified and coordinated national approach to domestic incident management. The National Strategy for Homeland Security; Homeland Security Act of 2002; and Homeland Security Presidential Directive-5 (HSPD-5), Management of Domestic Incidents, establish clear objectives for a concerted national effort to prevent terrorist attacks within the United States; reduce America's vulnerability to terrorism, major disasters, and other emergencies; and minimize the damage and recover from attacks, major disasters, and other emergencies that occur. Achieving these homeland security objectives is a challenge requiring bold steps and adjustments to established structures, processes, and protocols. An important initiative called for in the above documents is the development and implementation of a National Response Plan (NRP), predicated on a new National Incident Management System (NIMS), that aligns the patchwork of Federal special-purpose incident management and emergency response plans into an effective and efficient structure. Together, the NRP and NIMS (published March 1, 2004) integrate the capabilities and resources of various governmental jurisdictions, incident management and emergency response disciplines, nongovernmental organizations (NGOs), and the private sector into a cohesive, coordinated, and seamless national framework for domestic incident management.

The purpose of the NRP is to establish a comprehensive, national, all-hazards approach to domestic incident management across a spectrum of activities including prevention, preparedness, response, and recovery. The NRP incorporates relevant portions of, but supercedes the Federal Radiological Emergency Response Plan (FRERP), which outlined the responsibilities of Federal agencies with radiological monitoring and assessment capabilities.

The Nuclear/Radiological Incident Annex of the NRP provides an organized and integrated capability for a timely, coordinated response by Federal agencies to terrorist incidents involving nuclear or radioactive materials (Incidents of National Significance), and accidents or incidents involving such material that may or may not rise to the level of an Incident of National Significance. The Federal government has a number of agencies which can provide support to states in the event of a nuclear accident. Six coordinating federal agencies and seventeen cooperating federal agencies are identified and authorized in the Nuclear/Radiological Incident Annex of the National Response Plan to assist state and local governments in responding to nuclear/radiological Incidents of National Significance, and incidents of lesser severity.

The actions described in this annex may be implemented: (1) concurrently with, and as an integral part of, the National Response Plan (NRP) for all nuclear/radiological incidents or accidents considered to be Incidents of National Significance; or (2) independently for all other nuclear/radiological accidents or incidents considered to be below the threshold of an Incident of National Significance and, therefore, not requiring overall Federal coordination by DHS.

A. Scope

1. The Nuclear/Radiological Incident Annex: provides planning guidance and outlines operational concepts for the Federal response to any nuclear/radiological incident, including a terrorist incident, that has actual, potential, or perceived radiological consequences within the United States or its territories, possessions, or territorial waters, and that requires a response by the Federal Government. This includes both Incidents of National Significance and incidents of a lesser severity.
2. Specifies the roles and responsibilities of Federal agencies for preventing, preparing for, responding to and recovering from nuclear/radiological incidents
3. Provides protocols for coordinating Federal Government capabilities to respond to radiological incidents. These capabilities include, but are not limited to;
 - a. The Interagency Modeling and Atmospheric Assessment Center (IMAAC), which is responsible for production, coordination, and dissemination of consequence predictions for an airborne hazardous material release;
 - b. The Federal Radiological Monitoring and Assessment Center (FRMAC), established at or near the scene of an incident to coordinate radiological assessment and monitoring; and
 - c. The Advisory Team for Environment, Food, and Health (known as “The Advisory Team”), which provides expert recommendations on protective action guidance.

B. Policies

1. The NRP supersedes the Federal Radiological Emergency Response Plan, dated May 1, 1996.
2. DHS, as the overall incident manager for Incidents of National Significance, is supported by coordinating agencies and cooperating agencies. Coordinating agencies have specific nuclear/radiological technical expertise and assets for

responding to the unique characteristics of these types of incidents. Coordinating agencies facilitate the nuclear/radiological aspects of the response in support of DHS. For any given incident, the coordinating agency is the Federal agency that owns, has custody of, authorizes, regulates, or is otherwise designated responsibility for the nuclear/radioactive material, facility, or activity involved in the incident. The coordinating agency is represented in the Joint Field Office (JFO) Coordination Group, the Interagency Incident Management Group (IIMG), and the Homeland Security Operations Center (HSOC). The coordinating agency is also represented in other response centers and entities, as appropriate for the specific incident.

3. Coordinating agencies are also responsible for leading the Federal response to nuclear/radiological incidents of lesser severity (those incidents that do not reach the level of an Incident of National Significance).
4. Cooperating agencies include other Federal agencies that provide technical and resource support to DHS and the coordinating agencies. These agencies are represented in the IIMG, the HSOC, and other response centers and entities, as appropriate for the specific incident. They may or may not be represented in the JFO Coordination Group.
5. Nothing in this annex alters or impedes the ability of Federal departments and agencies to carry out their specific authorities and perform their responsibilities under law.
6. Some Federal agencies are authorized to respond directly to certain incidents affecting public health and safety. In these cases, procedures outlined in this annex may be used to coordinate the delivery of Federal resources to State, local, and tribal governments, and to coordinate assistance among Federal agencies for incidents that can be managed without the need for DHS coordination (i.e., incidents below the threshold of an Incident of National Significance).
7. The owner/operator of a nuclear/radiological facility primarily is responsible for mitigating the consequences of an incident, providing notification and appropriate protective action recommendations to State, local, and/or tribal government officials, and minimizing the radiological hazard to the public. The owner/operator has primary responsibility for actions within the facility boundary and may also have responsibilities for response and recovery activities outside the facility boundary under applicable legal obligations (e.g., contractual; licensee; Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)).

