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INITIAL CLASSIFICATION

1.0 GENERAL

The purpose of this procedure is to provide a means of classifying an event or condition at the Point Beach Nuclear Plant into one of four emergency classifications as described in the Point Beach Nuclear Plant Emergency Plan. Each emergency classification requires emergency organization notifications, mobilizations, and actions to be performed in order to appropriately react to the situation and provide for the health and safety of plant and public personnel. They are listed in order of increasing severity.

1.1 Unusual Event

An unusual plant condition which either has occurred or might occur. This condition could possibly lead to a degradation in overall safety. This condition does not represent a significant radioactivity release, involves no offsite response, and may require no augmentation of plant personnel. In spite of the above, prompt notification of the counties and state is required.

1.2 Alert

Plant conditions in which events are in progress or have occurred which involve an actual or potential degradation of plant safety. Radiation releases are not likely to cause an offsite hazard. Prompt offsite notification is necessary and the plant organization may have to be augmented.

1.3 Site Emergency

Plant conditions in which events are in progress or have occurred which involve actual or probable major failures of plant functions. Potential radioactive releases may have an impact on offsite people. Prompt notification of offsite agencies is required. The plant organization must be augmented and the technical support center, onsite operations support center, and emergency support center will be operational. An evacuation may be necessary.

1.4 General Emergency

Plant conditions in which events are in progress or have occurred which involve actual or imminent substantial core degradation and a potential for loss of containment integrity. Potential radioactive releases may have an impact on offsite people. Prompt notification

of offsite agencies is required. The plant organization must be augmented and the technical support center, onsite operations support center, and emergency support center will be operational. An evacuation may be necessary. The emergency news center will be opened.

The Shift Supervisor has the responsibility and authority to take immediate action to mitigate the consequences of the emergency. He will consult with the Duty & Call Superintendent and assign the appropriate emergency classification and initiate the necessary Emergency Plan implementing procedures.

2.0 REFERENCES

2.1 Nuclear Regulatory Commission NUREG-0654, Revision 1, published November, 1980.

2.2 Point Beach Nuclear Plant Emergency Plan Sections 4.1 and 5.1.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 All actions and notifications should be appropriately logged.

3.2 Emergency Plan implementing procedures are not to be used to respond to security threats. One hour notification of the NRC is required using the red phone for security threats.

3.3 Certain events require notification to the NRC within one hour. These items are included on Table 1-1. Those items which are noted as "NRC Only" means that there is no classification for the events and no notification other than the NRC is required. These notifications are not considered as starting the Emergency Plan.

3.4 The "Indications Used" in Table 1-1 are those which one may expect if that level of emergency occurs very quickly. For more slowly developing situations, other indications may be judged appropriate. For example, a primary system leak rate of 40 gpm is an Unusual Event. Subsequently, charging may be lost and, in addition, the leak may worsen. One may not see charging flow 50 gpm greater than letdown flow when in fact an Alert should be declared.

4.0 INITIAL CONDITIONS

None.

NOTE: APPENDIX 1 OF NUREG-0654 (PAGE 1-3) CONTAINS THIS SENTENCE: "THE TIME IS MEASURED FROM THE TIME AT WHICH OPERATORS RECOGNIZE (EMPHASIS ADDED) THAT EVENTS HAVE OCCURRED WHICH MAKE DECLARATION OF THE EMERGENCY CLASS APPROPRIATE.

5.0 PROCEDURE

5.1 Call the Duty & Call Superintendent for consultation to establish the initial classification. If he is unavailable, the Shift Supervisor is responsible for classification.

