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SUBJECT: Forwards Rev 4 to Emergency Plan Maint Procedures EPMP-4, ^{REVISED 7/10/87 M.M.}
 "Emergency Exercise/Drill Procedure," Rev 12 to Emergency
 Plan Implementing Procedures EPP-2, "Fire Fighting" & Rev 3
 to EPP-9, "Determination of Core Damage Under Accident..."

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10CFR50, Appendix E, Section V

June 25, 1987
(NMP2L 1059)

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Re: Nine Mile Point Unit 2
Docket No. 50-410
NPF-54

Gentlemen:

Enclosed is an uncontrolled copy of each of the following emergency procedures relating to the Niagara Mohawk Power Corporation Nine Mile Point Nuclear Station:

- Emergency Plan Maintenance Procedure 4, Revision 4
- Emergency Plan Implementing Procedure 2, Revision 12
- Emergency Plan Implementing Procedure 9, Revision 3

These emergency procedure revisions are submitted as required in Section V to Appendix E of 10CFR Part 50. Two controlled copies have been provided to the Region I office and one controlled copy has been provided to the Resident Inspector under separate cover.

Very truly yours, :

NIAGARA MOHAWK POWER CORPORATION

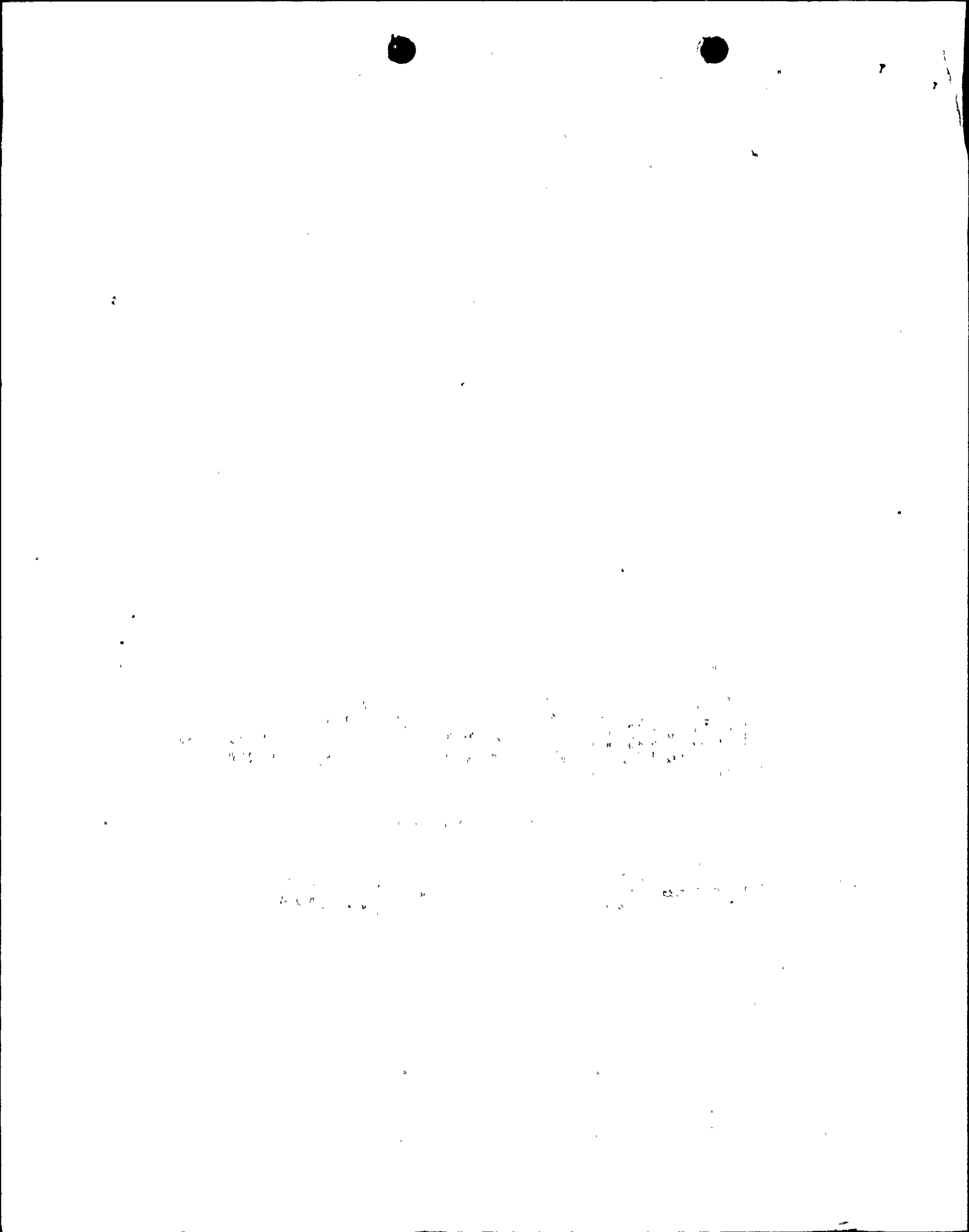
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A045
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DETERMINATION OF CORE DAMAGE UNDER ACCIDENT CONDITIONS

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50-410
 Emergency Plan
 Implementatory
 Procedures
 LTR J40 8-2-84

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**PROPRIETARY
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EMMP-4

EMERGENCY EXERCISE/DRILL PROCEDURE

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EMP-4

EMERGENCY EXERCISE/DRILL PROCEDURE

1.0 PURPOSE

The purpose of this procedure is to assure that periodic exercises and drills are conducted to evaluate the emergency response capabilities of the Nine Mile Point Nuclear Site. The results obtained during these exercises/drills shall be used to correct any identified deficiencies noted with respect to the Emergency Plan, Procedures, personnel and equipment.

2.0 REFERENCES

- 2.1 NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.
- 2.2 10CFR50 Appendix E
- 2.3 44CFR 350

3.0 RESPONSIBILITIES

3.1 Emergency Planning Coordinator

- a. Scheduling the drills/exercises per EMP-1.
- b. Ensuring that the scenarios are prepared in a timely manner to support the schedule.
- c. Assigning observers and controllers for the drill/exercise.
- d. Coordinating the post exercise critique.
- e. Ensuring that all deficiencies noted during the drill/exercise are being addressed.
- f. Ensuring that drill participant attendance sheets are forwarded to the Nuclear Training Department.
- g. Preparing a drill/exercise report within 30 working days.



