Nebraska Public Power District
Nebraska's Energy Leader

NLS2001047
April 23, 2001

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Gentlemen:

Subject: Emergency Plan Implementing Procedures
Cooper Nuclear Station, NRC Docket 50-298, DPR-46

Pursuant to the requirements of 10 CFR 50, Appendix E, Section V, "Implementing Procedures," Nebraska Public Power District is transmitting the following Emergency Plan Implementing Procedures (EPIPs):

EPIP 5.7.8.1	Revision 2	"Activation of Alternate OSC"
EPIP 5.7.12	Revision 13	"Emergency Radiation Exposure Control"
EPIP 5.7.19	Revision 11	"On-Site Radiological Monitoring"
EPIP 5.7.21	Revision 22	"Emergency Equipment Inventory"

Should you have any questions concerning this matter, please contact me.

Sincerely,

R. L. Zipfel
Emergency Preparedness Manager

/nr
Enclosures

cc: Regional Administrator w/enclosures (2)
USNRC - Region IV

Senior Resident Inspector w/enclosures
USNRC

NPG Distribution w/o enclosures

A045

Cooper Nuclear Station
P.O. Box 98 / Brownville, NE 68321-0098
***Telephone:** (402) 825-3811 / **Fax:** (402) 825-5211*
http://www.nppd.com

Correspondence Number: NLS2001047

The following table identifies those actions committed to by the District in this document. Any other actions discussed in the submittal represent intended or planned actions by the District. They are described for information only and are not regulatory commitments. Please notify the NL&S Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITTED DATE OR OUTAGE
None	

CNS OPERATIONS MANUAL EPIP PROCEDURE 5.7.8.1 ACTIVATION OF ALTERNATE OSC	USE: REFERENCE EFFECTIVE: 4/19/01 APPROVAL: SORC OWNER: S. C. REZAB DEPARTMENT: EP

1. PURPOSE

This procedure provides instructions for the activation and subsequent operation of the Alternate Operations Support Center (AOSC) in the event that the normal Operational Support Center (OSC) cannot be activated or becomes uninhabitable during an ALERT, SITE AREA EMERGENCY, or GENERAL EMERGENCY.

2. PRECAUTIONS AND LIMITATIONS

[ ] 2.1 If the Area Radiation Monitor and/or Continuous Air Monitor alarms, an area habitability survey should be conducted immediately. If the Chemistry/Radiological Protection (RP) Coordinator determines that the AOSC is uninhabitable, OSC personnel and equipment will relocate to the Control Room corridor.

3. REQUIREMENTS

[ ] 3.1 Ensure the following equipment and materials are available, as needed:

[ ] 3.1.1 A list of communications equipment located in the AOSC and instructions for its use are detailed in Procedure 5.7.22.

[ ] 3.1.2 A list of emergency equipment located in the AOSC and instructions for maintaining the readiness of the equipment are detailed in Procedure 5.7.21.

[ ] 3.1.3 A list of emergency rescue equipment and protective equipment located near the normal OSC is listed in Procedure 5.7.21.

[ ] 3.2 An ALERT or higher level emergency has been declared per Procedure 5.7.1.

[ ] 3.3 The OSC cannot be activated in its normal location or it has been determined to be uninhabitable.

[ ] 3.4 Habitability of the Alternate OSC has been verified by radiological surveys.

4. CHEMISTRY/RADIOLOGICAL PROTECTION OR OSC SUPERVISOR

[ ] 4.1 Chem/RP Coordinator or OSC Supervisor, upon making the decision to relocate the OSC, shall advise the TSC Director and OSC Leads of the decision to relocate.

[ ] 4.2 Chem/RP Coordinator shall determine the relocation route to be taken to the AOSC, based on radiological survey data and consistent with ALARA principles, as to avoid any excess radiation doses. This route shall be communicated clearly to all personnel who are relocating.

5. OSC SUPERVISOR/OSC LEADS

[ ] 5.1 The OSC Supervisor shall advise OSC personnel of the relocation decision. The OSC Supervisor shall relocate to the AOSC with OSC personnel, taking with them all OSC equipment needed to perform their duties from the AOSC. The OSC Supervisor shall ensure the proper relocation route is taken.

[ ] 5.2 The OSC Supervisor shall ensure all telephones, Gaitronics, and Alternate Intercom (Bonephone) located in the AOSC are operational.

[ ] 5.3 The OSC Supervisor shall ensure the HEPA Filtration System is activated and the Area Radiation Monitor and Continuous Air Monitor are set-up and operational. Chem/RP Coordinator shall be notified if there are any equipment problems or if any of the monitors start to alarm at any time.

[ ] 5.4 Upon relocation to the AOSC, the Chem/RP OSC Lead shall ensure all Chemistry/Radiological Protection equipment is in a state of operational readiness. The ARM, CAM, and friskers are located in and around the Emergency Locker.

[ ] 5.5 OSC Supervisor shall report the AOSC operational readiness to the Maintenance Coordinator when achieved.

[ ] 5.6 OSC Supervisor shall ensure the items on Attachment 1 of this procedure are completed.

6. OSC PERSONNEL

[ ] 6.1 OSC personnel shall relocate in an orderly fashion to the AOSC when instructed to do so, using the specified route. Personnel shall take with them all written logs, portable radios, tools, personnel protection and safety equipment that has been issued to them, and any other OSC equipment necessary to perform their OSC duties from the AOSC.

[ ] 6.2 All OSC personnel shall perform their duties from the AOSC in the same manner that they would from the normal OSC utilizing this and all other appropriate procedures.

