

Attachment

**Report of Change and Summary of 50.54(q) Analysis –
Emergency Plan Implementing Procedure 5.7.15, Revision 21**

Change Description

Revision 21 of Emergency Implementing Procedure (EPIP) 5.7.15 is a total re-write of the procedure. Sections for dispatching teams through the Operational Support Center (OSC) and Control Room were relocated to attachments in the EPIP and responsibilities were reassigned or added associated with certain OSC positions. Guidance was also added for communication of changing radiological conditions and authorization of emergency radiation exposure. Other various improvements were also made to the EPIP to address performance gaps identified by emergency response organization (ERO) personnel.

Change Summary of Analysis (10 CFR 50.54(q) evaluation)

Licensing Basis Affected by Change:

Cooper Nuclear Station (CNS) Emergency Plan (E-Plan), Section 1.16, provides the definition of the OSC as the facility from which emergency repair teams, monitoring teams, damage control teams, in-plant assignments, or other emergency response activities are coordinated and dispatched.

E-Plan, Section 5.2.1, discusses that the Emergency Director is in command of the ERO and that emergency actions, which may involve exposures exceeding occupational exposure limits, must be approved by him/her.

E-Plan, Section 5.2.4, discusses the responsibilities of the OSC supervisor and also provides a description of other key staff.

E-Plan, Section 6.6.1, discusses maintenance of personnel dose records, dosimetry requirements, and criteria for limiting dose to emergency workers.

E-Plan, Table 6.4-1, provides dose limits for emergency workers based on Environmental Protection Agency (EPA) Guides.

How Change Complies with Regulations and Previous Commitments:

10 CFR 50.47(b)(1), requires that primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones (EPZ) have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond to and to augment its initial response on a continuous basis.

10 CFR 50, Appendix E, Section IV.A, requires that the organization for coping with radiological emergencies shall be described, including definition of authorities, responsibilities, and duties of individuals assigned to the licensee's emergency organization and the means for notification of such individuals in the event of an emergency.

Primary responsibilities have not significantly changed and continue to be established and described as required. The EPIP change continues to meet the above regulatory requirements.

10 CFR 50.47(b)(10), requires that a range of protective actions has been developed for the plume exposure pathway EPZ for emergency workers and the public. In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic use of potassium iodide, as appropriate. Evacuation time estimates have been developed by applicants and licensees.

10 CFR 50.47(b)(11), requires that the means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

10 CFR 50, Appendix E, Section, IV.E requires that adequate provisions shall be made and described for emergency facilities and equipment.

Protective actions for emergency workers and emergency radiological exposure control requirements were not changed. Therefore there is no negative impact to the EPIP and the regulatory requirements continue to be met.

Two regulatory commitments are relevant to this change; one is associated with guidance for the direction and control of emergency repair and corrective action teams during an emergency, and the other pertains to team tracking and control. The change does not impact these regulatory commitments.

Affected Emergency Planning Functions/Impact on Effectiveness of Emergency Planning Functions:

10 CFR 50.47(b)(1); Function - Responsibility for emergency response is assigned.

10 CFR 50.47(b)(10); Function - A range of public protective action recommendations is available for implementation during emergencies.

10 CFR 50.47(b)(11); Function - The resources for controlling radiological exposures for emergency workers are established.

This change to EPIP 5.7.15 relocated responsibilities to the appropriate ERO positions, enhanced the process for team dispatch, and improved guidance for emergency radiation exposure. The change meets the above planning standards and does not represent a reduction in the effectiveness of the CNS E-Plan.

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Other Changes

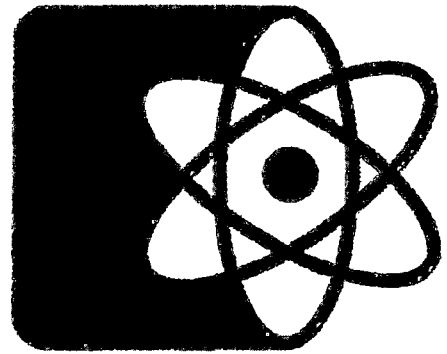
Other changes were also made to the EPIP to meet new procedure format guidance and to improve usability. These changes were determined to be editorial and did not require a full 10 CFR 50.54(q) evaluation.

