



Duke Energy Corporation

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H. B. Barron
Vice President

February 26, 2002

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

Re: McGuire Nuclear Station Unit 1 Docket No. 50-369
McGuire Nuclear Station Unit 2 Docket No. 50-370
Changes to Emergency Plan Implementing Procedures

Attached to this letter is a revised Emergency Plan Implementing Procedure (EPIP) Index and revised Emergency Plan Implementing Procedures. The procedure changes were evaluated pursuant to the requirements of 10 CFR 50.54 (q). These changes do not constitute a reduction in the effectiveness of the emergency plan and the plan continues to meet the requirements of 10 CFR 50.47 (b) and 10 CFR 50 Appendix E. Duke implemented these changes on February 5, 2002. A copy is also being sent to the NRC Office of Nuclear Material Safety and Safeguards as per 10 CFR 72.44 (f). Revision bars in the procedures indicate the procedure changes. The following index and procedure changes have been implemented:

EPIP Index Page 1	HP/O/B/1009/022	Rev. 003
EPIP Index Page 2	HP/O/B/1009/023	Rev. 004
EPIP Index Page 3	PT/O/A/4600/088	Rev. 007

There are no new regulatory commitments in this document. Duke is also supplying two copies of this submittal to the Regional Administrator of Region II. Questions on this document should be directed to Kevin Murray at (704) 875-4672.

Very truly yours,

H. B. Barron

HBB:jcm
Attachments

A045

U.S. Nuclear Regulatory Commission
February 26, 2002
Page 2

xc: (w/attachment)
Mr. Luis Reyes,
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U.S. Nuclear Regulatory Commission
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Electronic Licensing Library (EC050)

EP File 111

DUKE

McGUIRE NUCLEAR SITE

EMERGENCY PLAN IMPLEMENTING PROCEDURES

APPROVED: *Bryan J. Polan*
SAFETY ASSURANCE MANAGER

DATE APPROVED 2/6/02

EPIP Index Page 1	Dated	2/5/2002
EPIP Index Page 2	Dated	2/5/2002
EPIP Index Page 3	Dated	2/5/2002
HP/0/B/1009/022	Dated	2/5/2002
HP/0/B/1009/023	Dated	2/5/2002
PT/0/A/4600/088	Dated	2/5/2002

EMERGENCY PLAN IMPLEMENTING PROCEDURES INDEX

<u>PROCEDURE #</u>	<u>TITLE</u>	<u>REVISION NUMBER</u>
RP/0/A/5700/000	Classification of Emergency	Rev. 008
RP/0/A/5700/001	Notification of Unusual Event	Rev. 016
RP/0/A/5700/002	Alert	Rev. 016
RP/0/A/5700/003	Site Area Emergency	Rev. 016
RP/0/A/5700/004	General Emergency	Rev. 016
RP/0/A/5700/05	Care and Transportation of Contaminated Injured Individual(s) From Site to Offsite Medical Facility	DELETE
RP/0/A/5700/006	Natural Disasters	Rev. 009
RP/0/A/5700/007	Earthquake	Rev. 007
RP/0/A/5700/008	Release of Toxic or Flammable Gases	Rev. 004
RP/0/A/5700/009	Collisions/Explosions	Rev. 001
RP/0/A/5700/010	NRC Immediate Notification Requirements	Rev. 013
RP/0/A/5700/011	Conducting a Site Assembly, Site Evacuation or Containment Evacuation	Rev. 005
RP/0/A/5700/012	Activation of the Technical Support Center (TSC)	Rev. 019
RP/0/A/5700/013	Activation of the Emergency Operations Facility (EOF)	DELETE
RP/0/A/5700/14	Emergency Telephone Directory	DELETE
RP/0/A/5700/015	Notifications to the State and Counties from the EOF	DELETE
RP/0/A/5700/16	EOF Commodities and Facilities Procedure	DELETE
RP/0/A/5700/17	Emergency Data Transmittal System Access	DELETE
RP/0/A/5700/018	Notifications to the State and Counties from the TSC	Rev. 010
RP/0/A/5700/019	Core Damage Assessment	Rev. 003
RP/0/A/5700/020	Activation of the Operations Support Center (OSC)	Rev. 011
RP/0/A/5700/21	EOF Access Control	DELETE
RP/0/A/5700/022	Spill Response Procedure	Rev. 009
RP/0/A/5700/024	Recovery and Reentry Procedure	Rev. 002
RP/0/A/5700/026	Operations/Engineering Technical Evaluations in the Technical Support Center (TSC)	Rev. 002
RP/0/B/5700/023	Community Relations Emergency Response Plan	Rev. 002
OP/0/B/6200/090	PALSS Operation for Accident Sampling	Rev. 010

EMERGENCY PLAN IMPLEMENTING PROCEDURES INDEX

<u>PROCEDURE #</u>	<u>TITLE</u>	<u>REVISION NUMBER</u>
HP/0/B/1009/002	Alternative Method for Determining Dose Rate Within the Reactor Building	Rev. 002
HP/0/B/1009/003	Recovery Plan	Rev. 003
HP/0/B/1009/05	Initial Evaluation of Protective Action Guides Due to Abnormal Plant Conditions	DELETED
HP/0/B/1009/006	Procedure for Quantifying High Level Radioactivity Releases During Accident Conditions	Rev. 005
HP/0/B/1009/010	Releases of Radioactive Effluents Exceeding Selected Licensee Commitments	Rev. 006
HP/1/B/1009/015	Unit 1 Nuclear Post-Accident Containment Air Sampling System Operating Procedure	Rev. 003
HP/2/B/1009/015	Unit 2 Nuclear Post-Accident Containment Air Sampling System Operating Procedure	Rev. 003
HP/0/B/1009/016	Distribution of Potassium Iodide Tablets in the Event of a Radioiodine Release	Rev. 002
HP/0/B/1009/020	Manual Procedure for Offsite Dose Projections	DELETED
HP/0/B/1009/021	Estimating Food Chain Doses Under Post-Accident Conditions	Rev. 001
HP/0/B/1009/022	Accident and Emergency Response	Rev. 003
HP/0/B/1009/023	Environmental Monitoring for Emergency Conditions	Rev. 004
HP/0/B/1009/024	Personnel Monitoring for Emergency Conditions	Rev. 001
HP/0/B/1009/029	Initial Response On-Shift Dose Assessment	Rev. 005
SH/0/B/2005/001	Emergency Response Offsite Dose Projections	Rev. 001
SH/0/B/2005/002	Protocol for the Field Monitoring Coordinator During Emergency Conditions	Rev. 001
SR/0/B/2000/01	Standard Procedure for Public Affairs Response to the Emergency Operations Facility	Rev. 003
SR/0/B/2000/002	Standard Procedure for EOF Commodities and Facilities	Rev. 002
SR/0/B/2000/003	Activation of the Emergency Operations Facility	Rev. 008
SR/0/B/2000/004	Notification to States and Counties from the Emergency Operations Facility	Rev. 004

EMERGENCY PLAN IMPLEMENTING PROCEDURES INDEX

<u>PROCEDURE #</u>	<u>TITLE</u>	<u>REVISION NUMBER</u>
McGuire Site Directive 280	Site Assembly/Accountability and Evacuation/Containment Evacuation	DELETED
EP Group Manual	Section 1.1 Emergency Organization	Rev. 017
MNS RP Manual:	Section 18.1 Accident and Emergency Response	DELETED
	Section 18.2 Environmental Monitoring for Emergency Conditions	DELETED
	Section 18.3 Personnel Monitoring for Emergency Conditions	DELETED
	Section 18.4 Planned Emergency Exposure	DELETED
PT/0/A/4600/088	Functional Check of Emergency Vehicle and Equipment	Rev. 007

Duke Power Company
PROCEDURE PROCESS RECORD (1) ID No. HP/0/B/1009/022
Revision No. 003

PREPARATION

(2) Station McGuire Nuclear Station

(3) Procedure Title Accident and Emergency Response

(4) Prepared By Gary Terrell *Gary Terrell* Date January 23, 2002

- (5) Requires NSD 228 Applicability Determination?
- Yes (New procedure or revision with major changes)
 - No (Revision with minor changes)
 - No (To incorporate previously approved changes)

(6) Reviewed By Donald Miller (QR) Date 1-23-02

Cross-Disciplinary Review By _____ (QR) NA *DM* Date 1-23-02

Reactivity Mgmt. Review By _____ (QR) NA *DM* Date 1-23-02

Mgmt. Involvement Review By _____ (OPS Supt.) NA *DM* Date 1-23-02

(7) Additional Reviews

Reviewed By B. L. Murray Date 1-31-02

Reviewed By _____ Date _____

(8) Temporary Approval (if necessary)

By _____ (OSM) Date _____

By _____ (QR) Date _____

(9) Approved By Lance E. Louches Date 02-05-02

PERFORMANCE (Compare with Control Copy every 14 calendar days while work is being performed.)

(10) Compared with Control Copy _____ Date _____

Compared with Control Copy _____ Date _____

Compared with Control Copy _____ Date _____

(11) Date(s) Performed _____

Work Order Number (WO#) _____

COMPLETION

(12) Procedure Completion Verification

Yes NA Check lists and/or blanks initialed, signed, dated, or filled in NA, as appropriate?

Yes NA Required enclosures attached?

Yes NA Data sheets attached, completed, dated and signed?

Yes NA Charts, graphs, etc. attached, dated, identified, and marked?

Yes NA Procedure requirements met?

Verified By _____ Date _____

(13) Procedure Completion Approved _____ Date _____

(14) Remarks (Attach additional pages, if necessary.)

Duke Power Company
McGuire Nuclear Station

Accident and Emergency Response

Information Use

Procedure No.

HP/0/B/1009/022

Revision No.

003

Electronic Reference No.

MC0095LX

Accident and Emergency Response

1. Purpose

This procedure describes the actions to be taken by personnel to effectively and efficiently cope with a variety of accident conditions. Responses for the following accidents are included in this procedure:

- 1.1 Spills
- 1.2 Airborne releases
- 1.3 Personnel injury involving contamination
- 1.4 Fires in the Restricted Area
- 1.5 New Fuel Storage - Inadvertent Criticality Event
- 1.6 Kr-85 Hazard following a spent fuel accident

The level of use for this procedure is Reference Use.

2. References

- 2.1 SH/0/B/2001/003, Investigation of Skin and Clothing Contaminations
- 2.2 HP/0/B/1008/010, Airborne Radioactivity Control and Accountability
- 2.3 HP/0/B/1009/023, Environmental Monitoring for Emergency Conditions
- 2.4 Radiation Protection Policy Manual, Policy Number II-02, Planned Special Exposures and Emergency Dose Limits for Occupationally Exposed Personnel
- 2.5 Radiation Protection Policy Manual, Policy Number II-01, Occupational Dose Limits
- 2.6 SH/0/B/2000/005, Posting of Radiation Control Zones
- 2.7 Nuclear System Directive 112, Fire Brigade Organization, Training Responsibilities
- 2.8 SH/0/B/2000/004, Taking, Counting, and Recording Surveys
- 2.9 HP/0/B/1009/003, Recovery Plan
- 2.10 SH/0/B/2001/004, Investigation of Unusual Radiological Occurrences

3. Limits and Precautions

- 3.1 The Station Radiation Protection Manager (RPM) or his designee shall determine the need for high range personnel and/or extremity dosimetry and respiratory protection prior to any recovery personnel entering the plant after an accident/incident.
- 3.2 In accident conditions where exposure in excess of normal quarterly limits is anticipated, i.e., planned emergency exposure, refer to Radiation Protection Policy Manual Policy Number II-02 (Reference 2.4).
- 3.3 Personnel decontamination shall **NOT** take precedence over proper medical/surgical care.
- 3.4 The Station Radiation Protection Manager is to be notified as soon as possible of all incidents involving radioactive materials (spills, leaks, source breakage, loss, etc.) and of all radiation accidents, accidental releases, or injuries to personnel (wounds, contamination, overexposure, ingestion or inhalation of radioactive material).

4. Procedure

4.1 Spills

4.1.1 The general rule of thumb for spills is the SWIMS concept:

4.1.1.1 Stop the spill - by righting the container; isolating the system, if possible.

4.1.1.2 Warn others - notify other personnel in the area or who may be affected by the spill and Radiation Protection.

4.1.1.3 Isolate the area - through the use of barricades, signs, etc.

4.1.1.4 Minimize exposure and contamination spread - using only those personnel necessary for cleanup and utilizing absorbent material at the outer edges.

4.1.1.5 Secure unfiltered exhaust and all supply ventilation in cases where airborne contamination may be a problem.

4.1.2 Major Spills

4.1.2.1 Handle as in 4.1.1.

4.1.2.2 Notify the Operations Shift Manager/Designee of the circumstances.

- 4.1.2.3 **IF** the spill is uncontrollable or **CANNOT** be contained inside the RCA notify the Station Radiation Protection Manager as soon as possible.
 - 4.1.2.4 **IF** the spill is uncontrollable and **CANNOT** be completely decontaminated, maintain documentation as required by Reference 2.10.
- 4.2 Inadvertent release of radioactive particulates and/or iodines within the Radiation Control Area.
- 4.2.1 Notify all persons to vacate the room or immediate areas at once, and to proceed to the nearest safe location, taking care **NOT** to spread contamination unnecessarily.
 - 4.2.2 Notify the Operations Shift Manager/Designee immediately.
 - 4.2.3 Notify Radiation Protection Supervision immediately and report all known or suspected inhalation of radioactive materials. Assume that all persons immediately involved were exposed.
 - 4.2.4 Proceed to nearest contaminated change room.
 - 4.2.5 Take immediate steps to monitor and decontaminate personnel involved.
 - 4.2.6 Radiation Protection shall:
 - 4.2.6.1 Monitor all persons suspected of being contaminated, and assist with their decontamination.
 - 4.2.6.2 Take immediate steps to evaluate the radiological situation, and determine the requirements to reenter the area.
 - 4.2.6.3 Determine the cause of the contamination, and take steps to remedy the situation.
 - 4.2.6.4 Supervise reentry, decontamination and recovery work.
 - 4.2.6.5 Approve or limit further use of the area or equipment involved.
 - 4.2.6.6 Perform a complete survey of the area before permitting resumption of work, after decontamination and cleanup have been completed.
 - 4.2.6.7 Prepare records of the incident, for station records and report purposes.

4.2.6.8 Notify the Compliance Engineer about the incident and reports.

4.3 Personnel injury involving radiation or radioactive materials.

4.3.1 In the event of an injury involving radiation or radioactive materials notify the Operations Shift Manager/Designee immediately.

4.3.2 Evaluate the radiological implications and assist in radiation and contamination control and in decontaminating personnel as necessary per SH/0/B/2001/003 (Reference 2.1).

4.3.3 In case of severe injury, decontamination shall **NOT** interfere with or take precedence over proper medical and surgical care.

NOTE: MERT responders are responsible for all decisions involving patient care, including the need for transportation to an off-site facility.

4.3.3.1 Notify the Operations Shift Manager/Designee of any special considerations (i.e., type of injury, contamination levels present, etc.). Operations Shift Manager/Designee will notify off-site facilities.

4.3.3.2 First aid shall be given, and a Senior Radiation Protection Technician shall accompany the injured person(s) to the doctor or hospital, taking precautions to prevent the spread of contamination. **IF** Radiation Protection personnel are available, one technician should accompany each vehicle transporting injured person.

4.3.3.3 **IF** a contaminated injury occurs during nights, weekends, or holidays notify one of the designated management personnel by telephone or emergency pager. A call list is posted in the Shift Lab and at the Field Operations duty desk. RP Management will meet the Senior RP Technician at the medical facility.