ACTION ITEMS

TIME/INITIALS

1. The OSC Supervisor shall ensure OSC personnel have brought with them all equipment from the OSC that is necessary to perform their OSC duties from the AOSC. _____/_____

2. The OSC Supervisor shall ensure all communications devices operate in the AOSC. _____/_____

   2.1 Telephone: _____

   2.2 Gaitronics: _____

   2.3 Alternate Intercom: _____

3. The OSC Supervisor shall ensure the HEPA Filtration System is activated in the AOSC. _____/_____

4. The Chem/RP OSC Lead shall ensure all emergency equipment is in a state of operational readiness. _____/_____

   4.1 If locker seal is found intact, only the following operability checks are required.

      4.1.1 Battery checks: _____

      4.1.2 SCBAs Full: _____
      (SCBAs located in hallway).

   4.2 If locker seal is found broken, perform inventory of Chem/RP Equipment per Procedure 5.7.21 and replace any missing or inoperable equipment.

5. The OSC Supervisor shall ensure adequate personnel are present to initially activate the AOSC. _____/_____

6. The OSC Supervisor shall report OSC section readiness or problems to the Maintenance Coordinator in the TSC. _____/_____

1. DISCUSSION

1.1 If emergency conditions dictate relocation of the OSC, emergency repair or rescue activities will be accomplished from the AOSC. The AOSC is located on the 932' level of the Turbine Building (I&C Shop). The AOSC is equipped with an emergency equipment locker, emergency communications, and a HEPA Filtration System.

1.2 OSC personnel shall perform the same duties, as prescribed by the appropriate procedures, from the AOSC as they would from the normal OSC.

2. REFERENCES

2.1 CODES AND STANDARDS

2.1.1 NPPD Emergency Plan for CNS.

2.1.2 NUREG 0654, Revision 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

2.2 PROCEDURES

2.2.1 Emergency Plan Implementing Procedure 5.7.1, Emergency Classification.

2.2.2 Emergency Plan Implementing Procedure 5.7.21, Emergency Equipment Inventory.

2.2.3 Emergency Plan Implementing Procedure 5.7.22, Communications.

CNS OPERATIONS MANUAL EPIP PROCEDURE 5.7.12 EMERGENCY RADIATION EXPOSURE CONTROL	USE: REFERENCE ⊛ EFFECTIVE: 4/19/01 APPROVAL: SORC OWNER: S. C. REZAB DEPARTMENT: EP

1. PURPOSE

This procedure provides policy guidance, addresses required authorization, and sets forth maximum criteria for emergency radiation exposure control in the event emergency workers are required to exceed established occupational exposure limits.

2. PRECAUTIONS AND LIMITATIONS

[ ] 2.1 Protective clothing and/or respirators should be used as appropriate.

[ ] 2.2 Potassium Iodide (KI) tablets, if necessary, should be administered per Procedure 5.7.14.

[ ] 2.3 Administrative methods to minimize personnel exposure (such as ALARA) should remain in force to the extent consistent with timely rescue, corrective, and protective actions.

[ ] 2.4 Personnel shall wear dosimetry appropriate for anticipated exposure levels. These shall include:

[ ] 2.4.1 Direct reading dosimeter for whole body exposure.

[ ] 2.4.2 TLD dosimeter to permanently record whole body exposures.

[ ] 2.4.3 Extremity monitoring, if required, per Radiological Protection.

[ ] 2.5 Emergency exposures are allowed above 10CFR20 limits in an emergency situations as per Emergency Exposure Guidelines (NUREG 0654, 0737, ICRP Reports, and EPA Guides). Emergency Exposure Limits are contained in Attachment 1.

[ ] 2.6 Personnel authorized to receive emergency exposures should meet the following criteria:

[ ] 2.6.1 Personnel conducting corrective or protective actions or life-saving actions who may receive a TEDE in excess of occupational limits should be selected on a voluntary basis.

[ ] 2.6.2 Personnel shall be familiar with the hazards of any exposure received under emergency conditions.

[ ] 2.6.3 Declared pregnant woman shall not take part in these actions.

[ ] 2.6.4 Personnel should not have received previous emergency exposures. Emergency exposure should be limited to once in a lifetime.

[ ] 2.6.5 All occupational doses, including emergency doses, are required to be included as part of a worker's exposure history and hence can affect the worker's future allowable exposure.

3. REQUIREMENTS

[ ] **NOTE** - The examples listed below do not represent an absolute list. The existing situation may dictate additional conditions under which exceeding 10CFR20 limits may be warranted.

[ ] 3.1 The Emergency Director may authorize emergency exposures under the following conditions:

[ ] 3.1.1 LIFE-SAVING ACTIONS 25 REM OR MORE

[ ] 3.1.1.1 Rescue and/or treatment of personnel with life threatening injuries.

[ ] 3.1.1.2 Corrective activities to avoid extensive exposures to large populations.

[ ] 3.1.2 CORRECTIVE OR PROTECTIVE ACTIONS 10 REM TO 25 REM

[ ] 3.1.2.1 Providing first aid to less seriously injured personnel or in support of life saving activities.

[ ] 3.1.2.2 Undertaking corrective action on station equipment and systems to protect large populations from radiological exposure.

[ ] 3.1.3 ALL OTHER EMERGENCY CONDITIONS 5 REM

[ ] 3.1.3.1 Collection of in-plant airborne and liquid samples.

[ ] 3.1.3.2 Performing personnel decontamination.

[ ] 3.1.3.3 Use of the post-accident sampling system.

[ ] 3.1.3.4 Radiological monitoring (teams).

4. INSTRUCTIONS

[ ] 4.1 Only the Emergency Director has the authority to authorize exposures in excess of occupational limits.