5.2 Select affected categories related to plant events or conditions at this time. Check (√) all applicable categories.

Category				Refer to Page in Table 1-1
1. _____	_____	_____	Safety System Functions	1
2. _____	_____	_____	Abnormal Primary Leak Rate	1
3. _____	_____	_____	Abnormal Coolant Temperature/ Pressure	2
4. _____	_____	_____	Abnormal Primary/Secondary Leak	2
5. _____	_____	_____	Core Fuel Damage	3
6. _____	_____	_____	Secondary Coolant Anomaly	4
7. _____	_____	_____	Abnormal Effluent	5
8. _____	_____	_____	Major Electrical Failures	5
9. _____	_____	_____	Control Room Evacuation	6
10. _____	_____	_____	Fire	6
11. _____	_____	_____	Plant Shutdown Function	7
12. _____	_____	_____	Abnormal Radiation Levels at Site Boundary	8
13. _____	_____	_____	Fuel Handling Accident	8
14. _____	_____	_____	Serious or Fatal Injury	9
15. _____	_____	_____	Security Threat	9
16. _____	_____	_____	Hazards to Plant Operations	9
17. _____	_____	_____	Natural Events	10
18. _____	_____	_____	Reactivity Transient	10

Category				Refer to Page in Table 1-1
19.	_____	_____	_____ Load Transient	11
20.	_____	_____	_____ Other	11

5.3 Beginning at the indicated page in Table 1-1 (attached), review initiating conditions for all categories checked above.

5.4 Record most severe emergency classification at this time.

_____ _____ _____

5.5 Record date/time of initial classification (subsequent columns for reclassification at a later date and time are provided if reclassification is required).

Initial Date/Time	Subsequent Date/Time	Subsequent Date/Time
_____	_____	_____

NOTE: IF THE SHIFT SUPERVISOR CANNOT COMMUNICATE WITH A DUTY & CALL SUPERINTENDENT, THE SHIFT SUPERVISOR MUST NOTIFY THE STATE AND TWO COUNTIES WITHIN 15 MINUTES OF THE DECLARATION OF ANY CLASS OF EMERGENCY.

5.6 If events or conditions are classified as an Unusual Event, perform EPIP 2.1, "Unusual Event - Immediate Actions."

5.7 If events or conditions are classified as an Alert, perform EPIP 3.1, "Alert - Immediate Actions."

5.8 If events or conditions are classified as a Site Emergency, perform EPIP 4.1, "Site Emergency - Immediate Actions."

5.9 If events or conditions are classified as a General Emergency, perform EPIP 5.1, "General Emergency - Immediate Actions."

NOTE:

"One hour" refers to the requirement to notify NRC within one hour (10 CFR 50.72).

"One hour - Open line" refers to the requirement to notify NRC within one hour and maintain an open line for continuous communication (10 CFR 50.72).

Notes: DCS - Duty & Call Superintendent
DSS - Duty Shift Supervisor
FFDSAR - Final Facility Description & Safety Analysis Report
MASP - Modified Amended PBNP Security Plan

TABLE 1-1

EMERGENCY CLASSIFICATION

Category	Initiating Condition	Indication Used	Emergency Classification
1. Safety System Functions	Unplanned initiation of emergency core cooling with injection to the primary system	Any of the following first-out reactor trip panel annunciation with indicator confirmation noted: 1. "Containment press hi", [PI-945, PI-947, PI-949 (2/3 >5 psig)] 2. "Steam line loop A lo-lo press" [PI-468, PI-469, PI-482 (2/3 <530 psig)] 3. "Steam line loop B lo-lo press" [PI-478, PI-479, PI-483 (2/3 <530 psig)] 4. "Pressurizer lo press SI" [PI-429, PI-430, PI-431 (2/3 <1735 psig)] 5. Wide range pressure <1500 psig	Unusual Event
	Loss of containment integrity requiring shutdown by Technical Specifications	When shutdown commences as determined by DSS and DCS	Unusual Event
	Loss of engineered safety feature requiring shutdown by Technical Specifications	When shutdown commences as determined by DSS and DCS	Unusual Event
	Loss of fire protection system function requiring shutdown by Technical Specifications (i.e., both fire pumps inoperable)	When shutdown commences as determined by DSS and DCS	Unusual Event
2. Abnormal Primary Leak Rate	Exceeding Technical Specification primary system leak rate (10 gpm)	When shutdown commences as determined by DSS and DCS	Unusual Event

