

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 AUTH. NAME AUTHOR AFFILIATION
 DISE, D.P. Niagara Mohawk Power Corp.
 RECIP. NAME RECIPIENT AFFILIATION
 Office of Nuclear Reactor Regulation
 GRIMES, B.K. Emergency Preparedness Task Force

SUBJECT: Forwards April 1979 revision to "NY State Emergency Plan for Radiation Accidents." Emergency plan withheld per Privacy Act.

DISTRIBUTION CODE: A043S COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 1451
 TITLE: Emergency Planning Implementation (OL Stage)

NOTES: INFO. W/HELD PER PRIVACY ACT.

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	22 EEB	1	1	23 EFLT TRT SYS	1	1
	24 BRINKMAN	1	1	3 LPDR	1	0
	4 NSIC	1	0	5 EPB-DOR	52	52
	OELD	1	0	STATE PROGRAMS	2	2
EXTERNAL:	16 ACRS	16	16			

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is essential for ensuring the integrity of the financial system and for providing a clear audit trail. The text notes that without proper record-keeping, it would be difficult to identify discrepancies or to hold individuals accountable for their actions.

2. The second part of the document outlines the specific procedures that must be followed when recording transactions. It details the steps from the initial entry to the final review and approval process. The text stresses that every step must be performed meticulously and in accordance with established protocols to avoid any errors or omissions.

3. The third part of the document addresses the role of technology in modern record-keeping. It discusses how digital systems can improve efficiency and accuracy while also providing enhanced security and access control. The text highlights that while technology offers many benefits, it must be implemented carefully to ensure that data is protected and that the system remains reliable.

4. The fourth part of the document focuses on the training and education of staff involved in the record-keeping process. It states that all personnel must receive thorough training to understand the requirements and procedures. The text suggests that ongoing education and updates are necessary to keep staff informed of any changes in regulations or technology. It also emphasizes the importance of fostering a culture of responsibility and attention to detail among all employees.

5. The fifth part of the document discusses the periodic review and auditing of records. It explains that regular audits are crucial for verifying the accuracy and completeness of the data. The text notes that audits should be conducted by independent parties to ensure objectivity and to identify any areas for improvement. It also mentions that the results of these audits should be used to refine processes and prevent future issues.

6. The sixth part of the document covers the security and protection of records. It highlights the need for robust security measures to prevent unauthorized access, loss, or tampering of data. The text discusses various security protocols, such as encryption, access controls, and backup procedures, and stresses that these measures must be consistently applied and monitored. It also notes that physical security of any hardware or documents is equally important.

7. The seventh part of the document addresses the issue of data retention and disposal. It explains that records should be kept for a specific period as required by law or organizational policy. The text provides guidance on how to manage the lifecycle of data, from creation to archiving and finally to secure disposal. It emphasizes that improper retention or disposal can lead to legal and financial consequences.

8. The eighth part of the document concludes by summarizing the key points and reiterating the overall goal of maintaining a transparent and reliable record-keeping system. It states that by following the outlined procedures and best practices, organizations can ensure the accuracy and integrity of their financial records. The text ends with a call to action, encouraging all staff to take their responsibilities seriously and to contribute to the overall success of the organization through diligent record-keeping.

February 29, 1980

Director of Nuclear Reactor Regulation
Attn: Brian K. Grimes,
Director of Emergency Preparedness Task Force
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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

Dear Mr. Grimes:

Niagara Mohawk transmitted ten (10) copies of the draft upgraded emergency plan for Nine Mile Point Unit 1 on January 25, 1980. Appendix A to that upgraded plan is the New York State Emergency Plan for Radiation Accidents dated September, 1977. You will find enclosed ten (10) copies of the April, 1979 revision to the New York State Emergency Plan for Radiation Accidents.

Very truly yours,

NIAGARA MOHAWK POWER CORPORATION

D.P. Dise

D. P. Dise
Vice President - Engineering

GJG:jk
Enclosures

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CHANGE:
NRC PDR 100
LPDR 100
NSIC 100
EPB-DOR 55
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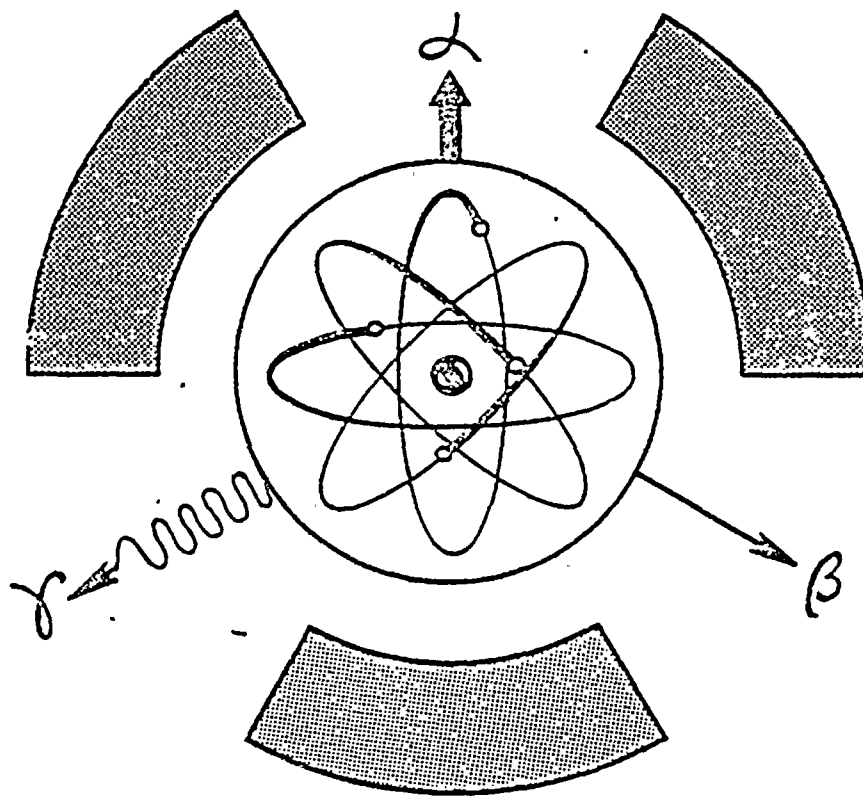
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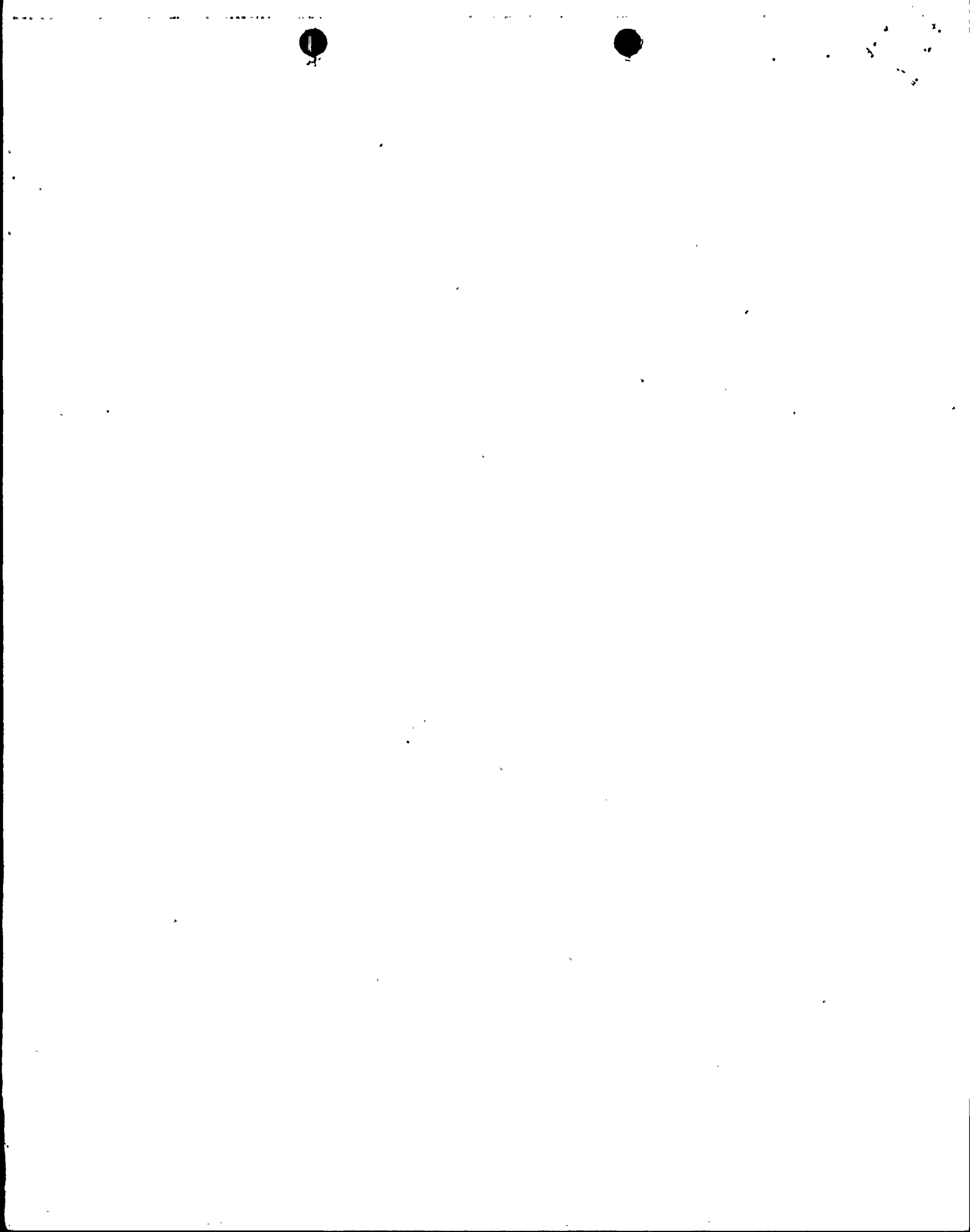
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**NEW YORK STATE
EMERGENCY PLAN
FOR
RADIATION ACCIDENTS**