4.3.3.4 In all cases, where injuries or illnesses have occurred within the RCA, documentation of the event shall be performed by a Senior Radiation Protection Specialist or Senior Contract Technician.

4.3.3.5 In situations where personnel have been decontaminated prior to transport to a medical facility, documentation of the event shall be performed per SH/0/B/2001/003 (Reference 2.1).

- 4.3.3.6 In situations where personnel have **NOT** been contaminated as a result of injury or illness within the RCA, document the event on a blank survey form, stating that the injured/ill individual was evaluated for contamination and released.
- 4.3.3.7 Radiation Protection shall notify the Operations Shift Manager/Designee when the person has been deconned below station limits or determined to be free of contamination.
- 4.3.3.8 Upon completion of medical aid, Radiation Protection shall survey the medical facility for contamination and assist in any necessary decontamination to be performed.
- 4.3.3.9 Any liquid or debris either in the ambulance or at the medical facility that is found to be contaminated or has the possibility of being contaminated (i.e. liquid used to flush a contaminated wound) with byproduct material from McGuire Nuclear Station (MNS) must be deconned or brought back to MNS for processing. (The bag(s) will be tagged "Medical Waste", placed in a separate RCZ in Room 1202 and RMC will be contacted.)

4.4 Fires Within the Restricted Area

- 4.4.1 Nuclear System Directive 112 (Reference 2.7) requires that a minimum of one (1) Radiation Protection Technician trained to Radiation Protection Fire Response, respond to a fire or fire drill. **WHEN** an actual fire or fire drill in the Radiation Control Area is announced over the public address system (or beeper system) at least one person qualified to task RP-280 shall respond with the following equipment:
- radio on channel 1 (located in Shift Lab)
 - E-520 w/pancake probe, (located in Shift Lab)
 - high range ion chamber and/or teletector, (located in Shift Lab)
 - smears, (Shift fire response kit)
 - air sampler (Shift fire response kit)
 - particulate and charcoal cartridges (Shift fire response kit)
 - 50 foot extension cord (Shift fire response kit)
 - red RP vest so the RP is easily identifiable (Shift fire response kit)

- 4.4.1.1 At first notification of a fire outside the RCA but inside the restricted area, RP technicians can respond with a single ion chamber instrument. **IF** the severity of radiological conditions increases, call the RP Shift Lab, (4282), RP Field Operations Office, (2027) or OSC (4978), for equipment support.
- 4.4.2 The RP technician(s) shall report to the fire brigade leader at the fire site and provide radiological assistance. This assistance includes assessing airborne activity, radiation levels, contamination control and ensuring everyone has the proper dosimetry. **IF** the fire involves or potentially involves radioactive material, perform the following:
- 4.4.2.1 Establish an airborne radioactivity area boundary. Without jeopardizing safety precautions, pull a grab air sample as close as possible to the area where fire fighters will combat the fire. Pull sequential air samples every 30 ft. until a boundary of < .25 DAC (100 ccpm on E-520 setup for cpm) can be established.
- A. Perform DAC accounting for all personnel who enter the airborne radioactivity area boundary per HP/O/B/1008/010 (Reference 2.2).
 - B. Under situations where an airborne radioactivity area boundary is established, ensure the fire brigade leader and other support personnel move to an area of < 10 DAC (4000 ccpm on E-520 setup for cpm) or utilize appropriate respiratory protection.
 - C. The only time it is necessary to pull an air sample in "smoke clouds" is outside where burning radioactive material would constitute an effluent release that is **NOT** monitored or controlled. In this instance pull an air sample downwind of the smoke plume.
 - D. **IF** the fire is within the restricted area but outside of buildings that have electrical sockets, other power sources must be located. Inform the fire brigade leader that a portable gas powered generator or an emergency van is needed to provide a power supply for air sampling.
- 4.4.2.2 Establish radiation levels in the area where firefighters will combat the fire. Determine the following:

- A. Do firefighting personnel have sufficient remaining dose to combat the casualty? i.e, will whole body and/or administrative limits be exceeded?
- B. Will extremity dosimetry be necessary?
 - 1. The Radiation Protection Technician shall inform the fire brigade leader if exposure limits may be exceeded, and to do so without the approval described in Radiation Protection Policy Manual Policy Number II-01 (Reference 2.5) will result in a 10CFR20 and/or a Tech. Spec. Violation. Several options are available including, request back up fire brigade members to combat the fire; request verbal approval for extensions over the radio/telephone; assume the responsibility of exceeding such limits; and/or stop fire fighting actions and plan emergency exposures as described in Radiation Protection Policy Manual Policy Number II-02 (Reference 2.4).
 - 2. **IF** extremity dosimetry or high range dosimetry will be necessary, continue firefighting actions and request the appropriate dosimetry via the fire brigade leader.
- C. Establish an RCZ for radiation levels and contamination in accordance with SH/O/B/2000/005 (Reference 2.6), but far enough back to allow the firefighters to work unencumbered.

4.5 Fires at McGuire outside of the Restricted Area during the day shift.

- 4.5.1 On the day shift when a fire, or fire drill is announced over the page (or beeper system) at McGuire, any Radiation Protection Technician currently on the fire brigade shall report to the fire brigade assembly area in the truck corridor of the turbine building (outside the Maintenance Shop).

4.6 New Fuel Storage - Inadvertent Criticality Event

- 4.6.1 Indications of an inadvertent criticality event could occur during the receipt of new fuel or while new fuel is stored in the New Fuel Storage Vault. In either case:
 - 4.6.1.1 The Control Room will contact RP Shift in the event that valid trip 2 alarms are received on either 1EMF20 and/or 1EMF21 (U-1 New Fuel Storage) or 2EMF7 and/or 2EMF8 (U-2 New Fuel Storage).

- 4.6.1.2 A valid reading could be confirmed by monitoring the OAC for increases on 1EMF20, 1EMF21 or 2EMF7, 2EMF8.
 - 4.6.1.3 During normal working hours, RP Shift shall contact the RP S&C Duty Technician at 2027 or 4847 and relay any applicable information concerning EMF alarm conditions. S&C Technicians should respond immediately to the affected and follow the guidance in Section 4.6.2.
 - 4.6.1.4 RP Shift shall monitor the affected Spent Fuel Building ventilation (1 or 2EMF42) and the affected Unit Vent for increase in activity, as time allows. Follow required sampling procedures should trip 2 conditions on either 1 or 2EMF42 and/or 1 or 2EMF36(L) exist.
- 4.6.2 RP Technicians responding to the affected Spent Fuel Building shall take the following actions:
- 4.6.2.1 Obtain appropriate ion chamber and portable neutron detection instruments. RP Technicians covering the receipt of new fuel should have portable neutron detection instruments in their possession. {56}
 - 4.6.2.2 Immediately evacuate all personnel from the affected New Fuel Storage area and Spent Fuel Building. Instruct personnel to use the CAD door emergency egress function to leave the area and report to the Hot Change Room for evaluation. {56}
 - 4.6.2.3 Monitor gamma and neutron dose rates on 760' elevation.
 - 4.6.2.4 Monitor gamma and neutron dose rates on the outside of the New Fuel Storage Vault and the North Yard to the site boundary fence. Evacuate personnel as necessary.
 - 4.6.2.5 Inform the Operations Shift Manager, or qualified designee, of dose rates encountered in the Spent Fuel Building, the North Yard and at the site boundary fence.
 - 4.6.2.6 Request Security to CAD secure access to the affected area. {56}
 - 4.6.2.7 Post affected areas of the North Yard in accordance with SH/0/B/2000/005 (Reference 2.6).
 - 4.6.2.8 Monitor and evaluate any personnel evacuated from the area for exposure received and internal deposition.

- 4.6.3 Do not enter the affected area until a complete assessment of conditions warrants safe re-entry. Follow the guidance in HP/0/B/1009/003 (Reference 2.9).

4.7 Kr-85 Hazard following a Spent Fuel Accident {59}

NOTE: Kr-85 can be a significant radiological skin dose hazard following a spent fuel bundle accident.

- 4.7.1 Take the following action if a bundle is dropped during movement or if a fuel bundle rupture is suspected:
- 4.7.1.1 Notify all persons to immediately vacate the area of concern and to proceed to the nearest safe location, taking care **NOT** to spread contamination unnecessarily.
 - 4.7.1.2 Notify the Operations Shift Manager/designee immediately.
 - 4.7.1.3 Do **NOT** enter the affected area until a complete assessment of conditions warrants safe re-entry. Follow the guidance in HP/0/B/1009/003 (Reference 2.9). The following are special considerations for re-entry following a spent fuel accident:
 - A. **IF** possible before re-entering the area, collect a remote gas sample to determine the concentration of Kr-85.
 - B. Do **NOT** use an area radiation monitor to provide an indication that a high concentration of Kr-85 exists. Kr-85 has a low gamma abundance; consequently, an area radiation monitor would be unreliable.
 - C. Use an RO-2, an RSO-50, or equivalent sealed in a plastic bag with the beta window open to provide a direct Kr-85 dose rate. Be aware that the beta instrument may **NOT** indicate a high concentration of Kr-85 until the cloud reaches the detector.

5. Enclosures

- 5.1 Commitments for HP/0/B/1009/022

Enclosure 5.1

HP/0/B/1009/022

Commitments for HP/0/B/1009/022

Page 1 of 1

- | | | |
|------|----------------|---|
| {56} | PIP 1-M97-1361 | Additional procedural guidance concerning Radiation Protection response to inadvertent criticality event. |
| {59} | IN 90-08 | Kr-85 Hazard from Decayed Fuel. Ensure that specific hazards of Kr-85 are addressed during a spent fuel accident. |

Duke Power Company
PROCEDURE PROCESS RECORD (1) ID No. HP/0/B/1009/023
Revision No. 004

PREPARATION

(2) Station McGuire Nuclear Station

(3) Procedure Title Environmental Monitoring for Emergency Conditions

(4) Prepared By Gary Terrell *Gary Terrell* Date January 23, 2002

- (5) Requires NSD 228 Applicability Determination?
 - Yes (New procedure or revision with major changes)
 - No (Revision with minor changes)
 - No (To incorporate previously approved changes)

(6) Reviewed By Robert E. Bechman (QR) Date 1/24/02

Cross-Disciplinary Review By _____ (QR) NA REB Date 1/24/02

Reactivity Mgmt. Review By _____ (QR) NA REB Date 1/24/02

Mgmt. Involvement Review By _____ (OPS Supt.) NA REB Date 1/24/02

(7) Additional Reviews

Reviewed By K.L. Murray Date 1-31-02

Reviewed By _____ Date _____

(8) Temporary Approval (if necessary)

By _____ (OSM) Date _____

By _____ (QR) Date _____

(9) Approved By Lance E. Toucher Date 02-05-02

PERFORMANCE (Compare with Control Copy every 14 calendar days while work is being performed.)

(10) Compared with Control Copy _____ Date _____

Compared with Control Copy _____ Date _____

Compared with Control Copy _____ Date _____

(11) Date(s) Performed _____

Work Order Number (WO#) _____

COMPLETION

(12) Procedure Completion Verification

Yes NA Check lists and/or blanks initialed, signed, dated, or filled in NA, as appropriate?

Yes NA Required enclosures attached?

Yes NA Data sheets attached, completed, dated and signed?

Yes NA Charts, graphs, etc. attached, dated, identified, and marked?

Yes NA Procedure requirements met?

Verified By _____ Date _____

(13) Procedure Completion Approved _____ Date _____

(14) Remarks (Attach additional pages, if necessary.)

Duke Power Company
McGuire Nuclear Station

**Environmental Monitoring for Emergency
Conditions**

Information Use

Procedure No.

HP/0/B/1009/023

Revision No.

004

Electronic Reference No.

MC0095LY

Environmental Monitoring for Emergency Conditions

1. Purpose

To provide a systematic method for identifying airborne plumes or liquid effluents, and obtaining field data indicative of the radiation exposure to the general public, following a release of radioactive material.

The level of use for this procedure is Information Use.

2. References

- 2.1 HP/0/B/1009/027, Operation of ESP-2
- 2.2 PT/0/A/4600/088, Functional Check of Emergency Vehicle and Equipment
- 2.3 SH/0/B/2005/002, Protocol for the Field Monitoring Coordinator During Emergency Conditions

3. Limits and Precautions

- 3.1 During drills/exercises, Field Monitoring Team(s) (FMTs) shall NOT be required to don respirators. This is to assure safe vehicle operation during drill/exercise. During emergency situations respirator use may be required.
- 3.2 FMT personnel shall be aware of dose and dose rate alarm setpoints on DMC-2000s used in the field. Dose and dose rate alarms are referenced on RWP 98.
- 3.3 After the use of any Emergency Kit, a full inventory of that kit is required per PT/0/A/4600/88 (Reference 2.2). The checklist in the kit shall be signed and dated each time the kit is inventoried.

4. Procedure

- 4.1 Field Monitoring Team (FMT) Activation and Dispatch
 - 4.1.1 Upon activation of the Emergency Response Organization, report to the OSC.
 - Form two teams to perform initial surveys for plume boundary. **IF** necessary dispatch additional beta/gamma monitoring teams.
 - Drivers for Field Monitoring Vehicles are provided by C&F. Ensure that each team has a driver prior to leaving the OSC.

- Personnel **NOT** trained for emergency response may assist a trained Radiation Protection Technician to do surveys and/or drive emergency vehicles.
 - Communicate team assignment to the OSC RP Supervisor, or qualified designee.
- 4.1.2 In the OSC, use any issued pocket dosimeter until DMC-2000s have been obtained. Leave pocket dosimeters in the supply cabinets upon dispatch. Return PD's to the OSC upon returning to the site.
- 4.1.3 The OSC RP Supervisor, or qualified designee, shall brief at least one member of each FMT on current plant conditions (plant status, release in progress, emergency classification).
- 4.1.4 Following the plant status brief from the OSC RP Supervisor, obtain current meteorological data using the guidance in Enclosure 5.11.
- 4.1.5 **WHEN** directed, make preparations for dispatch by completing pre-dispatch portion of Enclosure 5.1 (Sample Van) or Enclosure 5.2 (Survey Vehicle).
- The Radiation Protection Manager can elect to dispatch FMT's at his/her discretion.
- 4.1.6 Follow FMC direction concerning protective dress requirements according to existing conditions per RWP-98.
- 4.2 Field Monitoring Team (FMT) Communications
- 4.2.1 Maintain open radio communications with the FMC. **IF** the radio becomes inoperable, telephone:
- TSC Dose Assessment 875-4976
- FMC at EOF (704) 382-0735/0736
- RP Sample Van 1 (cellular phone) 534-1563
- RP Sample Van 2 (cellular phone) 534-1564
- 4.2.2 Provide pertinent, general information. **DO NOT** provide detailed, specific plant information.
- 4.2.3 During a drill, repeat the statement, "This is a drill", or, "This is an exercise message," with each radio transmission using the proper radio call signs (Base - WQC700, Mobile -KA82138).

- 4.2.3.1 The Base Station must give the radio call sign with each transmission.
- 4.2.3.2 The field teams do **NOT** have to use the radio call sign when addressing the Base Station. The field teams must give the radio call sign when addressing other field teams.
- 4.2.3.3 For any backup sampling vans from other stations, the call sign shall be preceded by the station name (example "Oconee sample van 1").
- 4.2.3.4 Vehicles drawn from the McGuire garage that are designated as beta/gamma survey teams shall use 'alpha, bravo, charlie, and delta' designations during radio messages.
- 4.2.3.5 **WHEN** transmitting vital information, use repeat back method of communications and the phonetic alphabet.
- 4.2.3.6 Follow FCC guidelines for radio communications at all times.