3.2 Superintendent, Nuclear Training Department

- a. Ensuring a timely review of the drill/exercise scenario to support the schedule.
- b. Ensuring that the training records of the drill/exercise participants are updated to reflect participation.

3.3 Superintendent, Technical Services Department

- a. Ensuring a timely review of the drill/exercise scenario to support the schedule.

4.0 EMERGENCY EXERCISES

- 4.1 An emergency exercise is an event that tests the integrated capability of a major portion of the basic elements contained within the Site and Corporate Emergency Plans and Procedures.
- 4.2 The emergency preparedness exercise shall simulate an emergency that results in off-site radiological releases which would require response by off-site authorities.
- 4.3 An emergency exercise shall be conducted at least once every 12 mos. (+25%).
- 4.4 Each State which has a commercial nuclear power plant within its boundaries or is within the 10-mile EPZ of such site shall fully participate in an exercise jointly with the nuclear plant licensee and appropriate local governments at least every two (2) years (+15%).
- 4.5 Each State with multiple sites within its boundaries shall fully participate in a joint exercise at some site on a rotational basis at least every two (2) years (+25%). When not fully participating in an exercise at a Site, the State shall partially participate at that site to support the full participation of appropriate local governments.
- 4.6 Each appropriate local government which has a site within its boundaries or is within the 10-mile EPZ shall fully participate in a joint exercise with the licensee and the State every two (2) years (+25%).
- 4.7 The exercise scenario shall be varied from year to year such that all elements of the Emergency Plan and Procedure are tested within a five year period (+25%).
- 4.8 Once every 6 years (+25%) provisions should be made to commence an exercise between 6:00 p.m. and midnight, and another between midnight and 6:00 a.m.



5.0 EMERGENCY DRILLS

5.1 An emergency drill is a supervised instruction period aimed at testing, developing and maintaining skills in a particular emergency operation. Drills can be varied between a "walk through" or a "surprise type". A drill shall be evaluated by a qualified drill instructor. When a drill is a component of an emergency response exercise the evaluation shall be performed by an exercise observer.

5.2 In addition to the annual emergency response exercise, emergency drills shall be performed in the following areas: Communication, Fire, Medical Emergencies, Radiologic Monitoring and Health Physics.

5.2.1 Communication Drills

- a. Communication with the New York State Emergency Operations Center, the Oswego County Emergency Operations Center, and the NRC Emergency Operations Center from the CR, TSC, EOF and AEOF shall be tested monthly (+25%).
- b. Communications between NMPNS, NYS Emergency Operations Center, Oswego County Emergency Operations Center and field assessment teams shall be tested every 12 mos. (+25%).

5.2.2 Fire Drills

Fire drills shall be conducted in accordance with the plant Fire Protection Technical Specifications.

5.2.3 Medical Emergency Drills

- a. A Medical Emergency Drill involving a simulated contaminated individual shall be conducted every 12 mos. (+25%).
- b. This drill shall contain provisions for participation by local support service agencies (i.e., Oswego Hospital, Oswego Fire Department Ambulance or Upstate Medical Center).

5.2.4 Radiological Monitoring Drills

- a. Radiological Monitoring Drills of On-site and Off-site plant environs shall be conducted every 12 mos. (+25%).
- b. These drills shall include the collection and analysis of all sample media (e.g., water, vegetation, soil and air) and provisions for communications and record keeping.

5.2.5 Health Physics Drills

- a. Health Physics Drills shall be conducted every 6 mos. (+25%) and should involve response to and analysis of simulated elevated airborne and liquid samples and direct radiation measurements in the environment.



- b. Analysis of inplant samples with actual elevated radiation levels, including use of the post-accident sampling system shall be tested every 12 mos. (+25%).

6.0 EXERCISE AND DRILL OBSERVERS

- 6.1 Observers shall be used to record all significant events and the time at which they occur during the exercise/drill using EPMP-4, Fig. 1 "Exercise/Drill Observation Sheet". The exercise/drill scenario shall state the objectives of the exercise/drill which will determine the major areas for the observers to concentrate their observation. Some of the areas to be observed include the ability to control the emergency; timely and proper notifications; availability and use of equipment and personnel for control and recovery; assessment of consequences of the emergency actions taken by emergency personnel; and the necessity for off shift notification.
- 6.2 Observers shall be selected with the concurrence of the General Superintendent or his designee.
- 6.3 There shall be enough observers to watch all points specified in the exercise/drill scenario and observe all it's major actions. This shall include one observer who will be stationed in the control room to observe the actions of the control room personnel and to ensure that the critical functions of the control room are not adversely affected by the exercise/drill. As required, other observers will be stationed appropriately to observe actions of site personnel, survey teams, search and rescue teams, etc.
- 6.4 Observers should be self-monitors and have as much experience as possible so that they will not be confused by any action that takes place during the exercise/drill.
- 6.5 Observers shall be visibly identified as observers, and they should take no part in the action of the exercise/drill except to:
 - a. Indicate simulated conditions to the exercise/drill participants, (e.g. survey meter readings, contamination levels, etc.) but only after proper action has been taken by the participants to obtain such information.
 - b. Observe poor communication techniques and procedures and note/correct such occurrences when they occur.
 - c. Prevent the communication of simulated emergency conditions as actual conditions outside of the exercise/drill area and to ensure that radio or telephone messages are periodically preceded and ended by the statement "This is a Drill".



6.5 (cont.)

d. Prevent actions which might create a hazard to personnel or equipment. In such cases, observers shall require personnel participating in the exercise/drill to indicate the action verbally.

6.6 Observers shall take attendance of all participants in their particular area of observation using EPMP-4, Figure 4 "Drill/Exercise Participation Attendance Sheet. This sheet shall be returned to the Emergency Planning Coordinator at the conclusion of the drill/exercise.

7.0 EXERCISE/DRILLS SCENARIOS

7.1 Scenarios should be prepared for all exercises and drills and should address the topics outlined in Figure 2.

7.2 Milestones for exercise observations and critiques are shown in Figure 5. This milestone schedule specifies when exercise objectives should be submitted for review, when scenarios should be submitted for review and when critiques, both oral and written, should be conducted and submitted.