8. State, local, and tribal governments primarily are responsible for determining and implementing measures to protect life, property, and the environment in those areas outside the facility boundary or incident location. This does not, however, relieve nuclear/radiological facility or material owners/operators from any applicable legal obligations.
9. State, local, and tribal governments and owners/operators of nuclear/radiological facilities may request assistance directly from DHS, and other Federal agencies, and/or State governments with which they have preexisting arrangements or relationships.
10. Participating Federal agencies may take appropriate independent emergency actions within the limits of their own statutory authority to protect the public, mitigate immediate hazards, and gather information concerning the emergency to avoid delay.

C. Planning Assumptions

1. Radiological incidents may not be immediately recognized as such until the radioactive material is detected or the effects of radiation exposure are manifested in the population.
2. An act of radiological terrorism, particularly an act directed against a large population center within the United States, will have major consequences that can overwhelm the capabilities of many local, State, and/or tribal governments to respond and may seriously challenge existing Federal response capabilities.
3. An incident involving the potential release of radioactivity may require the implementation of protective measures.
4. The Federal Government response to radiological terrorist threats/incidents also includes the following assumptions:
 - a. If appropriate personal protective equipment and capabilities are not available and the area is contaminated by radioactive material, response actions in a contaminated area may be delayed until the material has dissipated to a safe level for emergency response personnel or until appropriate personal protective equipment and capabilities arrive, whichever is sooner;
 - b. The response to a radiological threat or actual incident requires an integrated Federal Government response;

- c. In the case of a radiological terrorist attack, the effect may be temporarily and geographically dispersed, requiring response operations to be conducted over a multijurisdictional, multistate region; and
- d. A radiological terrorist incident may affect a single location, or multiple locations, each of which may require an incident response and a crime scene investigation simultaneously.

D. Hazard-Specific Planning and Preparedness

1. Headquarters

- a. The Federal Radiological Policy Coordinating Committee (FRPCC) provides a national-level forum for the development and coordination of radiological prevention and preparedness policies and procedures. It also provides policy guidance for Federal radiological incident management activities in support of State, local, and tribal government radiological emergency planning and preparedness activities. The FRPCC is an interagency body consisting of the coordinating and cooperating agencies discussed in this annex, chaired by DHS/EPR/FEMA. The FRPCC establishes subcommittees, as necessary.
- b. The FRPCC also coordinates research-study efforts of its member agencies related to State, local, and tribal government radiological emergency preparedness to ensure minimum duplication and maximum benefits to State and local governments. The FRPCC coordinates planning and validating requirements of each agency, reviewing integration requirements and incorporating agency-specific plans, procedures, and equipment into the response system.

2. Regional

- a. Regional Assistance Committees (RACs) in the DHS/EPR/FEMA regions serve as the primary coordinating structure at the Federal regional level. RAC membership mirrors that of the FRPCC, and RACs are chaired by a DHS/EPR/FEMA regional representative. Additionally, State emergency management agencies send representatives to RAC meetings and participate in regional exercise and training activities. The RACs provide a forum for information-sharing, consultation, and coordination of Federal regional awareness, prevention, preparedness, response, and recovery activities. The RACs also assist in providing technical assistance to State and local governments and evaluating radiological plans and exercises.

3. Coordinating Agencies and Cooperating Agencies

- a. During a response to an Incident of National Significance, coordinating agencies and cooperating agencies provide technical expertise, specialized equipment, and personnel in support of DHS, which is responsible for overall coordination of incident management activities. Coordinating agencies have primary responsibilities for Federal activities related to the nuclear/radiological aspects of the incident.
- b. The coordinating agency is that Federal agency which owns, has custody of, authorizes, regulates, or is otherwise deemed responsible for the radiological activity or facility involved in the incident. The following paragraphs identify the coordinating agency for a variety of radiological incidents. For example, the Nuclear Regulatory Commission (NRC) is the coordinating agency for incidents involving nuclear facilities licensed by the NRC; DOE is the coordinating agency for incidents involving the transportation of radioactive materials shipped by or for DOE. Table 1, on page NUC-7 of the Nuclear/Radiological Incident Annex, National Response Plan, identifies the coordinating agency for a variety of radiological incidents.

4. Radiological Terrorism Incidents

- a. The coordinating agency provides technical support to DHS, which has overall responsibility for domestic incident management, and to the FBI, which has the lead responsibility for criminal investigations of terrorist acts or terrorist threats. The FBI is also responsible for coordinating activities of other members of the law enforcement community to detect, prevent, preempt, investigate, and disrupt terrorist attacks against the United States, including incidents involving nuclear/radioactive materials (e.g. RDD/IND incidents).
- b. For radiological terrorism incidents involving materials or facilities owned or operated by DOD or DOE, DOD or DOE is the coordinating agency, as appropriate.
- c. For radiological terrorism incidents involving materials or facilities licensed by the NRC or Agreement States, the NRC is the coordinating agency.
- d. For all other radiological terrorism incidents, DOE is the coordinating agency. The coordinating agency role transitions from DOE to the Environmental Protection Agency (EPA) for environmental cleanup and site restoration at a mutually agreeable time, and after consultation with State, local, and tribal governments, the cooperating agencies, and the JFO Coordination Group.