Category	Initiating Condition	Indication Used	Emergency Classification
	Leak rate >50 gpm	All of the following: 1. "Volume control tank level hi-lo" [LI-141 and/or LI-112 <8%] 2. Decreasing pressurizer level [LI-426, LI-427, LI-428] 3. "Charging pump speed hi" 4. Charging line flow (FI-128) >50 gpm more than letdown flow (FI-134)	Alert
	Leak rate in excess of available pump capacity including charging, high head SI and low head SI	All of the following: 1. "Volume control tank level hi-lo [LI-141 and/or LI-112 <8%] 2. No pressurizer level indicated [LI-426, LI-427, LI-428] 3. All available pumps running as indicated by the red light at the switch 4. Increasing core exit T/C temp as indicated by P-250 and confirmed on local readout.	Site Emergency
3. Abnormal Coolant Temperature/Pressure	Unexpected decrease in subcooling margin	Both of the following: 1. Alarm on P-250, if operable 2. Confirmation by manual calculation	Unusual Event
	Pressure >2735 psig DNBR <1.30	Pressure >2735 psig on PR-420 and "Code, safety or PORV not closed"	NRC only 1-hour open line (2)
4. Abnormal Primary/ Secondary Leak	Exceeding Technical Specification primary-secondary leak rate	When shutdown commences as determined by DSS and DCS	Unusual Event

Category	Initiating Condition	Indication Used	Emergency Classification
	Gross failure of 1 SG tube (>400 gpm) & loss of offsite power (FFDSAR 14.2.4)	All of the following first-out reactor panel annunciation with confirmation indication: 1. "Pressurizer Lo Press SI," [PI-429, PI-430, PI-431 (2/3 <1735 psig)] 2. a. "Steam generator A level hi" [LI-461, LI-462, LI-463 (2/3 >70%)] or b. "Steam generator B level hi" [LI-471, LI-472. LI-473 (2/3 >70%)] 3. a. "4.16 kv bus undervoltage" & 0 volts on A03 & A04 voltmeters. b. X04 to A03 ammeter on CO2 (0 amps) c. X04 to A04 ammeter on CO2 (0 amps) 4. SI flow >400 gpm indicated by FI-924 & FI-925 and pump discharge pressure corresponding to flow.	Alert
	Rapid failure of >10 SG tubes (4000 gpm) with or without offsite AC	All of the following first-out reactor panel annunciation with confirming indication: 1. "Pressurizer lo press SI" [PI-429, PI-430, PI-431 (2/3 <1735 psig)] 2. a. "Steam generator A level hi" [LI-461, LI-462, LI-463 (2/3 >70%)] or b. "Steam generator B level hi" [LI-471, LI-472, LI-473 (2/3 >70%)] 3. SI flow >4,000 gpm indicated by FI-626 & FI-928.	Site Emergency
5. Core Fuel Damage	Gross fuel damage in core indicated	Both of the following: 1. Letdown line radiation monitor (R9) 100 x alarm setpoint. 2. Sustained offscale & chemical analysis shows fission product concentration increase by 100X.	Unusual Event