7.3 Exercise/Drill Scenarios will be issued to the following individuals or groups for review and comment:

- o Superintendent, Nuclear Training Department
- o Superintendent, Technical Services Department

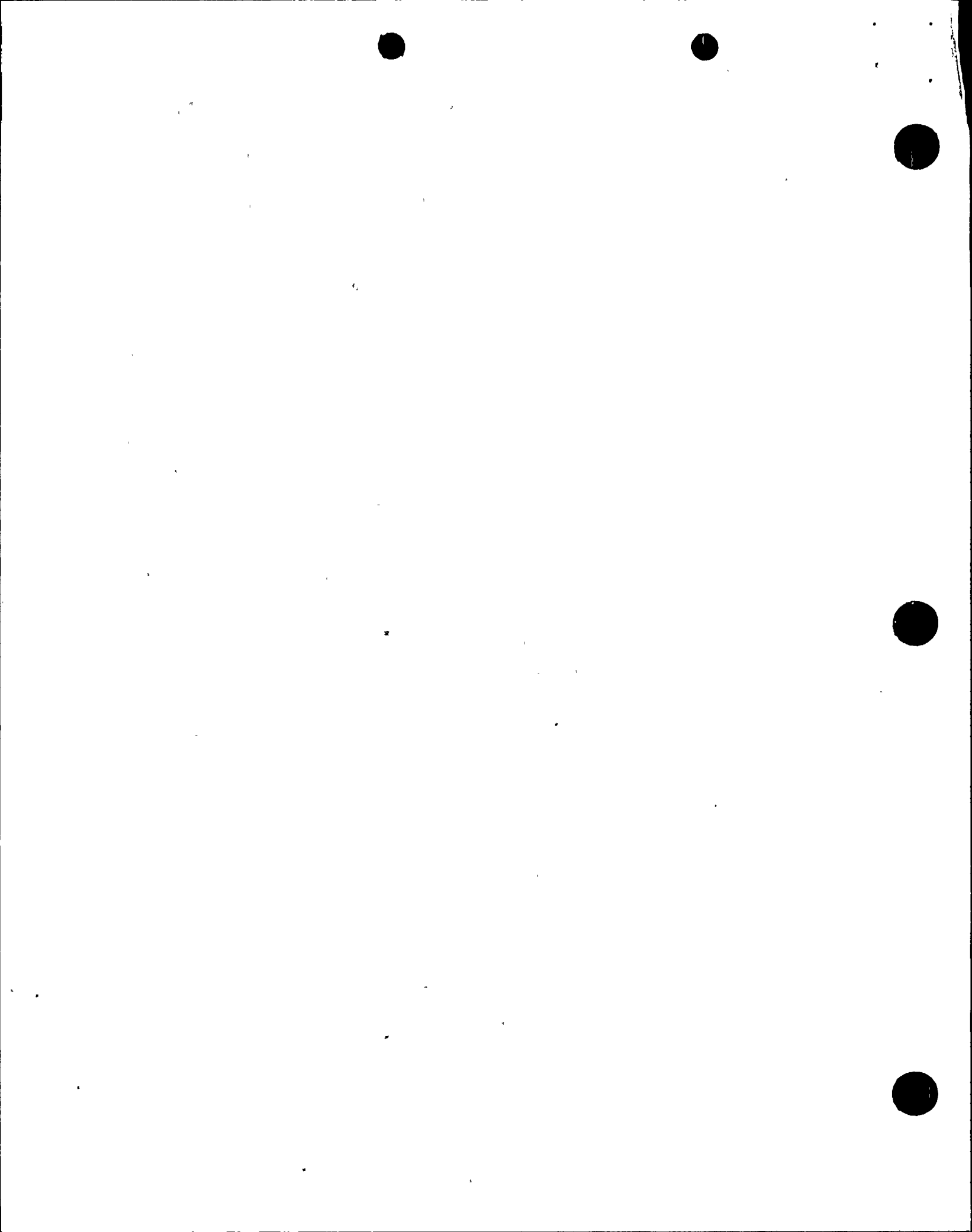
Review will be in a timely manner to support the overall drill/exercise/program. Comments will be resolved by the Emergency Planning Coordinator and incorporated into the final scenario.

7.4 Exercise and drill scenarios shall be varied each year to provide for the testing of all elements of the Emergency Plan and all its components within a five year period. Exercises and drills will be conducted under various weather conditions, at differing times of day, and some may even be unannounced.

7.5 Each scenario will provide observers with the anticipated response participants to proposed exercise/drill events.

7.6 All exercises/drills should be initiated by simulating the conditions which would lead to an action by plant personnel (e.g. - ARMs will be bugged with a radioactive source to simulate a radiation emergency). Simulated victims may be used for first aid training and search and rescue drills.

7.7 All exercise/drill scenarios must be approved at least 24 hours prior to initiation by the General Superintendent, Station Superintendent, Chemistry and Radiation Management Superintendent or their designees.



7.8 At the completion of an emergency exercise/drill, an announcement will be made over the station Gastronics and radio transmitter that the exercise/drill is completed and terminated.

8.0 POST EXERCISE/DRILL CRITIQUE REPORTING OF EXERCISE/DRILL FINDINGS

8.1 A post exercise/drill critique will be held for observers and station supervision of participating groups by the Emergency Planning Coordinator or his designee. The critique shall be held before the end of the next working day, at a time and place specified by the Emergency Planning Coordinator or his designee. This meeting will be held to resolve questions raised by various observers and to develop the exercise/drill report. The observations should include those actions noted by the observers which were not in accordance with approved procedures. In addition the exercise/drill observers should identify any areas which require clarification, development, or revision of procedures (see Fig. 1). This critique shall:

- a. Develop a chronological sequence of key observations.
- b. Generate a list of exercise/drill deficiencies and/or comments.
- c. Determine whether the exercise/drill was "satisfactory" or "unsatisfactory" (this may be a collective determination for the overall drill, or separate determinations for specific key elements of the exercise/drill).
- d. For any "unsatisfactory" exercise/drill, an evaluation must be made as to whether the drill should be rescheduled.
- e. All records and findings should be turned over to the Emergency Planning Coordinator at the end of the critique.

The Emergency Planning Coordinator, following the exercise critique, will evaluate all comments and recommendations. The Emergency Planning Coordinator will determine which recommendations are to be acted upon and shall establish a schedule for implementing those recommendations. Those recommendations which are not acted upon shall be documented along with the basis for so doing.

9.0 EXERCISE/DRILL RECORDS

9.1 All observer reports generated as a result of the exercise/drill shall be retained on file by the Emergency Planning Coordinator.

9.2 These records will be used by the Emergency Planning Coordinator to prepare a report documenting the exercise/drill findings. This report shall include recommendations from staff personnel and observers as to adequacy of the emergency procedures and personnel.