5. Nuclear Facilities

- a. The NRC is the coordinating agency for incidents that occur at fixed facilities or activities licensed by the NRCC or an Agreement State. These include, but are not limited to, commercial nuclear power plants, fuel cycle facilities, DOE-owned gaseous fusion facilities operating under NRC regulatory oversight, independent spent fuel storage installations, radiopharmaceutical manufacturers, and research reactors.
- b. DOD or DOE is the coordinating agency for incidents that occur at facilities or vessels under their jurisdiction, custody, or control. These incidents may involve reactor operations, nuclear material, weapons production, radioactive material from nuclear weapons or munitions, or other radiological activities.
- c. EPA is the coordinating agency for incidents that occur at facilities not licensed, owned, or operated by a Federal agency or an Agreement State, or currently or formerly licensed facilities for which the owner/operator is not financially viable or is otherwise unable to respond.

6. Transportation of Radioactive Material

- a. Either DOD or DOE is the coordination agency for transportation incidents involving DOD or DOE materials, depending on which of these agencies has custody of the material at the time of the incident.
- b. The NRC is the coordinating agency for transportation incidents that involve radiological material licensed by the NRC or an Agreement State.
- c. DHS/U.S. Coast Guard (DHS/USCG) is the coordinating agency for the shipment of materials in certain areas of the coastal zone that are not licensed or owned by a Federal agency or Agreement state.
- d. EPA is the coordinating agency for shipment of materials in other areas of the coastal zone and in the inland zone that are not licensed or owned by a Federal agency or an Agreement State.

7. Space Vehicles Containing Radioactive Materials

- a. NASA is the coordinating agency for missions involving NASA space vehicles or joint space vehicles with significant NASA involvement. DOD is the coordinating agency for missions involving DOD space vehicles or

joint space vehicles with significant DOD involvement. A joint venture is an activity in which the U.S. Government has provided extensive design/financial input; has provided and maintains ownership of instruments, spacecraft, or the launch vehicle; or is intimately involved in mission operations. A joint venture is not created by simply selling or supplying material to a foreign country by use in its spacecraft.

- b. DHS/USCG is the coordinating agency for space vehicles not managed by DOD or NASA impacting certain areas of the coastal zone.
- c. EPA is the coordinating agency for all other space vehicle incidents involving radioactive material.

8. Foreign, Unknown, or Unlicensed Material

- a. EPA or DHS/USCG is the coordinating agency depending on the location of the incident. DHS/USCG is the coordinating agency for incidents involving foreign or unknown sources of radioactive material in certain areas of the coastal zone. EPA is the coordinating agency for all other incidents involving foreign, unknown, or unlicensed radiological sources that have actual, potential, or perceived radiological consequences in the United States or its territories, possessions, or territorial waters. The foreign or unlicensed source may be a reactor, a spacecraft containing radioactive material, imported radioactively contaminated material, or a shipment of foreign-owned radioactive material. Unknown sources of radioactive material, also termed “orphan sources,” are those materials whose origin and/or radiological nature are not yet established. These types of sources include contaminated scrap metal or abandoned radioactive material.

9. Other Types of Incidents

- a. For other types of incidents not covered above, DHS, in consultation with the other coordinating agencies, designates a coordinating agency. If DHS determines that it is an Incident of National Significance, DHS is responsible for overall coordination and the designated coordinating agency assumes responsibilities as the coordinating agency.

E. Notification Procedures

- 1. The owner/operator of a nuclear/radiological or owner/transporter of nuclear/radiological material is generally the first to become aware of an incident and notifies State, local, and tribal authorities and the coordinating agency.

2. Federal, State, local, and tribal governments that become aware of a radiological incident from any source other than the coordinating agency notify the HSOC and the coordinating agency.
3. The coordinating agency provides notification of a radiological incident to the HSOC and other coordinating agencies, as appropriate.
4. Release of hazardous materials that are regulated under the NCP (40 CFR part 302) are reported to the National Response Center.

F. Incident Actions

1. Headquarters: Incidents of National Significance
 - a. Coordinating agencies and cooperating agencies report information and intelligence relative to situational awareness and incident management to the HSOC. Agencies with radiological response functions provide representatives to the HSOC, as requested.
 - b. The coordinating agency and cooperating agencies, as appropriate, provide representation to the IIMG.
 - c. Coordinating agencies and cooperating agencies provide representation to the National Response Coordination Center (NRCC), as appropriate.
2. Other Radiological Incidents
 - a. For radiological incidents that are below the threshold of an Incident of National Significance but require Federal participation in the response, the coordinating agency coordinates the Federal response utilizing the procedures in this (Nuclear/Radiological Incident Annex, NRP) annex, agency-specific plans, and/or the NCP, as appropriate. The coordinating agency provides intelligence and information relative to the incident to the HSOC.
 - b. The NRCC may be utilized to provide interagency coordination and Federal resource tracking, if needed.
3. Regional: Incidents of National Significance