4.3 Locating and Tracking the Plume

- 4.3.1 Begin plume boundary identification by monitoring dose rates while traversing east and west of the site (\approx 0.5 miles), traveling on owner controlled roads only.
 - 4.3.1.1 East of site - travel from the Hwy. 73 (stoplight) entrance to the MOC to the end of the discharge canal fishing area.
 - 4.3.1.2 West of site - travel from the medical facility parking lot to approximately the lower level intake using the road by the Initial Holdup Pond.
 - 4.3.1.3 Communicate location to the TSC and/or EOF when plume edge is identified. Any change in background dose rate shall be assumed to indicate plume edge. Communicate changes in dose or count rates immediately.
 - 4.3.1.4 DO **NOT** enter the plume unless directed by the FMC.
- 4.3.2 Be prepared to take full direction from the Field Monitoring Coordinator (FMC) at the EOF, when that position is prepared to do so.

- 4.3.2.1 Major roadways delineate major territories surrounding the plant. Either all or a portion of these sections would be expected to be affected to some degree by radioactivity released from the plant. Utilize major roadways to access suspected regions (outer edges, leading edge(s), centerline) of the plume, as necessary.
- A. Major roadways on the EPZ map are identified by numerical designations and responsibility level (federal, state, county or city) designations.
 - B. Selected roadways on the EPZ map are identified by a specific name, rather than a numerical responsibility designation.
- 4.3.2.2 Each predetermined sampling location is denoted by a red text oval on the map. The sampling point designator indicates the protective action zone the point is in and the mileage from the plant.
- A. The FMC should use the points as landmarks when directing the teams.
 - B. The point locations can be read directly from the map or from the directions in Enclosure 5.6.
- 4.3.2.3 While enroute and at sampling locations, report the maximum radiation level, and location of plume boundaries to the FMC.
- 4.3.2.4 Record radiation dose rates and sample results on Enclosure 5.7.
- 4.3.2.5 Once a release has occurred, close vehicle windows and place ventilation off or on recirculation to minimize contamination until the plume area is identified.
- 4.3.2.6 Ensure that count rate meter is on and is monitored during transport to sampling locations.
- 4.3.2.7 **IF** any equipment becomes inoperable, notify the FMC and await further instructions.
- 4.3.2.8 Record plant status update information on Enclosure 5.8.
- 4.3.2.9 Verify worker classification changes on RWP with changes in plant conditions.

- 4.3.2.10 Record any or no exposure received and turn in dose cards upon returning to site. Submit dose cards as record for all drills and exercises.

CAUTION: Park vehicles completely off the road when sampling and use emergency flashers and the strobe while stopped.

Wear reflective vests when leaving a vehicle parked on the roadside for sampling. Vests are stored in the rear section cabinet with protective clothing.

- 4.4 **WHEN** directed, collect additional environmental samples, including but **NOT** limited to: air samples, smears of surrounding areas, integrated dose over a period of time with TLDs, vegetation, sediment, water, and milk, as requested by the FMC. Label and save each for analysis. FMTs may also be requested to retrieve and replace environmental air samplers and/or TLDs.

4.4.1 To collect a vegetation sample, use the shears to cut enough broad leaf vegetation to fill a 12"x12" poly bag.

4.4.2 To collect a soil sample, estimate one square foot of soil and dig out one inch deep.

4.4.3 To collect a water sample, fill a one gallon cubitainer. For differences in elevation, or samples that are difficult to obtain, use the limnological sampling equipment (see Enclosure 5.3).

4.4.4 To perform a contamination survey, take smears on stationary, horizontal surfaces, e.g. mailboxes, gas pumps, etc., **DO NOT perform contamination surveys on automobiles!**

4.4.5 To collect an air sample:

NOTE: Be aware of terrain during air sampling or surveying (i.e. windbreaks formed by landscape or vegetation) which could inhibit acquiring representative samples.

4.4.5.1 Position sample van air sampling port in the direction of the plant.

4.4.5.2 Load Particulate and Charcoal (P&C) cartridge into P&C holder.

4.4.5.3 Remove the cover from the air sampling port.

4.4.5.4 Insert P&C holder into the sample port to ensure outside air is sampled.

- 4.4.5.5 Start air sampler and run for required time. (Normal air sample is 5 minutes at 2 CFM).
- 4.4.5.6 Stop the air sampler.
- 4.4.5.7 Remove P&C holder from the air sampling port.
- 4.4.5.8 Replace cover on air sample port.
- 4.4.5.9 Move van to a low background area.
- 4.4.5.10 **WHEN** van is no longer in the plume, purge the P&C by permitting 15 ft³ of air to flow through the sample cartridge. (7.5 minutes @ 2 cfm)
- 4.4.5.11 Remove the P&C from the P&C holder.
- 4.4.5.12 Separate the P&C.
- 4.4.5.13 Label particulate and charcoal and retain the particulate filter for gamma spec analysis.
- 4.4.5.14 Count the air sample charcoal cartridge, document and report results using Reference 2.1.
- 4.4.5.15 Retain the charcoal cartridge for further analysis.

4.5 FMT Turnover

- 4.5.1 FMTs shall be relieved as directed by the FMC.
- 4.5.2 Provide turnover to the relief FMTs, using Enclosure 5.10.
- 4.5.3 Turn in all data sheets to the FMC as directed.
- 4.5.4 After being relieved, report to a counting facility designated by the FMC for a post-job BBA.

5. Enclosures

- 5.1 Sample Van FMC Checklist
- 5.2 Survey Vehicle FMT Checklist
- 5.3 List of Designated Limnological Sample Points
- 5.4 Detailed Guide to All TLD Sample Locations

- 5.5 List of Designated Milk Sample Locations
- 5.6 Directions for Predetermined Survey/Sampling Locations
- 5.7 Field Monitoring Survey Data Sheet
- 5.8 Periodic Status Update for Field Monitoring Teams
- 5.9 Vehicle Refueling
- 5.10 FMT Turnover Checklist
- 5.11 Obtaining Meteorological Data from SDS

SAMPLE VAN FMT CHECKLIST

PRE-DISPATCH

- Ensure that current plant status and meteorological information has been obtained.
- Obtain Emergency key set (#905 and 906) from Security at the PAP. Proceed to the equipment storage area (Room 158 of the Administration Building) and unlock the equipment storage locker.
- Obtain the following equipment: Normal issue TLD, electronic dosimeter (DMC-2000) and a dose card. Sign in on RWP-98. Ensure the DMC-2000 is on and has been re-zeroed. ED alarm setpoints are 50 mR/hr (dose rate) and 15 millirem (accumulated dose). ED's are reset by placing in the manual reader provided.
- Obtain portable instruments (ion chamber and count rate meters) and source check. Survey the area for radiation levels.
- Remove portable radios from chargers (one unit for each FMT). Screw in the antenna to the top of the radio. Turn the off/on/volume control switch on the top of the radio until SELF TEST is displayed on the front. **IF MCGUIRE C17 does NOT display after SELF TEST**, turn the numbered switch on the top of the radio to position 3 and lock with the locking ring. Ensure that the small toggle switch is set to position "A".
- Test the radios using the mobile call sign: **"WQC 700, McGuire Base, this is KA8-2138, portable radio check. Do you copy?"** **IF** McGuire Base does **NOT** respond, perform radio checks with the other sample van using the mobile call sign **"KA8-2138, Sample Van _____ (other sample van), this is Sample Van _____ (your sample van) portable radio check. Do you copy?"**

IF a radio does **NOT** function, remove it from service by removing the battery. Ensure that the radio is turned off before removing or replacing any battery.
- Obtain all other necessary equipment: respirators, ESP-2's and check sources. Obtain canvas bags ESK-1 or ESK-2 (sample van kits). They can be used to carry instruments and respirators. All protective clothing is located in the back cabinet of the sample vans.
- One team shall call the TSC Dose Assessor at 875-4976 to determine the status of any release and communicate this information to the other teams.
- Proceed to the sample vans monitoring portable instruments in transit. Start sample van engines and stabilize inside temperature.
- Turn on the sample van radio. The unit will display SELF CHECK and MCGUIRE in sequence. **IF** MCGUIRE is **NOT** displayed after SELF CHECK, press the MODE key until MCGUIRE is displayed.
- Test the radios using the mobile call sign: **"WQC 700, McGuire Base, this is KA8-2138, sample van 1 (or 2). Do you copy?"** **IF** McGuire Base does **NOT** respond, perform radio check with the other sample van using the mobile call sign: **"KA8-2138 Sample Van _____ (other sample van), this is Sample Van _____ (your van). Do you copy?"**

SAMPLE VAN FMT CHECKLIST

- Turn on the cellular phone. Unlock the phone for use by pressing the last three (3) numbers of the cell phone number. Test the phone by calling TSC dose assessment at 875-4976. It may be necessary to move the vans from under the unit high voltage lines to test the cellular phones.
- Start the power inverter (located behind the left side of the driver's seat) to the ON position. The air sampler and plug mold strip are now energized. The air sampler is located on the left side arm rest, back seat.
- Set up ESP-2's. Perform background and source checks in accordance with HP/0/B/1009/027. Sample vans should perform background and source checks while the van is stationary. Report any problems to the TSC/EOF.
- Notify TSC Dose Assessors that pre-dispatch checks are complete and: (circle one)
 - a. Sample Van _____ (1,2) is proceeding west of the plant to traverse from Medical Facility parking lot to approximately the lower level intake using the road by the initial holdup pond.
 - b. Sample Van _____ (1,2) is proceeding east of the plant to traverse from Hwy 73 (stop light) entrance to the MOC to the end of the discharge canal fishing area.
 - c. Sample Van _____ (1,2) is standing by at _____ (location).

UPON RETURNING TO THE SITE:

- Ensure mobile van radios are switched off.
- Ensure that power inverter is turned to the OFF position.
- Perform inventory of protective clothing and emergency equipment per PT/0/A/4600/88. (Notify the RP Staff Scientist of any discrepancies.)
- Turn off all instruments and portable radios and place in storage cabinet.
- Remove portable radio antennas and place radio into a charging unit.
- Ensure that ED's display the calibration date and place in storage cabinet.
- Ensure that storage cabinet is closed and locked.
- Turn in all relevant surveys and checklists.
- Turn in dosecards to DRC.
- Return keys to Security at the PAP.

SURVEY VEHICLE FMT CHECKLIST

PRE-DISPATCH

- Ensure that current plant status and meteorological information has been obtained.
- Obtain Emergency key set (#905 and 906) from Security at the South PAP. Proceed to the equipment storage area (Room 158 of the Administration Building) and unlock the equipment storage locker.
- Obtain the following equipment: a normal issue TLD, electronic dosimeter (DMC-2000) and a dose card. Sign in on RWP-98. Ensure the DMC-2000 is on and has been re-zeroed. ED alarm setpoints are 50 mR/hr (dose rate) and 15 millirem (accumulated dose). ED's are reset by placing in the manual reader provided.
- Obtain portable instruments (ion chamber and count rate meters) and source check. Survey the area for radiation levels.
- Remove portable radios from chargers (one unit for each FMT). Screw in the antenna to the top of the radio. Turn the off/on/volume control switch on the top of the radio until SELF TEST is displayed on the front. **IF** MCGUIRE C17 does **NOT** display after SELF TEST, turn the numbered switch on the top of the radio to position 3 and lock with the locking ring. Ensure that the small toggle switch is set to position "A".
- Test the radios using the mobile call sign: **"WQC 700, McGuire Base, this is KA8-2138, portable radio check. Do you copy?"** **IF** McGuire Base does **NOT** respond, perform radio check with one of the sample vans using the mobile call sign:
"KA8-2138, Sample Van _____ (1 or 2), this is a portable radio check. "Do you copy?"
IF a radio does **NOT** function, remove it from service by removing the battery. Ensure that the radio is turned off before removing or replacing any battery.
- Obtain the designated emergency kits ESK-3 or ESK-4 (canvas bags) from the locker. All other necessary equipment is located in the kits.
- Proceed to the McGuire Garage by personal vehicle or Sample Van. **IF** obtaining pool vehicles after hours, weekends or holidays, call Security from the Garage gate phone to gain access. The phone number is located on the phone housing.

SURVEY VEHICLE FMT CHECKLIST

- Notify the TSC Dose Assessor that pre-dispatch checks are complete and; (circle one)
- a. Survey Vehicle _____ (alpha, bravo, charlie, delta) is proceeding west of the plant to traverse from Medical Facility parking lot to approximately the lower level intake using the road by the initial holdup pond.
- b. Survey Vehicle _____ (alpha, bravo, charlie, delta) is proceeding east of the plant to traverse from Hwy 73 (stop light) entrance to the MOC to the end of the discharge canal fishing area.
- c. Survey Vehicle _____ (alpha, bravo, charlie, delta) is standing by at _____ (location)

UPON RETURNING TO THE SITE:

- Perform inventory of emergency equipment per PT/0/A/4600/88 (Reference 2.2).
Notify the RP Staff Scientist of any discrepancies.
- Turn off all instruments and portable radios and place in storage cabinet.
- Remove portable radio antennas and place radio into charging unit.
- Ensure that ED's display the calibration data and place in storage cabinet.
- Ensure that storage cabinet is closed and locked.
- Turn in all relevant surveys and checklists.
- Turn in dosecards to DRC.
- Return emergency key set to Security.

List of Designated Limnological Sample Points

Mt Holly Intakes - Sector E (South ~ 5 miles)

Sample elevation - 630'

Accessible on Hwy 273, north of Duke Power Mt. Holly Training Center.

Charlotte Intakes - Sector E (South) 5-6 miles

Sample elevation 635' - Unit 1 intake

640 - Unit 2 intake

637' - Unit 3 intake

Accessible by land on SR 2004 (Mt. Holly-Huntersville Road)(Pump Station Road)

LIMINOLOGICAL SAMPLING DIRECTIONS

- (1) Pull one of the blue stoppers out of the end of the main tube and attach the wire loop to one of the small pins on the handle tripping mechanism.
- (2) Repeat for the other stopper.
- (3) Lower the bottle under water keeping the line taut, and drop the weight to strike the tripping mechanism. This will release the cables and close the bottle.
- (4) For shoreline sampling when the elevation difference is small, attach one stopper and fill the bottle with water by scooping. The bottle can now be closed and the black nozzle used to empty the sample into a cubitainer.

<p>NOTE: 1. Full lake elevation is 760'. 2. Catawba River spillway elevation (for Charlotte intakes) is 647'6"</p>

Detailed Guide to All TLD Sample Locations

This enclosure is meant to provide a guide to one who is **NOT** familiar with the environmental TLD sample route. Appropriate deviations from this sequence and route may be made as necessary.