[ ] 4.2 PERSONNEL EXPOSURE CONTROL

[ ] 4.2.1 Individuals shall not enter any area where dose rates are unknown or unmeasurable with instruments immediately available.

[ ] 4.2.1.1 If possible, the following survey instruments should be used:

[ ] a. High range portable survey instrument, 0 to 1000 rem/hr (0 to 10 Sv/hr); this should be the instrument of choice.

[ ] b. Low range portable survey instrument, 0 to 50 rem/hr (0 to 0.5 Sv/hr).

[ ] 4.2.1.2 METER USE

[ ] a. Perform a battery check.

[ ] b. Allow time for the meter to warm up, if required.

[ ] c. Check meter response with a check source.

[ ] d. Enter suspected radiation areas with the meter set on appropriate scale and switch, as necessary.

[ ] 4.3 Chemistry and Radiological Protection Coordinator shall:

[ ] 4.3.1 Obtain initial estimates of the radiation dose of exposed personnel as quickly as possible.

[ ] 4.3.2 Report any overexposures to the NRC per 10CFR20.2202 and 10CFR20.2203.

[ ] 4.3.3 Update existing Special Work Permits as station conditions change and information becomes available.

GUIDE ON DOSE LIMITS FOR WORKERS PERFORMING EMERGENCY SERVICES

DOSE LIMIT (rem)[1]	ACTIVITY	CONDITION
5	All	N/A
10	Protecting valuable property	Lower Dose Not Practicable
25	Life Saving or Protection of Large Populations	Lower Dose Not Practicable
> 25	Life Saving or Protection of Large Populations from Extensive Exposure	Only on a Voluntary Basis to Persons Fully Aware of the Risks Involved (see Tables 2-3 and 2-4 of EPA 400)

[1] Sum of external effective dose equivalent and committed effective dose equivalent to non-pregnant adults from exposure and intake during an emergency situation. Workers performing services during emergencies should limit dose to the lens of the eye to 3 times the listed value and doses to any other organ (including skin and body extremities) to 10 times the listed value. These limits apply to all doses from an incident, except those received in unrestricted areas as members of the public during the intermediate phase of the incident (refer to Chapters 3 and 4 of EPA 400).

1. DISCUSSION

1.1 Under emergency conditions it may become necessary for emergency workers to receive exposures in excess of occupational limits established by 10CFR20. Emergency dose exposure limits (guidance) are defined for emergency workers performing several activities. These exposure limits are listed on Attachment 1.

1.2 Only the Emergency Director has the authority to authorize exposures in excess of occupational limits. These exposures are only justifiable if it is determined that benefits to be achieved are commensurate with the projected dose and every reasonable effort is being made to maintain emergency workers doses As Low As Reasonably Achievable (ALARA).

2. REFERENCES

2.1 TECHNICAL SPECIFICATIONS

2.1.1 Section 5.4, Procedures.

2.2 CODES AND STANDARDS

2.2.1 NPPD Emergency Plan for CNS.

2.2.2 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.

2.2.3 NUREG 0737, November 1980, Emergency Exposure Limits.

2.2.4 NCRP Report 39, 1971, Basic Radiation Protection Criteria.

2.2.5 ICRP Report 59, Permissible Dose for Internal Radiation Working Breathing Rate.

2.2.6 Environmental Protection Agency EPA 400-4-92-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, May 1992.

2.2.7 10CFR20.

2.3 PROCEDURES

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

CNS OPERATIONS MANUAL EPIP PROCEDURE 5.7.19 ON-SITE RADIOLOGICAL MONITORING	USE: REFERENCE EFFECTIVE: 4/19/01 APPROVAL: SORC OWNER: S. C. REZAB DEPARTMENT: EP

1. PURPOSE

This procedure describes the emergency on-site radiological monitoring necessary to determine exposure rates, airborne particulate, noble gas, and radioiodine activity levels due to an accidental release of radionuclides. The on-site survey entails the interior space of all station buildings.

2. PRECAUTIONS AND LIMITATIONS

[ ] 2.1 Use appropriate protective equipment.

[ ] 2.2 Clearly label contaminated material and control access and egress from the area.

[ ] 2.3 Check the batteries and perform source check test on the survey instruments to be used.

[ ] 2.4 Allow warm up time for high range survey equipment.

[ ] 2.5 Keep the survey meter on while in route to the survey location.

[ ] 2.6 The survey instrument should be set on one of the lower scales to alert the surveyor of unusual dose rates before he enters the area.

[ ] 2.7 During the approach and during the survey, the Surveyor should occasionally verify the indicated dose rates by changing scales.

[ ] 2.8 Emergency radiation exposures in excess of occupational limits shall be authorized by the Emergency Director Per Procedure 5.7.12. Under no circumstances are exposures for sampling or monitoring procedures to exceed 5 rem (0.05 Sv) TEDE.

[ ] 2.9 When dose rates in excess of 10 rem/hr (0.1 Sv/hr) are encountered, withdraw from the area and contact the OSC.

3. REQUIREMENTS

[ ] 3.1 Ensure the following equipment and materials are available, as needed:

[ ] 3.1.1 As a minimum, the following equipment available from the emergency lockers is required:

[ ] 3.1.1.1 High range survey instrument.

[ ] 3.1.1.2 Appropriate self-reading dosimeter.

[ ] 3.1.1.3 TLD.

[ ] 3.1.1.4 Hand-held radios if deemed necessary.

[ ] 3.1.1.5 Protective clothing and/or respirators.

[ ] a. Coveralls, hoods, shoe covers.

[ ] b. Respiratory equipment (self-contained or filter mask).

[ ] 3.1.1.6 Air sampler (only if airborne sampling is required).

[ ] a. Plastic bags and envelopes for air samples.