9.3 The Emergency Planning Coordinator shall use EMP-4, Figure 3 to institute management controls over deficiencies noted to ensure corrective actions have been implemented. Once completed, the Exercise/Drill Deficiency Sheet (Figure 3) shall be filed with the exercise/drill report in the station files.

9.4 The Emergency Planning Coordinator shall forward all Drill/Exercise Participants attendance sheets to the Nuclear Training Department. The Nuclear Training Department shall retain these records as evidence of training received through active participation in an Emergency Drill/Exercise.

10.0 EXERCISE/DRILL REVIEW

10.1 The exercise/drill report shall be issued to SORC for review within 30 working days following the exercise/drill.

10.2 SORC will determine whether any deficiencies and/or corrective actions are required. SORC approval of identified corrective actions may be granted during the post-drill critique and prior to the issuance of the exercise/drill report so long as a quorum of SORC members are present at the critique and is so recorded in the SORC minutes.



FIGURE 1

EXERCISE/DRILL OBSERVATION SHEET

Observers Name: _____ Exercise/Drill Date: _____

Observers Location: _____

Exercise/Drill Title: _____

Information to Provide: _____

Time Drill Commenced: _____ Time Drill Terminated: _____

OBSERVATIONS, COMMENTS & RECOMMENDATIONS

Page _____ of _____

NOTE: Observations should include the proper and effective use of procedures, equipment, and personnel.

Signature: _____ Title: _____



FIGURE 2
GENERAL OUTLINE FOR
NINE MILE POINT NUCLEAR STATION (NMPNS)
EXERCISE/DRILL SCENARIO

- Part I Objectives
- Part II Date, Time, Place, and Participating Organizations
- Part III Simulated Events
- Part IV Reports
- Part V Observer/Controller Instructions
- Part VI Scenario Assumptions
- Part VII Narrative Summary/Scenario Event Schedule
- Part VIII Control/Contingency Messages
- Part IX Plant Parameters
- Part X Radiological and Meteorological Data

Attachments (as necessary)

Submitted by: _____
Emergency Coordinator or designee/ Date

APPROVALS:

General Superintendent or designee/ Date

Station Superintendent or designee/ Date

Chemistry & Radiation Mgt. Supt. / Date
or designee



FIGURE 2 (cont.)

NMPNS General Outline for Exercise/Drill Scenario

I. Objectives

State basic objectives of the proposed exercise/drill and which portions of the Emergency Plan will be tested.

II. Date, Time, Place, and Participating Organization

State appropriate date(s), time(s), location(s), and participants of exercise/drill briefing(s), exercise, and critique(s).

State work interruption (if any) to result from the exercise/drill.

III. Simulated Events

State simulated events to be used during exercise/drill for initiating and controlling emergency actions.

IV. Reports

Describe the formal reports or evaluations that will result from the critique(s).

V. Observer/Controller Instructions

- Discuss observer selection, conduct and responsibilities
- Identify observers by location
- Describe the method to be used in controlling flow of exercise/drill events.

VI. Scenario Assumptions

- Provide a list of all assumptions considered in developing scenario



VII. Narrative Summary/Scenario Event Schedule

See forth a summary of the exercise/drill details such as:

- suggest the method for initiating the incident or condition (should be as realistic as possible without endangering personnel or facilities).
- estimate the duration of the exercise/drill.
- provide a condensed time schedule of real and simulated events.
- alarms to be sounded
- planned groups or individuals who should respond to incident
- simulated casualties (if any)
- whether or not the presence of radioactive contamination is to be assumed
- whether onsite or offsite evacuations will be necessary
- deployment of radiological monitoring teams (inplant and downwind)
- public information activities to be initiated

VIII. Control/Contingency Messages

- Provide a chronological list of all messages to be provided to drill/exercise participants.

IX. Plant Parameters

Attachments (as necessary)

Provide observers and participants with the necessary information, data, pre-selected situations, etc. that they will need to perform their assigned responsibilities.

X. Radiological and Meterological Data



FIGURE 3

EXERCISE/DRILL DEFICIENCY/COMMENT SHEET

Exercise/Drill Title: _____ Exercise/Drill Date: _____

DEFICIENCY/COMMENT

RECOMMENDATION

CORRECTIVE ACTION

Assigned to: _____

Action Taken:

Date Completed: _____

NOTE: Return completed Drill Deficiency Sheets to Station Files.