A. Sample location numbers:

- 143 - Point of land north of intake pumps.
- 144 - On the fence, at air sampling site #120, near E.P. Boat House.
- 145 - On the fence, at air sampling site #121, near guard house at Training and Technology Center.
- 146 - Shoreline of discharge canal, below the bridge.
- 147 - On the fence, at the Training and Technology Center, Environmental Laboratory, behind the QA building, next to the beige aluminum building.
- 148 - Second utility pole on the right-hand side of Energy Explorium Entrance from Hwy. 73.
- 149 - Near site fence, 200 feet east of U-2 Access Road on Hwy. 73.
- 151 - Fence east side inside O.C. (Owner Controlled) Gate #2.
- 152 - Near railroad tracks west of McGuire main entrance.
- 153 - Clearing on the left, inside O.C. (Owner Controlled) Gate #4 (S. River Gate).
- 154 - Edge of river bank, access O.C. (Owner Controlled) Gate #5 (Lower Dam Access).
- 156 - Top of earthen dam, access O.C. (Owner Controlled) Gate #7.
- 157 - Williamson access area (on the Mecklenburg Neck) on utility pole just beyond access sign.
- 158 - End of state maintained Road #2189 (Bethel Church Road).
- 159 - Anchorage Marine Shipyard at Holiday Harbor Marina.
- 160 - On the fence, at Anchorage Marine Showroom.
- 161 - Main power pole at the intersection of Hwy. 21 and Hwy. 73.
- 162 - First power pole at the intersection of Gilead Road and State Road #2139.
- 163 - At the intersection of Hambright Road and McCoy Road (State Road #2138).
- 164 - Power pole at the intersection of Beatties Ford Road and Hambright Road.
- 165 - Approximately 2 miles down power plant road from River Bend Steam Station.

Detailed Guide to All TLD Sample Locations

- 166 - Water tank across from River Bend Steam Station.
- 167 - Behind Lucia Volunteer Fire Department.
- 168 - Power pole at State Road #1511 at Killian Creek.
- 169 - Last power pole on Kincaid Road.
- 170 - Second utility pole on right from intersection of Hwy. #73 and State Road #1386.
- 171 - Utility pole at Triangle Hardware.
- 172 - Power pole at the residence located at 625 Golf course Ln.
- 173 - First utility pole on S.R. #1891 intersection with S.R. #2393.
- 174 - On the fence, at air sampling site #134, near East Lincoln Junior High School.
- 175 - Utility pole, fifth house on right, Hoyle Road.
- 177 - On a tree at the residence, 908 Belmarrow Dr.
- 178 - Duke Power Substation at AmeriSteel Corporation.
- 180 - Mooresville Water Treatment Plant.
- 181 - Davidson Water Treatment Plant.
- 182 - On the fence, at air sampling site #133, at Cornelius substation.
- 186 - On peninsula beyond MNS fishing access.
- 187- First gravel road past Energy Explorium.
- 191 - Fenced pumping station on John Connor Dr.
- 196 - New Landfarm fence.
- 197 - New Landfill fence.
- 198 - Old Landfill fence.
- 199 - Old Landfill fence at groundwater well MW-1.

Detailed Guide to All TLD Sample Locations

B. Directions to sampling locations:

NOTE: Contact Security at Ext. 4460 to open all O.C. (Owner Controlled) Gates.

- Site #144 Located inside the air sampling cage by the HP Boathouse (air site #120)
- Site #187 Continue past Energy Explorium and take first right on to a gravel road. The TLD is located inside air sampler cage (air site #195).
- Site #186 Proceed toward the Plant to the end of the fishing access. Bear to the right at the site boundary fence, unlock the cable and proceed out on the peninsula. The TLD is on a stake about half way out the peninsula to the right on a stake.
- Site #143 Continue out the peninsula to the point where the TLD is located on a stake near the osprey nest site.
- Site #145 Heading back toward the guardhouse, the TLD is located inside the cage at the air sampling site #121.
- Site #146 Passing the guardhouse on your left, the TLD is located on the left, attached to the backside of the light pole, just after crossing the bridge.
- Site #147 Continue forward to main entrance road. Turn into the QA entrance on your left. The TLD is on the chainlink fence beside the brown aluminum building. (A large oak tree is in front of the fence).
- Site #148 Continue down entrance road to the fourth light pole on the left. The TLD is on the backside of the utility pole. You'll have to pull over to the right off of the road and allow the other person to pick up the TLD on the left side of the road.
- Site #149 Continue on to the stop sign at Hwy 73. Turn right and go to the first clearing on the right. The TLD is located on the site boundary fence.
- Site #189 Continue forward on Hwy 73 toward MNS. The TLD is located just off the right side of the road on a stake near a tree with a red painted dot just before transmission lines cross Highway 73.
- Site #152 Continue past MNS main entrance for approximately 100 yards to the clearing on your right. The TLD is located between on a stake..
- Site #151 Enter MNS main entrance. The TLD is located on the fence by OC gate #2 immediately on the right.

Detailed Guide to All TLD Sample Locations

- Site #153 Continue into MNS and head toward the settling ponds/land farm area. Circle around the settling ponds and pass the air site (#125) on the left. Proceed to OC gate #4 and approximately 100 feet from the gate is a clearing on the left. The TLD is located on a stake in the clearing.
- Site #154 Drive vehicle back around setting ponds toward the land farm area and turn left on the first gravel road and proceed through QC gate #5. Drive to where the road forks. Take the left fork and down the next gravel/dirt road on your right, you may drive directly to the level grassy area near the riverbank edge. The TLD is on a stake near the riverbank edge approximately 3/4 of the way down the length of the rocky bank just past the control monument.
- Site #190 Continue along the riverbank follow the tree line away from the river until you see a "dangerous water" sign. Continue forwards approximately 300 yards to the tree with a painted red dot on it. The TLD is on a stake.
- Site #156 Drive the vehicle back up the hill toward warehouse #5. Make a left turn just before you get to warehouse #5 and go up toward the intake structures. The road heads toward MNS and then makes a hairpin turn back toward the dam. Drive all the way to the edge of Cowan's Ford Dam and the TLD is located to the left of the cement wall on a stake.
- Site #196 Return to Hwy 73 and turn left. Turn right at MNS Garage Access Road and proceed past garage to dirt road on the right. Drive down dirt road past electrical switch yard to the MNS landfarm on the left. The landfarm is fenced in and the TLD is on the fence adjacent to the road. NOTE: TLD #196 replaces old TLD #LF2.
- Site #197 Proceed down dirt road to the landfill. The TLD is located to the left of the gate to the landfill.
- Site #198 Proceed back toward garage and take dirt road to left. Drive to road ends at old landfill gate. TLD is at top of hill to the right of the gate.
- Site #199 Drive through gate to back side of the landfill. You will see a groundwater well (MW-1) near the back gate. The TLD is at MW-1 on a steel post.
- Site #191 Return to Hwy 73 and turn right. Drive toward Cornelius and take a left on Jetton Rd. Drive to John Connor Rd. and take a left onto it. Drive a short distance to the CMUD pumping station on the left. The TLD is on the air sampler environmental house inside the fenced pumping station (air site # 192).
- Site #158 Return to Hwy 73 and turn left. Proceed to Bethel Church Rd. (SR 2189) and turn left. Proceed to Staghorn Rd. The TLD is located on a utility pole at the intersection of Bethel Church Road and Staghorn Road.

Detailed Guide to All TLD Sample Locations

- Site #159 Return to Hwy 73. Turn left and make a sharp left turn onto Henderson Rd. Drive to the end of that road. The TLD is on the oak "NRC Tree" by the water.
- Site #160 Return to Hwy 73 and turn left. Follow 73 east to Hwy 21 South, turn right and go to the Anchorage Marine Showroom, which will be on the left. The TLD is located on the chain link fence in front of the parking lot.
- Site #161 Return to Hwy 73 and turn left. Continue to the intersection of 21 and Sam Furr Rd. The TLD is located on the back of the Energy Explorium sign to the right.
- Site #178 Continue on Hwy. 21 (heading south) and go until you intersect with Gilead Road. Turn left onto Gilead Road. Proceed to the intersection of Gilead and Old Statesville Road (Hwy. 115) and turn right. Keep going past North Mecklenburg High School and continue to the "Croft Community" sign (which will be on your right). Immediately after this sign on your right is a dirt road. Turn right and this is the entrance to the Duke Power substation @ Florida Steel Corp. Use a DPC #2 key to gain access down the road. The TLD is on a stake to the left of the road approximately 100 yards past the entrance gate.
- Site #163 Return to Hwy.115. and turn left, proceed to SR #2117 (Hambright Road). Turn left (directly in front of Alexander Jr. High School) and proceed to McCoy Rd. (~3.0 miles). The TLD is located on the telephone pole (beside the NRC TLD) at the residence.
- Site #164 Turn around on McCoy Rd. then turn right on Hambright Rd. Come to the intersection of Hambright and Beatties Ford Road. The TLD is located on the left side of the road on a telephone pole.
- Site #162 Turn right onto Beatties Ford Rd. and proceed to Bud Henderson Rd., turn right. Go to Gilead Rd. and turn right. Proceed to Ranson Rd. (SR #2139, this road is in a sharp curve) and turn left. TLD is on the second pole on the left near an electric fence.
- Site #182 Return to Gilead Rd. and turn left. Travel forward over I-77. Turn left onto Old Statesville Road and go to Cornelius. TLD is inside cage at air sampler site #133.
- Site #181 Travel on to Davidson water treatment plant. The TLD is on a power pole in the front of the plant.
- Site #157 From Davidson water treatment plant, go to stop sign and turn left onto Gamble St. Go one block and turn right onto Jetton St. Follow until road ends, turn left and you will see I-77 to your right. Take I-77 North to exit 33, Hwy. 21N. Turn left. Proceed until you come to Brawley School Rd. (there will be a church on your right just before the intersection where you will be turning left.) Follow Brawley School Rd. which eventually turns into Mayhew Rd. past Mallard Head Country Club until the road dead-ends (~ 8 mi.). The TLD is located on a utility pole in the right rear yard.

Detailed Guide to All TLD Sample Locations

- Site #180 Go back to intersection of Brawley School Rd. and Hwy 21. Cross straight over 21 towards Mooresville. At Hwy 21N, turn left and continue to Mooresville water treatment plant. The TLD is located on a utility pole to the right of the driveway.
- Site #173 Return to Hwy 21-South and turn right. Proceed approximately 1/2 mile and veer to your right to Hwy. 150 west. Proceed past Marshall Station to the intersection of SR 1899 and 150 and turn left. This will be SR 1899 Slanting Bridge Rd. Continue to Keistler's Store Rd. and turn left. Follow this road to Mountain Shore Lane, turn left (across from the two-story beige house). Next turn left onto Glenwood Rd. The TLD is located on the first power pole in the front yard of the first house on the left.
- Site #172 Return to Slanting Bridge Rd. Turn left and continue to Hwy. 16. Turn left and go to Fairfield Rd. (~3.3 miles) on the left in the Westport Community and turn left (SR 1389). Take the first left onto North Golf Course drive which turns into Lakeshore Drive. At the intersection of Golf Course Drive and Lakeshore Drive. The TLD is on the utility pole to the right @ 625 Golf Course Dr.
- Site #171 Return to Hwy 16-South, turn left. TLD is on the utility pole on the north side of the Triangle Ace Hardware (which will be on the left).
- Site #170 Return to Hwy. 16 and turn left. Proceed to the intersection of Hwy. 16 and 73. Turn right onto 73 and turn left onto Little Egypt Rd. The TLD is on the 2nd utility pole on the right.
- Site #174 Return to Hwy. 73 and turn left. Go to East Lincoln Jr. High School. The TLD is located in the air sampling cage at air sampling site #134.
- Site #175 Return to Hwy. 73 and turn right. Go to Boger City. Hwy. 73 runs into Hwy. 27. Go straight to the first light and turn right on to Buffalo Shoals Rd. Proceed until you come to SR 1332 (Highland Rd.) and turn left. Follow to Hoyle Road on your right and turn right. Go to 208 Hoyle Road. TLD is on the fence beside the house.
- Site #168 Return to Hwy. 73 and go back past East Lincoln Jr. High School, take a right on Old Plank Road. Go approximately 5 miles until you cross a bridge. The TLD is located on a utility pole on the right just after crossing the bridge.
- Site #177 Return to Hwy 73 and continue to stop light at Hwy.16. Turn right on to Hwy 16 and proceed to Rozzelles Ferry Road (old Hwy.16) and take a right. Rozzelles Ferry turns into Belhaven Blvd. Go to a green Coulwood School sign. Turn right at this sign. This is Kentberry Rd. Continue ~ one block and turn left onto Belmarrow Dr. The TLD is located @ 908 Belmarrow Rd. on a safety light pole at the driveway entrance to the left.

Detailed Guide to All TLD Sample Locations

- Site #166 Return to Hwy. 16 and turn right. Continue to the Catawba River. After crossing the bridge, turn right at Steam Plant Rd. and follow this road to Riverbend Steam Station. Continue on Horseshoe Bend Beach Rd. to the water tower that is across the road directly in front of the steam station. The TLD is on the fence which surrounds the water tower.
- Site #165 Continue down the road, away from Hwy. 16, ~ 1 mile to a real sharp curve in the road. There'll be a dirt area on your left where you can pull over at a barricade. The TLD is on utility pole to the left of the barricade.
- Site #167 Return to Hwy. 16. At the light, go straight and proceed to the building at 14522 Lucia Riverbend Highway on the right. The TLD is located on a power pole that supplies the building.
- Site #169 Return to Hwy. 16 and turn left. Proceed to Hill's Chapel United Methodist Church on the left. Just past the church is a dirt road (Glover Lane), turn left and go to the end of this road. The TLD is located on a utility pole on the right.

List of Designated Milk Sample Locations

This enclosure is meant to provide a guide to one who is **NOT** familiar with the environmental milk sample route. Appropriate deviations from this sequence and route may be made as necessary.

MILK SAMPLES**A. Sample location numbers:**

139 - William Cook Dairy
138 - Henry Cook Dairy
140 - David Kidd Dairy
141 - Lynch Dairy

B. Directions to sampling locations:

Location #139 <u>William Cook Dairy</u>	Turn left when leaving MNS main entrance and proceed to Oliver Hager Rd. (SR #2142) on your right. Follow road to the large main house. Behind the house is a garage storage area. The milk will be in a refrigerator in the garage area.
Location #138 <u>Henry Cook Dairy</u>	Return to Hwy. 73 and turn left. Proceed to Beatties Ford Rd. (Rd. beside Phillips 73 General Store) and turn left. Follow Beatties Ford Rd. approximately .5 miles to Gilead Rd. Turn left. Follow Gilead Rd. approximately 4 mi. to Ervin Cook Rd. Turn left. Henry Cooks Dairy will be the second dairy on your left, approx. 1 mi. It will be on your left just before the road ends. The milk will be in a refrigerator in the white wooden building on your right.
Location #140 <u>Kidd's Dairy</u>	Return to Beatties Ford Road and make a left. Proceed to Jim Kidd Road (approximately 1.0 miles) and turn right. Proceed approximately .5 of a mile and look for a white house on the right. Follow the dirt road to the rear of the house. The milk sample is taken from the vat located in the block building behind the house.
Location 141 <u>Lynch Dairy</u>	From ASC turn right onto Hwy. 73. Follow Hwy. 73 until it intersects with Hwy. 27. Follow Hwy. 27 into Boger City to SR #1003 (Buffalo Shoals Road) and turn right. The Lynch residence is 5.4 miles on the right (yellow frame house).