[ ] 3.2 An unexpected in-plant release of radioactive material has occurred.

4. INSTRUCTIONS

[ ] 4.1 The on-site radiological monitoring team(s) are under the direction of the Chemistry/Radiological Protection (Chem/RP) Coordinator or designee.

[ ] 4.2 Survey members will be selected from those assembled at the OSC and/or EOF. They shall:

[ ] 4.2.1 Receive their initial briefing and initial assignments from the Chem/RP Coordinator or designee.

[ ] 4.2.2 Form the monitoring teams; each team should be comprised of two members.

[ ] 4.2.3 Obtain the appropriate equipment from the Emergency Lockers and perform the following tasks:

[ ] 4.2.3.1 If necessary, don the protective clothing and respiratory equipment.

[ ] 4.2.3.2 Record the dosimeter readings.

[ ] 4.2.3.3 Check the batteries and perform source check test on the survey instruments to be used.

[ ] a. Allow warm up time for high range survey equipment.

[ ] 4.2.3.4 If necessary, assemble appropriate air sampling equipment (sampler, cartridge, and filter) using the proper cartridge(s):

[ ] a. Identify the flow direction on the filter paper before installation.

[ ] **NOTE** - Noble gas concentrations may be determined by subtracting the silver zeolite results from the charcoal results.

[ ] b. If both radioiodines and noble gases are to be analyzed, use CHARCOAL CARTRIDGES.

[ ] c. If only radioiodines are to be evaluated, use AgX, SILVER ZEOLITE cartridges.

[ ] d. Install the particulate filter and a radioiodine cartridge on the air sampler.

[ ] e. Turn on the air sampler, checking for proper flow rate (3 cfm).

[ ] 4.3 ON-SITE EMERGENCY MONITORING PROCEDURES

[ ] **NOTE** - Monitoring teams may be assigned one or more of the following tasks; gross Gamma and/or Beta dose rate measurements, air particulate levels, and radioiodine levels.

[ ] 4.3.1 GAMMA-BETA DOSE RATES

[ ] 4.3.1.1 While enroute to the survey location, keep the survey meter on and using the appropriate scales, monitor for increasing radiation levels while approaching the survey location.

[ ] 4.3.1.2 Upon arrival at the survey location, enter the area cautiously.

[ ] a. Ascertain whether any of the following conditions exist: presence of steam or spillage, failed piping or equipment, or radiation levels in excess of 10 rem/hr (0.1 Sv/hr). If these conditions are encountered, leave the area and contact the Chem/RP Lead. The Chem/RP Lead will contact the Chem/RP Coordinator and any further team actions will then be determined.

[ ] 4.3.1.3 PERFORM GAMMA DOSE RATE MEASUREMENTS

[ ] a. Use the survey instrument with the window closed.

[ ] 4.3.1.4 Perform dose rate measurement with the detector held about 3' off the floor (waist level).

[ ] 4.3.1.5 Record the data using normal station survey sheets.

[ ] 4.3.1.6 Occasionally check the overhead or floor level radiation readings to make sure they are not significantly higher than the waist level measurements.

[ ] 4.3.1.7 Repeat the procedure with the window open.

[ ] 4.3.1.8 Record the data using normal station survey sheets.

[ ] 4.3.1.9 From the above information and the instrument correction factor, determine the Beta exposure rate and record.

[ ] 4.3.2 COLLECTION OF AIR PARTICULATE AND RADIOIODINE SAMPLES

[ ] 4.3.2.1 Assemble air sampling equipment per Step 4.2.3.4 (this should be completed before arriving at the sampling location).

[ ] 4.3.2.2 Start air sampler.

[ ] a. Adjust the flow rate to the desired level; usually 3 cfm.

[ ] b. Allow the sampler to run at least 5 minutes.

[ ] c. Record start time, stop time, flow rate, location, and sample on normal station air sampling survey sheets.

[ ] d. Place particulate filter and radioiodine cartridge in separate plastic bags. Date, label, and seal the plastic bag.

[ ] e. Return particulate filter and iodine cartridge to the Radiological Protection Counting Room or Radiochemistry Counting Room for analysis.

[ ] f. To obtain the total iodine inhalation dose rate (mrem/hr), multiply the I-131 air concentration (μCi/cc) by the appropriate correction factor:

Effective Age (hr)	Correction Factor (mrem - cc/hr - μCi I-131)
0 to 2	2.6E+9
2.1 to 10	2.4E+9
10.1 to 30	2.1E+9
30.1 to 100	2.0E+9
> 100	1.86E+9

[ ] 4.3.3 Refer to Procedure 8.4.1.2, Gaseous Releases Emergency Sampling, for the collection of radioiodines, particulates, and noble gas samples at the release pathway. Implementation of this procedure will be directed by the Chem/RP Coordinator.

[ ] 4.3.4 Post-accident samples of primary coolant and containment atmosphere may be obtained to aid in release core degradation information. Refer to Procedure 8.4.1.1, Post-Accident Sampling System. Implementation of this procedure will be directed by the Chem/RP Coordinator.

1. DISCUSSION

1.1 In the event of an accidental release involving radionuclides, data obtained from the on-site survey will be used to make initial assessments concerning the magnitude of the accident and decisions concerning evacuation of non-essential site personnel.

1.2 Principal concerns for accidental radioactive releases, particularly gaseous releases, include limiting internal doses through appropriate respiratory protection equipment, anti-contamination clothing, limiting external exposures by identifying areas of high external radiation, and containment of the material to prevent the spreading of contamination or release to the environs.