FIGURE 4

DRILL/EXERCISE PARTICIPATION ATTENDANCE SHEET



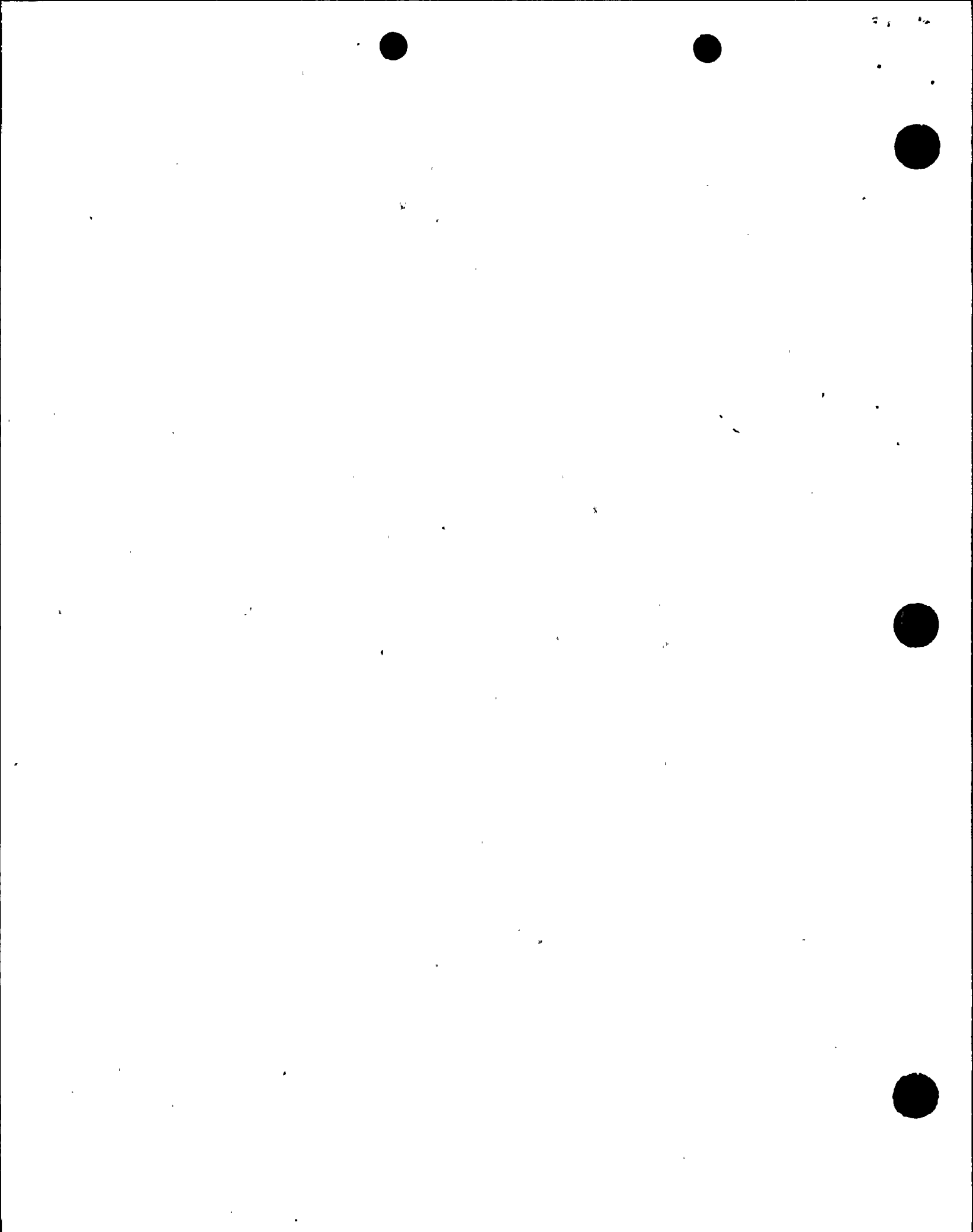
FIGURE 5

MILESTONES FOR EXERCISE OBSERVATION AND CRITIQUES

- 75 Days State and licensee jointly submit exercise objective to FEMA and NRC Regional Office.
- 60 Days FEMA and NRC Regional Office discuss and meet with licensee/State as necessary and prepare response.
- 45 Days State and licensee scenario developers submit exercise scenario to FEMA and NRC Regions for review.
- 35 Days FEMA and NRC Regions notify State and licensee of scenario acceptability.
- 30 Days FEMA and NRC Regions develop specific post exercise critique schedule with the State and advise FEMA and NRC Headquarters.
- 15 Days The RAC Chairman and NRC Region will meet to develop observer action plan (where stationed, how many from each organization, what to look for).
- 1 Day Meeting in the exercise area of all Federal observers both onsite and offsite to finalize assignments, give instructions.
- E Day Exercise
- E Day RAC observers caucus to collate observations. NRC observers also caucus to collate observations.
- E Day RAC Chairman and NRC Region meet, as soon after their respective caucuses as practical, to coordinate Federal participation in critique.
- E to +1 Day Joint RAC/NRC critique

General Agenda

- A. State, local and licensee present their views.
 - B. Critique of offsite actions, by RAC Chairman.
 - C. Critique of onsite action, by NRC.
 - D. Critique of Federal response (if applicable) by RAC Chairman.
 - E. Opportunity for clarification questions or comments by licensee, State and locals (press and public questions will not be entertained during the critique).
- +15 Days Written critiques by FEMA Region to State, with copies to FEMA Headquarters and NRC and by NRC Region to licensee with copies to NRC Headquarters and FEMA.



EPP-2

FIRE FIGHTING

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EPP-2

FIRE FIGHTING

1.0 PURPOSE

The purpose of this fire fighting procedure is to provide for the prompt and efficient handling of any fire, regardless of size or presence of radioactivity by the on-site Nine Mile Point Fire Department.

2.0 REFERENCES

2.1 EAP-1, Activation and Direction of Emergency Plan

2.2 EPP-4, Personnel Injury or Illness

2.3 EPP-5, Station Evacuation

2.3 EPP-20, Emergency Notifications

3.0 RESPONSIBILITIES

In order to ensure the complete and appropriate handling of any fire related emergency at the site, the following position listing provides associated assignment responsibilities:

3.1 Supervisor Fire Protection

a. The Fire Protection Supervisor performs general planning, testing, inspection and overseeing of the station fire protection activities. Periodic testing of the systems and portable equipment is performed by shift fire protection personnel under the direction of the Fire Protection Supervisor.

3.2 Nuclear Fire Chief

a. Maintains administrative responsibilities, which include plant fire preventive inspections, record transient fire loads, acknowledgement of fire protection and detection systems out-of-service, plant fire drills, periodic NMP Fire Department briefings, and participation in fire incident investigations.

b. Responds to all fire alarms.

c. Periodically reviews capabilities and limitations of fire fighting equipment; and initiates corrective actions, if necessary.



3.2 Nuclear Fire Chief (Cont.)

- d. Maintains joint response control with off-site fire department Chief, and provides technical advice pertaining to radiological protection of personnel and any special hazards.
- e. Arranges for appropriate departure activities for off-site fire fighters (e.g., contamination control).
- f. Evaluates the effectiveness of communications within the NMP Fire Department and with the on-scene fire team leader, the reactor operators in the control Room, the plant physical security organization (see Sect. 3.6, below), the off-site fire organization, and any other command post.
- g. Coordinate training with off-site fire departments so that responsibilities and duties are delineated in advance, and they are aware of the need for radiological protection of personnel and the special hazards associated with a nuclear power plant.

3.3 Nuclear Fire Fighter

- a. Participates in fire drills and attends periodic fire fighting and familiarization training and refresher sessions.
- b. Responds to ALL fire alarms, and performs actions under the direct guidance of the Fire Chief.
- c. Ensures that any required training/certification is kept current and up-to-date.

3.4 Station Shift Supervisor

- a. Evaluates the consequences of a fire, as it pertains to nuclear safety, and the probability of its effect on the overall operation of the plant; including the potential spreading of the affected areas and systems.
- b. Initiates station evacuation, if necessary.
- c. Assumes the role of Site Emergency Director, until properly relieved.

3.5 Licensed Nuclear Operator

- a. Provides technical advice to the Nuclear Fire Chief in regard to current plant operating status.
- b. Provides current fire status reports to the Station Shift Supervisor.