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Emergency Plan Implementing Procedure 5.7.15, Revision 21

COOPER NUCLEAR STATION



Operations Manual

Emergency Preparedness

EMERGENCY PLAN IMPLEMENTING PROCEDURE

5.7.15

OSC TEAM DISPATCH

Level of Use: INFORMATION

Quality: QAPD RELATED

Effective Date: 9/9/16

Approval Authority: ITR-RDM

Procedure Owner: EP ON-SITE COORD

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1. ENTRY CONDITIONS

- 1.1 OSC and TSC activation required per Emergency Plan and team dispatch required.

2. INSTRUCTIONS

- 2.1 **USE** following table to select appropriate task.

TASK	GO TO
Operator Dispatch from Control Room	Attachment 1
OSC Repair Team Dispatch	Attachment 2
OSC Team Dispatch/Tracking Form	Attachment 3
Personnel Search and/or Rescue Guide	Attachment 4
HAB Post-Attack Coordination and Control Guide	Attachment 5
Immediate Life-Saving Rescue Guide	Attachment 6

ATTACHMENT 1 OPERATOR DISPATCH FROM CONTROL ROOM

ATTACHMENT 1 OPERATOR DISPATCH FROM CONTROL ROOM

1. WHEN Operator(s) dispatched directly from Control Room,
THEN Shift Manager responsible to **ENSURE** Chem/RP Coordinator contacted to determine if RP support is required.

NOTE – Chemistry/Radiological Protection Coordinator (Chem/RP Coordinator) shall make determination, based on current available information and future trends, whether Radiological Protection Technicians (RPT) are to accompany each team.

2. IF RP support not required,
THEN **DISPATCH** Operator(s) per station procedures.

NOTE – If there are no radiological concerns in Section 3, RP steps are N/A.

3. IF RP support required,
THEN **INSTRUCT** Operator(s) to meet RP Technician (RPT) at predetermined location.

- 3.1 Chem/RP Coordinator **BRIEF** OSC Chem/RP Lead on dispatch details and need to assign RPT to meet Operator(s) at predetermined location.

CAUTION 1 – All team members must be volunteers if exposure will exceed 25 rem. Volunteers shall be briefed on possible effects of such exposure.
Early Affects: Possible vomiting, nausea, diarrhea.
Late Affects: Possible increase in cancer probability; possible decrease in total life expectancy.

CAUTION 2 – Emergency radiation exposures in excess of occupational limits shall be authorized by Emergency Director per EPIP 5.7.12. Under no circumstances are exposures for sampling or monitoring to exceed 5 rem (0.05 Sv) TEDE.

CAUTION 3 – If dose rates greater than 10 rem/hr (0.1 Sv/hr) are encountered, withdraw from area and contact OSC.

- 3.2 OSC Chem/RP Lead **PERFORM** following:

- 3.2.1 **COMPLETE** Attachment 3, OSC Team Dispatch/Tracking Form, Section 1.

- 3.2.2 **PROVIDE** RPT with cell phone or radio.

- 3.2.3 **BRIEF** RPT on team dispatch details.

3.2.4 **PROVIDE** white copy of Attachment 3, OSC Team Dispatch/Tracking Form, to Team Lead.

3.2.5 **PROVIDE** yellow copy of Attachment 3, OSC Team Dispatch/Tracking Form, to OSC Clerk.

3.2.6 **BRIEF** OSC Supervisor on team dispatch details.

3.3 RPT **PERFORM** following:

3.3.1 **MEET** Operator(s) at predetermined location.