1.3 During events which involve damage to decayed spent fuel, particular attention should be given to the skin dose resulting from gaseous Kr-85. Kr-85 emits Beta radiation with a maximum energy of 0.67 MeV for 99.6% of the decays and 0.51 MeV Gamma radiation for 0.4% of the decays. Consequently, direct exposure to this gas would result in a dose to the skin ~ 100 times the whole-body dose. In the event of a serious accident involving decayed spent fuel, protective actions would be needed for personnel on-site, while off-site doses (assuming an exclusion area radius of 1 mile from the plant site) would be well below the Environmental Protection Agency's Protective Action Guides. Accordingly, it is important to be able to properly survey and monitor for Kr-85, and to assess the skin dose to workers who could be exposed to Kr-85 in the event of an accident with decayed spent fuel.©

2. REFERENCES

2.1 CODES AND STANDARDS

2.1.1 NPPD Emergency Plan for CNS.

2.1.2 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.

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

2.2 PROCEDURES

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

2.2.2 Chemistry Procedure 8.4.1.1, Post-Accident Sampling System.

2.2.3 Chemistry Procedure 8.4.1.2, Gaseous Releases Emergency Sampling.

2.3 MISCELLANEOUS

2.3.1 © NRC Information Notice 90-08. Affects Step 1.3 on Attachment 1.

CNS OPERATIONS MANUAL EPIP 5.7.21 EMERGENCY EQUIPMENT INVENTORY	USE: REFERENCE ⊕ EFFECTIVE: 4/19/01 APPROVAL: SORC OWNER: S. C. REZAB DEPARTMENT: EP

1. PURPOSE

This procedure provides a means of ensuring the operational readiness and availability of equipment required for the immediate action steps of all four Emergency Classification action levels.

2. INSTRUCTIONS

[ ] 2.1 PM cards, from the CNS Maintenance Planning Office, shall be issued to those departments responsible for emergency equipment inventory once per quarter. Emergency equipment inventory shall also be performed after each use.

[ ] 2.1.1 The Radiological Protection Department is responsible for the inventory of emergency equipment listed on Attachments 1, 2, 4, 5, 6, 7, and 8.

[ ] 2.1.2 The Maintenance Department is responsible for the inventory of emergency rescue equipment listed on Attachment 3.

[ ] 2.2 Personnel responsible for emergency equipment inventory shall obtain an emergency locker seal prior to opening an Emergency Locker. A supply of locker seals shall be maintained by the Emergency Preparedness Department.

[ ] 2.3 The inventory shall be performed utilizing the appropriate attachment of this procedure.

[ ] **NOTE** - An operability check need not be performed on communication equipment listed in this procedure that is located in the TSC, OSC, or EOF. Testing of these communication devices is conducted by the Emergency Preparedness Staff on a periodic basis.

[ ] 2.4 Emergency equipment shall be inventoried, inspected, equipment calibration stickers checked, and an operability check shall be performed on all emergency equipment/instruments.

[ ] 2.5 Operability, calibration, and equipment maintenance shall be conducted per normal station procedures.

[ ] 2.6 During inspection, any equipment found inoperative or out of calibration shall be replaced in a timely manner.

[ ] 2.7 During inspection, if any deficiency of inventory is discovered, contact the Emergency Preparedness Department.

[ ] 2.8 Instruments or equipment may be routinely removed from inventory for purposes of calibration or repair. Instruments and equipment being removed for calibration or repair should be immediately replaced with similar reserve instruments or equipment, where such reserves exist. Instruments or equipment for which there are not reserves should be returned to inventory immediately upon completion of calibration or repair activities.

[ ] 2.9 During the inventory process, the expiration date of the supply of Potassium Iodide (KI) located within the emergency response facilities shall be checked. If the expiration date is within 3 months from the date of the inventory currently being performed, contact the Emergency Preparedness Department and advise them of the expiration date. Emergency Preparedness Department personnel shall order a new supply of KI or receive an extension of the expiration date from the manufacturer.

[ ] 2.10 Upon completion of the emergency equipment inventory, the PM card shall be signed off, indicating inventory is complete, and sent to the Emergency Preparedness Department for review. Emergency Preparedness Department will return the PM card to CNS Maintenance Planning Office. Documentation of emergency equipment inventories shall be kept on file at CNS Maintenance Planning Office.

ATTACHMENT 1	EMERGENCY EQUIPMENT MAINTAINED AT CONTROL ROOM

NOTE - The air breathing equipment is not within the Emergency Locker, but the cases are located near the Emergency Locker for convenience, inspection, and maintenance.

ITEM	QUANTITY
1. Coveralls, Paper	25 Pairs
2. Shoe Covers, Disposable 14"	24 Pairs
3. Gloves, Disposable	2 boxes
4. Geiger-Mueller Survey Meter (Range 0-50 mrem/hr)	1 Each
5. Ion-Chamber Survey Instrument (Range 0-50 rem/hr)	3 Each
6. Dosimeter, Direct Reading Electronic	6 Each
7. Spare Batteries ("AA" Cell)	12 Each
8. Thyroid Blocking Tablets (KI) Check Expiration Date Per Step 2.9	20 Bottles
9. Radiation Warning Sign	4 Each
10. Radiation Barrier Rope, 200'	1 Coil
11. Radiation Warning Tape	1 Roll
12. First Aid Kit	1 Each
13. Plastic Bag, Large	6 Each
14. Duct Tape, 2"	3 Rolls
15. Self-Contained Breathing Apparatus (With Voice Communicators)	6 Each
16. Full Face Respirators With Single Particulate Canisters	6 Each
17. Full Face Respirators With Single Particulate Canisters And Voice Communicators	6 Each
18. Spare Air Cylinders	6 Each
19. Spare Respirator Canister	12 Each
20. Hand Lantern, With 6 Volt Battery	2 Each
21. Flashlight, With Two "D" Cell Batteries	8 Each
22. Spare Battery For Hand Lantern (6 Volt)	2 Each
23. Spare Batteries ("D" Cell, 12 Per Box)	1 Box
24. Spare Battery (9 Volt)	24 Each
25. General Arrangement Drawing	1 Set
26. Step-Off Pad	1 Each
27. Radiation Monitor (Frisker)	1 Each
28. Spare Batteries ("C" Cell)	15 Each
29. Spare Batteries (30 Volt)	2 Each
30. Meals-Ready-To-Eat (MREs)©	> 20 each