3.6

Chief Shift Operator

- a. Activates station fire alarm in response to a personnel report or as a result of the annunciation of the automatic fire detection system.
- b. Requests off-site fire fighting assistance upon the recommendation of the Nuclear Fire Chief.
- c. Activates station evacuation alarm in response to a fire requiring a general area station evacuation.
- d. Provides a termination announcement to station personnel upon receiving notification from the Nuclear Fire Chief.

3.7

Station Security

- a. Verifies receipt of fire alarm, expedites the arrival of off-site fire fighting assistance on-site and maintains required personnel accountability.
- b. Provides responding off-site personnel with appropriate dosimetry.
- c. Maintains plant physical security and performs required personnel notifications.

3.8

Chemistry and Radiation Management Department

- a. Provides radiation protection assistance to the Nuclear Fire Chief during fires.
- b. Assists Personnel Accountability Coordinator in accounting for station personnel at scene of fire.

4.0

NOTIFICATION

4.1

Visual Detection

The person who discovers a fire notifies the control room, giving the location and type of fire before making any attempt at fire fighting. He should remain on the phone until the announcement is made on the public address system.



4.2 Automatic Fire Detection Systems

Automatic fire detection equipment is provided for those areas protected by fixed extinguishing systems and in certain other areas where early fire detection is desirable. The fire detection system actuates an annunciator system in the main Control Room which informs the Control Room Operator of the location of the fire. Once alarms are received, the Chief Shift Operator will inform the Station Shift Supervisor, a designated Licensed Nuclear Operator, and the NMP Fire Department of its location.

5.0 PROCEDURE

5.1 Person Discovering Fire

After he has notified the Control Room of the location and type of fire and the announcement is made on the public address system, he should take initial fire fighting actions or if not knowledgeable in fire fighting techniques leave the area. He should take all necessary precautions to protect himself.

5.2 Chief Shift Operator (See Figure 1)

- a. Upon notification of a fire, either by personal report or by annunciation of the automatic detection system, the Chief Shift Operator shall sound the fire alarm for ten (10) seconds and then announce over the public address system "Attention, a fire has been detected in (location of fire). The NMP Fire Department shall report to (location of fire)", repeat alarm and announcement twice.
- b. Turn up the volume on the Oswego County Fire and Station UHF radio base stations.
- c. If the annunciation is from Local Panel 8 (Meteorological Tower) or Local Panel 10 (Energy Information Center) immediately call Oswego County Fire Control (343-6555) requesting fire fighting assistance for the area involved. DO NOT SOUND FIRE ALARM - See Section 6.0. If busy or no answer call (343-8571). The CSO will then notify security that an offsite Fire Department has been summoned.
- d. If the Control Room Operator does not receive an acknowledgement from the Station Shift Supervisor, Nuclear Fire Chief, designated Licensed Nuclear Operator and Security in approximately 60 seconds, he will repeat Step 5.2.a.



5.2 (Continued)

- e. If requested by the Nuclear Fire Chief call Oswego County Fire Control at the number listed below and request fire fighting assistance at the Nine Mile Point Unit 1.

343-6555 (if busy or no answer, call 343-8571)

If both numbers are busy or no answer, contact Oswego County Fire Control using the fire radio.

- f. Initiate any "Special Operating Procedures" required.
- g. Observe ARMs, CAMs and stack monitors for increased levels.
- h. Sound the station evacuation alarm if requested to do so by the Nuclear Fire Chief.
- i. Upon notification from the Nuclear Fire Chief that the fire has been extinguished or the event has been determined to be a false alarm. Sound the station alarm for 10 sec. and announce the termination of the event.

5.3 Licensed Nuclear Operator (Advisor to the Nuclear Fire Chief)

- a. Contact Control Room and acknowledge receipt of the fire alarm.
- b. Proceed to the location of the fire with a radio and set up a command post with Nuclear Fire Chief. Investigate area of alarm and immediately report status to the Control Room.

5.4 Nuclear Fire Chief

- a. Contact Control Room and acknowledge receipt of the fire alarm.
- b. Pick up a portable fire radio.
- c. Proceed to the location of the fire and set up a command post. Ensure the Licensed Nuclear Operator and a Security Guard are available to coordinate communications with their respective departments.
- d. Investigate area of alarm and report status to the Control Room directly or through the Licensed Nuclear Operator.
- e. Contact Control Room directly or through the Licensed Nuclear Operator and request CSO to call Oswego County Fire Control to obtain outside fire fighting assistance, if deemed necessary.
- f. Contact security force directly or through security guard at command post and direct the security force to escort the off-site fire department and any other vehicles required for the emergency to the emergency vehicle staging area when they arrive.



5.4 Nuclear Fire Chief (Cont.)

- g. Contact Control Room and request a station evacuation of all non-essential personnel, if deemed necessary.
- h. Supervise and coordinate the efforts of the fire fighters to control and extinguish the fire. Any equipment taken off the trucks shall not be returned to the trucks until surveyed for contamination and released.
- i. Once the fire is extinguished or event has been determined to be a false alarm, contact control room and notify them of fire status.
- j. When off-site firemen are ready to leave, arrange to have ALL firemen and their equipment surveyed. All contaminated equipment should be decontaminated or retained at the station for decontamination.

5.5 Nine Mile Point Fire Department

- a. The NMP Fire Department shift complement is comprised of the following:
 - 1 - Nuclear Fire Chief
 - 4 - Nuclear Fire Fighters
 - 1 - Licensed Nuclear Operator

NOTE: During normal working hours the Fire Department will receive assistance from the reserve fire brigade if they are available. This brigade is made up of three individuals from each of the following departments --

- Maintenance
- Instrument and Control
- Chemistry and Radiation Protection

- b. The NMP Fire Department shall respond to ALL fires.
- c. The NMP Fire Department will immediately proceed to the location of the fire, picking up self-contained breathing apparatus and protective clothing at the nearest storage area. Storage areas are located at:
 - 1. Turbine Building - Elevation 261', S.E. Corner
 - 2. Turbine Building - Elevation 277', S.E. Corner
 - 3. Turbine Building - Elevation 300', S.E. Corner
 - 4. Reactor Building - Elevation 237', N.E. Corner
 - 5. Reactor Building - Elevation 261', N.W. Corner
 - 6. Off-Gas Building - Elevation 261', Entrance
 - 7. Administrative Building - Elevation 261', Locker Room Area
 - 8. Screen House - Elevation 261', S.W. Corner
- d. Persons entering smokey areas or fighting fires shall use the self-contained breathing apparatus.



5.5

(Continued)

- e. If off-site fire fighting assistance has been requested, the Nuclear Fire Chief and the off-site Fire Chief will be jointly in charge of the fire fighting forces.
- f. The NMP Fire Department will assist the off-site fire departments in fire fighting.