**Directions for Predetermined
Survey/Sampling Locations**

Example: A - 2 - 1
 Evacuation Mile Sample
 Zone Radius

- A-2-1 From the intersection of Hwy. 73 and Jetton Road (SR2151), go west on Jetton Road 2.0 miles. Turn left onto John Connor Rd. and go 1.0 miles. Turn right on Belle Isle Dr. (SR2331) and go to the end of the road.
- A-3-1 From the intersection of Hwy. 73 and Jetton Road (SR2151), go west on Jetton 3.8 miles to dead end.
- A-3-2 From the intersection of Hwy. 73 and Jetton Road (SR2151), go west on Jetton Road 2.1 miles to the intersection of Jetton Road and North Beatties Ford Rd. Go to end of road and turn right.
- A-3-3 From the intersection of Hwy. 73 and Nantz Road (SR2148), go west on Nantz Road. Go to end of Nantz Road.
- A-5-1 Take I-77 north to exit 33, turn left on Williamson Road (SR1109). Turn left on Brawley School Road (SR1100), go west 8.0 miles on Brawley School Road to dead end at water. NOTE: Brawley School Road becomes Mayhew Road at Meckenburg County Line.
- A-5-2 From the intersection of Hwy. 73 and Bethel Church Road (SR2189), go north on Bethel Church Road to the end of Bethel Church Road.
- A-5-3 From the main plant entrance, go east on Hwy. 73 (6.4 miles) to the intersection of Hwy. 73 and Henderson Road (SR2307).
- A-6-1 From the intersection of Williamson Road (SR1109) and Brawley School Road (SR1109), go west 6.9 miles on Brawley School Road. Turn left on Torrence Chappel Road (SR2065), go 0.4 miles. Stop on roadside. NOTE: Brawley School Road becomes Mayhew Road at Mecklenburg County Line. Torrence Chappel Road is the first left after the county line.
- B-1-1 One mile from plant on Lake Norman. (WNW)
- B-1-2 One mile from plant on Lake Norman. (NW)
- B-1-3 One mile from plant on Lake Norman. (NNW)
- B-1-4 One mile from plant on Lake Norman. (N)
- B-1-5 One mile from plant on Lake Norman. (NNE)
- B-1-6 Emergency Boat House and dock.
- B-1-7 One and ½ miles from plant on Lake Norman directly east of TTC. (NE)

**Directions for Predetermined
Survey/Sampling Locations**

- B-1-8 One and ¼ miles from plant on Lake Norman (NE) at mouth of discharge canal.
- B-1-9 One and ½ miles from plant on Lake Norman (ENE).
- B-1-10 Bridge over discharge canal on road to TTC.
- B-1-11 The intersection of U-2 access road and the road to TTC.
- B-1-12 On the roadside of U-2 access road .2 miles off of Hwy. 73.
- B-1-13 The intersection of Hwy. 73 and the U-2 access road.
- B-1-14 The intersection of Hwy. 73 and the access road to the firing range.
- B-1-15 U-1 main entrance.
- B-1-16 Right past the bridge on Hwy. 73 over the Catawba River (below the dam).
- B-1-17 The east side of Cowans Ford Dam, access through O.C. Gate #5 (lower dam access).
- B-1-18 At the intake structure.
- B-2-1 2 miles from plant on Lake Norman (NE).
- B-2-2 From McGuire main entrance, go east on Hwy. 73 (2.5 miles). Turn left on Terry Lane (SR2255). Go 0.5 miles to the end of Terry Lane (SR2255).
- B-3-1 From McGuire main entrance, go east on Hwy. 73 (3.8 miles). Turn left on Norman Island Drive (SR2145). Go to the end of of Norman Island Drive.
- C-1-1 At the intersection of Hubbard Road and Hwy. 73 turn on Hubbard Road (SR2134) and stop on roadside.
- C-1-2 From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south 1.3 miles on Beatties Ford Road. Turn right onto Cashion Road (SR2133), go to end of road.
- C-2-1 From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south 1.3 miles on Beatties Ford Road to the intersection of Beatties Ford Road and Cashion Road (SR2133).
- C-2-2 From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south 1.5 miles on Beatties Ford Road. Turn right on Stephens Road (SR2132), go .7 miles to dead end at gate.
- D-2-1 From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south .3 miles on Beatties Ford Road to the intersection of Beatties Ford Road and Gilead Road (SR2136).

**Directions for Predetermined
Survey/Sampling Locations**

- D-3-1 From McGuire main entrance go east on Hwy. 73 (3.8 miles) to first stoplight. Cashion's convenience store parking lot on Hwy. 73.
- D-3-2 From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go .3 miles south on Beatties Ford Road. Turn left on Gilead Road (SR2136), go 1.2 miles to the intersection of Gilead Road and Bud Henderson Road (SR2131).
- D-3-3 From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road 2.4 miles to the intersection of Beatties Ford Road and Jim Kidd Road (SR2129).
- D-3-4 From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road 3.5 miles. Turn right on Neck Road (SR2074), go 2.4 miles to the intersection of Neck Road and Allison Ferry Road (SR2127).
- D-3-5 From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road 3.5 miles. Turn right on Neck Road (SR2074), go 2.4 miles. Turn right on Allison Ferry Road (SR2127), go .7 miles to dead end.
- D-5-1 From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road .3 miles. Turn left on Gilead Road (SR2136), go 3.0 miles to the intersection of Gilead Road and Ranson Road (SR2139).
- D-5-2 From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road 4.2 miles. Turn left on Hambright Road (SR2117), go 1.6 miles to the intersection of Hambright Road and McCoy Road (SR2120).
- D-5-3 From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road 4.2 miles to the intersection of Beatties Ford Road and Hambright Road (SR2117).
- D-5-4 From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road 5.0 miles to the intersection of Beatties Ford Road and Sample Road (SR2125).
- D-5-5 From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road 3.5 miles. Turn right on Neck Road (SR2074), go 2.4 miles. Bear to left and continue 0.6 miles. Stop on roadside. Should see entrance to Cowan's Ford Waterfowl Refuge.
- E-6-1 From the intersection of Beatties Ford Road (SR2128) and Mt. Holly Huntersville Road (SR2004), go west on Mt. Holly-Huntersville Road to the intersection of Mt. Holly-Huntersville Road and Oakdale Road (SR2042).
- E-7-1 From the intersection of Beatties Ford Road (SR2128) and Mt. Holly-Huntersville Road (SR2004), go west on Mt. Holly-Huntersville Road 3.2 miles to the intersection of Mt. Holly-Huntersville Road and Pump Station Road (SR2001).

**Directions for Predetermined
Survey/Sampling Locations**

- E-8-1 From the intersection of Beatties Ford Road (SR2128) and Miranda Road (SR2025), go west on Miranda Road to the intersection of Miranda Road and Sunset Road (SR2042).
- E-8-2 From the intersection of Mt. Holly-Huntersville Road (SR2004) and Hwy. 16, go south on Hwy. 16 to intersection of Hwy. 16 and Pleasant Road (SR2008).
- E-8-3 From the intersection of Mt. Holly-Huntersville Road (SR2004) and Hwy. 16, go west on Mt. Holly-Huntersville .8 miles to the intersection of Mt. Holly-Huntersville Road and Harwood Lane (SR1667) - directly across from Mountainair Road.
- E-10-1 From the intersection of Beatties Ford Road (SR2128) and Sunset Road (SR2108), go west on Sunset .7 miles. Turn left on Peachtree Road (SR2019), go 1.3 miles to the intersection of Peachtree Road and Oak Road (SR2027).
- E-10-2 From the intersection of Mt. Holly-Huntersville Road (SR2004) and Hwy. 16, go south on Hwy. 16 (1.5 miles). Turn right on Valleydale Road, then make an immediate right (50 ft.) onto Gumbranch Road. Go .7 miles on Gumbranch. Turn left on Cathey Road, go 1.0 miles to the intersection of Cathey Road and Tom Saddler Road.
- F-5-1 From the intersection of US21 and Gilead Road (SR2136), go south on US21 (.9 miles) to the intersection of US21 and Mt. Holly-Huntersville Road (SR2004).
- F-7-1 From the intersection of US21 and Gilead Road (SR2136), go south on US21 (2.9) miles. Turn right on Alexanderana Road (SR2116), go 1.0 miles to the intersection of Alexanderana Road and Mt. Holly-Huntersville Road (SR2004).
- F-8-1 From the intersection of I-77 and Gilead Road (SR2136) - Exit #23, go south to I-77 to the intersection of I-77 and Reames Road (SR2110) - Exit #18.
- F-9-1 From the intersection of US21 and Gilead Road (SR2136), go east on Gilead Road .7 miles. Continue straight on Huntersville-Concord Road (SR2426) 3.6 miles to the intersection of Huntersville-Concord Road and Hiwasee (this also may be called Huntersville-Concord Road).
- F-9-2 From the intersection of US21 and Gilead Road (SR2136), go east on Gilead Road .7 miles. Continue straight on Huntersville-Concord Road (SR2426) 2.4 miles. Turn right on Asbury Chapel Road (SR2442), go 2.4 miles to the intersection of Asbury Chapel Road and Trails End Road (SR2445).
- F-10-1 From the intersection of US21 and Gilead Road (SR2136), go east on Gilead Road .7 miles. Turn right on Hwy. 115, go 2.9 miles. Turn left on Alexanderana Road (SR2457), go .9 miles. Turn left on Eastfield Road (SR2459), to 2.3 miles to the intersection of Eastfield Road and Prosperity Church Road (SR2475).

**Directions for Predetermined
Survey/Sampling Locations**

- F-10-2 From the intersection of US21 and Gilead Road (SR2136), go south on US21 5.2 miles. Turn left on Lakeview Road (SR2112), go 1.0 miles. Turn right on Hwy. 115, go .7 miles to the intersection of Hwy. 115 and Victoria Ave. (SR2631) Beachwood Mobile Home Park Road.
- G-5-1 From the intersection of US21 and Gilead Road (SR2136), go north on US21 (3.8 miles) to the intersection of US21 and Westmoreland (SR2147).
- G-5-2 From the intersection of US21 and Gilead Road (SR2136), go north on US21 (2.3 miles) to the intersection of US21 and Sam Furr Road (SR2145).
- G-6-1 From the intersection of US21 and Gilead Road (SR2136), go east on Gilead Road .7 miles. Turn left on Hwy. 115, go 3.7 miles to the intersection of Hwy. 115 and Bailey Road (SR2416).
- G-6-2 From the intersection of US21 and Gilead Road (SR2136), go east on Gilead Road .7 miles. Turn left on Hwy. 115, go 1.6 miles. Turn right on McCord Road (SR2427), go .3 miles. Turn right on Hagers Road (SR2438), go .5 miles to dead end.
- G-8-1 From the intersection of US21 and Gilead Road (SR2136), go north on US21 (2.3 miles). Turn right on Sam Furr Road (SR2145), go 3.9 miles. Turn left on Davidson-Concord Road and continue to intersection of Davidson-Concord Road and Rockey River Road (SR2420).
- G-8-2 From the intersection of US21 and Gilead Road (SR2136), go east on Gilead Road .7 miles. Turn left on Hwy. 115, go .7 miles. Turn right on Ramah Church Road (SR2439), go 2.4 miles to the intersection of Ramah Church Road and McCord Road (SR2427).
- G-10-1 From the intersection of US21 and Gilead Road (SR2136), go east on Gilead Road .7 miles. Turn left on Hwy. 115, go 2.0 miles. Turn right on Sam Furr Road (SR2145), go 2.7 miles. Turn left on Davidson-Concord Road, go 2.3 miles. Turn right on Rocky River Road (SR2420), go 2.3 miles. Turn left on Shearer Road (SR2418), go 2.6 miles to the intersection of Shearer Road and Fisher Road (SR2419).
- H-6-1 From the intersection of US21 and Hwy. 73, to east on Hwy. 73 .9 miles to the intersection of Hwy. 73 and Hwy. 115.
- H-7-1 From the intersection of I-77 and Hwy. 73 (Exit #28), go north on I-77 to the intersection of I-77 and Griffith Street (SR2158) (Exit #30).
- H-7-2 From the intersection of I-77 and Griffith Street (SR2158) Exit #30, go east on Griffith Street .9 miles to Sadler Square Shopping Center.
- I-7-1 From the intersection of Brawley School Road (SR1100) and Williamson Road (SR1109), go west on Brawley School Road 5.2 miles to the intersection of Brawley School Road and Garden Road (SR1111).

**Directions for Predetermined
Survey/Sampling Locations**

- I-7-2 From the intersection of Brawley School Road (SR1100) and Williamson Road (SR1109), go west on Brawley School Road 2.7 miles. Turn left on Isle of Pines Road (SR1113), go 3.4 miles to dead end.
- I-8-1 From the intersection of Brawley School Road (SR1100) and Williamson Road (SR1109), go west on Brawley School Road 3.8 miles. Turn right on Chuckwood Road (SR1177), go to end.
- I-9-1 From the intersection of Brawley School Road (SR1100) and Williamson Road (SR1109), go west on Brawley School Road 3.8 miles to the intersection of Brawley School Road and Chuckwood Road (SR1177).
- I-10-1 From the intersection of Brawley School Road (SR1100) and Williamson Road (SR1109), go west on Brawley School Road 3.2 miles. Turn right onto McKendries Road (SR1115), go 1.6 miles to the intersection of McKendries Road and Lakeview Drive (SR1455).
- J-7-1 From the intersection of I-77 and US21 (Exit #33), go west on US21 over I-77 (.2 miles). Turn left on Alcove Road (SR1206), go 1.8 miles. Turn right on Langtree Road (SR1102), go 2.0 miles to entrance Alexander Island.
- J-9-1 From the intersection of I-77 and Griffith Street (Exit #30), go east on Griffith Street (SR2158) 1 mile. Turn left on Hwy. 115, go 1.4 miles to the intersection of Hwy. 115 and Midway Lake Road (SR1137).
- J-10-1 From the intersection of I-77 and US21 (Exit #33), go west on US21 over I-77 (.2 miles). Turn left on Alcove Road (SR1206) then bear right on Catalina Road (SR1110) go .6 miles. Bear right on Malibur Road (SR1194) go .4 miles to dead end at Cul-de-sac.
- J-10-2 From the intersection of I-77 and US21 (Exit #33), go east on US21 (.1 miles). Turn right on Fairview Road (SR1246), go .9 miles. Turn right on Hwy. 115, go .3 miles. Turn left at Faith Road (SR1136), go .8 miles to the intersection of Faith Road and Midway Lake Road (SR1137).
- K-9-1 From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 6.6 miles. Turn right on Campground Road (SR1373), go 2.8 miles to the intersection of Slanting Bridge Road (SR1373) and Keistler Store Road (SR1899).

NOTE: Campground Road turns into Slanting Bridge Road at Catawba County Line.

- K-9-2 From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 6.6 miles. Turn right on Campground Road (SR1373), go 4.8 miles. Turn right on Hwy. 150, go 1.7 miles. Turn right on Kiser Island Road (SR1841), go 3.1 miles to dead end at circle.

**Directions for Predetermined
Survey/Sampling Locations**

NOTE: Campground Road turns into Slanting Bridge Road at Catawba County Line.