**NEW YORK STATE DEPARTMENT OF HEALTH
AND
NEW YORK STATE DIVISION OF
MILITARY AND NAVAL AFFAIRS.**



NEW YORK STATE EMERGENCY PLAN
FOR
RADIATION ACCIDENTS

HUGH L. CAREY
Governor

DISASTER PREPAREDNESS COMMISSION

William C. Hennessy
Chairman

PREPARED BY

NEW YORK STATE DEPARTMENT OF HEALTH

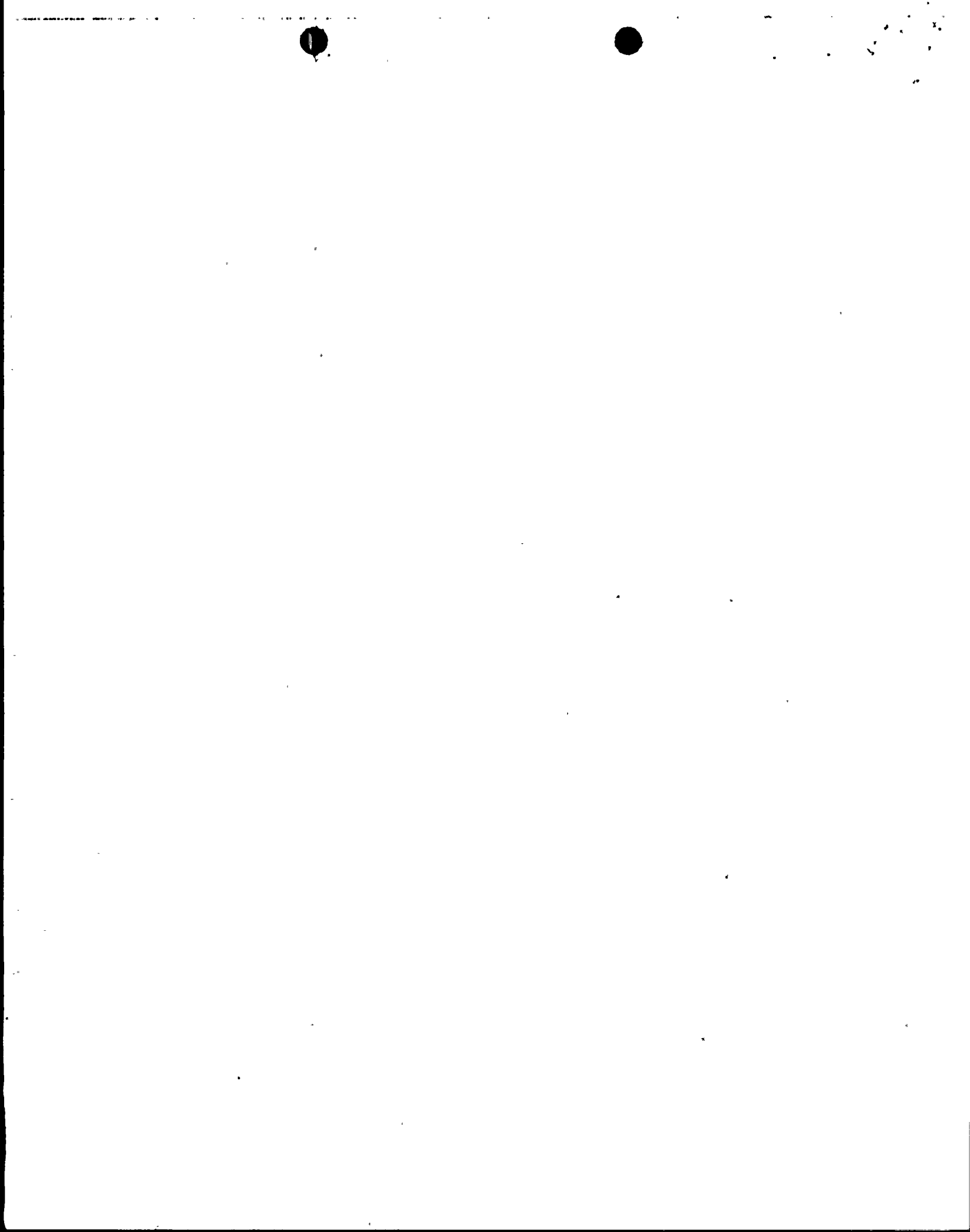
David Axelrod, M.D.
Commissioner of Health

and

NEW YORK STATE DIVISION OF MILITARY AND
NAVAL AFFAIRS

Vito J. Castellano
Major General, NYARNG
Chief of Staff to the Governor

May 1971
R0479



NEW YORK STATE EMERGENCY PLAN FOR RADIATION ACCIDENTS

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The following Appendices are distributed separately:

- APPENDIX E.1. Technical Resource Personnel (Controlled Distribution)
- APPENDIX E.2. Alerting Procedures for State Warning Point (Controlled Distribution)

- APPENDIX F Specific Operating Procedures Ginna Site

- APPENDIX G Specific Operating Procedures Indian Point Station

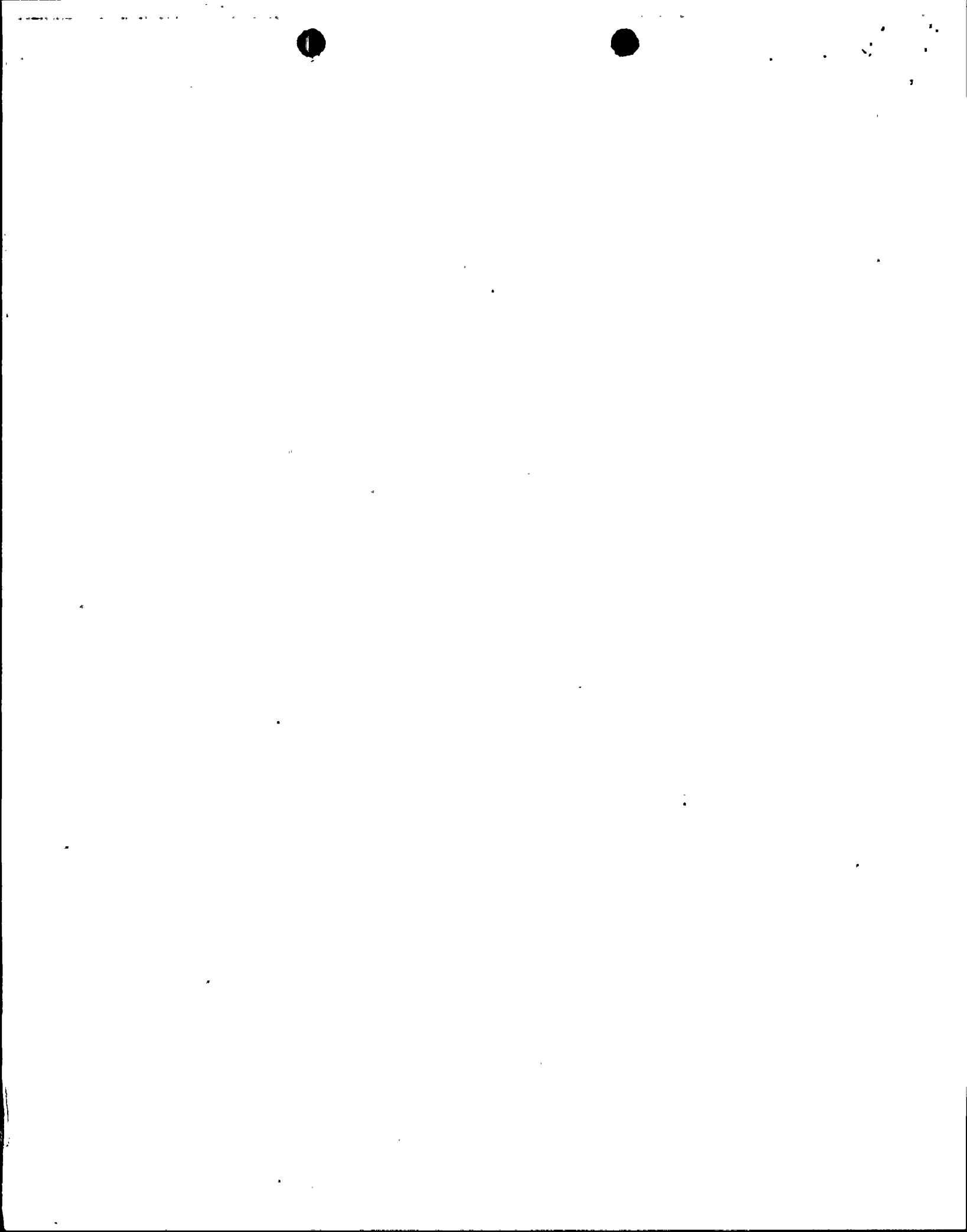
- APPENDIX H Specific Operating Procedures Nine Mile Point Site

- APPENDIX I Specific Operating Procedures Brookhaven National Laboratory

- APPENDIX J Specific Operating Procedures Knolls Atomic Power Laboratory
- Knolls Site

- APPENDIX K Specific Operating Procedures Knolls Atomic Power Laboratory
- Kesselring Site

- APPENDIX L Specific Operating Procedures for the Shoreham Site



NEW YORK STATE EMERGENCY PLAN FOR RADIATION ACCIDENTS

I. INTRODUCTION

The basic planning document for emergency response to enemy attack and natural or man-made disasters for all jurisdictions within the State is the "State of New York Emergency Operations Plan". This radiological emergency response plan is a supporting plan to the State's general disaster preparedness plan. For brevity, "State Rad Plan" is used interchangeably throughout this document with proper title of "New York State Emergency Plan For Radiation Accidents."

Planning for the consequences of potential accidents at nuclear facilities within the disaster response framework established by the "Emergency Operations Plan" consists of the following:

1. "New York State Emergency Plan For Radiation Accidents."
2. Specific Operating Procedures (SOP) developed for each major nuclear facility.
3. Emergency plans and implementing procedures developed by local jurisdictions.

Each nuclear facility develops and maintains emergency or site contingency plans. The procedures developed by the State and local agencies and the nuclear facility must be compatible and mutually supportive.

The "Supplemental Radiation Emergency Response Plan to Provide for Monitoring, Surveillance and Control Over Milk, Milk Products, Agricultural Products and Water Sources Following An Accident At a Fixed Nuclear Facility" issued in September 1975 is incorporated within the body of this State Rad Plan (Section XIII).

II. PURPOSE

The purpose of the State Rad Plan and allied documents is to provide a coordinated effort by Federal, State, and local agencies to prevent or minimize hazards to life and health in the event of a radiation accident.

III. DEFINITION

A radiation accident, as used in this State Rad Plan, is one in which offsite protective action may be necessary to reduce population exposure as a result of an accident at a commercial power reactor; testing, training or research reactor; nuclear fuel fabrication plant; nuclear fuel reprocessing plant; special nuclear material storage facility; or other similar facility.

IV. SCOPE

The "State Emergency Plan for Radiation Accidents" provides for the early notification of responsible agencies, the subsequent evaluation of the severity of the accident and initiation of procedures for protective action to safeguard the public in the vicinity of the radiation accident site.

Radiation incidents such as lost sources, spills in laboratories, transportation mishaps involving radioactive materials, etc. are investigated and responded to in accordance with administrative guidance in the State Department of Health's Environmental Health Manual Item RAD 320 (Appendix D).

V. CONCEPT OF OPERATIONS

The nuclear facility operator (NFO) has the primary responsibility for assessment of the magnitude and consequences of radiological accidents. This responsibility includes requirement for onsite and offsite monitoring, sample collection and analysis, and notification of appropriate State and local officials. Those nuclear installations having NAWAS (National Warning System) outlets will use NAWAS as the primary means for initial notification of State and local disaster coordination agencies.

After the initial notification, technical personnel from the NFO will remain in continual contact with technical personnel from the State Health Department for consultation and continued evaluation of the accident consequences.

Based upon the assessment, the State Department of Health is responsible for prescribing protective actions to accomplish the objective of this plan. The State Commissioner of Health will recommend the implementation of such actions.

The State Division of Military and Naval Affairs will coordinate the assistance to be furnished by various Federal and State departments and agencies, governmental forces from political subdivisions, quasi public and private organizations in support of the State Department of Health's activities in executing this plan, when directed by the Governor.

The primary responsibility for implementing actions to mitigate the effects of a disaster rests with the local political subdivisions which are affected by the emergency. In addition to technical guidance and evaluations, State assistance in the form of personnel, equipment, supplies, services and facilities, other than the extension of credit, may be provided when local resources are insufficient to cope with the effects of the emergency.

Federal assistance, primarily the RAP (Radiological Assistance Plan) teams administered by the Brookhaven Area Office of the U.S. Department of Energy will be requested to assist in field assessment and verifying offsite doses. The RAP teams have sophisticated field monitoring equipment, substantial technical manpower, and transportation arrangements for rapid response. Additional radiation surveillance resources of the State, local and/or other Federal agencies will supplement the NFO and RAP field assessment teams and will be made available for assistance in determining and verifying offsite consequences. The field assessment teams will use the local or district emergency operations center (EOC) or forward command post established by the local EOC as a base of operations. Communications for field assessment teams will be provided by listing State/local governmental communications which includes police, fire, public works,

school, civil defense, etc. and nongovernmental agencies including Civil Air Patrol, RACES, REAC, as appropriate.

Analysis of potential accidents at fixed nuclear facilities (light water reactors) indicates that bodily contamination of offsite personnel is not anticipated. Monitoring of evacuees from the affected areas or decontamination of these evacuees should not be required. Field assessment teams can be sent to reception centers (shelters) for monitoring evacuated personnel, if necessary. The reception centers, typically schools and armories, have shower facilities that can be used if decontamination is deemed advisable. Normal Red Cross procedures for registering evacuees at shelters will be utilized to account for personnel removed from affected areas.

A screening program for possible thyroid uptake of radioiodines for personnel from the affected area may be desirable. The licensing files of the State Bureau of Radiological Health (BRH) contain reference information regarding hospitals with nuclear medicine departments and thyroid scanning equipment which could be used for screening programs. State BRH also has information regarding the location of whole body counters at various locations in the State.