3.3.2 **ESTABLISH** communication with OSC Chem/RP Lead and Control Room.

3.3.3 **INFORM** Operator(s), Control Room, and OSC Chem/RP Lead of current and changing radiological conditions, when necessary.

3.3.4 **COMMUNICATE** job status/work in-progress.

3.4 OSC Chem/RP Lead **PERFORM** following:

3.4.1 **CONTACT** team periodically to check work status and safety.

3.4.2 **INFORM** OSC Supervisor of team progress report.

<p>CAUTION – Radiological conditions can change continuously during accident conditions. Team may be directed to low dose area based on plant conditions/radiation levels in travel path to OSC or Control Room.</p>

3.4.3 **REQUEST** team to return when job secure.

3.4.4 IF returning to OSC,
THEN OSC Lead or OSC Chem/RP Lead **DEBRIEF** team.

3.4.4.1 **COMPLETE** Attachment 3, OSC Team Dispatch/Tracking Form, Section 2.

3.5 IF returning to Control Room,
THEN Control Room **DEBRIEF** team.

3.5.1 **COMPLETE** Attachment 3, OSC Team Dispatch/Tracking Form, Section 2.

1. Maintenance Coordinator **OBTAIN** specifics concerning plant problem, location, and corrective actions from TSC Director.

NOTE – Chemistry/Radiological Protection Coordinator (Chem/RP Coordinator) shall make determination, based on current available information and future trends, whether Radiological Protection Technicians (RPT) are to accompany each team.

2. Maintenance Coordinator **NOTIFY** Chem/RP Coordinator to provide RP support.

2.1 Chem/RP Coordinator **DETERMINE** if RP support required.

NOTE – If there are no radiological concerns in Section 3, RP steps are N/A.

CAUTION 1 – All team members must be volunteers if exposure will exceed 25 rem. Volunteers shall be briefed on possible effects of such exposure.
Early Affects: Possible vomiting, nausea, diarrhea.
Late Affects: Possible increase in cancer probability; possible decrease in total life expectancy.

CAUTION 2 – Emergency radiation exposures in excess of occupational limits shall be authorized by Emergency Director per EPIP 5.7.12. Under no circumstances are exposures for sampling or monitoring to exceed 5 rem (0.05 Sv) TEDE.

CAUTION 3 – If dose rates greater than 10 rem/hr (0.1 Sv/hr) are encountered, withdraw from area and contact OSC.

3. Section 3 may be performed concurrently:

- 3.1 Maintenance Coordinator **BRIEF** OSC Supervisor on task performance and respective priority.

- 3.1.1 OSC Supervisor **SELECT** appropriate OSC Lead to assemble a team to perform task assignment.

- 3.1.1.1 **RESOLVE** any resource allocation conflicts that may arise.

- 3.2 OSC Lead **SELECT** team personnel.

NOTE – Engineering input may be required for task assignments.

3.3 OSC Lead and OSC Chem/RP Lead **COMPLETE** Attachment 3, OSC Team Dispatch/Tracking Form, Section 1.

3.3.1 OSC Chem/RP Lead **REVIEW** task assignment.

3.3.1.1 **DETERMINE** following:

- RP coverage.
- Protective clothing requirements.
- Respiratory protection.
- LHRA entry.

3.3.1.2 IF respiratory protection required,
THEN **VERIFY** team member qualifications.

3.4 Assigned OSC Lead with assistance from OSC Chem/RP Lead, if necessary, **PERFORM** following:

3.4.1 **BRIEF** team per Attachment 3, OSC Team Dispatch/Tracking Form, Section 1.

3.4.2 **ASSIGN** Team Leader.

3.4.3 **PROVIDE** white copy Attachment 3, OSC Team Dispatch/Tracking Form, to Team Lead.

3.4.4 **DISPATCH** team.

3.4.5 **PROVIDE** yellow copy Attachment 3, OSC Team Dispatch/Tracking Form, to OSC Clerk.