Category	Initiating Condition	Indication Used	Emergency Classification
	Massive fuel damage	300 µCi/cc iodine-equivalent as determined by by chemical analysis	Alert
	1. Massive loss of fuel clad integrity 2. With simultaneous loss of primary system integrity 3. With potential loss of containment integrity	Initiating Condition Nos. 1 & 2 exist and No. 3 is possible: 1. 300 µCi/cc iodine-equivalent determined by chemical analysis 2. Primary system leak >1000 gpm indicated by SI flow >1000 gpm (FI-924 & FI-925) and pump discharge pressure corresponding to flow 3. Minimum containment pressure suppression equipment is not available (any of the following): a. No fan coolers operating and <2 spray pumps. b. No spray pumps operating and <2 fan coolers c. <2 fan coolers running with 1 spray pump 4. "Containment press hi" [PI-945, PI-947, PI-949 (2/3 >5 psig)] 5. "Containment spray" with 2/3 + 2/3 >25 psig [PI-945, PI-947, PI-949] [PI-946, PI-948, PI-950]	General Emergency
6. Secondary Coolant Anomaly	Reduction in feedwater enthalpy incident (FFDSAR 14.1.7)	1. a. Decreasing feedwater temp indicated by TO-418A & TO-438A on P-250 and b. Confirmed by local temperature indicator on outlet of No. 5 feedwater heater. 2. Unexpected increasing power on excore nuclear instrumentation	Unusual Event
	Steam line break with primary-to-secondary leak rate in excess of 10 gpm (FFDSAR 14.2.5)	All of the following first-out reactor trip panel annunciation with confirmation: 1. Either: a. "Steam line loop A Lo-Lo press" [PI-468, PI-469, PI-482 (2/3 <530 psig)] or b. "Steam line loop B Lo-Lo press" [PI-478, PI-479, PI-483 (2/3 <530 psig)]	Alert

Category	Initiating Condition	Indication Used	Emergency Classification
		2. Confirmed primary-to-secondary leak rate of at least 10 gpm. 3. Either: a. "Steam line loop A isol channel alert" [FI-464, FI-465 (1/2 >3.9×10^6 lb/hr)] or b. "Steam line loop B isol channel alert" [FI-474, FI-475 (1/2 >3.9×10^6 lb/hr)]	
Secondary Coolant Anomaly	Transient initiated by loss of feedwater, followed by loss of auxiliary feedwater for >1 hour (FFDSAR 14.1.11)	All of the following: 1. Decreasing SG levels - "A" SG [LI-461, LI-462, LI-463] "B" SG [LI-471, LI-472, LI-473] 2. No auxiliary feedwater flow - [FI-4002, FI-4007, FI-4014] [FI-4036, FI-4037]	General Emergency
7. Abnormal Effluent	Radiological effluent Technical Specification limits exceeded but <10 times the limit (FFDSAR 14.2.3)	Airborne effluents only	Unusual Event
	Radiological effluent Technical Specification limits exceeded (FFDSAR 14.2.2)	Liquid effluents only	Unusual Event
	Radiological effluents >10 times Technical Specification instantaneous limits. (An instantaneous rate which, if continued for >2 hours, would result in a dose of about 1 mR at the site boundary under average meteorological conditions.)	Airborne effluents only	Alert
8. Major Electrical Failures	Sustained loss of offsite power >15 minutes (FFDSAR 14.1.2)	All of the following: 1. "4.16 kv bus undervoltage" & 0 volts on A03 & A04 voltmeters. 2. X04 to A03 ammeter on CO2 (0 amps). 3. X04 to A04 ammeter on CO2 (0 amps)	Unusual Event

Category	Initiating Condition	Indication Used	Emergency Classification
	Sustained loss of onsite AC power capability (>15 minutes)	Both of the following: 1. "4 16 kv bus undervoltage" & 0 volts on A05 and A06 voltmeters and "Emergency Diesel Starting System Disabled" for both Diesels	Unusual Event
	Loss of all vital onsite DC power >15 minutes	Both of the following: 1. "Annunciator power failure" on C01, C02, C03, and C04 2. <100 volts on the voltmeters for all batteries	Site Emergency
	Loss of offsite power and loss of all onsite AC power for >15 minutes	All of the following: 1. "4.16 kv bus undervoltage" 0 volts on A03, A04, A05, A06 & "Emerg Diesel starting system disabled" for both Diesels 2. X04 to A03 ammeter on C02 (0 amps) 3. X04 to A04 ammeter on C02 (0 amps)	Site Emergency
	Loss of offsite and all onsite AC power with loss of all auxiliary feedwater for >2 hours	All of the following: 1. Unit aux MW meter X02 on C02 (0 MW) 2. Station aux MW meter X04 on C02 (0 MW) 3. X04 to A03 ammeter on C02 (0 amps) 4. X04 to A04 ammter on C02 (0 amps) 6. X02 to A01 ammeter on C02 (0 amps) 7. a. No auxiliary feedwater flow [FI-4036, FI-4037] b. Decreasing SG level - "A" SG [LI-461, LI-462, LI-463] "B" SG [LI-471, LI-472, LI-473]	General Emergency
9. Control Room Evacuation	Evacuation of control room >15 minutes & no control at remote shutdown station	As required by DSS	Site Emergency
10. Fire	Fire in vital area or on the controlled side of plant lasting >10 minutes after initial use of fire extinguishing equipment.	As reported by Fire Brigade Chief	Unusual Event