- a. The coordinating agency provides representation to the JFO to serve as a Senior Federal Official within the JFO Coordination Group. Cooperating agencies may also be represented, as needed.
 - b. The coordinating agency is part of the Unified Command, as defined by the NIMS, and coordinates Federal radiological response activities at appropriate field facilities (appropriate field facilities may include a JFO, Incident Command Post, Emergency Operations Center, Emergency Operations Facility, Emergency Control Center, etc.)
4. Other Radiological Incidents
 - a. The coordinating agency coordinates Federal response operations at a designated field facility. Cooperating agencies may also be represented, as needed.
- G. Response Coordination - Please refer to the Nuclear/Radiological Incident Annex, NRP, for a detailed explanation.
- H. Other Federal Resource Support - For Stafford Act or Federal-to-Federal support incidents, DHS/EPR/FEMA coordinates the provision of Federal resources and assistance to affected State, local, and tribal governments as part of the JFO Operations Section or other appropriate location established by DHS/EPR/FEMA.
- I. Recovery
 1. For all radiological incidents, the coordinating agency coordinates environmental remediation/cleanup in concert with cognizant State, local, and tribal governments, and owners/operators, as applicable. While retaining overall technical lead, a coordinating agency may require support from a cooperating agency that has significant cleanup/recovery experience and capabilities (e.g., EPA, U.S. Army Corps of Engineers (USACE)) for a long-term cleanup. The initial coordinating agency may request that the coordinating agency role may be transitioned to a cooperating agency to manage long-term cleanup efforts.
 2. State, local, and tribal governments primarily are responsible for planning the recovery of the affected area (the term “recovery,” as used here, encompasses any action dedicated to the continued protection of the public and the resumption of normal activities in the affected area). Recovery planning is initiated at the request of the State, local, or tribal governments, and generally does not take place until the initiating conditions of the incident have stabilized and immediate actions to protect public health, safety, and property are

accomplished. Upon request, the Federal government assists State, local, and tribal governments develop and execute recovery plans.

3. Private owners/operators have primary responsibility of recovery planning activities and eventual cleanup within their facility boundaries and may have responsibilities for recovery activities outside their facility under applicable legal obligations (e.g., contractual, licensee, CERCLA).
4. Radiological monitoring and assessment activities are normally terminated when DHS, in consultation with the coordinating agency, other participating agencies, and State, local, and tribal governments, determines that:
 - a. There is no longer a threat to public health and safety of the environment;
 - b. State, local, and tribal resources are adequate for the situation; and
 - c. There is mutual agreement among the agencies involved to terminate monitoring and assessment.

J. Federal Assets Available Upon Request by the Coordinating Agency or DHS

1. Federal Radiological Monitoring and Assessment Center - DOE is responsible for developing and maintaining FRMAC policies and procedures, determining FRMAC composition, and maintaining FRMAC operational readiness. The FRMAC is established at or near the incident location in coordination with DHS, the coordinating agency, other Federal agencies, and State, local, and tribal authorities. A FRMAC normally includes representation from DOE, EPA, the Department of Commerce, the National Communications System (DHS/IAIP/NCS), USACE, and other Federal agencies as needed. Regardless of who is designated as the coordinating agency, DOE, through the FRMAC or DOE CMHT and CMRT, coordinates radiological monitoring and assessment activities for the initial phases of the response. When the FRMAC is transferred to the EPA, they assume responsibility for coordination of radiological monitoring and assessment activities.
2. Advisory Team for Environment, Food, and Health
 - a. The advisory team includes representatives from DHS, EPA, the Department of Agriculture (USDA), the Food and Drug Administration, the Centers for Disease Control and Prevention, and other Federal agencies. The Advisory Team develops coordinated advice and recommendations for DHS, the JFO Coordination Group, the coordinating agency, and State,

local, and tribal governments concerning environmental, food health, and animal health matters.

- b. The Advisory Team selects a chair for the team.
- c. The advisory team provides recommendations in matters related to the following:
 - 1) Environmental assessments (field monitoring) required for developing recommendations with advice from State, local, and tribal governments and/or the FRMAC senior Monitoring Manger;
 - 2) Protective Action Guides and their application to the emergency;
 - 3) Protective Action Recommendations using data and assessment from the FRMAC;
 - 4) Protective actions to prevent or minimize contamination of milk, food, and water, and to prevent or minimize exposure through ingestion;
 - 5) Recommendations regarding the disposition of contaminated livestock, poultry, and contaminated foods, especially perishable commodities (e.g., meat in processing plants);
 - 6) Recommendations for minimizing losses of agricultural resources from radiation effects;
 - 7) Availability of food, animal feed, and water supply inspection programs to assure wholesomeness;
 - 8) Relocation, reentry, and other radiation protection measures prior to recovery;
 - 9) Recommendations for recovery, return, and cleanup issues;
 - 10) Health and safety advice or information for the public and for workers;
 - 11) Estimated effects of radioactive releases on human health and the environment; and
 - 12) Other matters, as requested by the coordinating agency.

3. DOE Radiological Assistance Program, Emergency Management Teams, and Nuclear Incident Response Team Assets

- a. RAP teams are located at DOE operations offices, national laboratories, and some area offices. They can be dispatched to a radiological incident by the DOE regional coordinating offices responding to a radiological incident.

Additional DOE planning and response teams and capabilities are located at various DOE facilities throughout the country and can be dispatched, as needed, to a radiological incident.

- K. Federal Agency Responsibilities are listed in Tab C to Annex A, Direction and Control.

III. ADJACENT STATES

A. State of Maryland:

Notify the Virginia EOC, 804-674-2400, if there is a radiological emergency classed as a Site Area Emergency or General Emergency at the Calvert Cliffs Nuclear Power Station and keep the Virginia EOC informed of the situation until the emergency situation returns to normal.

B. States of Maryland and North Carolina

Notify the State of Maryland EOC, 410-517-3600, of a radiological emergency at the North Anna Power Station and the State of North Carolina EOC, 919-733-3942 of a radiological emergency at the Surry Power Station.

IV. POLITICAL SUBDIVISIONS

A. Local Governments (within Plume Exposures Pathways)

1. Plan and prepare for response to a radiological emergency in accordance with this Plan.
2. Notify citizens of a radiological accident and keep them informed of developments.
3. Warn citizens within ten miles of a commercial nuclear power station in the event of a radiological accident and advise them of protective actions to be taken.