VI. OBJECTIVE

The objective of the State Rad Plan is to prevent or minimize radiation exposure to the population in the event of a radiation accident.

Protective action to minimize radiation exposure shall be undertaken at the direction of the State Commissioner of Health, and as specified in the local radiological emergency response plans (referred to as local radiological plans in this document), if the projected absorbed dose is likely to exceed the Protective Action Guide (PAG) established in the U.S. Environmental Protection Agency "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents" or in the "Federal Radiation Council Reports No. 5 and 7" for the ingestion pathway. Protective action may also be taken at the direction of the State Commissioner of Health for lower projected doses.

VII. LEGAL AUTHORITY

A. State Department of Health

Under Section 201 of the Public Health Law, the State Department of Health is responsible for public health aspects in the use of ionizing radiation. Part 16 of the New York State Sanitary Code implements the Public Health Law. Part 16 includes requirements relating to accidents, emergencies or incidents with respect to notification, theft, loss of radiation sources or release from radiation installations in any uncontrolled area exceeding specified limits; reporting upon individuals receiving greater than acceptable dose limits as prescribed in the Code and the reporting of steps instituted to correct and prevent unnecessary exposures to the general population. The responsibilities for the public health aspects of ionizing radiation have been assigned to the Department's Bureau of Radiological Health.

B. State Disaster Preparedness Commission

The Executive Law as amended by Chapters 640 and 641 of the Laws of 1978 establishes the Disaster Preparedness Commission (DPC). The DPC is the State's natural and man-made disaster coordination agency. Article 2-B of the Executive Law provides that when a disaster has occurred or is imminent the Governor may declare a State disaster emergency. The DPC may then direct State agencies to use their resources to protect endangered life, health and property. Man-made disasters include nuclear facility accidents, accidents at chemical, fuel or explosive production plants and transportation accidents.

The Chief of Staff to the Governor (CSG) serves as Secretariat to the DPC and provides necessary staff services. The Office of Disaster Preparedness (ODP) within the Division of Military and Naval Affairs provides this staff support to the DPC as well as carrying out the allied civil defense functions.

The State Office of Disaster Preparedness may be requested to assist State and local agencies operationally responsible in specific kinds of natural or man-made disasters, and to coordinate the assistance furnished in support of State and local disaster efforts by various Federal and State departments, agencies and local authorities. State ODP also has the responsibility for a Statewide warning and communications system.

C. Local Chief Executive

The chief executive or administrative head of a county, city, village or town is responsible for natural and man-made disaster operations in his jurisdiction. Under Article 2-B of the Executive Law, the chief executive may proclaim a local state of emergency within any part or all of the territorial limits of that local government and is authorized and empowered to use any and all facilities, equipment, supplies, personnel and other resources of his political subdivision to cope with the disaster or any emergency resulting therefrom. In most counties including those having nuclear facilities the local civil defense director is designated as coordinator of all disaster responses affecting his respective jurisdiction.

Under the authority vested in the local chief executive, protective actions for potential radiation emergencies can be instituted by the local political subdivision without the formal approval of the State Commissioner of Health. These protective actions should be specified in the local radiological plan. This local authority is important in the event of a breakdown in communications between the nuclear facility and State officials. It is anticipated, however, that recommendations regarding appropriate protection actions from the State Commissioner of Health will be provided to the local disaster coordinator before the mobilization of key local officials is completed.

D. State-Nuclear Regulatory Commission Agreement

The agreement between the State of New York and United States Nuclear Regulatory Commission (NRC), formerly the Atomic Energy Commission, authorizes the State to assume regulatory responsibility for by-product,

source and special nuclear materials in quantities not sufficient to form a critical mass. The NRC retained authority and responsibility with respect to regulation of the construction and operation of any production and utilization facility.

Article 7 of the agreement between the State and the NRC, as well as paragraph 5 in the Memorandum of Understanding augmenting that agreement, states that nothing therein shall be construed as defining or affecting the exercising of respective rights and powers of the NRC or the State.

VIII. NOTIFICATION AND ALERTING PROCEDURES

A. State Warning Point

The State maintains a warning center for receipt and dissemination of warnings of an attack upon the United States as well as for warning of actual or impending natural or man-made disasters. The primary State Warning Point is located in the Emergency Operating Center (EOC), Public Security Building, Albany, and is manned during normal business hours by the Warning Section of the Office of Disaster Preparedness.

An alternate State Warning Point is also located in the Public Security Building. It is manned by the Division of State Police and provides coverage during non-business hours (generally 4:45 PM to 8:30 AM) and all hours on weekends and holidays.

The primary means for notification are the telephone or NAWAS (National Warning System). The telephone number for 24-hour notification to the State Warning Point is 518/457-2200. A back-up telephone number is 518/457-6811. NAWAS is a private telephone system dedicated for disaster and emergency reports. The State Office of Disaster Preparedness has access to other modes of communication including teletype and radio systems.

B. Local Warning Point

Every county and certain cities in New York State are connected to NAWAS. The primary local NAWAS outlet is located at a local Warning Point that is manned on a 24-hour a day basis. Typically, the local Warning Point is a sheriff's, police or fire coordinator's dispatch and communications center.

C. Notification Procedure

In the event of an actual or potential radiation accident, the nuclear plant emergency coordinator or his designee, shall immediately notify the State Warning Point. The notification by the nuclear facility will generally be by telephone. If there is any delay in transmitting the initial notification message to the State Warning Point, the plant emergency coordinator or his designee shall immediately notify the local disaster coordinator. Certain fixed nuclear facilities may use NAWAS for the initial notification resulting in simultaneous contact with the State and local Warning Points.

The State Warning Point shall immediately relay the notification message to the State Bureau of Radiological Health and the State Office of Disaster Preparedness and shall alert the appropriate local and district disaster agencies in accordance with State Rad Plan and State Warning Point Alerting Procedures.

The State Bureau of Radiological Health shall verify the information from the nuclear facility. Upon the request of the State Commissioner of Health, the State Warning Point assisted by staff from the State Office of Disaster Preparedness will forward the directive from the State Commissioner of Health to the appropriate local jurisdictions(s) and initiate notification of State and Federal agencies and contiguous States in accordance with this State Emergency Plan and the Warning Point Alerting Procedures.

IX. PUBLIC INFORMATION

A. State Department of Health

The State Commissioner of Health and the local chief executive will be responsible for issuing public announcements on public health and safety relating to radiation accidents. Public information officials from the local jurisdiction shall consult with the public information spokesman in the State Health Department to ensure that factual information will be available for reporting to the public in a timely manner at both State and local levels. Requests for information to local jurisdictions regarding public health and safety items not covered in joint State-local liaison shall be referred to the State Department of Health.

B. Local Public Information

In accordance with procedures established in the local radiological plans supportive of the State Emergency Plans, specific information regarding required or recommended protective actions will be disseminated directly to the individuals within the affected area.

X. STATE DEPARTMENT OF HEALTH RESPONSE PLAN

A. Information and Definitions

1. ALERT - notification to local, State and Federal agencies that a radiation accident has occurred and calling for response as set forth in this plan, in the appropriate Specific Operating Procedures, and in the local radiological plans.
2. BRH - the Director of the Bureau of Radiological Health, State Department of Health or his designee.
3. Chief Executive of Local Government - The Chief Executive of a county, city, village or town is responsible by law for civil defense preparedness and for natural and man-made disaster operations in his jurisdiction. Local executive orders have established disaster coordination

agencies which are known by a variety of names such as emergency preparedness/ civil defense, disaster preparedness, disaster and emergency services.

4. Chief of Staff to the Governor (CSG) - the head of the Division of Military and Naval Affairs, or his designee. The CSG serves as Secretariat and provides staff support to the Disaster Preparedness Commission.
5. Critical Radionuclides - Iodine 131, Iodine 133 and Iodine 135 are considered the critical radionuclides for the immediate public health impact from a radiation accident at a commercial nuclear power reactor.
6. Disaster Preparedness Commission (DPC) - State body responsible for coordination of State and Federal disaster response and the rendering of State disaster assistance to localities.
7. Federal, State and Local Agencies - all agencies that have indicated a response capability.
8. Local Disaster Coordinator - person or agency designated by local laws and executive orders to coordinate a local political subdivision's disaster response. (See Chief Executive of Local Government.)
9. Local EOC - an established emergency operations center in the local jurisdiction from which emergency actions will be directed and coordinated. The local EOC also may serve as a command post for State and Federal personnel sent to the local jurisdiction to assist in the evaluation and recovery operations.
10. Local Warning Point - a 24-hour manned Warning Point that serves as the local terminus of NAWAS. The local Warning Point is typically located at an emergency agency such as the sheriff, police or fire communications center.
11. NAWAS - the National Warning System (NAWAS) is a dedicated land line (telephone) systems for rapid dissemination of warning information and emergency announcements. NAWAS outlets are installed in the State and County Warning Points.

12. NFO
 - the nuclear facility operator (station or plant superintendent, plant manager, etc.) or his designee (plant emergency director, emergency coordinator, shift supervisor, senior reactor operator, etc.).
13. Office of Disaster Preparedness (ODP)
 - unit of State government which provides staff support to the Disaster Preparedness Commission for the CSG.
14. PAG
 - a Protective Action Guide (PAG) is the projected biologically effective dose from a particular radioisotope(s) to individuals in the general population which warrants protective action following a contaminating event.
15. Protective Actions
 - all actions that may be taken to prevent or minimize radiation exposure to the public from a radiation accident.
16. Radiation Accident
 - as used in this State Rad Plan, a radiation accident is one in which offsite protective action may be taken to reduce population exposure as a result of an accident at a commercial power reactor; training, testing or research reactor; nuclear fuel reprocessing plant; special nuclear material storage facility; or other facilities.
17. State Health Commissioner
 - the State Commissioner of Health or his designee on the Executive Staff of the State Department of Health. (Director for Local Health Management, etc.).
18. State EOC
 - Emergency Operating Center which is located in the substructure of the Public Security Building, State Office Building Campus, Albany, New York. It is the point from which State emergency actions will be directed and coordinated. The State Warning Point and the Office of Disaster Preparedness are located in the EOC.
19. State PIO
 - the designated spokesman for the State Department of Health referred to in this State Rad Plan as the public information officer.

20. State Warning Point

- the State Warning Point is a 24-hour communications center at the State EOC. The State Warning Point has multiple modes of communication including NAWAS. During normal business hours, the State Warning Point is manned by ODP. During nonbusiness hours, weekends and holidays an alternate Warning Point is manned by State Police to maintain 24 hour coverage.

B. Procedures

NFO

1. Notifies the State Warning Point, (primary telephone number 518/457-2200 or back-up number 518/457-6811) that a radiation emergency exists or is possible and requests that the following information be immediately provided to the State BRH:
 - a. Name and location of the facility.
 - b. Name of person making report.
 - c. Emergency phone number.
 - d. Time of incident.
 - e. Type of emergency.
 - f. Status of containment integrity.
 - g. Status of engineered safeguards (working/not working).
 - h. Weather conditions, wind speed and direction.
2. Awaits verification call from State BRH.

- Note: (1) If there is any delay in either contacting the State Warning Point or in receiving a verification call from State, the NFO shall immediately notify the local Warning Point.
- (2) Some arrangements are in effect for direct notification of the local Warning Point by the NFO. The notification procedures listed below will vary slightly for cases of direct and/or simultaneous notification of local Warning Points by nuclear facilities having NAWAS capability. The specific notification procedures are detailed in the appropriate Specific Operating Procedures and local radiological emergency response plans.