3.5 RPT **INFORM** team of current and changing radiological conditions.

3.5.1 **COMMUNICATE** radiological conditions to OSC Chem/RP Lead, as necessary.

3.6 Team Leader **PERFORM** following:

3.6.1 **MAINTAIN** copy of Attachment 3, OSC Team Dispatch/Tracking Form.

3.6.2 **OBTAIN** cell phone or portable radio.

3.6.3 **ESTABLISH** communication with OSC Lead.

3.6.4 **COMMUNICATE** job status/work in-progress to OSC Lead.

3.7 OSC Lead or OSC Chem/RP Lead **PERFORM** following:

3.7.1 **INFORM** OSC Supervisor and Chem/RP Coordinator of team progress periodically.

3.7.2 **MAINTAIN** accountability of dispatched OSC Team.

3.7.3 **CONTACT** Team Leader periodically to check work status and team safety.

3.8 OSC Supervisor **INFORM** Maintenance Coordinator of team progress.

<p>CAUTION – Radiological conditions can change continuously during accident conditions. Team may be directed to low dose area based on plant conditions/radiation levels in travel path to OSC or Control Room.</p>

3.9 Team **RETURN** to OSC when work is secure or job complete.

3.10 OSC Lead or OSC Chem/RP Lead **DEBRIEF** team upon return to OSC.

3.10.1 **COMPLETE** Attachment 3, OSC Team Dispatch/Tracking Form, Section 2.

ATTACHMENT 3 OSC TEAM DISPATCH/TRACKING FORM©²

ATTACHMENT 3 OSC TEAM DISPATCH/TRACKING FORM©²

Section 1: Team Brief

Team #: _____ Date: _____ Time: _____

Team Task: _____ Briefed By: _____

Work to be performed: _____

LIMITS: DOSE: _____; RATE: _____; TURNBACK RATE: _____; STAY TIME: _____

Respiratory Protection: ☐ SCBA; ☐ Full Face

Precautions/Areas to Avoid: _____

TEDE Year On-Site Dose Info from Hard Copy/RP Web Page/ALARA Resources/Year to Date Dose Reports

Mark TEDE Current Year Dose column N/A if there are no radiological concerns.

LIST OF TEAM MEMBERS		
NAME	TEDE CURRENT YEAR DOSE	DOSE RECEIVED
Time Dispatched: _____		

Pre-Job Work Briefing

- ☐ Team Leader
- ☐ Communication Plan/Protocol
- ☐ Tools/Keys/Parts

☐ Copy of Team Dispatch/Tracking Form

RP Briefing

- ☐ Full Dress
- ☐ Shoe Covers & Gloves
- ☐ Potassium Iodide (KI); EPIP 5.7.14, Attachments 3 and 4 signed

Section 2: DEBRIEF BY: _____ **Time of Return:** _____

Team Findings: _____

Follow-Up Actions needed: _____

OSC Phones: Chem/RP: **5630** MECH: **5623** IAC: **5619** ELECT: **5091** UT: **5528**

1. AFTER Accountability check,
THEN Security Coordinator **DETERMINE** if personnel are missing.
2. Security Coordinator attempt to **DETERMINE** if missing personnel are injured or isolated in some area of plant or plant site.
3. IF missing individuals cannot be found,
THEN following actions are performed:
 - 3.1 TSC Director **REQUEST** Chem/RP Coordinator and Maintenance Coordinator to direct OSC Supervisor to assemble Search and/or Rescue Team.

CAUTION 1 – All team members must be volunteers if exposure will exceed 25 rem. Volunteers shall be briefed on possible effects of such exposure:
Early Affects: Possible vomiting, nausea, diarrhea.
Late Affects: Possible increase in cancer probability, possible decrease in total life expectancy.

CAUTION 2 – Emergency radiation exposures in excess of occupational limits shall be authorized by Emergency Director per EPIP 5.7.12. Under no circumstances are exposures for sampling or monitoring to exceed 5 rem (0.05 Sv) TEDE.