-
4. Develop and maintain local Radiological Emergency Response Plans incorporating detailed Standing Operating Procedures (SOPs) for responding to radiological accidents at fixed nuclear facilities located within the political subdivision or within ten miles and for transportation accidents involving nuclear materials occurring in their jurisdiction. Telephone numbers in emergency procedures shall be updated at least quarterly.
 5. Obtain training of radiological monitors and local government emergency response personnel in accordance with local Radiological Emergency Response Plans.
 6. Provide fire, rescue, and law enforcement assistance to fixed nuclear facilities, as mutually agreed.
- B. Local Governments (Within Ingestion Exposure Pathways)
1. Plan and prepare for a response to a radiological emergency in accordance with this Plan and local Emergency Operations Plan (EOP).
 2. Provide and maintain adequate facility (may be local EOC) for direction and coordination of response effort in the ingestion pathway.
 3. Maintain clearly defined procedures for:
 - a. Local coordination with Extension Agents/specialists/Damage Assessment Team.
 - b. Dissemination of public information (and rumor control).
 4. Participate in ingestion exercises and drills.

V. OPERATOR OF FIXED NUCLEAR FACILITY

- A. Coordinate and interface nuclear facility Radiological Emergency Response Plans with State and local government plans.
- B. Perform the initial assessment of a radiological accident.
- C. Notify State and affected local governments of a radiological emergency.
- D. Establish the Local Emergency Operations Facility, as necessary.

-
- E. Establish Joint Public Information Center and coordinate news releases with State Public Information Officers.
 - F. Provide a representative to the Virginia EOC, upon request.
 - G. Invite off-site emergency services support agencies to participate in or observe scheduled drills at fixed nuclear facilities, to include medical, fire, rescue, communications, and radiological monitoring. Also provide formalized training to personnel of local fire departments and rescue squads and other emergency response personnel.

VI. NAVAL NUCLEAR PROPULSION PROGRAM ORGANIZATIONS

- A. Norfolk Naval Shipyard
 - 1. Develop and maintain emergency plans and procedures.
 - 2. Maintain MOUs and MOAs with State and local response organizations.
 - 3. Train and exercise personnel, plans, procedures, and equipment essential for emergency response.
 - 4. Mitigate potential consequences to workers and the environment. Take necessary actions to recover from an emergency.
 - 5. Function as the primary radiological response organization inside Norfolk Naval Shipyard and Norfolk Naval Station. In addition, dispatch teams to offsite locations to conduct radiological monitoring until relieved by State, local, or Federal monitoring teams.
 - 6. Function as the primary Naval Nuclear Propulsion Program (NNPP) radiological response organization to assist State and local responders at the site of an offsite transportation accident involving a shipment of NNPP or other radioactive material in the State of Virginia. Upon request from State or local agencies and in accordance with the Federal Radiological Emergency Response Plan, provide radiological assets for response to other non-NNPP radiological emergencies.
- B. Supervisor of Shipbuilding, Newport News, with Northrop Grumman Newport News Shipyard as implementing agency
 - 1. Develop and maintain emergency plans and procedures.
 - 2. Maintain MOUs and MOAs with State and local response organizations.

3. Train and exercise personnel, plans, procedures, and equipment essential for emergency response.
4. Mitigate potential consequences to workers and the environment. Take necessary actions to recover from an emergency.
5. Function as the primary radiological response organization inside Northrop Grumman Newport News Shipyard. In addition, dispatch teams to offsite locations to conduct radiological monitoring until relieved by State, local, or Federal monitoring teams.
6. Function as the secondary Naval Nuclear Propulsion Program (NNPP) radiological response organization to assist State and local responders at the site of an offsite transportation accident involving a shipment of NNPP or other radioactive material in the State of Virginia. Upon request from State or local agencies and in accordance with the Federal Radiological Emergency Response Plan, provide radiological assets for response to other non-NNPP radiological emergencies.

C. Naval Nuclear Propulsion Program

1. Radiological regulatory authority for Norfolk Naval Shipyard, Norfolk Naval Station, and Northrop Grumman Newport News.
2. Serves as the Lead Federal Agency under the Federal Radiological Emergency Response Plan for radiological emergencies at Norfolk Naval Shipyard, Norfolk Naval Station, and Northrop Grumman Newport News.

VII. OTHER SUPPORTING ORGANIZATIONS

A. American Red Cross

Provide assistance as mutually agreed in Annex I-W to Volume II of the State EOP, upon request. During a peacetime radiological emergency, the American Red Cross will conduct shelter and feeding operations in centers and facilities designated in advance by the VDEM, and under other arrangements worked out among the American Red Cross, and/or between local government Emergency Management organizations, and officials or owners of the buildings.

B. Salvation Army

A Statement of Understanding exists between the State of Virginia and the Salvation Army. A copy is at Appendix 1 to Annex I-X to Volume II - COVEOP - Peacetime Disasters. This document describes the Salvation Army organization in the State and outlines responsibilities and the services the Salvation Army can provide in the event of a peacetime disaster. A nuclear accident is included in the definition of a peacetime disaster.

C. Civil Air Patrol (Virginia Wing)

A joint agreement exists between the Civil Air Patrol (CAP) and VDEM. The agreement outlines the duties, responsibilities, and relationship of both agencies in preparation for and during a peacetime disaster in Virginia. CAP provides communications support as outlined in Appendix 9.