- State Warning Point
3. Records all conversations with NFO.
 4. Follows Alerting Procedure in Warning Point Manual and notifies:
 - a. State BRH
 - b. State ODP
 - c. Appropriate local and district disaster coordinators.
 - d. State Police Communications, if the primary State Warning Point is manned by the State ODP.
- State BRH
5. Confirms call from the NFO and obtains as much of the following information that is available:
 - a. Type of accident, if known (transportation accident, fuel handling, steam line break inside or outside containment, puff-type release, accidental criticality, other).
 - b. Primary effect to offsite areas (release to the atmosphere, release to water, direct radiation).
 - c. Estimate of the quantity and type of radioactive material released or that may be released including estimate of the duration of any release.
 - d. Estimates of offsite two hour whole body (immersion) and thyroid (inhalation) doses.
 - e. Perimeter survey results.
 - f. Wind stability category.
 - g. Status of safeguards (status of core coolant systems, ECCS, containment integrity, etc.).
 - h. Additional offsite agencies notified and nature of request and response.
 - i. Other pertinent information.
 6. Assesses the magnitude of the emergency. (ALERTS A, B, C, D, or E as set forth in the appropriate Specific Operating Procedures. The

State BRH (cont.)

classification system of ALERT A through E is gradually being phased out. As SOP's are revised to meet new planning criteria the SOP's will use State Response Action Level I, II, III, or IV).

7. To provide a time savings, instructs the State Warning Point to immediately relay the assessment of the accident to the appropriate local and district disaster coordination agencies, and to the State ODP.

Note: If the accident conditions warrant (ALERTS A or C or Response Action Level III or IV), local radiological emergency response plans will be initiated without prior formal approval of the State Commissioner of Health. Local disaster coordinators will be advised of any modification or rescission in the protective actions that the State Commissioner of Health may direct.

8. Advises the State Commissioner of Health.
9. Directs BRH to contact State ODP to issue ALERT. (See step 7 above.)
10. Relays State Commissioner of Health's directive to State ODP to initiate ALERT (if not begun earlier).
11. Issues ALERT to local and district disaster coordinators and provides information as authorized by the State Commissioner of Health or State BRH.
12. Requests that technical resource personnel report to the State EOC in accordance with the Warning Point Alerting Procedures.
13. Advises Governor's Office of situation and that State ODP is issuing ALERT to local and regional disaster coordinators.
14. Directs State PIO to make announcements.
15. Leaves for EOC.
16. Maintains liaison with Governor's Office in actual or imminent disaster situation.
17. Notifies regional and full time local health officers.
18. Prepares public information release regarding public health impact and recommended protective actions in consultation with appropriate local and State agencies.

19. Leaves for EOC.
20. Continues to issue ALERT and provide information as authorized by the Commissioner of Health or BRH to:
- State Regional Health Officers
 - Brookhaven Area USDOE Office - Radiological Assistance Plan (RAP) and Interagency Radiological Assistance Plan (IRAP)
 - State Departments of:
 - Agriculture and Markets
 - Environmental Conservation
 - Education
 - Labor
 - State (Fire Prevention and Control)
 - State Divisions of:
 - Budget
 - State Police
 - State Department of Health:
 - Radiological Sciences Laboratory
 - Bureau of Public Water Supply
 - Bureau of Food and Institution Sanitation
 - Public Service Commission
 - State Energy Office
 - N.Y. City Office of Radiation Control
 - Federal Emergency Management Agency, Region II
 - Contiguous States, as applicable -
 - Vermont, Massachusetts, Connecticut,
 - New Jersey, Pennsylvania
 - Canada, if appropriate
- FEMA, Region II
21. Notifies the following:
 - Environmental Protection Agency, Region II
 - Food and Drug Administration, Region II
 - Nuclear Regulatory Commission, Region I
 - FEMA - Headquarters and Regions I and III
- State ODP
22. As authorized by BRH, requests status or response capabilities of various Federal, State and local agencies.
- State Commissioner of Health, BRH, PIO, Technical Resource Personnel, Other
23. Review status of various response capabilities reported to EOC.
24. Evaluate all information as it becomes available.
- State Commissioner of Health
25. Determines protective actions.

d. Restrict use of water to sanitary and fire fighting purposes as needed.

e. Shut off reservoir.

4. Agricultural Air-Crops-Man

a. Alert farmers and county agents.

b. Hold produce for monitoring.

c. Embargo produce, and destroy if necessary.

D. Protective Action Guides

Protective Action guides are the numerical projected doses which act as trigger points to initiate protective action. PAG's are provided for the following pathways of radiation exposure:

Exposure from airborne radioactive releases. This type of exposure could occur within a short period following an incident as a result of inhalation of radioactive materials or from external whole body exposure (immersion).

Exposure through the food chain. This exposure could occur from ingestion of contaminated foods and water. This exposure may commence after the passage of airborne radioactive materials and may continue for a long or short time depending on the radionuclides involved.

Protective actions may be directed by the State Health Commissioner for projected doses below established PAG's in order to prevent or minimize radiation exposure to the population in the event of a radiation accident.

1. PAG's FOR AIRBORNE RADIOACTIVE MATERIAL

a. PAG for Thyroid Dose Due to Inhalation from a Passing Plume

General Population	5-25 rem*
Emergency Workers	125 rem
Lifesaving Activities	No specific upper limit

b. PAG for Whole Body Gamma Dose for Exposure to Airborne Radioactive Materials

General Population	1-5 rem*
Emergency Workers	25 rem
Lifesaving Activities	75 rem

*When ranges are shown, the lowest value should be used if there are no major local constraints in providing protection at that level, especially to sensitive populations. Local constraints may make lower values impractical to use, but in no case should higher value be exceeded in determining the need for protective actions. (Office of Radiation Programs, United States Environmental Protection Agency)

2. PAG's FOR THE INGESTION PATHWAY

The Food and Drug Administration (FDA), U.S. Department of Health, Education, and Welfare is developing guidance on accidental radioactive contamination of human food and animal feeds. When the FDA guidance is promulgated, it will replace the following PAG's from the Federal Radiation Council Reports and will be incorporated in the New York State emergency plans and procedures.

- a. Protective Action Guide for Iodine-131
"Federal Radiation Council Report No. 5" provides the following PAG for a thyroid dose from I-131:

To an individual 30 rem
To a suitable sample of the population 10 rem

A suitable sample consists of the sensitive segment of the population, that is, children of approximately one year of age. The PAG from FRC No. 5 was established for the ingestion pathway. New York State initially adopted this PAG for projected doses from both ingestion and inhalation pathways prior to development of the EPA PAGs for inhalation and immersion (whole body exposure).

- b. Protective Action Guides for Strontium-89, Strontium-90 and Cesium-137

"Federal Radiation Council Report Number 7" provides information and guidance for situations involving contamination of the environment by the radionuclides Strontium-89, Strontium-90 and Cesium-137. This report separates an acute contaminating event into three categories for evaluating when protective actions may be indicated. Category I is limited to the transmission of Sr-89; Sr-90 and Cs-137 through the pasture-cow-milk-man pathway. Category II is concerned with the transmission the radionuclides through dietary pathways other than the milk chain. Category III is primarily concerned with the long-term transmission of Sr-90 through soil into plants in the years following a contaminating event.

1. Category I

10 rem to the bone marrow or whole body of individuals in the general population in the first year, and providing that the total dose resulting from Category I does not exceed 15 rem.

2. Category II

5 rem to the bone marrow or whole body of individuals in the general population in the first year. For operational purposes, FRC No. 7 assumes that the guide will be met effectively if the average dose to a suitable sample of the population does not exceed approximately 3 rem for Category I and 2 rem for Category II.

3. Category III

No specific PAG recommended. If the annual dose to the bone marrow exceeds 0.5 rem for an individual or 0.2 rem for a suitable sample of the population, further evaluation is required.

E. Emergency Response Alerts

In the site specific plans (Specific Operating Procedures) for each operational nuclear generating facility, the offsite consequences of a spectrum of potential accidents are considered. Three cases, referred to as ALERTS, are developed for minimizing radiation exposure primarily via the inhalation or immersion pathways during the immediate period following a major release of fission products. The following exposure levels refer to a two-hour thyroid inhalation or whole body immersion dose:

<u>Category</u>	<u>Accident Conditions</u>
ALERT C	Greater than 25 Rem thyroid greater than 5 Rem whole body
ALERT A	5-25 Rem thyroid 1-5 Rem whole body
ALERT B	Less than 5 Rem thyroid less than 1 Rem whole body

In the typical site specific plan, two additional ALERTS are developed for situations with potentially lower public health impact. These include:

<u>Category</u>	<u>Accident Conditions</u>
ALERT D	Liquid release to a body of water such as Lake Ontario, Hudson River or Long Island Sound.
ALERT E	Puff-type gaseous release

F. Response Action Levels

The incident classification system of ALERT A through E provided in Section X.E. above is gradually being phased out. As SOPs and local response plans are revised to meet new planning criteria, the following classification, also based upon the EPA PAGs, will be used:

<u>State Response Action Level</u>	<u>Offsite Radiological Consequences</u>	<u>Protective Actions</u>
I	None	None-events of potential public interest but of no public health hazard.

<u>State Response Action Level</u>	<u>Offsite Radiological Consequences</u>	<u>Protective Actions</u>
II	< 1 Rem Whole Body < 5 Rem Thyroid	Increase surveillance and consider pasture, milk and other agricultural product control.
III	1-5 Rem Whole Body 5-25 Rem Thyroid	Consider shelter, access control, respiratory protection and thyroid protection for emergency workers, water control and actions in Level II.
IV	> 5 Rem Whole Body > 25 Rem Thyroid	Evacuate residents from affected areas if time permits, institute protective actions in Levels II and III as necessary.

G. Technical Resources In The State Department of Health

1. Bureau of Radiological Health (BRH)

The Bureau of Radiological Health presently has eleven radiological health specialist/engineer positions in the Central Office. In addition, there are eleven radiological health specialist positions assigned to the Regional and Area Health Offices. New York State Health Regions and full time local health departments are shown in Appendix B.1.

Portable survey instruments, calibrated on a periodic schedule, for detection of alpha, beta and gamma activity are available. The BRH licensing files include information on hospitals with nuclear medicine departments, thyroid uptake scanners, etc., that may be useful for screening potentially exposed population.

2. Radiological Sciences Laboratory (RSL), Division of Laboratories and Research

The Radiological Sciences Laboratory is a comprehensive facility for analysis of environmental samples including air, milk and water samples for radioactivity. RSL maintains a calibration facility for the Department's and local health unit's portable radiation survey equipment.

3. Office of Health Communications and Education

The Director of the Office of Health Communications and Education is the designated spokesman for the State Department of Health for public information. The Director, or his designee, is referred to as the PIO (public information officer) in the State Emergency Plan for Radiation Accidents.

H. Technical Resource Personnel

In addition to the technical personnel in the State Department of Health, resource personnel from other State agencies in the Albany area are identified in the Warning Point Alerting Procedures. The technical resource panel will report to the State Emergency Operating Center and provide technical assistance to the State Commissioner of Health in formulating intermediate and long range protective actions to minimize radiation exposure from all potential vectors of exposure. The resource personnel have expertise in various disciplines such as health physics, laboratory analysis, environmental surveillance and monitoring, radiation monitoring, meteorology and reactor hazards analysis.

XI. SUPPORT ACTIVITIES OF OTHER AGENCIES UNDER THE DIRECTION OF THE STATE COMMISSIONER OF HEALTH

A. Division of Military and Naval Affairs (DMNA)

1. Disaster Coordination - Office of Disaster Preparedness (ODP) as the staff support for the Disaster Preparedness Commission.
 - a. Shall coordinate the actions of Federal, State and local agencies as requested by the Commissioner of Health.
 - b. Shall request authorization of the Governor's Office to implement the Commissioner of Health's request for protective actions by other State agencies.
 - c. ODP has six District Offices for administering inter-county disaster assistance within district boundaries. The location and area encompassed by the ODP District Offices is shown in Appendix B.2. The appropriate District Offices will be activated for support.
2. Radiological Support - ODP
 - a. Shall provide support in the areas of fixed radiological monitoring, mobile and aerial radiological survey, aerial photo and reconnaissance and other mission type requests, through utilization of State and local civil defense radiological resources, Civil Air Patrol resources, and other DMNA resources as may be available.
 - b. Shall provide monitoring of emergency governmental workers for surface contamination of persons and equipment by State and local civil defense radiological personnel using CD instruments.
 - c. Shall provide for issuance of CD dosimeters as may be appropriate for maintaining records of external exposure of governmental emergency response personnel.