- 3.1.1.1 IF time allows,
THEN OSC Lead **COMPLETE** Attachment 3, OSC Team Dispatch/Tracking Form.
 - 3.1.1.1.1 **USE** form to document search and rescue effort.
 - 3.1.2 OSC Team **ASSEMBLE** at OSC for briefing.
 - 3.1.3 OSC Team **CONDUCT** search, keeping all members of team in same general area (i.e., frequent visual checks, each searching independently).
 - 3.1.4 WHEN victim(s) located,
THEN team **NOTIFY** OSC immediately, unless directed otherwise.
 - 3.1.5 **FOLLOW-UP** with additional relevant information (i.e., nature and extent of injuries, dose rates encountered, etc.) as information develops.

- 3.1.6 **LIMIT** exposure of rescuers to as low as reasonably achievable (ALARA).
- 3.1.7 **TREAT** victim(s) per Procedure 5.7.24, Medical Emergency, if required.

1. PERSONNEL MOVEMENT AROUND SITE IN POST-ATTACK ENVIRONMENT

NOTE 1 – After Hostile Action attack on station, areas of plant will be crime scene and may contain additional hazards beyond normal industrial hazards faced on-site during normal operation. Hazards may include deployment of anti-tampering devices or explosives. Personnel being dispatched to and around site need to be aware of these potential hazards.

NOTE 2 – Security is responsible for ensuring personnel movement about site will not needlessly expose personnel to any post-attack hazards.

- 1.1 Security Shift Supervisor (SSS), Shift Manager (SM), and Incident Command Post (ICP), if applicable, **DETERMINE** safe travel paths about station.

NOTE – Procedure 5.1INCIDENT contains map of station with grid markings. Use of this drawing can facilitate planning of personnel movements about station.

1.2 RULES

- Prior to directing any personnel movements about site, **CHECK** with SSS.
- IF any question about potential insider involvement, THEN **IMPLEMENT** two-man rule.
- IF areas in and around station could potentially contain post-attack hazards, THEN **TRAVEL** through these areas should be avoided.
- Security Officer or Local Law Enforcement Agency (LLEA) should **ACCOMPANY** any personnel traveling through or into crime scene areas.
- **ASSUME** any areas accessed by adversaries to be hazardous.
- **ASSUME** any adversary casualties are booby trapped.

1.3 COORDINATE movement of personnel around site with SSS.

- 1.3.1 Security **PROVIDE** escorts, if available, particularly through crime scene areas or areas where adversaries may have had access.

- 1.3.2 IF Security Officers not available to provide escorts,
THEN USE escorts requested from ICP or recalled Security Officers
upon their arrival.
- 1.3.3 Areas may be **ASSESSED** by SSS, SM, and ICP, and
DETERMINED safe due to lack of adversary access.
 - 1.3.3.1 Travel to these areas may need to be escorted; but once
in area, free movement may be allowed.
 - 1.3.3.2 IF area access by adversaries unknown,
THEN caution should be exercised by SSS, SM, and ICP.
 - 1.3.3.3 In event of active insider, two-man rule should be
implemented.

CAUTION 1 – All team members must be volunteers if exposure will exceed 25 rem. Volunteers shall be briefed on possible effects of such exposure.
Early Affects: Possible vomiting, nausea, diarrhea.
Late Affects: Possible increase in cancer probability, possible decrease in total life expectancy.

CAUTION 2 – Emergency radiation exposures in excess of occupational limits shall be authorized by Emergency Director per EPIP 5.7.12. Under no circumstances are exposures for sampling or monitoring to exceed 5 rem (0.05 Sv) TEDE.