NOTE: Off-site Fire Department Coat Identification
White- Chief
Yellow- Officers
Black or Red- Firemen

5.6

Chemistry and Radiation Management Department. (See Figure 3)

- a. Upon receipt of a fire alarm and announcement, send an inplant survey team with radio to the location of the fire to assist the Nuclear Fire Chief in evaluating any radiological aspects of the fire. During normal hours this team should be comprised of members of the reserve fire brigade.

NOTE: Departmental assistance will be directed by a Chief Technician until relieved by a Chemistry and Rad. Mgt. Department Supervisor.

- b. Have survey team take air samples as necessary in areas where the fire fighters are working, and ensure that sampling does not interfere with the fire fighting.
- c. When the fire is extinguished, provide the necessary staff to survey all personnel and equipment used at the fire scene.
- d. In the event of a station evacuation perform the following:
 - 1. To aid in accountability, instruct the survey team to report back the names of all individuals at the scene. Ensure this information is passed on to the Personnel Accountability Coordinator.
 - 2. Contact the Chemistry & Radiation Protection Assistant in the Control Room and have him check the CAMs and stack monitors to see if "fouling" is occurring due to smoke removal from plant.
 - 3. Dispatch a survey team to monitor contractors assembling at their work location headquarters (ie north and south trailer areas).
- e. During off-hours utilize departmental callout list to provide radiological assistance to the Nuclear Fire Chief, if necessary.



5.7

Station Shift Supervisor

- a. Contact Control Room and acknowledge receipt of the fire.
- b. May proceed to the fire to adequately assess its effect on station operations and shall then proceed to the main Control Room to direct appropriate station operation (e.g., plant shutdown).
- c. If the Nuclear Fire Chief has requested a station evacuation, or requested outside fire fighting assistance, perform steps d) and e), below:
- d. Perform actions required per EAP-1 as Site Emergency Director until relieved.
- e. To aid in accountability, provide Personnel Accountability Coordinator with the names of any individuals known to be at the fire scene.
- f. Prior to allowing Off-site Fire Departments to depart ensure personnel, vehicles, and equipment have been surveyed by Radiation Protection. Once equipment and personnel contamination levels have been determined to be within station control levels, contact Security Building and notify them of this fact. Ensure roadway to fire location is kept clear of any obstructions so emergency vehicles can respond unhindered.

5.8

Station Personnel

- a. Upon hearing the "fire alarm" station personnel should stay clear of the area described in the announcement and be aware that a station evacuation may be necessary.
- b. If the station evacuation alarm is sounded all personnel in the station and the administrative building, shall evacuate immediately to their designated assembly areas and report to their personnel accountability representative for a head count (see EPP-5, "Station Evacuation"). Personnel actively engaged in fighting the fire will not evacuate, but will make their location and status known to either the inplant survey team or SSS.

5.9

Security Force (See Figure 2)

- a. Contact Control Room and acknowledge receipt of fire alarm.
- b. Dispatch a guard with a radio to the fire scene command post to coordinate communications between the Security Department and the Nuclear Fire Chief.
- c. Turn volume up on the fire radio and monitor continuously during the fire emergency.



(Continued)

- d. During off hours immediately notify the Supervisor Fire Protection 343-4161 (or pager), and the Emergency Planning Coordinator 638-2706 (or pager).
- e. Dispatch a guard and vehicle to Lake Road to direct responding fire vehicles and personnel to appropriate access road and Emergency Vehicle Staging Area. When needed, security will escort trucks to the scene of the fire when directed by the Nuclear Fire Chief. A security guard will stay with the fire trucks at all times. Normal sign-in procedure can be waived and a head count will be taken.
- f. When the off-site fire departments arrive, issue film badges to all personnel and then notify the Nuclear fire Chief and SSS directly or through security guard at the fire command post and Control Room SAS of the number of trucks and time they arrived on-site. Ensure roadway to fire location is kept clear of any obstructions so emergency vehicles can respond unhindered.
- g. Prior to allowing off-site fire departments to depart ensure the following have been completed:
- 1) Film badges collected.
 - 2) Data for Film badge Issue sheets and entrance registration log has been collected.
 - 3) Personnel, vehicles, and equipment have been surveyed by Radiation Protection and cleared for departure by SSS.
- h. During off hours perform necessary notification required per EPP-20, Figure 3 "Security Off Hours Emergency Contact List."
- i. Notify CSO that call(s) have been made.
- If the evacuation alarm is sounded, perform steps j & k.
- j. Prevent non-emergency personnel from leaving the site. Direct these individuals to their designated assembly areas for accountability.
- k. Sergeant directs a guard to obtain roll call and Entrance Registration Log and proceed to the Operation Support Center area for accountability.

NOTE: During the fire emergency, do not allow personnel into the plant or site unless they have emergency plan responsibility and appropriate identification cards as indicated in EPP-14 "Emergency Access Control"..



6.0

LOCAL PANEL 8 (Meteorological Tower) and LOCAL PANEL 10 (Energy Information Center)

- a. Chief Shift Operator will perform the following:
 1. Call Oswego County Fire Control - 343-6555 and request fire fighting assistance for the area involved (if busy call 343-8571).
 2. Inform the Security Department that an alarm has been received from either LP 8 or LP 10.
 3. Notify the Station Shift Supervisor on duty of the fire alarm received.

- b. Security will perform the following:
 1. If conditions permit - dispatch a guard and vehicle to the area involved with a fire radio.
 2. Call the following site personnel:
 - i. On-call Supervisor
 - ii. Supervisor Fire Protection - 343-4161
 - iii. Emergency Planning Coordinator - 638-2706
 - iv. Director of Nuclear Information - 342-2271
 3. Advise Oswego County Fire Control, via fire radio, of conditions.



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FIGURE 1

FIRE FIGHTING CHECKLIST

(Control Room/CSO)

DATE: _____

NAME: _____

INITIAL/TIME

- a. _____ Sound fire alarm for 10 seconds and announce over PA system "Attention, a fire has been detected in (location of fire). The NMP Fire Department shall report to (location of fire)." Repeat alarm and announcement twice.
- b. _____ Turn up volume on the Oswego Fire/Rescue and UHF radio base stations.
- c. _____ Designated Licensed Nuclear Operator responded.
- d. _____ SSS responded.
- e. _____ Nuclear Fire Chief responded.
- f. _____ Security Force responded.
- g. _____ If requested by the Nuclear Fire Chief call Oswego County Fire Control at the number listed below and request fire fighting assistance at the Nine Mile Point Unit 1.