3. Division Support

- a. This portion of the DMNA support activities includes the New York Army National Guard, New York Air National Guard, New York Naval Militia and the New York Guard.
 - (1) Shall make available facilities, ships, aircraft, personnel and vehicles to respond to mission type requests dependent on troop and equipment availability.
 - (2) Other actions as required.
- b. The Division of Military and Naval Affairs may be contacted on a twenty-four (24) hour basis by calling (518) 459-2550. During normal working hours (0815 to 1645) the caller will ask for the Military Support to Civil Authorities Section and render their report to personnel of this section. After duty hours, the caller will be referred to the DMNA Duty Officer. The Military Support to Civil Authorities Section, DMNA, is charged with the responsibility for coordination with other agencies relative to this plan.

B. Division of State Police

1. Responsibility

Whenever the primary State Warning Point is unmanned by Office of Disaster Preparedness staff -

- a. Shall receive initial report of incident from nuclear facility operator at the alternate State Warning Point.
- b. Shall immediately notify representative of the State BRH, State ODP and appropriate local and regional disaster coordinators in accordance with the Warning Point Alerting Procedures.
- c. Shall alert Federal, State and local agencies as requested by the State Commissioner of Health or his designee.
- d. Shall provide personnel and communications equipment to restrict access to highways and alert off site public personnel as requested.

2. Resources Available

- a. The alternate State Warning Point shall be manned whenever the primary State Warning Point is unmanned by Office of Disaster Preparedness personnel; such as off duty hours - 4:45 PM to 8:30 AM, and all hours on holidays and weekends.
- b. Personnel to maintain road blocks to restrict access to highways. This would be used to augment local police agencies as deemed necessary.

- c. Complete radio communication system between fixed State Police substations and mobile units.
- d. Mobile command post bus with radio and telephone communications.
- e. Radio cars equipped with public address systems.
- f. Portable battery operated bullhorns in each troop area.
- g. Helicopters equipped with public address systems.

3. Availability

The Division of State Police provides police emergency services at all Troop Headquarters throughout the State. Appendix B.3. delineates the State Police Troop areas and provides the addresses of the respective Troop Headquarters.

C. Department of Agriculture and Markets

1.	<u>Specific action</u>	<u>Responsible Agencies</u>
	Safety of food and feed from contamination, seizure, embargo and salvage	USDA FDA State A&M - FIS & DMC
	Livestock contamination	USDA - ARS
	Advice to farmers on emergency problems	CES State A&M
	Radiological monitoring in relation to land	USDA - SCS State A&M - DAI

2. Key

State A&M	- New York State Department of Agriculture and Markets
DAI	- Division of Animal Industry, State A&M
DMC	- Division of Milk Control, State A&M
FIS	- Food Inspection Service, State A&M
FDA	- Food and Drug Administration, U.S. Department of Health, Education and Welfare
USDA	- United States Department of Agriculture
ARS	- Agricultural Research Service, USDA
SCS	- Soil Conservation Service, USDA
CES	- Cooperative Extension Service

D. Department of Environmental Conservation

- 1. Shall make staff available to make technical evaluations as requested.
- 2. Upon notification by the State ODP or the State Health Department of an accidental release of radioactivity, assists in defining the extent of the area affected and the degree of contamination.

3. May undertake studies to determine the long-range effects upon the environment relating to potential effects on public health.
4. Shall make available aircraft, equipment and personnel as requested.
5. Other actions as requested.

E. Department of Transportation

1. Shall provide its own equipment and/or technical staff as requested by the State Commissioner of Health.
2. Shall invoke its Departmental Emergency Operations Plan for Natural Disaster Emergencies (Chapter 6.1 of the Manual of Administrative Procedures) when requested to provide assistance.
3. The Department may be contacted on 518/457-6164 during off-duty hours.

F. Department of Labor

1. Shall make available the services of its personnel and other equipment as requested.
2. Shall perform such other actions as required.

G. State Energy Office

1. Technical staff with knowledge of nuclear reactors, reactor analysis, and reactor systems will be available to provide accident assessment and evaluation, and an assessment of the potential for continued or future releases.
2. Other technical assessments or assistance will be provided as requested.

H. Department of State, Office of Fire Prevention and Control

1. Shall implement the New York State Fire Mobilization Plan upon request as outlined therein. (Part 205 of Title 9 of the Official Compilation of Codes, Rules and Regulations of the State of New York.)
2. Shall provide available staff and communications equipment for technical assistance to local fire departments and State agencies upon request.
3. Shall provide the State Warning Point with roster of personnel including radio frequencies, duty rosters and inventory of fire service equipment within the State. This information is available for use in implementing this State Rad Plan.
4. Shall keep local fire departments informed of the location of licensed radioactive materials users within the State and information regarding proper fire department procedures in the event of a radiation accident.
5. May be contacted on a 24-hour a day coverage on 518/474-6746.

I. Department of Education

1. Shall make available the services of its personnel.
2. Other actions as required.

J. Public Service Commission

1. Shall make staff specialists available to conduct evaluations and analyses as requested.

K. Office of Radiation Control - New York City Department of Health

1. Shall make available staff, equipment and facilities as requested.
2. Other actions as required.

XII. FEDERAL ASSISTANCE

A. Radiological Assistance Plan (RAP)

The U.S. Department of Energy's Radiological Assistance Plan (RAP) provides for emergency operations to assist State and local governments in protecting the health and safety of individuals, the public and the environment in the event of an accidental release of radioactive material or ionizing radiation. In New York State, radiological assistance teams are provided by the Brookhaven Area US DOE Office (Brookhaven National Laboratory) with advance teams available from the New York City DOE Health and Safety Laboratory, University of Rochester DOE Project and Schenectady Naval Reactors (Knolls Atomic Power Laboratory). Both the Radiological Assistance Plan (ERDA-60, July 1975) and the Regional Radiological Assistance Plan (Brookhaven Area DOE Office) are an integral part of the State Rad Plan and are reference documents available at the Bureau of Radiological Health and at the State EOC.

B. Interagency Radiological Assistance Plan (IRAP)

The Interagency Radiological Assistance Plan (IRAP) provides for the use of all available Federal capabilities in the event of a serious peacetime radiological incident. Thirteen (13) Federal agencies are signatory to this plan. IRAP (ERDA-10, April 1975) is an integral part of the State Plan and is on file in the Emergency Plans Unit, Bureau of Radiological Health and at the State EOC.

XIII. MONITORING AND SURVEILLIANCE OF MILK, WATER AND AGRICULTURAL PRODUCTS

This section establishes responsibility for actions to be taken by industry, and State and local agencies to reduce the potential radiation exposure from ingestion of contaminated milk, milk products, agricultural products and potable water supplies in the event of an accident at any nuclear facility within or outside New York State.

Nuclear power reactors are presently operating or will be operating in 35 States and in all States east of the Mississippi River, except West Virginia and Kentucky. The commercial power reactors are generally located away from

centers of population and in the vicinity of agricultural producing land areas. A large accidental gaseous release of radioactivity may be carried downwind resulting in deposition of radioactivity on land and water surfaces. In a gaseous release, radioiodines will generally be the nuclides of primary concern. Deposition on water surfaces may contaminate surface water supplies. Deposition on crops or pastureland may result in contamination of agricultural products and milk supplies.

The relative dose from inhalation and from consumption of milk would depend upon a number of factors including dispersion of the cloud with regards to food crops and dairy farms as well as location of populations. If both modes of exposure may be involved, i.e. inhalation and ingestion of milk, and no protective actions are taken, the dose due to ingestion of milk may be as much as 400 to 700 times greater than that from the inhalation pathway. Exposure due to ingestion of contaminated agricultural products may be 5 to 10 times greater than from inhalation. The contamination may extend 50 to 100 miles or more from the site.

An accidental liquid discharge of radioactivity from a nuclear facility may result in contamination of downstream potable water sources used by individuals or municipalities. Fission or corrosion products may be released from the facility. The need for protective actions would be based upon the projected concentration of radioactivity at any down stream water supply. A relatively large volume of water available for dilution would substantially reduce the concentration of radioactivity.

The following procedures are predicated upon initiating protective actions to prevent the entry of contaminated milk and food products into the food processing and distribution chain. If steps can be taken within the first few hours to prevent contaminated milk and food products from reaching the consumer, more effective surveillance, control and enforcement will be assured. Contaminated lands will be identified through ground and/or aerial surveillance as quickly as possible and routine agricultural operations would be resumed in those areas that were found to be uncontaminated.

In the event of a radiation accident at a fixed nuclear facility, the State Bureau of Radiological Health will request that the State Office of Disaster Preparedness notify the designated representatives of the following State agencies of the areas potentially affected and request initiation of one or more of the actions listed in the following sections.

A. Milk and Milk Products

The State Department of Agriculture and Markets regulates and controls the production, processing and distribution of milk and milk products in New York State.

<u>Actions</u>	<u>Agency Having Primary Responsibility</u>
1. Establish immediate liaison with the industry receiving milk from the affected area.	State A&M
2. Assign a qualified milk control specialist responsibility for one or more of the milk receiving plants likely to receive milk from the affected areas.	State A&M

<u>Actions</u>	<u>Agency Having Primary Responsibility</u>
3. Notify the appropriate Cooperative Extension Agents.	State A&M
4. Issue a joint statement from the State Commissioner of Agriculture and Markets and the State Commissioner of Health over the media to notify all dairy farmers of the situation and the need to remove dairy herds from pasturage of other appropriate actions as may be indicated.	State A&M and State Health
5. Provide drivers of bulk milk tanks with guidelines and requirements concerning protective actions such as advising farmers of limitations or prohibitions on shipment of milk.	State A&M
6. Accept milk produced by cattle on stored feed.	State A&M
7. Milk produced by cattle on pasturage may be received subject to radiological analysis. If feasible, milk may be screened with portable radiation survey equipment.	State A&M and State Health
8. Establish a sampling program, including collection of representative samples of the finished product and of raw milk as needed.	State A&M and State Health
9. If the milk is contaminated in excess of acceptable levels, the milk may be destroyed.	State A&M and State Health
10. Individuals and families who keep dairy cows and/or goats will be notified of the situation via the media, and instructed to place their animals on stored feed and possibly forego consuming fluid milk.	State A&M and State Health
11. Maintain liaison with the State Bureau of Radiological Health.	State A&M

In the event of milk shortage, the industry may be requested to import uncontaminated fluid milk into the area of divert powdered or canned milk for consumption.

B. Agricultural Products

The State Department of Agriculture and Markets regulates and controls the processing and distribution of agricultural products in New York State.

1. Establish immediate liaison with the industry receiving agricultural products other than milk or milk products from the affected area and with Federal agencies having responsibility for production, processing or distribution of agricultural products.

2. Determine types of agricultural products being produced in the affected area and schedules for harvesting produce.
3. Embargo all food being produced in the affected area pending radiological evaluation.
4. Provide county agricultural agents and State and local health department representatives with guidelines and requirements concerning protective action in effect and request local representatives to keep farmers and individuals (home gardeners) apprised of the situation.
5. Issue a joint statement from the State Commissioners of Agriculture and Markets and Health over the media to notify all farmers and home gardeners of the situation.
6. Initiate a sampling program including representative samples of processed foods as needed.
7. Assist the industry in establishing procedures for collection and disposal of all agricultural products which are contaminated.
8. Maintain liaison with the Bureau of Radiological Health.

C. Water Sources

The Bureau of Public Water Supply is responsible for public water systems. Public water systems include municipally or privately operated systems which provide piped water for human consumption to at least five homes (service connections) or regularly serves an average of 25 persons daily at least 60 days per year. Individual water systems are the responsibility of the State Health Department's Bureau of Community Sanitation.

1. Identify public water sources that may be affected by the release.
2. Establish liaison with the water supply operators.
3. Collect representative samples.
4. Alert individuals and water supply operators using water sources that may be contaminated.
5. Implement protective action as recommended by the State Commissioner of Health.
6. Identify satisfactory sources of water in consultation with State Bureau of Radiological Health.
7. Maintain liaison with the State Bureau of Radiological Health.