Category	Initiating Condition	Indication Used	Emergency Classification
	Fire affecting 1 train of safety systems.	As reported by Fire Brigade Chief	Alert
	Fire affecting 2 trains of safety systems	As reported by Fire Brigade Chief	Site Emergency
11. Plant Shutdown Function	Nonfunctional indications or alarms in the control room on primary system parameters requiring plant	Both of the following: 1. "Annunciator power failure" on C04. 2. Failed indication as determined by DSS.	Unusual Event
	Turbine mechanical failure with consequences	1. Annunciator "Turbine supervisory." 2. Indication on TR-6019 of bearing vibration >7 mils. 3. Bearing vibration alarm on back of C03. 4. Visual confirmation of turbine housing penetration by a blade or disc.	Unusual Event
	Significant loss of effluent monitoring capability & meteorological instruments which impairs ability to perform emergency assessment. Loss of effluent monitoring may/may not require plant shutdown.	1. Loss of LW16 during a release or 2. Loss of R18 during a release or 3. a. Loss of wind speed indication or wind direction indication and b. Loss of R14 and RMS II Channel 1 or c. Loss of R15 and CR9 and RMS II Channel 5 or d. Loss of R21 and RMS II Channel 2 or e. Loss of GW112 and RMS II Channel 6	Unusual Event
	Failure of reactor protection system to complete a trip which brings reactor subcritical	All of the following: Unplanned first out annunciator on C04 with confirmation from associated indicator and intermediate range detector output not decaying and >1 RCC RPI indicates fully withdrawn	Alert

Category	Initiating Condition	Indication Used	Emergency Classification
	All alarms (annunciators) lost >15 minutes while unit is not in cold shutdown	1. "Annunciator power failure" on CO1, CO2 & 1(2)CO3, 1(2)CO4	Alert
	Loss of functions needed for cold shutdown for >4 hours while at cold shutdown	Any of the following: 1. Loss of service water Unit 1 = south & west header Unit 2 = north & west header 2. Loss of both trains of RHR 3. Loss of component cooling	Alert
12. Abnormal Radiation Levels at Site	a. Effluent monitors detect levels corresponding to any of the following: (1) >50 mR/hr for ½ hour (2) >250 mR/hr for ½ hour for the thyroid (3) >500 mR/hr whole body for 2 minutes (4) >2500 mR/hr to the thyroid for 2 minutes at the site boundary for adverse meteorology	Airborne effluents only	Site Emergency
	b. Any of the above doses measured in the environs	As reported to DSS by HP Supervisor	
	c. Any of the dose rates projected, based on plant parameters		
	a. Effluent monitors detect levels corresponding to either: (1) 1 R/hr whole body (2) 5 R/hr thyroid at the site boundary under actual meteorological conditions	Airborne effluents only	General Emergency
	b. Either of the above doses measured in environs	As reported to DSS by HP Supervisor	
	c. Either of above dose rates projected based on other plant parameters		
13. Fuel Handling Accident	Major damage to irradiated fuel in containment	Both of the following: 1. As reported to DSS by Core Loading Supvr. 2. Alarm on Victoreen on manipulator & alarm on R11	Alert