ATTACHMENT 2 EMERGENCY EQUIPMENT AT OSC

ITEM	QUANTITY
1. Flashlight, With Two "D" Cell Batteries	25 Each
2. Masking Tape	6 Rolls
3. Particulate Filter, 2"	1 Box
4. Charcoal And Silver Zeolite Cartridge	10 Each
5. Air Sample Plastic Bag And Label	20 Each
6. Smear Book (10 Smears Per Book)	10 Each
7. Spare Batteries ("D" Cell, 12 Per Box)	2 Boxes
8. Spare Batteries ("AA" Cell)	4 Each
9. Step-Off Pad	4 Each
10. Protective Clothing (Full Set)	6 Each
11. Self-Contained Breathing Apparatus	8 Each
12. Spare Bottle For SCBA	12 Each
13. Thyroid Blocking Tablets (KI) Check Expiration Date Per Step 2.9	100 Bottles
14. Survey Instrument Ion-Chamber (Range 0 to 50 rem/hr)	2 Each
15. I&C/Electrical Tool Kit	4 Each
16. Volt Ohmmeter	2 Each
17. Coveralls, Paper	25 Pairs
18. Shoe Covers, Disposable 14"	25 Pairs
19. Gloves, Disposable	1 Box
20. Radiation Barrier Rope, 200'	1 Roll
21. Radiation Monitor (Frisker)	2 Each
22. Radiation Warning Sign	12 Each
23. Mechanical Maintenance Tool Kit	2 Each
24. Continuous Air Monitor	1 Each
25. PD-1 Area Radiation Monitor	3 Each
26. Personnel Radiation Monitor	1 Each
27. Gloves, Electrical, Low Voltage	1 Pair
28. Continuous Air Monitor Particulate Filter (CNSNO 35881)	10 Each
29. Hard Hat	10 Each
30. Safety Glasses	10 Each
31. Ear Plugs	1 Box
32. Portable Air Sampler	1 Each
33. Spare Battery (9 Volt)	12 Each
34. Spare Battery ("C" Cell)	12 Each

ATTACHMENT 3 EMERGENCY RESCUE EQUIPMENT LOCKER

ITEM	DESCRIPTION	UNIT	QUANTITY
1.	Wrecking Bars	Each	2
2.	Bolt Cutters	Each	2
3.	Hacksaw And Blades	Each	2
4.	Come-Along	Each	1
5.	Cable Sling, 1/2" x 3'	Each	2
6.	Cable Sling, 1/2" x 6'	Each	2
7.	Hydraulic Jack, 3 Ton	Each	1
8.	Hydraulic Jack, 5 Ton	Each	1
9.	Sledge Hammer, Various Sizes	Each	4
10.	Porta Power	Each	1
11.	Web Slings (2" - 20' Long, 2" - 10' Long)	Each	4
12.	Sound Powered Phones	Each	1
13.	Safety Belt And Line	Each	1
14.	Fire Axe	Each	1
15.	Crow Bar	Each	1
16.	200' - 3 Part Block And Tackle	Each	1
17.	Battery Lanterns	Each	2

1. GENERAL SUPPLIES AND PROTECTION EQUIPMENT

ITEMS	QUANTITY
1. Coveralls, Paper	25 Pair
2. Shoe Covers	25 Pair
3. Gloves, Disposable	1 Box
4. PD-1 Area Radiation Monitor	3 Each
5. Continuous Air Monitor	1 Each
6. Radiation Monitor (Frisker)	1 Each
7. Flashlight, With 2 "D" Cell Batteries	8 Each
8. Spare Batteries ("D" Cell, 12 Per Box)	1 Box
9. Book Of Team-Dispatch Forms (Procedure 5.7.15, Attachment 1)	1 Each
10. Thyroid Blocking Tablets (KI) Check Expiration Date Per Step 2.9	20 Bottles
11. Step-Off Pad	2 Each
12. Continuous Air Monitor Particulate Filter (CNSNO 35881)	10 Each
13. Spare Batteries ("AA" Cell, 4 Per Box)	1 Box

1. PROTECTION EQUIPMENT

NOTE - The air breathing equipment is not within the Emergency Locker, but the cases are near the Emergency Locker for convenience, inspection, and maintenance.