D. Radio Amateur Civil Emergency Service (RACES)

RACES provides communications support as outlined in Appendix 10. There is no signed formal agreement between RACES and VDEM. RACES is an alliance of licensed radio amateurs operating under Subpart F, Part 97, Rules and Regulations, Federal Communications Commission.

Attachments:

Tab A - Summary of Primary and Support Responsibilities

Tab B - Support of Federal Response

Tab A

SUMMARY OF PRIMARY AND SUPPORT RESPONSIBILITIES

Federal Emergency Emergency Support Functions 1-15 and Additional State Functions 	1: Transportation	2: Communications	3: Public Works & Engineering	4: Firefighting	5: Emergency Management	6: Mass Care, Housing & Human Svcs.	7: Resource Support	8: Public Health & Medical Services	9: Urban Search & Rescue	10: Oil & Hazardous Materials Response	11: Agriculture & Natural Resources	12: Energy	13: Public Safety & Security	14: Long-term Comm. Recovery & Mit.	15: External Affairs	Direction and Control	Logistics	Financial Management
	Department																	
Agriculture and Consumer Services																		
American Red Cross																		
Aviation																		
Chesapeake Bay Bridge-Tunnel Com.																		
Conservation and Recreation																		
Corrections																		
Emergency Management																		
Environmental Quality																		
Fire Programs																		
Forestry																		
Game and Inland Fisheries																		
General Services																		
Health																		
Housing & Community Development																		
Information Technology																		
Mental Health, MR & SAS																		
Military Affairs																		
Mines, Minerals, & Energy																		
Motor Vehicles																		
Social Services																		
State Corporation Commission																		
State Police																		
Transportation																		
Virginia Corps																		
Virginia Port Authority																		
Volunteers (VOAD)																		

Tab B

SUPPORT OF FEDERAL RESPONSE

The following resources are available to support Federal response to a radiological accident in Virginia.

I. AIRFIELDS

A. Surry Power Station

1. Scheduled air carrier passenger service - Richmond International Airport, Richmond, Virginia; Newport News/Williamsburg International Airport, Newport News, Virginia.
2. Charter air service (fixed wing and rotary) - Richmond International Airport, Richmond, Virginia; Newport News/Williamsburg International Airport, Newport News, Virginia.
3. Airfield for light fixed wing aircraft - Wakefield Municipal Airport, Richmond International Airport, Newport News/Williamsburg International Airport, Newport News, Virginia.

B. North Anna Power Station

1. Scheduled air carrier passenger service - Richmond International Airport, Richmond, Virginia.
2. Charter air service (fixed wing and rotary) - Richmond International Airport, Richmond, Virginia.
3. Airfield for light fixed wing aircraft - Hanover County Municipal Airport, Ashland; Richmond International Airport; Gordonsville Municipal Airport, Gordonsville.

C. Northrop Grumman Newport News

1. Scheduled air carrier passenger service Newport News/Williamsburg International Airport, Newport News, Virginia.
2. Charter air service (fixed wing and rotary) Newport News/Williamsburg International Airport, Newport News, Virginia.

3. Airfield for light fixed wing aircraft Suffolk Municipal Airport, Suffolk and Newport News International Airport, Newport News, Virginia.

D. Norfolk Naval Station or Norfolk Naval Shipyard

1. Scheduled air carrier passenger service Norfolk International Airport, Norfolk, Virginia.
2. Charter air service (fixed wing and rotary) Norfolk International Airport, Norfolk, Virginia.
3. Airfield for light fixed wing aircraft Chesapeake Municipal Airport, Chesapeake, Suffolk Municipal Airport, Suffolk and Norfolk International Airport, Norfolk, Virginia.

II. COMMAND POSTS

The State response is coordinated from the Virginia Emergency Operations Center (VEOC) located in Chesterfield County west of Richmond. Space will be provided in the VEOC for a Federal liaison officer, and the individual will be given access to the State telephone system.

III. COMMUNICATIONS

The Federal response should be prepared to have its own radio frequencies and radio communications capability. The Virginia EOC has direct contact with telephone company representatives who will be capable of having telephones for Federal response installed on an expedited basis. It is expected that the National Communications System Plan will have been implemented and that the NCS representative will be in the response area. This representative should contact the VDEM Communications Officer at the Virginia EOC to obtain the necessary support from the telephone company State liaison officer.

IV. FEDERAL RESPONSE EFFORT SUPPORT

Support will also be provided to the Federal response effort by the State BRH, Department of Health (See Appendix 6).

V. ADDITIONAL FEDERAL SUPPORT REQUIREMENTS

Additional Federal support requirements should be submitted to the Virginia EOC when known.

Appendix 3:
ORGANIZATION

I. STATE ORGANIZATION

A. The basic State organization for response to radiological emergencies conforms to the regular peacetime emergency organization as outlined in the following two references in the Commonwealth of Virginia Emergency Operations Plan as modified by Section VII, Organization, of this Plan.

1. Volume I, Basic Plan
2. Volume II, Recovery
3. Volume IV, Hazardous Materials,
4. Volume VIII, Terrorism Consequence Management

B. The State organization is based on normal governmental structures and channels of communication with the Governor in his role as Director of Emergency Management directing the response through the State Coordinator of Emergency Management, who coordinates the overall response. The State Department of Health provides technical advice and assistance on radiological monitoring, radiological accident assessment, protective actions, and radiological exposure control. Other State agencies provide support and assistance, on request, in accordance with their responsibilities and capabilities (See Attachment 1). Specific radiological emergency response functions assigned to State agencies are set forth in Appendix 2, Task Assignments.