D. Environmental Surveillance

The Bureau of Radiation, State Department of Environmental Conservation carries out a routine radiation surveillance program around fixed nuclear facilities.

1. Increase frequency of air sampling near the accident site.
2. Undertake field survey readings near the accident site.
3. Continue sampling of air, water and milk near the accident site and postpone all other routine samples as necessary.
4. Maintain liaison with the State Bureau of Radiological Health and provide surveillance data.

E. Radiological Laboratory Services

The Radiological Sciences Laboratory, Division of Laboratories and Research, State Department of Health provides extensive radiological laboratory supporting services.

1. Mobilize laboratory staff.
2. Establish procedures for receipt of emergency samples.
3. Postpone analysis of routine samples.
4. Provide analysis of emergency samples and submit results to the State Bureau of Radiological Health.

F. Radiological Support - Office of Disaster Preparedness

The Radiological Intelligence Section, State ODP, is a resource for radiological support.

1. Provide and/or distribute civil defense dosimeters for personnel monitoring use by emergency workers other than the nuclear facility personnel responding to the accident.
2. Alert monitors of established fixed monitoring stations (FMS) around the nuclear facility to activate the station, check operability of civil defense instruments, and report radiological readings in accordance with procedures established for FMS nuclear accident response.
3. Provide a summary of the location, status and availability of portable civil defense radiation detection equipment in the State.
4. Establish liaison with the Civil Air Patrol and request assistance as needed.

G. Nuclear Facility Accidents Outside New York State

In the event of a radiation accident at a fixed nuclear facility outside New York State, the State Bureau of Radiological Health will contact the responsible state radiological official and the appropriate Federal officials (i.e., Regional Radiological Representative, Food and Drug Administration for matters concerning milk and other agricultural products) to determine the type and magnitude of accident, the estimated off-site releases of radioactivity and the applicable radiation limits that have been established for interstate shipment of milk, milk products and agricultural products.

If a serious accident occurred that could result in the contamination of milk or food products that may be shipped into New York State, the State Departments of Agriculture and Markets and Health will initiate the following actions as appropriate:

1. Establish liaison with their counterpart in the Federal government and in the state(s) where milk or food products may have been contaminated.
2. Estimate the type and amount of milk, milk products or agricultural products being shipped into New York State.
3. Determine the surveillance and controls being exercised to ensure that contaminated products in excess of acceptable limits will not be shipped into New York State.
4. Provide recommendations for a sampling program for surveillance over milk and food shipped into New York State.

XIV. PLAN TESTING, UPDATING AND DISTRIBUTION

A. Plan Testing

1. The State Rad Plan will be tested at intervals determined by the State Bureau of Radiological Health and the State Office of Disaster Preparedness. One of the prime considerations in determining that an exercise is needed is a significant change in personnel since the last test. Within budgetary constraints, an annual exercise of procedures in the State Rad Plan is established as a goal. The drill will be rotated among the major nuclear fixed facility sites. In this manner, a goal of an exercise involving each major nuclear site and the appropriate State and local agencies at least every three years is established.
2. After each test, all parties involved will determine the adequacy of the State and local plans and suggest improvements and modifications.
3. Tests will be conducted periodically during non-duty hours and during seasons with adverse weather conditions.

4. Unannounced communications drills between the State, each major nuclear facility and the appropriate local disaster agencies will be conducted once a year as a minimum.
5. Internal State Department of Health communications will be tested annually as a minimum.

B. Plan Updating

1. The State Rad Plan will be reviewed by the State on a periodic basis.
2. The State Bureau of Radiological Health will assist the State Warning Point in maintaining personnel and telephone numbers listed in the Alerting Procedures on a current basis. As a minimum, a review of the Warning Point Alerting Procedures will be accomplished every year.
3. Specific Operating Procedures for the particular nuclear facility, local radiological emergency response plans and required interface with the nuclear facility emergency plan will be reviewed on a periodic basis by the State Bureau of Radiological Health, local disaster coordinator and designated representative from the fixed nuclear facility.
4. "Pen and ink" revisions are made as necessary to at least the master copies of the State Rad Plan maintained by the State BRH and the State ODP and are provided to the appropriate local agencies and nuclear facility affected by the change.

C. Plan Distribution

1. Revised editions of the State Rad Plan are routinely distributed through both the State Department of Health and State Division of Military and Naval Affairs channels.
 - a. The State Health Department distributes revised copies of the State Rad Plan by means of an executive memorandum to the deputy, associate and assistant commissioners, division directors, regional and area health directors, directors of bureaus and staff offices, district health offices, directors of State hospitals, city and county health commissioners and the directors of State health research institutes. The State Rad Plan is included as Chapter XVIII of the overall Health Department Emergency Plan.
 - b. The Division of Military and Naval Affairs transmits revised copies of the plan by means of a permanent memorandum mechanism established for this purpose. This distribution is made to all local Civil Defense Directors, natural disaster coordinators, district offices of disaster preparedness, section and unit heads of the Division of Military and Naval Affairs and appropriate State and Federal agencies.

2. In addition to the normal departmental distributions indicated above, revised copies of the State Rad Plan are sent to each major nuclear facility in the State, to the designated contact personnel for State and Federal agencies and technical resource personnel listed in the Plan and to the appropriate agency in contiguous States.

XV. TRAINING

Training and retraining of State and local emergency response officials is provided by a variety of means. The training consists of formal courses, seminars and conferences, simulations, experience gained in response to actual incidents and emergencies, and through participation in annual drills initiated by the nuclear facility operators.

The State Division of Military and Naval Affairs sponsors a continuing training program for State and local officials having disaster responsibilities. This program consists of conference of Public Officials (CPO), Emergency Operations Simulations (EOS) and other related training activities. In the EOS, emergency response requirements, actions and methods are discussed and explained and tested under simulated conditions. These emergency activities are the same as may be required in a radiological emergency with exception of technical response in evaluating radiation hazards.

Courses dealing with the evaluation of and response to radiation emergencies are sponsored by the Federal government. Courses listed in the latest edition (November 1978) of the "Catalog of Federal Interagency Training Courses for Radiological Emergency Response" include:

Radiological Emergency Response Planning

Technical Management Course of Radiological Emergency Response
Coordinator and Staff

Part I - Plume Exposure

Part II - Food Ingestion Pathway (under development)

Technical Operations Course for Radiological Emergency Response Teams

Medical Planning and Care in Radiation Accidents - for Physicians

Radiological Emergency Response - Transportation Emergencies -
Course for First at the Scene (under development)

Radiological Emergency Response - Fixed Nuclear Facility Emergencies -
Course for First at the Scene (under development)

Emergency Care of Radiation Casualties - Course for Emergency Room
Physicians and Supervisors and Hospital Administrators (under development)

Orientation for Emergency Care of Radiation Casualties - Short Course
for Physicians, Nurses and Technicians (under development)

Participation of appropriate State and local officials in current and future Federal courses is promoted and coordinated by the State Health Department and the Division of Military and Naval Affairs.

The nuclear facilities provide periodic training and retraining for local emergency services located in the vicinity of the facility. Training and/or drills are typically provided on an annual basis for fire, hospital and ambulance personnel. The nuclear facilities provide instructors at certain CPO's and EOS's and provide staff to assist in preparation of scenarios used in the EOS simulated emergencies.

A radiological defense training program for local civil defense staff including monitor training, radiological defense officer and monitor instructor training is coordinated by DMNA. Although this training is designed primarily for the nuclear attack contingency it offers background information basic to any nuclear emergency. This training is supported by Federal civil preparedness funding.

XVI. LIAISON AND MUTUAL ASSISTANCE - FIXED FACILITY OPERATORS

In reply to communications from State BRH the licensed operators of fixed nuclear facilities indicated the desirability of a program for rendering assistance to the State. This assistance is for electric utility radiation emergencies not involving their respective facilities. The details for implementing the mutual assistance are presently under development. In the event that mutual assistance is required before the implementing procedures are completed, the utilities agreed to provide assistance to the extent possible on an ad hoc basis.

SUPPORTING AND RELATED EMERGENCY PLANS

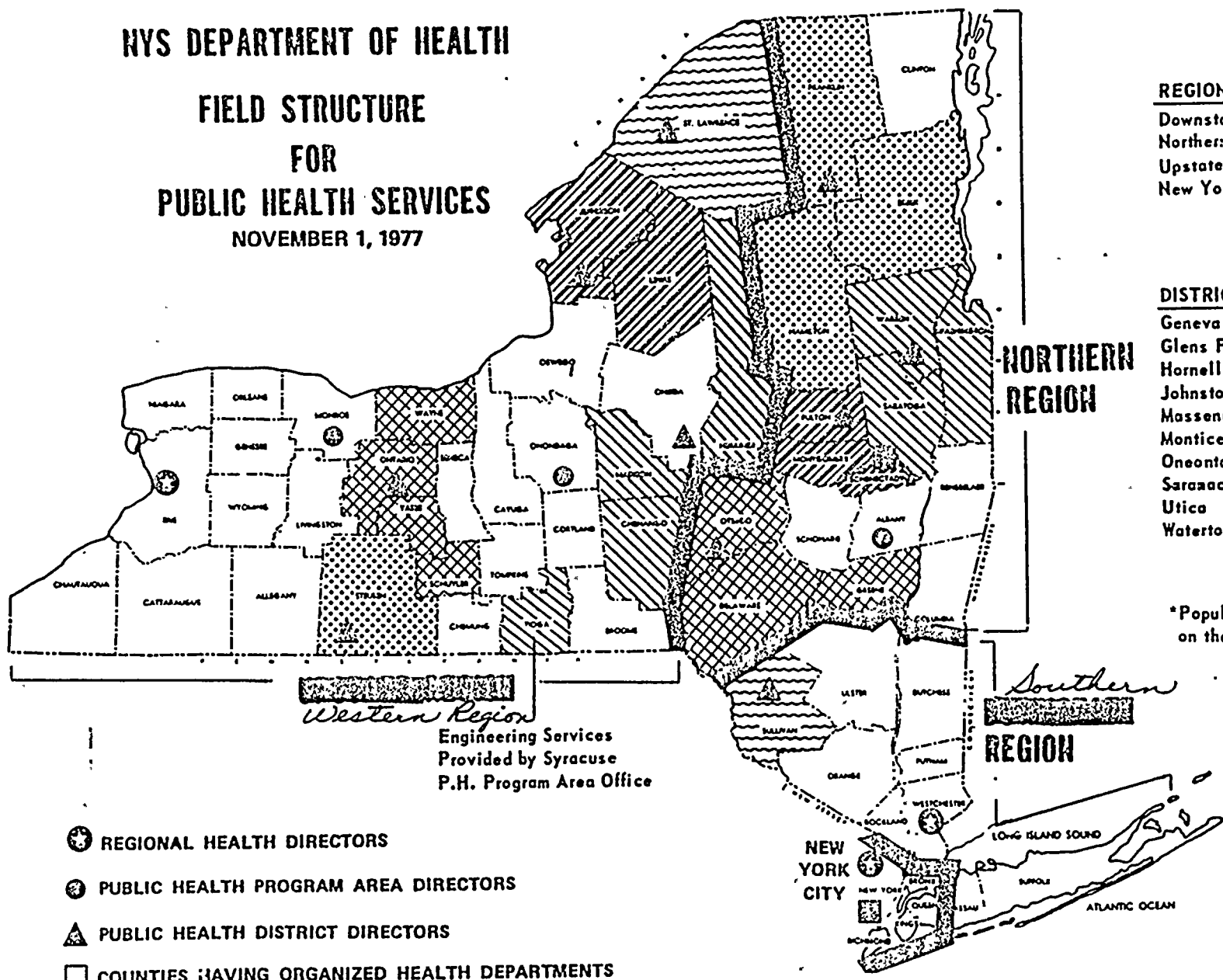
1. State of New York Emergency Operations Plan.
2. R.E. Ginna Nuclear Power Plant - Wayne County
 - a. State BRH Specific Operating Procedures - Ginna Site.
 - b. Wayne County Response Plan Ginna Site.
 - c. Rochester Gas and Electric Corporation - Ginna Station Radiation Emergency Plan and Procedures, Controlled Copy.
3. Indian Point Station - Westchester County
 - a. State BRH Specific Operating Procedures - Indian Point Station.
 - b. Westchester County Radiation Response Plan - Indian Point Facility.
 - c. Consolidated Edison Company of New York, Inc. - Indian Point Station Emergency Plan, Controlled Copy.
 - d. Power Authority of the State of New York - Emergency Plan - Indian Point 3 Nuclear Power Plant, Controlled Copy.
4. Nine Mile Point/James A. FitzPatrick Site - Oswego County
 - a. State BRH Specific Operating Procedures - Nine Mile Point Site.
 - b. Oswego County Radiation Emergency Response Plan for Nine Mile Point Nuclear Station and the James A. FitzPatrick Nuclear Power Plant.
 - c. Niagara Mohawk Power Corporation - Nine Mile Point Nuclear Station Site Emergency Plan and Procedures, Controlled Copy.
 - d. Power Authority of the State of New York - James A. FitzPatrick Nuclear Power Plant Emergency Plan and Procedures, Controlled Copy.
5. Shoreham Nuclear Power Station - Suffolk County
 - a. State BRH Specific Operating Procedures - Shoreham Station.
 - b. Suffolk County Response Plan For Major Radiation Incidents.
 - c. Long Island Lighting Company - Shoreham Nuclear Power Station Emergency Plan, Draft.
 - d. Memorandum of Understanding Between New York State and Long Island Lighting Company On Emergency Planning.
 - e. Memorandum of Understanding Between Suffolk County and Long Island Lighting Company On Emergency Planning.
6. Brookhaven National Laboratory - Suffolk County
 - a. State BRH Specific Operating Procedures - Brookhaven National Laboratory Site.
 - b. Suffolk County Response Plan For Major Radiation Incidents.