1. IMMEDIATE LIFE-SAVING RESCUE REQUIRED

- 1.1 Within limits allowed by urgency of situation, make every reasonable effort to **OBTAIN** following:
 - 1.1.1 Pertinent information (i.e., what happened, what may happen, what hazards are present, what can be done, etc.).
 - 1.1.2 Available protective and monitoring equipment, and rescue devices.
 - 1.1.3 Assistance from others nearby.
- 1.2 **EVALUATE** available information and **DISCUSS** best apparent rescue approach with Chem/RP Coordinator prior to rescue attempt, if practical.
 - 1.2.1 IF time allows,
THEN OSC Lead **COMPLETE** Attachment 3, OSC Team Dispatch/Tracking Form.
 - 1.2.1.1 **USE** form to document search and rescue effort.
 - 1.2.2 OSC Team **ASSEMBLE** at OSC for briefing.
 - 1.2.3 IF available,
THEN other personnel in area should **RENDER** assistance and **MONITOR** team exposure time in High Radiation Area.
 - 1.2.4 **PERFORM** rescue mission consistent with good first aid practices and as dictated by dose rates encountered and limits discussed above.

1.2.5 **LIMIT** exposure of rescuers to as low as reasonably achievable (ALARA).

1. PURPOSE^{©1}

- 1.1 Dispatch survey, repair, and rescue teams while maintaining personnel accountability and safety.

2. PRECAUTIONS AND LIMITATIONS

- 2.1 During any emergency involving radiological hazards, exposure to personnel should be minimized, consistent with nature of emergency response required.
- 2.2 During HAB security event, all team members that are dispatched and require movement around site shall use HAB Post-Attack Movement and Control Guidance provided in Attachment 5. Personnel conducting corrective or protective actions, or life-saving actions should be selected on voluntary basis.

3. DISCUSSION

- 3.1 During station emergency, abnormally high levels of radiation and/or radioactivity may be encountered. These levels may range from slightly above those experienced during normal station operation to life-endangering levels of several hundred rem in a short period of time. Under all emergency situations, whether immediate action to regain control of emergency or life-saving purposes, care should be taken to minimize exposure from external and internal sources of radiation.
- 3.2 TSC Maintenance Coordinator provides OSC Supervisor specifics concerning plant problem, location, and corrective actions to be taken from TSC Director.
- 3.3 Chem/RP Coordinator in TSC keeps OSC Chem/RP Lead informed of any changing radiological conditions that may affect team safety (i.e., High Area Radiation Alarms, steam leaks, etc.).

4. RECORDS

- 4.1 Attachment 3, OSC Team Dispatch/Tracking Form, retained with OSC event paperwork, which is provided to EP upon termination of event in accordance with EPIP 5.7.8 (quality record upon completion).

5. REFERENCES

5.1 CODES AND STANDARDS

5.1.1 10CFR20.

5.1.2 Environmental Protection Agency EPA-400-R-92-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, May 1992.

5.1.3 NPPD Emergency Plan for CNS.

5.1.4 NUREG-0654/FEMA-REP-1, Revision 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

5.2 PROCEDURES

5.2.1 Emergency Plan Implementing Procedure 5.7.12, Emergency Radiation Exposure Control.

5.2.1 Emergency Plan Implementing Procedure 5.7.14, Stable Iodine Thyroid Blocking (KI).

5.2.2 Emergency Plan Implementing Procedure 5.7.19, On-Site Radiological Monitoring.

5.2.3 Emergency Plan Implementing Procedure 5.7.24, Medical Emergency.

5.2.4 Radiological Protection Procedure 9.RESP.1, Respiratory Protection Program.

5.3 MISCELLANEOUS

5.3.1 NRC Inspection Report 93-24.

5.4 NRC COMMITMENTS

5.4.1 ©¹ NRC Commitment 811217-01-10; Response to IR 81-13, Develop Guidance for the Direction and Control of Emergency Repair and Corrective Action Teams during an Emergency. Commitment affects entire procedure (Attachment 7, Step 1, flagged).

5.4.2 ©² NRC Commitment NLS91000613-04, Team Tracking and Control. Commitment affects Attachment 3.