Category	Initiating Condition	Indication Used	Emergency Classification
17. Natural Events	Any earthquake	Activation of ≥2 accelerographs	Unusual Event
	Any tornado visible from site	Verification by Operations Supervisor	Unusual Event
	Low Lake Michigan water level	With no CW pumps running, water level is 3.9' below 0' on surge chamber level & confirmed by measuring forebay level at 10.9' below pumphouse floor (7' level)	Unusual Event
	Earthquake greater than operating basis earthquake	Earthquake with attendant structural damage of containment or spent fuel pit	Alert
	Any tornado striking the facility	Visual observation by Operations Supervisor	Alert
	Seiche near design level	>6" of water in turbine hall	Alert
	Winds in excess of design levels	Wind speed indicated as >100 mph	Alert
	Wind with damage	Structural damage to containment	Site Emergency
	Failure of protection for vital equipment at low levels (i.e., caused by seiche > design levels)	Any of the following: 1. >3' water in both EDG rooms. 2. >2' water in vital switchgear room. 3. >2' water in auxiliary feed pump room.	Site Emergency
18. Reactivity Transient	Uncontrolled rod withdrawal (FFDSAR 14.1.1 & 14.1.2)		Unusual Event
	CVCS Malfunction (FFDSAR 14.1.5)		Unusual Event
	Accidental Criticality		NRC Only (3)

Category	Initiating Condition	Indication Used	Emergency Classification
	Fuel damage accident with release of radioactivity to auxiliary building (FFDSAR 14.2.1)	Both of the following: 1. As reported to DSS by Supvr in charge of fuel handling & drumming area vent (R21) 2. Alarm on Victoreen on spent fuel pit bridge.	Alert
14. Serious or Fatal Injury	Transportation of seriously or fatally injured individual from site to hospital (Reference EPIP 11.1)	Reported as judged by DSS (expect hospitalization for at least 48 hours)	Unusual Event
15. Security Threat	Security threat or attempted sabotage or Ongoing security compromise	Per MASP	Per MASP & Appendices 1-Hour Red Phone Only (Open Line) (4)
16. Hazards to Plant Operation	Unusual aircraft activity over facility	Visual observation of Operations Supervisor or security force	Unusual Event
	Near or onsite explosion or flammable or toxic gas release	As reported to DSS by plant personnel making visual observation	Unusual Event
	Missile impacts from any source on facility	Visual observation by Operations Supervisor	Alert
	Missile impact causing damage to two trains of safety systems	Visual observation by Operations Supervisor	Site Emergency
	Aircraft crash in protected area (within the fence)	Visual observation by Operations Supervisor	Alert
	Known explosion damage to facility affecting plant operation. Toxic or flammable gases in facility environment excluding normal process gases	Visual observation by Operations Supervisor	Alert
	Toxic or flammable gases entering into vital areas (control room, auxiliary building, etc.) excluding normal process gases	Visual observation by Operations Supervisor	Site Emergency

Category	Initiating Condition	Indication Used	Emergency Classification
19. Load Transient	Loss of Electrical Load (FFDSAR 14.1.10)		Unusual Event
20. Other	Condition that warrants State and/or local official awareness	DCS & DSS concurrence	Unusual Event
	Condition that warrants establishment of technical support center & emergency support center	DCS & DSS concurrence	Alert
	Condition that warrants use of monitoring teams	DCS & DSS concurrence	Alert
	Personnel contamination	Health Physicist & DCS concurrence	NRC-only 1-hour (10)
	Any unplanned reactor trip	DCS & DSS concurrence	NRC-only 1-Hour (7)
	Strike by employees or guard force	DCS & DSS concurrence	NRC-only 1-Hour (12)
	Loss of red phone (ENS)	DCS & DSS concurrence	NRC-only 1-Hour (13)
	Personnel or procedural error	DCS & DSS concurrence	NRC-only 1-Hour (6)
	10 CFR 20.403	DCS & DSS concurrence	NRC-only 1-Hour (11)