II. LOCAL GOVERNMENT ORGANIZATION

The State Emergency Services and Disaster Law requires that each political subdivision designate a Director of Emergency Management. The Director has the authority to appoint a Coordinator of Emergency Management. Direction of a radiological accident will be exercised by the Coordinator of Emergency Management. Locally-available forces and resources will be fully committed before requesting assistance from State government. See Tab B for local government emergency response organization.

III. FEDERAL GOVERNMENT ORGANIZATION

The Federal government has a number of agencies which can provide support to states in the event of a radiological emergency. The Federal agencies with a summary of their capabilities are included in Annex A, Attachment 3.

IV. NUCLEAR FACILITY OPERATOR

The nuclear facility operator has significant responsibilities in accident assessment, warning, and public information and has organized its response organization accordingly. Government and facility operator response organizations require close interface and coordination. This will be accomplished primarily in the Emergency Operations Facility. See Annex L for radiological response field organization.

Attachments:

Tab A - Radiological Emergency Response from the State Emergency Operations Center

Tab B - Radiological Response Organization

Insert Page 3-3, an 11" x 17" page, here.

Tab B to Appendix 3

RADIOLOGICAL RESPONSE ORGANIZATION

(Monitoring and Assessment)

State, Local and Dominion

- (1) Federal agencies, to include NRC and FEMA, State agencies and the Licensee will be represented in the Emergency Operations Facility (EOF). Integration of the support effort will be accomplished in the EOF.
- (2) The State will provide to the local EOCs a VDEM representative and a Radiological Exposure Control Officer at the Virginia EOC to coordinate response requirements and respond to technical issues.
- (3) Local representatives will not be present at the EOF. Coordination between the EOF and local EOCs will be through the State On-Scene Coordinator, Virginia EOC and a BRH representative.

Appendix 4:
NOTIFICATION AND WARNING

I. MISSION

To provide for prompt notification by operators of fixed nuclear facilities to State and local government of a radiological emergency and for providing timely warning and instructions on protective actions to the public.

II. OPERATIONAL CONCEPTS AND PROCEDURES

A. Concept of Operations

1. Operators of fixed nuclear facilities will immediately notify local governments and the Virginia Emergency Operations Center (Virginia EOC) whenever any of the four classes of radiological emergencies occur. See Tab A for the reporting format for the following: (1) commercial nuclear power plants, (2) naval propulsion reactors, (3) B&W Naval Nuclear Fuel Division.
2. The primary means of notification by operators of fixed nuclear facilities will be by Insta-phone (dedicated hot-loop system), which will permit simultaneous notification of the Virginia EOC and the local governments within the plume exposure pathway EPZ. Radio, commercial telephones, and facsimile machines will be used as back-up. Local Governments within the ingestion pathway will be notified via Virginia Criminal Information Network (VCIN), with backup by commercial telephone.
3. The initial notification from the facility of an Alert, Site Area Emergency, or General Emergency will be verified by local jurisdictions and the Virginia EOC if the notification is not received by Insta-phone. Subsequent transmissions of information need not be verified unless the source is suspect. The facility operator will provide verification telephone numbers to the Virginia EOC Communications Center and to local government communications centers.

B. Public Alerting and Warning

1. Primary responsibility for activating the early warning system lies with the local government assigned as the Primary activation point in coordination with VDEM and the affected local governments. In the event the State cannot be reached for any reason, local governments may request the primary or alternate activation point to activate the system if the situation warrants. The public will be alerted primarily by use of an early warning siren system installed around the power station supplemented by public address systems mounted on emergency vehicles (See paragraph 5 below).

State assistance in alerting and warning the public will be requested through the Virginia EOC (See Appendices 9 and 10).

2. Transients located within ten miles of a nuclear power station will be notified of a radiological accident as follows:
 - a. Chippokes Plantation State Park and Lake Anna State Park by State Park Superintendents.
 - b. Jamestown and Yorktown Colonial National Historical Parks by National Park Rangers.
 - c. Colonial Williamsburg Foundation-by-Foundation employees at the various sites, vehicles with public address systems, and phone calls to individual rooms.
 - d. Busch Gardens and Water Country USA by public address system within the Parks.
 - e. Water sportsmen at Lake Anna, Hog Island, or on the James River (swimming, fishing, boating) by Department of Game and Inland Fisheries, Marine Resources Commission, and/or aircraft with public address systems.
 - f. Other transients will receive information and protective action instructions over the Emergency Alert System.
 - g. Detailed information on warning of the transient population is contained in local government plans and supporting SOPs.
 - h. Pamphlets entitled "Response to Emergency", featuring instructions to transients for responding to radiological emergencies at North Anna and Surry Power Stations are distributed annually to transients within ten miles of a nuclear power station in Virginia.
3. Notifications to special facilities (hospitals, nursing homes, prisons) with institutionalized personnel are the responsibility of local governments. Each special facility is required to maintain an emergency plan that provides for evacuation or sheltering in place, as appropriate. Requirements for evacuating special facilities will also be identified and assistance, if required, requested from the local government and VDEM. Non-institutionalized persons with special requirements, i.e., on life-support equipment or non-ambulatory, without transportation will be identified by name, address, and telephone number prior to a radiological emergency. Arrangements will be made to have these individuals evacuated early in the emergency, if this is the best available protective measure. Requirements

above local capabilities will be identified during pre-emergency planning and assistance requested from the VDEM.