- L-1-1 From the McGuire main entrance, go west on Hwy. 73 (.5 miles) to the Cowans Ford Dam.
- L-1-2 From the McGuire main entrance, go west on Hwy. 73 (1.4 miles). Turn right onto Cowans Ford Road (SR1395), go .8 miles.
- L-2-1 From the McGuire main entrance go 1.4 miles to the intersection of Hwy. 73 and Cowans Ford Road (SR 1395).
- L-2-2 From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (0.6 miles). Turn right onto Hagers Ferry Road (SR1393) and go 1.4 miles. Go straight on paved road (Lucky Point) 0.4 miles.
- M-1-1 From the McGuire main entrance, go west on Hwy. 73 (0.9 miles) to the intersection of Hwy. 73 and Caswell Road (SR1578).
- M-2-1 From the McGuire main entrance, go west on Hwy. 73 (2.3 miles). Turn left onto Killian Road (SR1396), go 2.2 miles. Stop on roadside of railroad crossing.
- N-2-1 From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (.6 miles). Turn right onto Hagers Ferry Road (SR1393), go 1.4 miles. Go left onto Hager's Ferry Road (SR1393), go 1.6 miles to where pavement ends residence 8886 Hager's Ferry Rd.
- N-3-1 From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (.6 miles). Turn right onto Hagers Ferry Road (SR1393), go .9 miles to the intersection of Hagers Ferry Road and Nixon Heights, Lane (SR 1568).
- N-3-2 From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (2.1 miles). Turn right on Unity Church Road (SR1439), go .3 miles. Turn right on Graham Road, go 1.6 miles to end of road.
- N-4-2 From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (2.1 miles). Turn right on Unity Church road (SR1439), go 2.4 miles to Beatties Ford Access Area.
- N-5-1 From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (3.2 miles). Turn right on Lakeshore Drive (SR1456) go 1.3 miles. Turn right on Island View Court (SR1495) go .1 miles to dead end.
- O-3-1 From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (2.0 miles). Turn left on Sifford Road (SR1397), go 1.2 miles to the intersection of Sifford Road and Mac Lane (SR 1710).
- O-4-1 From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (1.2 miles). Stop on roadside at Hills Chapel United Methodist Church.

**Directions for Predetermined
Survey/Sampling Locations**

- O-4-2 From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (.6 miles) to the intersection of Hwy. 16 and Pilot Knob Road (SR1394).
- O-5-1 From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (2.2 miles). Turn right on Old Plank Road (SR1511), go 1.0 miles. Stop on roadside past bridge.
- P-5-1 From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (1.5 miles) to the intersection of Hwy. 73 and Little Egypt Road (SR1386).
- P-5-2 From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (1.5 miles). Turn right on Little Egypt Road (SR1386), go 1.9 miles. Turn right on Optimist Club Road (SR1380), go about .6 miles. Stop near creek.
- P-6-1 From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (3.6 miles). Turn right on Schronce Road (SR1385). Go to intersection of Schronce Road (SR1385) and Ingleside Farm Road (SR1383).
- P-6-2 From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (1.5 miles). Turn right on Little Egypt Road (SR1386), go 3.2 miles to the intersection of Little Egypt Road which is now St. James Church Road - SR1380) and Kidville Road (SR1381).
- P-6-3 From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (4.9 miles). Turn right on Webb's Chapel Road (SR1379), go 1.6 miles to the intersection of Webb's Chapel Road and Burton Road.
- P-8-1 From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (5.3 miles). Turn right on Beth Haven Church Road (SR1360), go 1.4 miles. Stop on roadside past bridge.
- P-8-2 From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (2.5 miles). Turn right on Ingleside Farm Road (SR1383), go .1 mile and bear left 3.2 miles more. Turn right on Beth Haven Church Road (SR1360), go 1.3 miles. Turn right on Forney Hill Road (SR1373), go .7 miles. Stop on roadside passed bridge.
- P-8-3 From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (7.8 miles) to the intersection of 16 and SR1373 (Campground Road or Slanting Bridge Road). Turn right on this road and go about 1.8 miles to the intersection of SR1373 and Pineridge Drive (SR1375).
- P-10-1 From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (6.8 miles) to the intersection of Hwy. 73 and Amity Church Road (SR1362).
- P-10-2 From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (2.5 miles). Turn right on Ingleside Farm Road (SR1383), go .1 miles and bear left 3.2 miles more. Turn right on Beth Haven Church Road (SR1360), go 2.8 miles to the intersection of Beth Haven Church Road and Mundy Road (SR1349).

**Directions for Predetermined
Survey/Sampling Locations**

- Q-6-1 From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (2.5 miles). Turn right on Ingleside Farm Road (SR1383), go .1 mile bear right and go 1.7 miles more. Turn left on Old Plank Road (SR1511), go .6 miles to the intersection of Old Plank Road and Mariposa (SR1412).
- Q-8-1 From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (5.3 miles). Turn left on Brevard Place road (SR1360), go .1 mile. Turn left on Old Plank Road (SR1511), go 1 mile. Turn right on Mt. Zion Church Road (SR1404), go 1.9 miles. Stop on road side pass the bridge.
- Q-8-2 From the intersection of Hwy. 73 and Hwy. 16, to west on Hwy. 73 (5.3 miles). Turn left on Brevard Place Road (SR1360), go .1 miles. Turn left on Old Plank Road (SR1511), go 1.0 miles to the intersection of Old Plank Road and Mt. Zion Church Road (SR1404).
- Q-10-1 From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (5.3 miles). Turn left on Brevard Place Road (SR1360), go 3.4 miles to the intersection of Brevard Place Road and Paysour Road (SR1361).
- R-3-1 From the main entrance to McGuire go west on Hwy. 73 (2.3 miles). Turn left on Killian Road (SR1396), go 3.4 miles. Stop on roadside (just past Gaston County sign).
- R-5-1 From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (7.2 miles). Turn left on Horseshoe Bend Beach Road (SR1912), go 2.0 miles. Stop on roadside passed curve.
- R-5-2 From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (7.2 miles). Turn left on Horseshoe Bend Beach Road (SR1912), go 1.0 miles. Stop on roadside.
- R-5-3 From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (7.2 miles) to the intersection of Hwy. 16 and Horseshoe Bend Beach Road (SR1912).
- R-5-4* From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (4.1 miles) to the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905).
- S-7-1* From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go west on Stanley-Lucia Road 2.0 miles. Stop on roadside at Macedona Church parking lot.
- S-7-2* From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go west on Stanley-Lucia Road 1.1 miles. Turn right on Alexis-Lucia road (SR1820), go 1.6 miles to intersection of Alexis-Lucia Road and Old Lowesville Road (SR 1907).
- S-8-1* From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go south on old Hwy. 16 (2.0 miles). Turn right on Hwy. 273, go to the intersection of Hwy. 273 and Sand Ford Road (SR1918).

**Directions for Predetermined
Survey/Sampling Locations**

- S-8-2* From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go west on Stanley-Lucia Road 3.2 miles. Go left at curve and continue 1.5 miles to the intersection of SR1935 and Old NC 27 (SR1923).
- S-8-3* From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go west on Stanley-Lucia Road 3.2 miles. Go left at curve and continue .7 miles to the intersection of Stanley-Lucia Road and Sandy Ford Road (SR1918).
- S-8-4* From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go west on Stanley-Lucia Road 1.1 miles. Turn right on Alexis Lucia (SR1820), go 2.2 miles to the intersection of Alexis-Lucia Road and Mariposa Road (SR1902).
- S-9-1* From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go west on Stanley-Lucia Road 1.1 miles. Turn right on Alexis Lucia Road (SR1820), go 2.2 miles. Turn left on Mariposa (SR1902), go 1.5 miles. Turn right on Airport Road (SR1903), go .6 miles to the intersection of Airport Road and Hwy. 27.
- S-10-2* From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go south on old Hwy. 16 2.0 miles. Turn right on Hwy. 273, go 4.7 miles to the intersection of Hwy. 273 and N. Main Street.

NOTE: Old Hwy. 16 (Lucia Riverbend Hwy.) can be reached by turning right at the intersection of Hwy. 16 and Lucia Riverbend Hwy. which is 4.1 miles south on 16 from the Hwy. 73 and Hwy. 16 intersection.{*}

Enclosure 5.9
Vehicle Refueling

HP/0/B/1009/023
Page 1 of 1

1. Pull in at the fueling island located at the McGuire Garage. The garage is located on the right side of the access road to the McGuire switchyard.
2. Place the special refueling key in the pump control station. The control station is located on a vertical steel beam which is located between the gas pump and the diesel pump.
3. Remove the key, and follow the instructions as they appear on the control station. The instructions include:
 - a. Enter the vehicle's mileage.
 - b. Enter the pump being used; 1 for gas, and 2 for diesel.
 - c. Enter your social security number.
4. Remove the nozzle, turn the pump on, and refuel the vehicle.
5. **WHEN** finished, turn the pump off, and return the nozzle to the pump.

The refueling pumps are opened 24 hours per day, 7 days a week. The McGuire Garage has personnel working in the garage from 7:30 AM to 12:00 AM Monday through Friday. Call Security from the garage gate phone to gain access to the pumps after hours or on weekends or holidays.

IF oil, antifreeze, or windshield washer fluid is needed, see McGuire Garage personnel.

Enclosure 5.10
FMT Turnover Checklist

- 1. Copies of Enclosure 5.3 from HP/0/B/1009/027.

- 2. Latest copy of Enclosures 5.7 and 5.8 from HP/0/B/1009/023.

- 3. List sampling van or emergency kit supplies needed.

- 4. List Inoperable Equipment.

- 5. List any Sampling Problems.

Obtaining Meteorological Data from SDS

NOTE: **IF** a computer is **NOT** available in the OSC, Meteorological Data may be obtained from any other LAN based computer or from the OSC Radiation Protection Supervisor.

1. From any LAN based computer:
 - a. Select DAE
 - b. Select Department Apps
 - c. Select Nuclear Generation
 - d. Select McGuire Desktop
2. Select **McGuire Process Data**.
3. Select **SDS**.
4. At the SDS screen, select either **Unit-1** or **Unit-2**. For drills, select **Simulator**.
5. Type in **GD ERORD 5**.
6. Obtain 10 meter (lower) wind speed and 60 meter (upper) wind direction from page 1 of 3.

Other MET Data (temperature and precipitation) is also found on page 1 of 3.

7. Use the 10 mile EPZ map and 90° plume marker located in the OSC to assist in determining where plume edge could be encountered. The plume marker will indicate 45° to either side of centerline wind direction.

Duke Power Company
PROCEDURE PROCESS RECORD (1) ID No. PT/0/A/4600/088
Revision No. 007

PREPARATION

(2) Station McGuire Nuclear Station

(3) Procedure Title Functional Check of Emergency Vehicle and Equipment

(4) Prepared By Gary Terrell *Gary Terrell* Date January 23, 2002

- (5) Requires NSD 228 Applicability Determination?
- Yes (New procedure or revision with major changes)
 - No (Revision with minor changes)
 - No (To incorporate previously approved changes)

(6) Reviewed By *[Signature]* (QR) Date 1/23/02
 Cross-Disciplinary Review By _____ (QR) NA JPL Date 1/23/02
 Reactivity Mgmt. Review By _____ (QR) NA JPL Date 1/23/02
 Mgmt. Involvement Review By _____ (OPS Supt.) NA _____ Date _____

(7) Additional Reviews
 Reviewed By *H.L. Murray* Date 1-31-02
 Reviewed By _____ Date _____

(8) Temporary Approval (if necessary)
 By _____ (OSM) Date _____
 By _____ (QR) Date _____

(9) Approved By *Lance E. Louche* Date 02-05-02

PERFORMANCE (Compare with Control Copy every 14 calendar days while work is being performed.)

(10) Compared with Control Copy _____ Date _____
 Compared with Control Copy _____ Date _____
 Compared with Control Copy _____ Date _____

(11) Date(s) Performed _____
 Work Order Number (WO#) _____

COMPLETION

(12) Procedure Completion Verification

- Yes NA Check lists and/or blanks initialed, signed, dated, or filled in NA, as appropriate?
- Yes NA Required enclosures attached?
- Yes NA Data sheets attached, completed, dated and signed?
- Yes NA Charts, graphs, etc. attached, dated, identified, and marked?
- Yes NA Procedure requirements met?

Verified By _____ Date _____

(13) Procedure Completion Approved _____ Date _____

(14) Remarks (Attach additional pages, if necessary.)

Duke Power Company
McGuire Nuclear Station

**Functional Check of Emergency
Vehicle and Equipment**

Reference Use

Procedure No.

PT/0/A/4600/088

Revision No.

007

Electronic Reference No.

MC0047J7

Functional Check of Emergency Vehicle and Equipment

1. Purpose

- 1.1 To ensure that protective equipment and supplies are operational, and that capable communications exist with the various emergency personnel and emergency organizations at all times in the support of an emergency condition at the station.
- 1.2 The level of use for this procedure is "Reference Use".

2. 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 Letter from John Dinning (MSA) December 2, 1998. Subject: Expiration of MSA Twin Cartridge Respirator Chemical Cartridges
- 2.3 SH/0/B/2001/003, Investigation of Skin and Clothing Contaminations
- 2.4 HP/0/B/1009/023, Environmental Monitoring for Emergency Conditions
- 2.5 HP/0/B/1009/025, Off-Site Radiological Transportation Incidents
- 2.6 HP/0/B/1009/027, Operation of ESP-2
- 2.7 HP/0/B/1009/022, Accident and Emergency Response
- 2.8 HP/0/B/1009/024, Personnel Monitoring for Emergency Conditions
- 2.9 NUREG—0041, Manual of Respiratory Protection Against Airborne Radioactive Materials

3. Time Required

- 3.1 Sixteen (16) manhours

4. Prerequisite Tests

N/A

5. Test Equipment

N/A

6. Limits and Precautions

- 6.1 Each emergency equipment kit shall be inventoried and checked for operability on a quarterly basis (Reference 2.1).
- An intact emergency equipment tamper seal can be used to verify the inventory; however, a complete item by item inventory shall be conducted at least once per year.
- 6.2 The emergency respirators shall be inspected monthly for dry rot and deformation.
- 6.3 Personnel using an emergency vehicle shall wear seat belts.
- 6.4 Personnel shall follow all FCC regulations during radio transmissions.
- 6.5 Note any identified discrepancy on the proper enclosure and leave the enclosure in the kit. After resolving the discrepancy, make a separate note on the enclosure stating the resolution date and the name of the person performing the resolution.
- 6.6 Combination cartridges have no specific shelf life (Reference 2.2). These cartridges shall be replaced if they are exposed to adverse environmental conditions such as high humidity. To ensure that these cartridges are replaced periodically, cartridges should be ordered from the supplier (MSA, Part No. 4698C) three months prior to the date that is three years after the date of manufacture.
- 6.7 After the use of any emergency kit, a full inventory of that kit is required. The checklist shall be signed and dated each time the kit is inventoried.
- 6.8 During instrument calibration, the check source kept in the Administration Building area may be taken out by the Instrument Cal. Lab for response checks. **WHEN** the calibration of instruments is complete, the check source shall be returned to the Emergency Equipment cabinets in the Administration Building.
- 6.9 The supplies listed on the emergency kit inventory are the minimum quantity required. Any extra supplies for drill purposes, etc. are acceptable.
- 6.10 Respirators shall be stored so that they are not damaged by adjacent equipment or twisted out of normal configuration (Reference 2.9). Elastic straps should be placed inside the mask to prevent deformation.
- 6.11 Electronic Dosimeters in Emergency Kits (except MSC-2 and MDK-1) are programmed for 'Fast Entry' mode and should only be turned on for emergency use. EDs in 'Fast Entry' mode should display "pause". **IF** an ED in 'Fast Entry' mode is found on, it shall be removed from service and returned to RP Staff to be reset to 'Fast Entry' mode.

7. Required Station Status

N/A

8. Prerequisite System Conditions

N/A

9. Test Method

N/A

10. Data Required

- 10.1 For each inventory and verification that is performed in accordance with this procedure, the appropriate check-off list shall be completed. Refer to the list of enclosures in Section 13 of the procedure.

11. Acceptance Criteria

- 11.1 All required enclosures are completed.

12. Procedure

12.1 Monthly Emergency Equipment Inspection

- 12.1.1 Monthly, complete all inspection requirements per Enclosure 13.1. Sign and date the enclosure and route to RP Staff Representative.