7. Knolls Atomic Power Laboratory, Knolls Site - Schenectady County
 - a. State BRH Specific Operating Procedures - Knolls Site.
 - b. Knolls Atomic Power Laboratory Radiological Emergency Plan - Knolls Site, Controlled Copy.
8. Knolls Atomic Power Laboratory Kesselring Site - Saratoga County
 - a. State BRH Specific Operating Procedures - Kesselring Site.
 - b. Knolls Atomic Power Laboratory Radiological Emergency Plan - Kesselring Site, Controlled Copy.
9. U.S. Energy Research and Development Administration Radiological Assistance Plan (RAP), ERDA-60.
10. Interagency Radiological Assistance Plan (IRAP), ERDA-10.
11. U.S. Energy Research and Development Administration Region I Radiological Assistance Plan.
12. New York State Department of Health Emergency Plan.

NYS DEPARTMENT OF HEALTH

FIELD STRUCTURE FOR PUBLIC HEALTH SERVICES

NOVEMBER 1, 1977



REGIONS	POPULATION*
Downstate	4,354,259
Northern	1,297,947
Upstate	4,670,801
New York City	7,867,760
	18,190,767

DISTRICTS	POPULATION*
Geneva	194,821
Glens Falls	223,806
Hornell	99,546
Johnstown	191,640
Massena	111,991
Monticello	52,580
Oneonta	134,035
Saratoga Lake	83,276
Utica	179,658
Watertown	112,152

*Population figures based on the 1970 Federal census.

Western Region
Engineering Services
Provided by Syracuse
P.H. Program Area Office

Southern
REGION

- ⊙ REGIONAL HEALTH DIRECTORS
- ⊙ PUBLIC HEALTH PROGRAM AREA DIRECTORS
- ▲ PUBLIC HEALTH DISTRICT DIRECTORS
- COUNTIES HAVING ORGANIZED HEALTH DEPARTMENTS
- CITY HEALTH DEPARTMENTS

APPENDIX B.1
EMERGENCY PLAN FOR
RADIATION ACCIDENTS

NEW YORK STATE HEALTH REGIONS AND DISTRICTS

Albany Regional Office
 Building No. 7A, State Campus
 Albany 12226
 (518) 457-5150

Buffalo Regional Office
 584 Delaware Avenue
 Buffalo 14202
 (716) 842-4580 or
 T.L. 161-4580

Rochester Regional Office
 1475 Winton Road, North
 Rochester 14609
 (716) 482-9711

Syracuse Regional Office
 677 South Salina Street
 Syracuse 13202
 (315) 473-8392 or
 T.L. 151-8392

White Plains Regional Office
 901 North Broadway
 White Plains 10603
 (914) 761-7900

New York City Health Services
 Two World Trade Center
 49th Floor
 New York 10047
 (212) 488-2748

Geneva District Office
 81 North Street
 Geneva 14456
 (315) 789-3030

Glens Falls District Office
 Bay and Quaker Road
 Glens Falls 12801
 (518) 793-3893 or
 474-3921 or 22

Hornell District Office
 282 Canisteo Street
 Hornell 14843
 (607) 324-5120

Johnstown District Office
 19 North William Street
 Johnstown 12095
 (518) 762-3189

Massena District Office
 10 Water Street
 Massena 13662
 (315) 769-2870

Monticello District Office
 6 Prince Street
 Monticello 12701
 (914) 794-2045

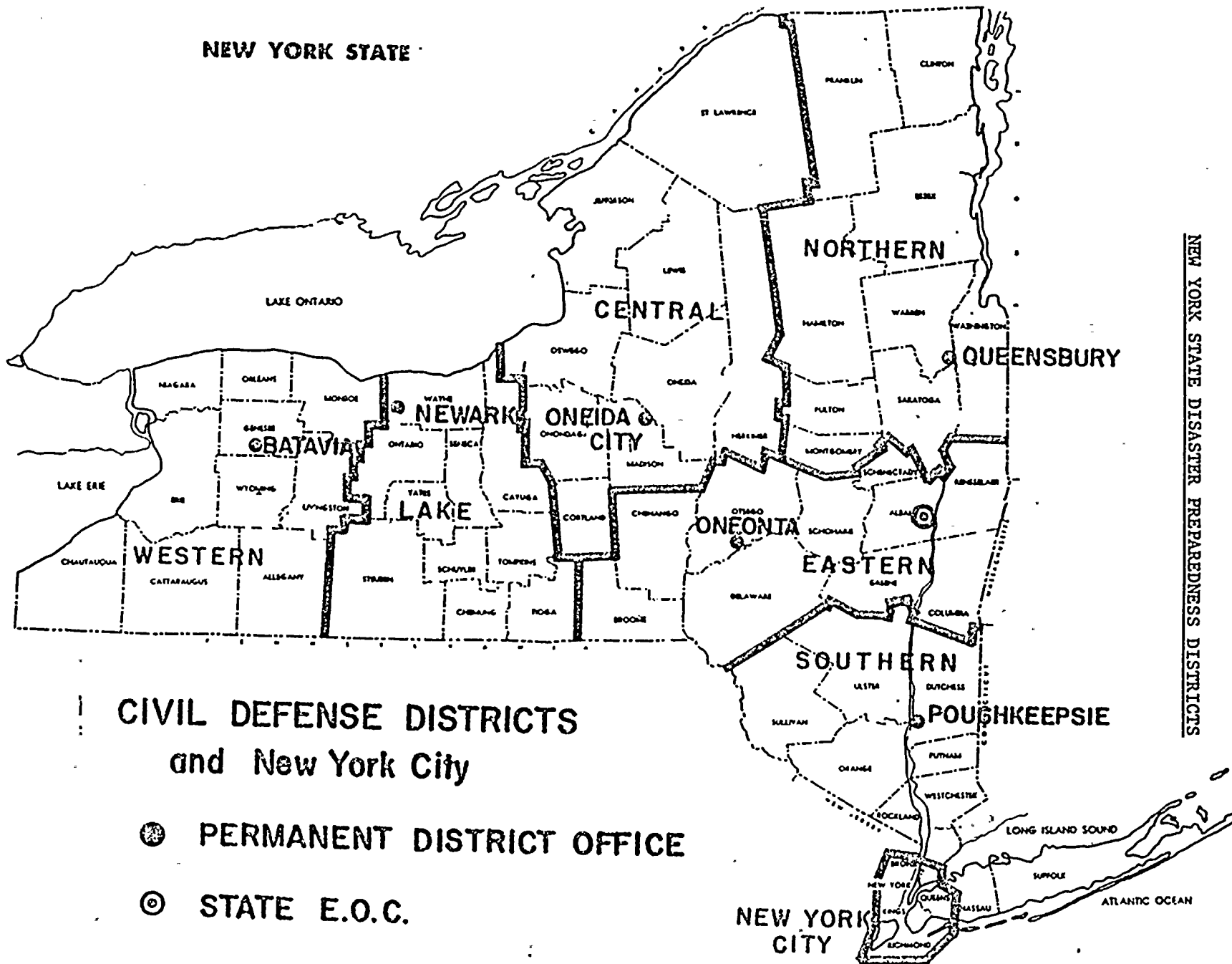
Oneonta District Office
 P.O. Box 459
 Upper West Street
 Oneonta 13820
 (607) 432-3911

Saranac Lake District Office
 P.O. Box 389
 11-15 St. Bernard Street
 Saranac Lake 12983
 (518) 891-1800

Utica District Office
 State Office Building
 207 Genesee Street
 Utica 13501
 (315) 797-6120

Watertown District Office
 State Office Building
 317 Washington Street
 Watertown 13601
 (315) 782-0100

NEW YORK STATE



CIVIL DEFENSE DISTRICTS
and New York City

- PERMANENT DISTRICT OFFICE
- ◎ STATE E.O.C.

NEW YORK STATE DISASTER PREPAREDNESS DISTRICTS

NEW YORK STATE DISASTER PREPAREDNESS DISTRICTS

Central District ODP
213 Union Street
Oneida 13421
(315) 363-8524

Eastern District ODP
Upper West Street
Oneonta 13820
(607) 432-1771

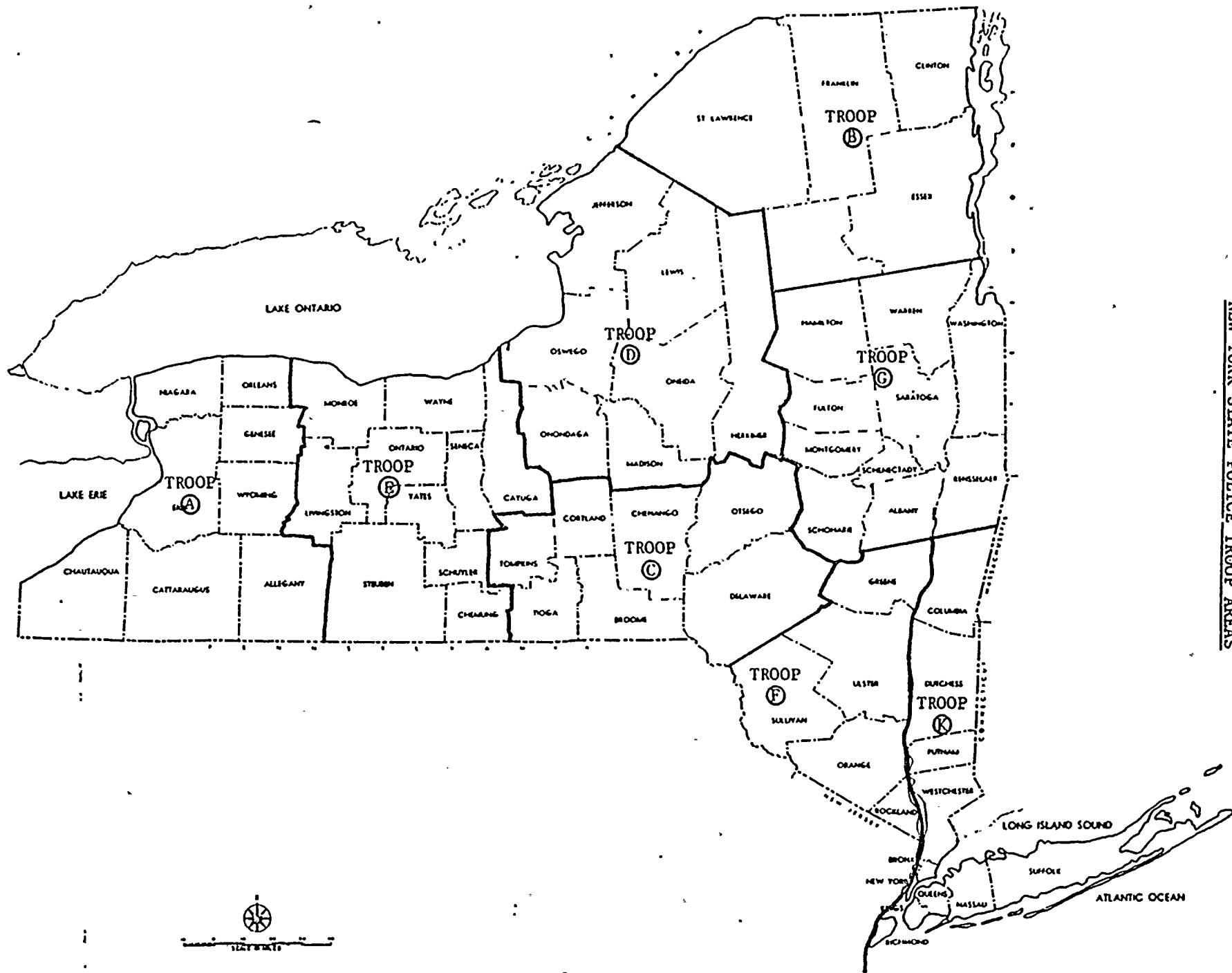
Lake District ODP
R.D.#2, Box 3B
Route 31 East
Newark 14513
(315) 331-4880