343-6555
(if busy or no answer, call 343-8571)

If both numbers are busy or no answer, contact Oswego County Fire Control using the fire radio.
- h. _____ Process monitors checked.
- i. _____ Initiate any required Special Operating Procedure(s).
- j. _____ When directed by Station Shift Supervisor, sound station evacuation alarm and announce evacuation per EAP-1 Figure 3.
- k. _____ Upon notification from the Nuclear Fire Chief that the fire has been extinguished or the event has been determined to be a false alarm, sound station alarm for 10 sec. and announce the termination of the event.



4 4 4



FIGURE 2

FIRE FIGHTING CHECKLIST

(Security Building/Security Shift Supervisors)

DATE: _____

NAME: _____

INITIAL/TIME

- a. _____ Acknowledge receipt of alarm to CSO.
- b. _____ Dispatch a Security Guard with a radio to the fire scene command post to coordinate communications between the Security Department and the Nuclear Fire Chief.
- c. _____ Turn up volume on Oswego Fire/Rescue and UHF base stations.
- d. _____ Off Hours: Contact Supervisor Fire Protection (343-4161 or pager) and the Emergency Planning Coordinator (638-2706 or pager).
- e. _____ Dispatch a guard and vehicle to Lake Road to direct responding fire vehicles and personnel to the appropriate access road and Emergency Vehicle Staging area.
- f. _____ Issue film badges to firemen.
- g. _____ Notify Nuclear Fire Chief and SSS directly or through security guard at command post and Control Room SAS, of the number of fire trucks and the time they arrived on Site.
- h. _____ Off Hours: Make calls per EPP-20, Figure 3.
- i. _____ CSO notified that call(s) have been made.
- j. _____ If a Station Evacuation Alarm is sounded, dispatch a roll call & visitor list to Operations Support Center.
- k. _____ Prior to allowing off-site Fire Departments to depart ensure:
 - 1) Film badges collected and data logged.
 - 2) Data for film badge issue sheets and entrance registration log has been collected.
 - 3) Personnel, vehicles, and equipment have been surveyed by Radiation Protection and cleared for department by SSS.



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FIGURE 3

FIRE FIGHTING CHECKLIST

(Chemistry and Radiation Management Department)

DATE: _____

NAME: _____

INITIAL/TIME

- a. _____ When fire alarm is sounded send an inplant survey team to fire location to assist Nuclear Fire Chief in evaluating radiological aspects of fire.
- b. _____ Take air samples as necessary in area fire fighters are working.
- c. _____ When fire is extinguished, provide necessary support to survey personnel and equipment at fire scene.
- d. _____ If Station Evacuation Alarm is sounded, have a survey team report back names of all at scene of fire and refer names to Personnel Accountability Coordinator.
- e. _____ CAMs and stack monitors being checked.
- f. _____ Off-hours utilize departmental callout list to provide radiological assistance to the Nuclear Fire Chief if necessary.
- g. _____ During a station evacuation dispatch a survey team to monitor contractors assembling at their work location headquarters.



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Worksheet 1B

Fission Product Inventory Correction Factor for Cs-137
 ($\lambda = 6.29E-5 \text{ day}^{-1}$)

$$F_I(\text{Cs-137}) = \frac{\text{Inventory of Cs-137 in reference plant}}{\text{Inventory of Cs-137 in operating plant}}$$

$$F_I(\text{Cs-137}) = \frac{243.2}{\sum_j \left[P_j (1 - e^{-(6.29E-5) T_j}) e^{-(6.29E-5) T_j^\circ} \right]}$$

Operation Period j	Days Since Startup	Operation Time T _j (day)	T _j ^o	Average Power P _j (MWt)
1A	_____	_____	_____	_____
1B	_____	_____	_____	_____
2A	_____	_____	_____	_____
2B	_____	_____	_____	_____
3A	_____	_____	_____	_____
3B	_____	_____	_____	_____
4	_____	_____	_____	_____

$$F_I(\text{Cs-137}) = \frac{243.2}{\text{_____}}$$

$$F_I(\text{Cs-137}) = \frac{243.2}{\text{_____}} = \text{_____}$$

Calculation Performed By: _____
 Calculation Reviewed By: _____



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2
2
2



WORKSHEET 1C

Fission Product Inventory Correction Factor for Xe-133
(X = 0.132 day⁻¹)

$$F_I (\text{Xe-133}) = \frac{\text{Inventory of Xe-133 in reference plant}}{\text{Inventory of Xe-133 in operating plant}}$$

$$F_I (\text{Xe-133}) = \frac{3651}{\sum_j \left[P_j (1 - e^{-(0.132) T_j}) e^{-(0.132) T^{\circ}_j} \right]}$$

Operation Period j	Days Since Startup	Operation Time T _j (day)	T ^o _j	Ave. Power P _j (MWL)
1A	_____	_____	_____	_____
1B	_____	_____	_____	_____
2A	_____	_____	_____	_____
2B	_____	_____	_____	_____
3A	_____	_____	_____	_____
3B	_____	_____	_____	_____
4	_____	_____	_____	_____

F_I (Xe-133) = _____

F_I (Xe-133) = _____ =

Calculation Performed By = _____
 Calculation Reviewed By = _____



WORKSHEET 1D

Fission Product Inventory Correction Factor for Kr-85
(X = 0.132 day⁻¹)

$$F_I (\text{Kr-85}) = \frac{\text{Inventory of Kr-85 in reference plant}}{\text{Inventory of Kr-85 in operating plant}}$$

$$F_I (\text{Kr-85}) = \frac{643}{\sum_j \left[P_j (1 - e^{-(1.77E-4) T_j}) e^{-(1.77E-4) T^{\circ}_j} \right]}$$

Operation Period j	Days Since Startup	Operation Time T _j (day)	T [°] _j	Ave. Power P _j (MWL)
1A	_____	_____	_____	_____
1B	_____	_____	_____	_____
2A	_____	_____	_____	_____
2B	_____	_____	_____	_____
3A	_____	_____	_____	_____
3B	_____	_____	_____	_____
4	_____	_____	_____	_____

$$F_I (\text{Kr-85}) = \underline{\hspace{15em}}$$

$$F_I (\text{Kr-85}) = \underline{\hspace{15em}} =$$

Calculation Performed By = _____
 Calculation Reviewed By = _____