12.2 Quarterly Emergency Kit Inspection

- 12.2.1 Once per quarter, complete all monthly and quarterly inspection requirements per Enclosure 13.1 and 13.2. Sign and date the enclosures and route to RP Staff Representative.
- 12.2.2 Perform a functional check of all communication equipment per Enclosure 13.24. Sign and date the enclosure and route to RP Staff Representative.
- 12.2.3 Perform a functional verification on EMF54A and 54B per Enclosure 13.25. Sign and date the enclosure and route to RP Staff Representative.

12.3 Annual Emergency Kit Inspection

- 12.3.1 Annually perform a complete item inventory of each emergency kit. Document the inventory, including the monthly and/or quarterly requirements on Enclosures 13.1, 13.2 and 13.3. Sign and date the enclosures and route to the RP Staff Representative.

13. Enclosures

- 13.1 Monthly Emergency Equipment/Kit Inspection
- 13.2 Quarterly Emergency Equipment/Kit Inspection

- 13.3 Annual Emergency Equipment/Kit Inspection
- 13.4 Emergency Kit Locations
- 13.5 Required Changeouts
- 13.6 Environmental Survey Kit Checklist - Sample Van (Vehicle #3224)
- 13.7 Environmental Survey Kit Checklist - Sample Van (Vehicle #3233)
- 13.8 Environmental Survey Kit Checklist - Survey Vehicle
- 13.9 Environmental Survey Kit Checklist - Survey Vehicle
- 13.10 Transportation Accident Kit Checklist
- 13.11 Miscellaneous Kit Checklist
- 13.12 Personnel Survey Kit Checklist - RP Instrument Calibration Lab
- 13.13 Personnel Survey/Recovery Kit Checklist - Admin. Building (Room 158)
- 13.14 Personnel Survey Kit Checklist - Cowan's Ford Dam
- 13.15 Recovery Kit Checklist - Cowan's Ford Dam
- 13.16 Personnel Survey Kit Checklist - Training Center
- 13.17 Recovery Kit Checklist - Training Center
- 13.18 Recovery Kit Checklist - Control Room
- 13.19 Decontamination Kit Checklist - First Aid Room
- 13.20 Decontamination Kit Checklist - Carolinas Medical Center
- 13.21 Operations Support Center Kit Checklist
- 13.22 Technical Support Center Kit Checklist
- 13.23 Monthly Respirator Inspection Sheet
- 13.24 Communication Equipment Check Guidelines
- 13.25 EMF 54 Flow Check

Enclosure 13.1
MONTHLY EMERGENCY EQUIPMENT/KIT
INSPECTION

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Check Off

- 13.1.1 Inspect all emergency kit respirators monthly per the guidelines on Enclosure 13.23 (Monthly Respirator Inspection Sheet). The inspection shall be documented on Enclosure 13.23. Ensure that all appropriate blanks are signed.
- 13.1.2 Verify that the GMI-H respirator cartridges (MSA, Part No. 4698C) do not need replacement. Replace all cartridges three years from the date of manufacture.
- 13.1.3 Verify that all procedures/documents contained in emergency kits are the most current revision. Enter the revision number on the applicable checklist.
- 13.1.4 Verify emergency kit tamper seals intact.
- 13.1.5 Reinventory of emergency kit(s) due to broken seal. Sign and date the applicable emergency kit checklist after reinventory due to broken seal.

_____/_____
Signature

Date

**QUARTERLY EMERGENCY EQUIPMENT/KIT
INSPECTION**

Check Off

- 13.2.1 Verify all monthly inspection requirements have been met.
- 13.2.2 Perform a battery check of each instrument in the emergency kits. Replace any batteries that are weak or dead.
- 13.2.3 Check all batteries in emergency kits for strength and condition. Replace any batteries that are weak or dead.
- 13.2.4 Verify that all electronic dosimeters are within calibration. Electronic dosimeters are calibrated every six months.
- 13.2.5 Verify that all electronic dosimeters in Fast Entry mode display "pause". Replace any electronic dosimeters which do **NOT** display "pause".
- 13.2.6 Verify that all potassium iodide tablets are within expiration dates. Expiration date: _____
- 13.2.7 Check operability of emergency communication equipment at a distance of ten (10) miles from the McGuire Site. Refer to Enclosure 13.24 (Communication Equipment Check Guidelines) for instructions.
- 13.2.8 Verify that actual flow is at least 1 scfm at EMF-54A and EMF-54B (located on the north end of each Turbine Building operating floor), per instructions on Enclosure 13.25 (EMF Flow Check) and document all data on enclosure.

_____/_____
Signature Date

**Annual Emergency Equipment/Kit
Inspection**

Check Off

- 13.3.1 Perform a complete item inventory of each emergency kit per the applicable checklist. Sign and date the checklist and leave in the emergency kit.
- 13.3.2 Verify all monthly and quarterly requirements have been met.

_____/_____
Signature Date

EMERGENCY KIT LOCATIONS

<u>KIT ID#</u>	<u>KIT TYPE</u>	<u>LOCATION</u>
1. ESK-1 (Sample Van)	Envr. Survey	Sample Van (Vehicle #3224)
2. ESK-2 (Sample Van)	Envr. Survey	Sample Van (Vehicle #3233)
3. ESK-3 (Survey Vehicle)	Envr. Survey	Admin. Rm. 158, cabinet #2
4. ESK-4 (Survey Vehicle)	Envr. Survey	Admin. Rm. 158, cabinet #2
5. TAK-1	Transportation Accident	Admin. Rm. 158, cabinet #1
6. MSC-2	Miscellaneous	Admin. Rm. 158
7. PSK-1	Personnel Survey	RP Instrument Calibration Lab
8. PSK-2	Personnel Survey/Recovery	Admin. Rm. 158
9. PSK-3	Personnel Survey	Cowan's Ford Dam
10. R-CFD	Recovery	Cowan's Ford Dam
11. PSK-4	Personnel Survey	Training Center (Bldg. 7403)
12. R-TTC	Recovery	Training Center (Bldg. 7403)
13. R-CR1	Recovery	Control Room
14. MDK-1	Medical Decon.	Aux. Bldg. (First Aid Room)
15. MDK-2	Medical Decon.	Carolinas Medical Center
16. OSC-1	OSC	Operations Support Center
17. TSC-1	TSC	Technical Support Center

Enclosure 13.5
REQUIRED CHANGEOUTS

<u>ITEM</u>	<u>FREQUENCY</u>	<u>NEXT DUE DATE</u>
Respirator Combination Cartridges MSA Part 4698C	per manufacturer	_____
	cartridge no.	_____
Potassium Iodide	per manufacturer	_____
Radiation Protection Instruments	every six months	per RPIC
Electronic Dosimeters	every six months	per RPIC

Procedures/Documents

Current Revision or Approval Date

SH/0/B/2001/003

HP/0/B/1009/022

HP/0/B/1009/023

HP/0/B/1009/024

HP/0/B/1009/025

HP/0/B/1009/027

SRWP 98

Enclosure 13.6
ENVIRONMENTAL SURVEY KIT
CHECKLIST
SAMPLE VAN VEHICLE #3224

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Page 1 of 1

KIT I.D. ESK-1

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Eberline E-520 or E-120 with probe (located in Admin. Rm. 158)	1	
Eberline Model RO-20 or Equivalent (located in Admin. Rm. 158)	1	
Potassium Iodide Tablets (bottle)	1	
Protective Clothing (disposable sets)	3	
Poly Bags (various sizes)	6	
Masking Tape (roll)	1	
Cubitainers	6	
Hand Gardening Spade	1	
Limnological Sampler	1	
Stopwatch	1	
Flashlight	1	
Batteries, D-cell	4	
CP100G Filter Cartridges and Particulate Filters	30 each	
Labels for Filter Cartridges	30	
NuCon Smears (box)	1	
ESK-1 Vehicle Booklet containing: legal pad and Ten Mile Zone Sectors Map - MNS SH/0/B/2001/003 HP/0/B/1009/023 HP/0/B/1009/027 SRWP 98	1	
Pen	2	
Grease Pencil	1	
Grass Clippers	1	
Calculator	1	
Disposable Gloves, bag	1	
Disposable Shoe Covers	12 pair	
ESP-2 with Ba-133 source (located in Admin. Rm. 158)	1	
Rainsuits	1	
Cs-137 Check Source (Cs-7A)	1	
Rasp Air Sampler	1	

Discrepancies/Resolutions:

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

**ENVIRONMENTAL SURVEY KIT
CHECKLIST
SAMPLE VAN VEHICLE #3233**

KIT I.D. ESK-2

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Eberline E-520 or E-120 with probe (located in Admin. Rm. 158)	1	
Eberline Model RO-20 or Equivalent (located in Admin. Rm. 158)	1	
Potassium Iodide Tablets (bottle)	1	
Protective Clothing (disposable sets)	3	
Poly Bags (various sizes)	6	
Masking Tape (roll)	1	
Cubitainers and caps	6	
Limnological Sampler	1	
Hand Gardening Spade	1	
Stopwatch	1	
Flashlight	1	
Batteries, D-cell	4	
CP100G Filter Cartridges and Particulate Filters	30 each	
Labels for Filter Cartridges	30	
NuCon Smears (box)	1	
ESK-2 Vehicle Booklet containing: legal pad and Ten Mile Zone Sectors Map - MNS SH/0/B/2001/003 HP/0/B/1009/023 HP/0/B/1009/027 SRWP 98	1	
Pen	2	
Grease Pencil	1	
Grass Clippers	1	
Calculator	1	
Disposable Gloves, bag	1	
Disposable Shoe Covers	12 pair	
Rainsuits	1	
ESP-2 with Ba-133 check source (located in Admin. Rm. 158)	1	
Cs-137 Check Source (Cs-7A)	1	
Rasp Air Sampler	1	

Discrepancies/Resolutions: _____

Inventoried: _____ Signature/Date

Reinventoried: _____ Signature/Date

Reinventoried: _____ Signature/Date

Reinventoried: _____ Signature/Date

**ENVIRONMENTAL SURVEY KIT
CHECKLIST
SURVEY VEHICLE**

KIT I.D. ESK-3

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Eberline E-520 or E-120 with probe (located in Admin. Rm. 158)	1	
Eberline Model RO-20 or Equivalent (located in Admin. Rm. 158)	1	
Potassium Iodide Tablets (bottle)	1	
Flashlight	1	
Batteries, D-cell	4	
NuCon Smears (box)	1	
ESK-3 Vehicle Booklet containing: legal pad and Ten Mile Zone Sectors Maps - MNS SH/0/B/2001/003 HP/0/B/1009/023 SRWP 98	1	
Pen	2	
Calculator	1	
Disposable Gloves, bag	1	
Cs-137 Check Source (Cs-7A)	1	

Discrepancies/Resolutions: _____

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

**ENVIRONMENTAL SURVEY KIT
CHECKLIST
SURVEY VEHICLE**

KIT I.D. ESK-4

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Eberline E-520 or E-120 with probe (located in Admin. Rm. 158)	1	
Eberline Model RO-20 or Equivalent (located in Admin. Rm. 158)	1	
Potassium Iodide Tablets (bottle)	1	
Flashlight	1	
Batteries, D-cell	4	
NuCon Smears (box)	1	
ESK-4 Vehicle Booklet containing: legal pad and Ten Mile Zone Sectors Map - MNS SH/0/B/2001/003 HP/0/B/1009/023 SRWP 98	1	
Pen	2	
Quarter Roll	1	
Calculator	1	
Disposable Gloves, bag	1	
Cs-137 Check Source (Cs-7A)	1	

Discrepancies/Resolutions: _____

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

**TRANSPORTATION ACCIDENT KIT
CHECKLIST**

KIT I.D. TAK-1

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Eberline E-520 or E-120 with probe	2	
MSA Ultra Twin Respirator w/Combination Cartridge	2	
Step Off Pads	3	
50 yard roll of Barricade Tape (magenta and yellow)	4	
Box of small Kimwipes	2	
Electronic Dosimeters	5	
Transportation Accident Kit Booklet containing legal pad and HP/0/B/1009/025	1	
Pens	2	
NuCon Smears (box)	3	
Cotton Gloves, bundle	1	
Shoe Covers, disposable, pair	20	
All Purpose Marker	2	
Scotch Tape Roll and Dispenser	1	
Masking Tape, 1 roll 1" and 1 roll 2"	2	
Rain Suit, disposable	2	
Weather-Proof Caution Signs with Inserts	4	
Radioactive Waste Signs (4" x 6")	25	
Caution: Radiation/Radioactive Material Tags	12	
Binoculars	1	
Plastic Sample Bottles	12	
Thermometer	2	
Flashlight	2	
Batteries, D Cell	4	
CP-100 Cartridges	10 each	
Particulate Filters	10	
Roll of Duct Tape	2	
Poly Bags	12	
Protective Clothing (disposable sets)	6	
Safety Glasses	5	
Hard Hats	3	

Discrepancies/Resolutions: _____

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Enclosure 13.11
MISCELLANEOUS KIT
CHECKLIST

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KIT I.D. MSC-2 (Admin Room 158)

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Radeco H809V Air Samplers (Cabinet #2)	2	
Emergency 800 MHz Radios (Cabinet #1)	6	
Limnological Sampler (Cabinet #1)	1	
MSA Ultra Twin Respirator w/Combination Cartridge (Cabinet #2)	10	
Electronic Dosimeters	15	
Electronic Dosimeter Reader	1	

Leave a copy of this sheet in Cabinet 1.