Northern District ODP
R.D. Aviation and Fox Farm Roads
Glens Falls 12801
(518) 793-6646

Southern District ODP
Creek Road
Poughkeepsie 12601
(914) 454-0430

Western District ODP
P.O. Box 692
321 State Street
Batavia 14020
(716) 343-1465

NEW YORK STATE POLICE TROOP AREAS



NEW YORK STATE POLICE TROOP HEADQUARTERS

Troop "A" - Sielle Drive
Batavia 14020
(716) 343-2200

Troop "B" - Box 391
Malone 12953
(518) 483-5000

After March 1, 1980

Box 100
Ray Brook 12977
(518) 897-2000.

Troop "C" Sidney 13838
(607) 563-9011

Troop "D" - Oneida 13421
(315) 363-4400

Troop "E" Box 343
Canandaiqua 14424
(315) 398-3200

Troop "F" - Crystal Run Road
Wallkill 10940
(914) 343-1424

Troop "G" - P.O. Box 67
Loudonville 12211
(518) 783-3211

Troop "K" - Poughkeepsie 12603
(914) 677-6321

Troop "T" New York State Thruway
Albany 12201
(518) 449-1750

NUCLEAR FACILITIES IN NEW YORK STATE



NUCLEAR FACILITIES IN NEW YORK STATE
COMMERCIAL POWER REACTORS

Facility-Location		Owner/Operator
1. Indian Point Station Buchanan, Westchester County		
a. Units No. 1 and 2		Consolidated Edison Company of New York, Inc. (Con Ed)
Unit No. 1	PWR 265 mW(e)	Out of Service
Unit No. 2	PWR 873 mW(e)	Start-up 1973
b. Unit No. 3		PASNY/Con Ed
	PWR 965 mW(e)	Start-up 1976
2. Nine Mile Point Site Lycoming, Oswego County		
a. Nine Mile Point Station		Niagara Mohawk Power Corp. (NMPC)
Unit No. 1	BWR 610 mW(e)	Start-up 1969
Unit No. 2	BWR Under Con- struction	Projected commercial operation 1985
b. James A. FitzPatrick Nuclear Power Plant		Power Authority of the State of New York (PASNY)
	BWR 849 mW(e)	Start-up 1975
3. Robert E. Ginna Station Brookwood, Wayne County		Rochester Gas & Electric Corp.
	PWR 470 mW(e)	Start-up 1969
4. Shoreham Nuclear Power Station Brookhaven, Suffolk County		Long Island Lighting Company
	BWR Under Con- struction	Projected commercial operation 1981

TESTING, TRAINING OR RESEARCH REACTORS

5. Brookhaven National Laboratory (BNL) Upton, Suffolk County		BNL
HFBR (High Flux Beam Reactor)	40 mW(t)	Start-up 1965
MRR (Medical Research Reactor)	5 mW(t)	Start-up 1959
6. Sterling Forest Research Center Tuxedo, Orange County		Union Carbide Corp.
UCNR	5 mW(t) Pool	Start-up 1961

Facility-Location	Owner/Operator
7. Nuclear Science and Technology Facility Buffalo, Erie County	State University of New York at Buffalo
PULSTAR 2 mW(t) Pool	Start-up 1961
8. Cornell University Ithaca, Tompkins County	Cornell University
Triga Mark II (Research) 100 kW(t) ZPR (Zero Power Reactor) Negligible Power	Start-up 1962 Start-up 1962
9. Knolls Atomic Power Laboratory Kesselring Site West Milton, Saratoga County	U.S. DOE /General Electric Company
Destroyer and Submarine Reactor Prototypes	
10. Knolls Atomic Power Laboratory Knolls Site Schenectady, Schenectady County	U.S. DOE /General Electric Company
Research Reactors and Critical Facilities	
11. Manhattan College New York City	Manhattan College
Research Reactor (Tank) Negligible Power	Start-up 1964
12. Columbia University Morningside Heights Campus New York City	Columbia University
Triga - Mark II (Research) 250 kW(t)	Operating permit issued 1977 New York City certification pending
13. Rensselaer Polytechnic Institute Schenectady, Schenectady County	R.P.I.
RPI Critical Experiments Negligible Power Facility	

NUCLEAR FUEL REPROCESSING PLANT

14. Nuclear Fuel Services, Inc. West Valley, Cattaraugus County	Nuclear Fuel Services, Inc. (Not Operating)
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ACCIDENT ANALYSIS CONSEQUENCES

In the unlikely event that dose projections are not rapidly available from the nuclear facility operator, the following tabulation may serve as a guide for categorizing accidents. The accident analysis consequences are found in the respective Final Safety Analysis Reports.

UNIT: JAMES A. FITZPATRICK

<u>Analyzed Accident</u>	<u>Exclusion Area Boundary</u>		<u>State ALERT</u>
	<u>Thyroid</u>	<u>Whole Body</u>	
LOCA	11.4	0.97	A
Steam Line Break	13.6	0.0141	A
Control Rod Drop	3.9	0.24	B
Refueling	4.38	0.217	B

UNIT: NINE MILE POINT

<u>Analyzed Accident</u>	<u>Exclusion Area Boundary</u>		<u>State ALERT</u>
	<u>Thyroid</u>	<u>Whole Body</u>	
Main Steam Line Break Outside Drywell	7.18	0.079	A
Refueling	1.08×10^{-4}	2.02×10^{-5}	B
Control Rod Drop	3.28×10^{-5}	1.79×10^{-2}	B
LOCA	4.96×10^{-7}	1.1×10^{-6}	B

UNIT: ROBERT E. GINNA

<u>Analyzed Accident</u>	<u>Exclusion Area Boundary</u>		<u>State ALERT</u>
	<u>Thyroid</u>	<u>Whole Body</u>	
LOCA	90	-	C
Fuel Handling	-	0.025	B
Gas Decay Tank Rupture	-	1.3	A
Volume Control Tank Rupture	1.4×10^{-3}	3.5×10^{-3}	B
Steam Generator Tube Rupture	-	1.04	A

UNIT: INDIAN POINT NO. 3 AND 2

<u>Analyzed Accident</u>	<u>Exclusion Area Boundary</u>		<u>State ALERT</u>
	<u>Thyroid</u>	<u>Whole Body</u>	
LOCA	189	9.74	C
Steam Generator Tube Rupture	88 (6 hours)	7.40	C
Steam Line Break	64	-	C
Refueling	1.3	1.0	B
Gas Decay Tank Rupture	<6 mRem	0.80	B
Volume Control Tank Rupture	Neg	0.46	B



NEW YORK STATE DEPARTMENT OF HEALTH
OFFICE OF PUBLIC HEALTH
OFFICE OF LOCAL HEALTH MANAGEMENT

ENVIRONMENTAL
HEALTH MANUAL

PROCEDURE

TRANSMITTAL LETTER

PROCEDURE: RAD 320 PAGE 1 OF 3
ISSUING UNIT: Bureau of Radiological Health

SUBJECT: Radiation Emergencies (Incidents,
Accidents, Overexposures)

POLICY

Radiation emergencies (incidents, accidents, and overexposures) are to be reported and investigated so that corrective measures may be taken to eliminate the emergency situation.

PROCEDURE

Field

1. Receives report of radiation emergency.
2. Evaluates report immediately to determine if emergency actually exists.
 - 2a. In counties not having personnel capable of making such an evaluation, refers immediately to Area/Regional Office for evaluation.

Field (Area/Regional Office if applicable)

3. Notifies Bureau of Radiological Health (BRH) immediately by telephone.
 - 3a. If immediate contact cannot be made with BRH, reports emergency to State Warning Point (see Supplementary Information for telephone number) providing the following information:
 1. Location
 2. Reporting individual's name, phone number and other means of communications contact available.
 3. Time of incident/accident.
 4. Type of emergency.

State Warning Point

- 3a1. Notifies a member of BRH staff by calling personnel in the order listed in Supplementary Information. Continues to place calls until personal contact is made with a staff person.

Procedure: RAD 320
/ /
Transmittal Letter

Radiation Emergencies (Incidents,
Accidents, Overexposures)

Page 2 of 3

PROCEDURE (cont'd)

BRH

4. Provides assistance to Field (Area/Regional Office), if needed.

- 4a. Notifies or requests assistance from Federal or other State agencies as necessary.

Field (Area/Regional Office
if applicable)

5. Evaluates corrective measures taken at emergency site, environmental releases if any, and need to inform the public.

- 5a. If necessary, notifies appropriate local officials and recommends action to be taken.

6. Makes immediate recommendations to radiation source operator or carrier.

7. Prepares report of incident. Forwards one copy to operator or carrier and one copy to BRH.

8. Reinspects to determine compliance with recommendations.

REFERENCE

10 NYCRR 16.15

Procedure: RAD 320
 / /
 Transmittal Letter

Radiation Emergencies (Incidents,
 Accidents, Overexposures)

Page 3 of 3

SUPPLEMENTAL INFORMATION

For a major radiation accident involving fixed nuclear facilities (Reactors), the notification and response procedure is detailed in the New York State Emergency Plan for Radiation Accidents and the Specific Operating Procedures for each nuclear facility.

Phone numbers through which BRH may be notified
 (AREA CODE FOR ALL PHONE NUMBERS IS 518)

During normal business hours, phone

Bureau of Radiological Health
 New York State Department of Health
 Empire State Plaza, Tower Building
 Albany, New York 12237

as follows:

Routine business 474-2846
 Incidents or emergencies 474-2886 or 474-2882

During non-business hours, holidays and weekends, report
 radiation incidents or emergencies to:

State Warning Point 457-2200 or
 457-6811 (back-up number)

Home addresses and phone numbers (Area Code 518) of BRH staff are as follows:

Lawrence B. Czech RD 2, Delanson, NY 12053	864-5579
Karim Rimawi, Ph.D. 301 Elm Avenue South, Delmar, NY 12054	439-0865
Harry Farkas 50 Rapple Drive, Albany, NY 12205	869-0676
Bernard A. Heald E. High Street, RD #5, Ballston Spa, NY 12020	885-9816
Robert F. West RD 2, Old Ravena Road, Selkirk, NY 12158	767-2981
Adelbert J. Potter RD #1, Pattersonville, NY 12137	864-5390
George Kerr 286 State Street, Albany, NY 12210	434-1899
Thomas W. Miller 17 Robin Hood Road Albany, NY 12203	456-4540