ITEM	QUANTITY
1. Coveralls, Paper	25 Each
2. Shoe Covers, Disposable 14"	25 Pairs
3. Gloves, Disposable	1 Box
4. Extendable Probe Survey Instrument (Range 0-1,000 rem/hr)	1 Each
5. Ion-Chamber Survey Instrument (Range 0-50 rem/hr)	1 Each
6. Geiger-Mueller Survey Instrument (Range 0-50 mrem/hr)	1 Each
7. Sample Holder With Pancake Type Detector	1 Each
8. Scaler Electronic Package (MS-2)	1 Each
9. Dosimeter, Direct Reading, Electronic	1 Each
10. Spare Batteries ("AA" Cell)	8 Each
11. Filters For Air Sampler; 2"	1 Box
12. Charcoal Cartridge For Air Sampler	10 Each
13. Silver Zeolite Cartridge For Air Sampler	10 Each
14. Extension Cord, Electric (50')	2 Each
15. PD-1 Area Radiation Monitor	3 Each
16. Continuous Air Monitor	1 Each
17. Self-Contained Breathing Apparatus	4 Each
18. Spare 45 Air Cylinder	4 Each
19. Tape, Duct, 2"	3 Rolls
20. Plastic Sheeting, 20' x 20'	2 Sheets
21. Plastic Bag, Small	1 Box
22. Plastic Bag, Large	6 Each
23. Radiation Warning Sign	12 Each
24. Smear Book (10 Smears Per Book)	20 Each
25. Radiation Barrier Rope, 200'	1 Coil
26. Radiation Warning Tape	1 Roll
27. Hand Lantern With 6 Volt Battery	1 Each
28. Flashlight, With Two "D" Cell Batteries	8 Each
29. Spare Battery For Hand Lantern (6 Volt)	1 Each
30. Spare Batteries ("D" Cell, 12 Per Box)	1 Box

ITEM	QUANTITY
31. Pocket Knife	1 Each
32. Small Hand Tool Kit With Straight Slot Screwdriver, Phillips Screwdriver, Small Pliers, And Small Vise Grip	1 Each
33. Step-Off Pads	2 Each
34. Procedure 9.INST.58, Portable Beta-Gamma Counting Instruments	1 Each
35. Thyroid Blocking Tablets (KI) Check Expiration Date Per Step 2.9	200 Bottles
36. Radiation Monitor (Frisker)	2 Each
37. Continuous Air Monitor Particulate Filter (CNSNO 35881)	10 Each
38. Spare Batteries (9 Volt)	12 Each
39. Spare Batteries ("C" Cell)	6 Each
40. Portable Air Sampler	1 Each

2. EMERGENCY DOWNWIND SURVEY KIT SUPPLIES (two complete kits are required).

NOTE - The Downwind Survey Team Supplies (Items 1 through 13) are located in the EOF. Items 14 through 47 may be stored in the Downwind Survey Vehicles.

ITEM	QUANTITY
1. Full Face Respirator	2 Each
2. Hand Lantern	1 Each
3. Spare Battery For Hand Lantern	1 Each
4. Calculator	1 Each
5. Dosimeter, Direct Reading Electronic	2 Each
6. Spare Batteries ("AA")	4 Each
7. Hand Held Radio	1 Each
8. Gieger-Mueller Survey Instrument (Range 0-50 mrem/hr)	1 Each
9. Ion Chamber Survey Instrument (Range 0-50 rem/hr)	1 Each
10. Spare Battery ("D" Cell)	4 Each
11. Spare Battery (30 Volt)	1 Each
12. Spare Battery (9 Volt)	4 Each
13. Thyroid Blocking Tablets (KI) Check Expiration Date Per Step 2.9	2 Bottles
14. Lowcut Rubber Shoes	4 Each

ITEM	QUANTITY
15. 250 ml Square Bottle	6 Each
16. One Liter Bottle	4 Each
17. Masslin Cloths	1 Package
18. One-Piece Plastic Coveralls	2 Each
19. Shovel	1 Each
20. Combination Cartridge For Respirator	8 Each
21. Masking Tape	2 Rolls
22. Emergency Action Log	1 Pad
23. Procedure 9.EPIN.1, Emergency Air Samplers	1 Each
24. Plastic Sheeting	1 Roll
25. Complete Set Of EPIPs	1 Each
26. Bolt Cutters	1 Each
27. Small Plastic Bag	50 Each
28. Grass Shears	1 Each
29. Paper Coveralls	4 Each
30. 2" Air Sample Filters	1 Box
31. Silver Zeolite Cartridge	6 Each
32. Charcoal Cartridge	6 Each
33. 2" Millipore Air Sample Filters	1 Box
34. Air Sampler With Head	1 Each
35. Smear Book (10 Smears Per Book)	10 Each
36 Radioactive Material Sticker	50 Each
37. Sample Label	25 Each
38. 2cc Vial	10 Each
39. Plastic Pipet	10 Each
40. Lined Paper Pad	1 Pad
41. Clipboard	2 Each
42. 10-Mile Radius Map	2 Each
43. Site Map	1 Each
44. Large Plastic Bags	25 Each
45. Disposable Gloves	1 Box
46. Ink Pens	3 Each
47. Tweezers	1 Each

3. DECONTAMINATION SUPPLIES

NOTE - Following supplies are available in or near the EOF Decon Room.

ITEM	QUANTITY
1. Towels	10 Each
2. Soap	3 Bars
3. Septisol (Germicide)	1 Can
4. Lanolin	1 Tube
5. Swabs, Cotton Tipped, 100s	3 Packages
6. Compresses, Gauze, 3" x 3", 100s	2 Packages
7. Towels, Paper	1 Roll
8. Beaker, Plastic, 150 ml	3 Each
9. Hand Brush, Soft Bristle	2 Each
10. Soap, Pumice	2 Bars

4. FIRST AID AND RESCUE EQUIPMENT

ITEM	QUANTITY
1. First Aid Kit	1 Each
2. Stretcher	1 Each
3. Rope, 1/2" - 50'	1 Coil