Signature/Date

**PERSONNEL SURVEY KIT CHECKLIST
RP INSTRUMENT CALIBRATION LAB**

KIT I.D. PSK-1

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Eberline E-520 or E-120 with probe	1	
MSA Ultra Twin Respirators w/Combination Cartridges	4	
Potassium Iodide Tablets (bottle)	1	
Protective Clothing (disposable sets)	6	
Boundary Ribbon or Rope (50 yd. Roll)	1	
Caution Signs w/inserts	4	
Masking Tape (roll)	1	
Poly Bags (various)	6	
NuCon Smears (box)	2	
PSK-1 Booklet containing: Legal pad SH/0/B/2001/003 HP/0/B/1009/022 HP/0/B/1009/024	1	
Pen	2	
Grease Pencil	1	
Disposable Coveralls (case - in separate container)	1	
Batteries, D cell	4	
Cs-137 Check Source (Cs-7A)	1	

Discrepancies/Resolutions: _____

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

**PERSONNEL SURVEY/RECOVERY KIT
CHECKLIST
ADMIN. BLDG. (ROOM 158)**

KIT I.D. PSK-2

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Eberline E-520 or E-120 with probe	2	
MSA Ultra Twin Respirators w/Combination Cartridges	4	
Potassium Iodide Tablets (bottle)	150	
Protective Clothing (disposable sets)	6	
Rain Suits	2	
Boundary Ribbon or Rope (50 yd. Roll)	1	
Caution Signs w/inserts	4	
Masking Tape (roll)	1	
Poly Bags (various)	6	
NuCon Smears (box)	2	
PSK-2 Booklet containing: legal pad SH/0/B/2001/003 HP/0/B/1009/022 HP/0/B/1009/024	1	
Pen	2	
Grease Pencil	2	
Hand Soap	10	
Hand Brushes	2	
Disposable Towels	1 pk.	
Fingernail Clippers	1	
Flashlight	1	
Disposable Coveralls (case - in separate container)	1	
Small Sample Bottles	60	
Batteries, D cell	4	
Cs-137 Check Source (Cs-7A)	1	

Discrepancies/Resolutions: _____

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Enclosure 13.14
PERSONNEL SURVEY KIT
CHECKLIST
COWAN'S FORD DAM

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KIT I.D. PSK-3

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Eberline E-520 or E-120 w/probe	2	
Electronic Dosimeters	4	
MSA Ultra Twin Respirators w/Combination Cartridges	4	
Potassium Iodide Tablets (bottle)	2	
Small Sample Bottles	4	
Protective Clothing (disposable sets)	6	
Boundary Ribbon or Rope (50 yd. Roll)	2	
Caution Signs w/inserts	6	
Masking Tape (roll)	1	
Poly Bags (various)	6	
NuCon Smears (box)	2	
PSK-3 Booklet containing: legal pad SH/0/B/2001/003 HP/0/B/1009/022 HP/0/B/1009/024	1	
Pens	2	
Grease Pencil	2	
Hand Soap	10	
Hand Brushes	2	
Disposable Towels	1 pk.	
Fingernail Clippers	1	
Disposable Coveralls (case - in separate container)	1	
Batteries, D cell	4	
Cs-137 Check Source (Cs-7A)	1	

Discrepancies/Resolutions: _____

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

RECOVERY KIT CHECKLIST
COWAN'S FORD DAM

KIT I.D. R-CFD

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Electronic Dosimeters	2	
Boundary Ribbon or Rope (50 yard roll)	1	
Masking Tape (roll)	1	
Rain Suits	2	
Protective Clothing (disposable sets)	2	
Poly Bags (various)	12	
Caution Signs w/inserts	2	
R-CFD Booklet (containing legal pad)	1	
Pens	2	
Grease Pencil	2	
MSA Ultra-Twin Respirators w/Combination Cartridges	2	
Potassium Iodide Tables (Bottles)	470	
NuCon Smears (box)	2	
Soap (bar)	6	
Flashlight	1	
Batteries, D cell	4	
Small Sample Bottles	200	

Discrepancies/Resolutions: _____

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

**PERSONNEL SURVEY KIT
CHECKLIST
TRAINING CENTER**

KIT I.D. PSK-4

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Eberline E-520 or E-120 with probe	2	
Electronic Dosimeters	4	
MSA Ultra Twin Respirators w/Combination Cartridges	4	
Potassium Iodide Tablets (bottle)	2	
Small Sample Bottles	4	
Protective Clothing (disposable sets)	6	
Boundary Ribbon or Rope (50 yd. Roll)	2	
Caution Signs w/inserts	6	
Masking Tape (roll)	1	
Poly Bags (various)	6	
NuCon Smears (box)	2	
PSK-4 Booklet containing: legal pad SH/0/B/2001/003 HP/0/B/1009/022 HP/0/B/1009/024	1	
Pens	2	
Grease Pencil	2	
Hand Soap	10	
Hand Brushes	2	
Disposable Towels	1 pk.	
Fingernail Clippers	1	
Disposable Coveralls (case - in separate container)	1	
Batteries, D cell	4	
Cs-137 Check Source (Cs-7A)	1	

Discrepancies/Resolutions: _____

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

**RECOVERY KIT CHECKLIST
TRAINING CENTER**

KIT I.D. R-TTC

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Electronic Dosimeters	2	
Boundary Ribbon or Rope (50 yd. Roll)	1	
Masking Tape (roll)	1	
Rain Suits	2	
Protective Clothing (disposable sets)	2	
Poly Bags (various)	12	
Caution Signs w/inserts	2	
R-TTC Booklet (containing legal pad)	1	
Pens	2	
Grease Pencil	1	
MSA Ultra-Twin Respirators w/Combination Cartridges	2	
Potassium Iodide Tablets (Bottles)	150	
NuCon Smears (box)	2	
Soap (bar)	6	
Flashlight	1	
Batteries, D cell	4	
Small Sample Bottles	60	

Discrepancies/Resolutions: _____

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

**RECOVERY KIT CHECK LIST
CONTROL ROOM**

KIT I.D. R-CR1

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Boundary Ribbon or Rope (50 yd. Roll)	1	
Masking Tape (roll)	1	
Rain Suits	2	
Protective Clothing (disposable sets)	2	
Poly Bags (various)	12	
Caution Signs w/inserts	2	
R-CR1 Booklet (containing legal pad)	1	
Pens	2	
Grease Pencil	1	
MSA Ultra-Twin Respirators w/Combination Cartridges	2	
Potassium Iodide Tablets (Bottles)	150	
NuCon Smears (box)	2	
Soap (bar)	6	
Flashlight	1	
Batteries, D cell	4	
Small Sample Bottles	60	

Discrepancies/Resolutions: _____

Inventoried: _____

Signature/Date

Reinventoried: _____

Signature/Date

Reinventoried: _____

Signature/Date

Reinventoried: _____

Signature/Date

Reinventoried: _____

Signature/Date

**DECONTAMINATION KIT CHECKLIST
FIRST AID ROOM**

KIT I.D. MDK-1

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Eberline RM014 w/HP-210 Probe (CAF)	1	
Germicidal Spray Cleaner	3	
Disposable Towels	10	
Poly Bags (various)	6	
Fingernail Clippers	1	
NuCon Smears	2	
Hand Brushes	2	
Hand Soap	10	
Protective Clothing (disposable sets)	4	
Disposable Rain Suits	2	
MDK-1 Booklet containing: RP/0/A/5700/05	1	
Tape, Radioactive Material	1	
Tape, Masking 2"	1	
Tape, Duct 2"	1	
Absorbent Pads (box)	1	
Rad Ribbon	1 50' roll	

Discrepancies/Resolutions: _____

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

**DECONTAMINATION KIT CHECKLIST
CAROLINAS MEDICAL CENTER**

KIT I.D. MDK-2

ITEM	REQUIRED AMOUNT	√ IF PRESENT
<i>Drawer #1</i>		
Procedure Book (H)	1	
Inventory Sheet	1	
<i>Drawer #2</i>		
Cultures (H)	6	
Smears (Nucon)	3 boxes	
<i>Drawer #3</i>		
Poly Bags	6	
Zip Lock Poly Bags	10	
<i>Drawer #4</i>		
Betadine Surgical Scrub (H)	1	
Betadine Solution (H)	1	
500 ml Distilled Water (H)	1	
Hand Brushes	4	
Gauze Sponges 4"x4", 12 ply (H)	20	
Surgipad Combine Dressing ()	5	
<i>Drawer #5</i>		
Radiation Caution Signs w/inserts	8	
Rad Ribbon	2 rolls	
Blue Pads (H)	1 bag	
Masking Tape 2" wide	6 rolls	
<i>Drawer #6</i>		
Batteries, D-Cell (check condition)	4	
Nail Clippers	1	
Electronic Dosimeters	8	
Electronic Dosimeter Reader	1	

Discrepancies/Resolutions: _____

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

**DECONTAMINATION KIT CHECKLIST
CAROLINAS MEDICAL CENTER**

KIT I.D. MDK-2

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Drawer #7		
Disposable Protective Clothing	10	
Each set is placed in Zip Loc Poly Bag and labeled. One set contains: Disposable Coveralls 1 pair cotton liners 1 pair PVC gloves 1 pair PVC booties 1 pair Eyeshields 1 hair cover (H) 1 Fluid Shield Mask (H)		
XXXL Disposable Coveralls	10	
Drawer #8		
Safety Glasses	10	
Additional Clothing	NA	
Drawer #9		
Hair Clipper Set	1	
Thermometers, Disposal (H)	2	
Masslin Cloth	1 pack	
Drawer #10		
E-120 w/probe	1	
E-520 w/probe	1	
Source CS-7a	1	
Drawer #11		
Vinyl Gloves (H)	1 box	
Specimen Cups (H)	4	

- Supplies followed by (H) are obtained from Hospital personnel. Contact the Training Coordinator at Carolina's Medical Center at 355-2838.
- Notify Radiation Protection three (3) months prior to calibration expiration date.

Verify calibration date of instruments and perform battery check.		
Instrument	Calibration Date	Calibration Due
E-120		
E-520		

Discrepancies/Resolutions: _____

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

**OPERATIONS SUPPORT CENTER KIT
CHECKLIST**

KIT I.D.OSC-1

ITEM	REQUIRED AMOUNT	√ IF PRESENT
MSA Ultra Twin Respirator w/Combination Cartridges	4	
Flashlight	4	
Batteries, D-cell	8	
Eberline E-520/E-120	1	
Potassium Iodide (bottles)	25	
Poly Bags	12	
Pkg. Respirator Cards	1	
Log Book	1	
OSC-1 Booklet (contains legal pad)	1	
Nucon Smears (box)	2	
CP-100 cartridges	30	
Particulate Filters	30	
Labels for Filter Cartridges	30	
Plastic Bags for Cartridges	30	
Pens	1 box	
Stopwatch	1	
Cs-137 Check Source (Cs-7A)	1	

OPERATIONS SUPPORT CENTER KIT
CHECKLIST

KIT I.D. OSC-1 (continued)

ITEM	REQUIRED AMOUNT	√ IF PRESENT
The following supplies are located in the OSC Emergency Equipment Locker		
Rain Suits	16	
Shoe Covers	16 pr.	
Rubber Gloves	1 bag	
Cotton Liners	1 bag	
Sack Suits	1 box	
Disposable Hoods	1 bag	
Step Off Pads	5	
Tape, Masking 2"	4	
Caution Signs w/inserts	5	
Extension Cord	1	
Protective Clothing (set)	4	

Discrepancies/Resolution: _____

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

**TECHNICAL SUPPORT CENTER KIT
CHECKLIST**

KIT ID.TSC-1

ITEM	REQUIRED AMOUNT	√ IF PRESENT
Protective Clothing (disposable sets)	6	
MSA Ultra Twin Respirator w/Combination Cartridges	6	
CP-100 Cartridges and Particulate Filters	25 each	
Labels for Filter Cartridges	25	
Potassium Iodide Tablets (bottle)	25	
Caution Signs w/inserts	3	
Rad Ribbon	2	
Nucon Smears (box)	1	
Plastic Bags	6	
Masking Tape (roll)	1	
Pen	2	
Grease Pencil	1	
Frisker Stand (not in kit)	1	
Duct Tape (roll)	1	
Radeco H809V Air Sampler (located outside kit)	1	

- TSC key located in Work Control Center.

Discrepancies/Resolutions: _____

Inventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

Reinventoried: _____
Signature/Date

**MONTHLY RESPIRATOR
INSPECTION SHEET**

MONTH _____

<u>KIT ID#</u>	<u>KIT TYPE</u>	<u>LOCATION</u>	<u>RESPIRATOR NUMBER</u>	<u>INSPECTED BY (signature)</u>
ESK-1	Envr. Survey	Admin. Room 158	3	_____
ESK-2	Envr. Survey	Admin. Room 158	3	_____
ESK-3	Envr. Survey	Admin. Room 158	2	_____
ESK-4	Envr. Survey	Admin. Room 158	2	_____
TAK-1	Transportation Accident	Admin. Room 158	2	_____
PSK-1	Personnel Survey	RP Instrument Cal Lab	4	_____
PSK-2	Personnel Survey/Recovery	Admin. Bldg. Room 158	4	_____
PSK-3	Personnel Survey	Cowans Ford Dam	4	_____
R-CFD	Recovery Kit	Cowans Ford Dam	2	_____
PSK-4	Personnel Survey	TTC	4	_____
R-TTC	Recovery Kit	TTC	2	_____
R-CR1	Recovery	Control Room	2	_____
OSC-1	Operation Support Center	Work Control Center Area	4	_____
TSC-1	Technical Support Center	TSC Dose Assessment Area	6	_____
				<u>44</u>

INSPECTION CRITERIA

- Check all surfaces for dry rot or deformation.
- Check lens retaining ring for integrity.
- Check lens for clarity.
- Remove exhalation valve cover.
- Check exhalation valve for dry rot, deformation, cracks, tears and residue.
- Check placement of exhalation valve cover.
- Ensure the inhalation valves are in place on both sides and that there are no visible defects.
- Check the headstraps for dry rot or deformation. They should be stored loosely, inside the facepiece, not strapped over the lens of the facepiece.
- Return completed enclosure to the Staff Representative.

RESPIRATOR CHECKS COMPLETED

_____/_____
Signature(s) Date

_____/_____
Staff Representative Signature Date

COMMUNICATION EQUIPMENT CHECK
GUIDELINES

BASE STATION: Turn on radio base station and use call sign WQC700 to sign on. "This is WQC700 McGuire base signing on for radio check". After radio check is completed, sign off using call sign. **IF** CNS is using the radios for a drill or emergency, abandon check.

PORTABLE RADIOS: Six (6) 800 MHz hand held radios located in cabinet #1, Room 158 of the Administration Building. Two (2) mobile radios in each sample van (vehicles 3224 and 3233). To test the portable radios:

1. Remove the radio from the charger.
2. Screw in antenna to the top of the radio.
3. Turn **off/on/volume** control switch on the top of the radio until **SELF TEST** is digitally displayed on the front. **MCGUIRE C17** will be displayed. **IF MCGUIRE C17** is not displayed after **SELF TEST**, turn the numbered dial on the top of the radio to position **3**. Ensure small toggle is set to position **A**. Radio is now ready to transmit and receive. No squelch adjustment is required.
4. Test the radios using the mobile call sign ("WQC 700, McGuire base, this is KA82138, radio check of portable radio number XXXX. Do you copy?") Designate each portable by the DPC number engraved on the side. It is necessary to exchange batteries, make sure the radio is turned off before removing or replacing it.
5. Turn the radio off after testing.
6. Remove the antenna and place in the storage cabinet.
7. Place the radio into a charging unit.
8. Ensure that the cabinet is closed and locked.

MOBILE EMERGENCY VAN RADIOS: One (1) located in the front of each vehicle.

1. Turn on the unit by pressing **power** button.
2. The unit will display **SELF CHECK**, press the mode key until **MCGUIRE** is displayed. You are ready to transmit and receive.

IMPORTANT: Ensure that the radio is turned off after returning from exercise or emergency.

These units will not turn off automatically when the van is turned off. Leaving the radio on will result in a vehicle dead battery.

CELLULAR PHONES: One (1) located in each vehicle.

1. Turn on the cellular phone.
2. Unlock the phone for use by pressing the last three (3) digits of the cell phone number.
3. Test the phone by call TSC dose assessment at 875-4976.

TEN-MILE RADIO CHECK LOCATIONS: Any location on the 10 mile EPZ perimeter is satisfactory for testing. Avoid stopping vehicles on the shoulder of the road during radio checks.

VERIFICATION OF EMERGENCY COMMUNICATIONS

This document shall serve as written verification that McGuire Nuclear Station's emergency radio transmitter/receivers have been successfully checked for operation at the distances prescribed by this procedure. (To be done quarterly).

Discrepancies Noted: _____

Corrective Actions Taken: _____

Signature/Date

Enclosure 13.25
EMF54 FLOW CHECK

PT/0/A/4600/088
Page 1 of 1

INSTRUCTIONS:

- Start both EMF's using the TSC motor controller by pressing the start button.
- Verify actual flow is 1 scfm at each package. (Document below).
- Secure the EMF's using the TSC motor controller by pressing the stop button and the acknowledge button when loss of flow alarm sounds.

EMF54A

Observed flow (fo): _____ cfm

Observed vacuum (Vo) _____ inches of Hg.

Actual flow (fa) _____ scfm

EMF54B

Observed flow (fo): _____ cfm

Observed vacuum (Vo) _____ inches of Hg.

Actual flow (fa) _____ scfm

Use: $fa = fo \sqrt{\frac{29.92 - Vo}{29.92}}$

Discrepancies:

Signature/Date