4. Siren alerting systems, designed to meet the requirements of Appendix 3, NUREG-0654/FEMA-REP-1, Revision 1, and FEMA-REP-10, are operational out to ten miles of both nuclear power stations. The systems have been installed and are maintained by Dominion. Activation of the alert system is the responsibility of State and local governments. The siren systems provide the primary and most rapid means for alerting the public. The sirens are single tone and designed to develop a sound level of 123 dB(c) at 100 feet. The sirens are activated by an electronic system. Signals can be transmitted to decoders at the sirens from a primary and two alternate locations at selected government agencies located in the vicinity of each power station. The public will be alerted by four three-minute activations of the sirens; each activation separated by a one-minute silent interval. (Total lapsed activation time - 15 minutes.) This signal alerts the public to tune in to EAS stations on their radios or TV sets. Detailed information about the siren systems is included in Annex B.

In the event that part or all of the siren system fails to function, the warning systems in paragraph 5 below will be used as backup.

5. Combinations of the following can be used as primary, supplemental or backup route alerting methods to alert the public in the plume exposure EPZ. Specific systems used will be described in each local government plan.
 - a. Emergency vehicles with loudspeakers.
 - b. Aircraft and boats with loudspeakers.
 - c. Telephone.
 - d. Radio.
 - e. Television.
 - f. Sirens.
 - g. CBs or other radios.
 - h. Personal notification.
6. Based on the radiological emergency situation and off-site conditions, the initial warning might include instructions for in place sheltering or evacuation. Coordination will be effected with EAS radio and TV stations serving the affected area (See Appendix 10) or other stations serving the affected political subdivisions so that emergency information and instructions can be disseminated.

Attachments:

- Tab A - Report of Emergency For Use By Commonwealth of Virginia
- Tab B - Report of Protective Action Decision
- Tab C - Report of Radiological Conditions For Use By Commonwealth of Virginia
- Tab D - Report of KI Decision and Administration
- Tab E - Initial Notification Report Form – North Anna Hydroelectric Dam Project
- Tab F - Siren Alerting System

Attachment 1 to Tab F - Surry Siren Locations

Attachment 2 to Tab F - North Anna Siren Locations

- Tab G - Adjacent States and Jurisdictions Within 50-Mile Ingestion Pathway

Attachment 1 to Tab G – Surry Power Station Ingestion Pathway –
Adjacent Jurisdictions (In-State and Out-of-State)

Figure 1 to Attachment 1 to Tab G – Surry Ingestion Pathway Map

Attachment 2 to Tab G – North Anna Power Station Ingestion Pathway –
Adjacent Jurisdictions (In-State and Out-of-State)

Figure 1 to Attachment 2 to Tab G – North Anna Ingestion Pathway Map

Attachment 3 to Tab G – Calvert Cliffs Power Station (Maryland) –
Virginia Jurisdictions Within Ingestion Pathway

Figure 1 to Attachment 3 to Tab G – Calvert Cliffs Ingestion Pathway
(Maryland) Map

Tab A to Appendix 4

Message No.: _____

**Report of Emergency -
For Use By Commonwealth of Virginia**

Message:

"This is (North Anna/Surry Power Station) Control Room TSC LEOF CEOF. Standby for a roll-call followed by an emergency message. (Check this box when indicated by roll-call.) **The emergency message is as follows:**

Item 1 - Emergency Class:

- Notification of Unusual Event Alert
 Site Area Emergency General Emergency
 Emergency Terminated

Declared at _____ on ____ / ____ / ____
(24 Hr. Time) (Date)

Item 2 - Release of Radioactive Material:

- Is within federal limits and not related to the event. Related to the event is presently occurring.
 Related to the event has occurred and is now terminated. Related to the event is projected to occur.

Item 3 - Report of Radiological Conditions:

- We will not transmit a report of radiological conditions to the State EOC
 We will transmit a report of radiological conditions to the state EOC

Item 4 - Meteorological Data:

- AVE Wind direction is ____ (degrees from), Compass Point ____ AVE Wind speed is ____ (mph)
Based on: On-site Measurements Off-site Measurements Not Available

Item 5 - Remarks/Description of Event: _____

NOTE: Items 6 through 9 may be excluded from the initial message reporting an emergency class and termination reports.

Item 6 - Assistance Requested:

- None. Excluded from this message.
 ____ (number) Fire Units from _____. ____ (number) Police Units from _____.
 ____ (number) Rescue Units from _____. ____ Other: _____.

Item 7 - Emergency Response Actions Underway:

- None. Excluded from this message.
 ____ Station emergency personnel called in.
 ____ Station monitoring teams dispatched offsite. ____ Other: _____.

Item 8 - Evacuation of Onsite Personnel:

- No. Excluded from this message.
 Yes. Evacuated to: Primary Remote Assembly Area. Secondary Remote Assembly Area.
 Other: _____
 Company Dismissal of non-essential personnel; is planned. is in progress. has been completed.

Item 9 - Prognosis of Situation:

- Improving. Stable. Excluded from this message.
 Worsening. Other: _____

Item 10 - This is _____ / Emergency Communicator.
(Name)

Please acknowledge receipt of this message. (Check this box when identified by roll-call.)

This is (North Anna/Surry Power Station) Control Room TSC LEOF CEOF out at _____ on ____ / ____ / ____
(24 Hr. Time) (Date)

ITEMS 11 - 12 CONTINUED ON REVERSE

DEM Form No. STATEROE
Effective: May 17, 2007