1. PROTECTION EQUIPMENT AND ADMINISTRATIVE SUPPLIES

ITEM	QUANTITY
1. Coveralls, Paper	50 Each
2. Shoe Covers, Disposable 14"	50 Pairs
3. Gloves, Disposable	2 Boxes
4. Gieger-Mueller Survey Instrument (Range 0-50 mrem/hr)	1 Each
5. Ion-Chamber Survey Instrument (Range 0-50 rem/hr)	1 Each
6. Sample Holder With Pancake Type Detector	1 Each
7. Scaler Electronic Package (MS-2)	1 Each
8. Dosimeter, Direct Reading Electronic	1 Each
9. Spare Batteries ("AA" cell)	4 Each
10. Portable Air Sampler w/head (High Volume) (60 Hz, 120 VAC)	1 Each
11. Inverter (12 VDC To 120 VAC)	1 Each
12. Filter For Air Sampler; 2"	1 Box
13. Charcoal Cartridge For Air Sampler	5 Each
14. Silver Zeolite Cartridge For Air Sampler	5 Each
15. Extension Cord, Electric (50')	1 Each
16. Tape, Duct, 2"	3 Rolls
17. Plastic Sheeting, 20' x 20'	2 Sheets
18. Plastic Bag, Small	1 Box
19. Plastic Bag, Large	6 Each
20. Radiation Warning Sign	12 Each
21. Smear Book	20 Each
22. Radiation Barrier Rope, 200	1 Coil
23. Radiation Warning Tape	1 Roll
24. Hand Lantern With 6 Volt Battery	3 Each
25. Flashlight, With Two "D" Cell Batteries	8 Each
26. Spare Battery For Hand Lantern (6 Volt)	3 Each
27. Spare Batteries ("D" Cell)	1 Box
28. Pocket Knife	1 Each
29. Small Hand Tool Kit With Straight Slot Screwdriver, Phillips Screwdriver, Small Pliers, And Small Vise Grip	1 Each
30. Shovel	1 Each
31. Liter Bottle	6 Each
32. Step-Off Pad	2 Each

ITEM	QUANTITY
33. Thyroid Blocking Tablets (KI) Check Expiration Date Per Step 2.9	60 Bottles
34. Radiation Monitor (Frisker)	1 Each
35. Spare Batteries (9 Volt)	6 Each

2. DECONTAMINATION SUPPLIES

ITEM	QUANTITY
1. 55 Gallon Radwaste Barrel With Lid	3 Each
2. Disposable Coveralls	50 Each
3. Disposable Gloves, 25 Pair/Box	2 Boxes
4. 2" Masking Tape	3 Rolls
5. Small Poly Bag	12 Each
6. Large Poly Bag	36 Each
7. Plastic Bucket	4 Each
8. Bar Soap	24 Each
9. Bath Towel	~ 50.
10. Poly Sheeting	1 Roll
11. Procedure 9.RADOP.7, Personnel Decontamination	6 Copies
12. Pumice Soap	2 Bars
13. Septisol (Germicide)	1 Can
14. Lanolin	1 Tube
15. Procedure 9.INST.58, Portable Beta-Gamma Counting Instruments	1 Each
16. Swabs, Cotton Tipped, 100s	3 Packages
17. Compresses, Gauze, 3" x 3", 100s	2 Packages
18. Towels, Paper	1 Roll
19. Breaker, Plastic 150 ml	3 Each
20. Hand Brush, Soft Bristle	10 Each

3. FIRST AID AND RESCUE EQUIPMENT

ITEM	QUANTITY
1. First Aid Kit	1 Each
2. Stretcher	1 Each

ATTACHMENT 7	EMERGENCY EQUIPMENT MAINTAINED FOR AMBULANCE

ITEM	QUANTITY
1. Dosimeter, Direct Reading Electronic	5 Each
2. TLD Badge	5 Each
3. Geiger-Mueller Survey Instrument (CPM)	1 Each
4. Ion-Chamber Survey Instrument (0-5 rem/hr)	1 Each
5. Radiation Tag	10 Each
6. Spare Batteries ("AA" Cell)	8 Each
7. Smear Book	5 Each
8. Form CNS RP-25, TLD Badging Record	1 Each
9. Spare Batteries (9 Volt)	6 Each

ATTACHMENT 8 EMERGENCY EQUIPMENT MAINTAINED AT HOSPITAL

ITEM	QUANTITY
1. Radiation Barrier Rope	1 Roll
2. Masking Tape	10 Rolls
3. Brown Paper	1 Roll
4. Plastic Sheeting	1 Roll
5. Applicable Radiation Warning Signs	5 Each
6. Shoe Covers	15 Pairs
7. Bags, Plastic (Large)	10 Each
8. Bags, Plastic (Small)	20 Each
9. Radiation Marking Tape	1 Roll
10. Coveralls, Paper	25 Pairs
11. Gloves, Rubber Disposable	2 Boxes
12. Cardboard Boxes, ~ 2' x 3'	6 Each
13. Masslin Cloths	1 Bundle
14. Step-Off Pad	1 Each

1. DISCUSSION

1.1 As an emergency situation progresses, conditions may arise which require augmentation of emergency equipment. Additional equipment shall be obtained from normal station stores and utilized on an as-needed basis to support the emergency response.

2. REFERENCES

2.1 CODES AND STANDARDS

2.1.1 NPPD Emergency Plan for CNS.

2.1.2 NUREG 0654, Revision 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

2.2 PROCEDURES

2.2.1 Radiological Protection Procedure 9.EPIN.1, Emergency Air Samplers.

2.2.2 Radiological Protection Procedure 9.INST.58, Portable Beta-Gamma Counting Instruments.

2.2.3 Radiological Protection Procedure 9.RADOP.7, Personnel Contamination.

2.3 MISCELLANEOUS

2.3.1 QA Finding 92-1900-24.

2.4 NRC COMMITMENTS

2.4.1 © NUREG-0737, Item III.D.3.4, Section 5.2, Emergency Provisions (LQA 8000581-11). Commitment affects Step 30 on Attachment 1.