EPIP 7.1.1
MINOR
Revision 1
03-17-82

CHEMISTRY & HEALTH PHYSICS GROUP PERSONNEL NOTIFICATION AND INITIAL RESPONSE WHEN CHEMISTRY & HEALTH PHYSICS PERSONNEL ARE ON SITE

1.0 PURPOSE

The purpose of this procedure is to establish guidelines for the initial response of the Chemistry & Health Physics Group in support of a Site or General Emergency which may require evacuation of the main plant building while Chemistry & Health Physics personnel are on site. A rapid and organized response by the Chemistry & Health Physics Group is necessary to facilitate early assessment of site radiological conditions. The three major areas of concern are as follows:

a. The area within the protected area including the plant buildings.

b. The area outside of the protected area but within the exclusion area (site boundary perimeter lines).

c. Those areas off-site (beyond the exclusion area).

2.0 PRECAUTIONS AND LIMITATIONS

2.1 Health Physics response team assignments (refer to EPIP 7.2.1) will be made by a Health Physics Supervisor after a preliminary assessment (EPIP 1.0) of plant/site radiological conditions.

2.2 Assigned personnel will wear the prescribed protective clothing, dosimetry devices, and other prescribed protective equipment when on their job assignments.

2.3 Whenever possible, standard health physics procedures are to be followed.

2.4 It is to be understood that these are implementation guidelines and that the existing plant and radiological conditions may necessitate changes to these guidelines and/or the sequence in which they are implemented.

3.0 CHEMISTRY & HEALTH PHYSICS GROUP INITIAL RESPONSE

3.1 Upon notification that an Alert, Site, or General Emergency is in effect, all Chemistry & Health Physics Group personnel on site not already assigned an emergency function will report to the health physics station.

3.2 Upon arrival at the health physics station, all Chemistry & Health Physics personnel shall remain alert for further instructions concerning the need for limited or plant evacuation (EPIP 6.0) or the need for search and rescue efforts (EPIP 12.0).

3.3 The acting Health Physics Supervisor will have a roll call taken to ensure that all Chemistry & Health Physics Group personnel on duty are present. Personnel not accounted for will be paged. The Health Physics Supervisor will notify the Security staff of missing personnel.

3.4 The Chemistry/Health Physics Supervisor (Superintendent - Chemistry & Health Physics) or his designated alternate will report to the technical support center and be prepared to implement EPIP 7.2.2, "Activation of Health Physics Facilities at the Operations Support Center," as required.

4.0 CHEMISTRY & HEALTH PHYSICS GROUP RESPONSE IN THE EVENT OF A PLANT EVACUATION OR NEED FOR PROTECTED AREA OR OFF-SITE SURVEYS

4.1 In the event of a plant evacuation, the Health Physics Director (Health Physicist) or his designated alternate will report to the site boundary control center and begin implementation of EPIP 7.2.1, "Site Boundary Control Center Activation Plan," as appropriate. In addition, the emergency vehicle will be utilized for transportation to the site boundary control center. If plant evacuation has not been declared, but protected area/off-site surveys are required, the Health Physics Director (Health Physicist) will report to the health physics station and make assignments as necessary.

4.2 The acting Health Physics Supervisor assigned to the health physics station should utilize Appendix "A" to verify completion of the procedural steps to follow.

4.3 Under the direction of a Health Physics Supervisor, Chemistry & Health Physics personnel will collect and make ready for use the equipment listed below or their equivalents:

Dosimeters (0-500 mR)	As available
Dosimeters (0-5000 mR)	25 ea.
Dosimeter chargers	2 ea.
Rad Owl One	1 ea.
Mini-scaler and battery pack	1 ea.
HPI-1010	1 ea.
PIC-6A	5 ea.
Baird Model 530 (Canberra Model 30)	1 ea.
Self-contained breathing units	4 ea.
Other instruments and equipment as designated	

4.4 In the event of a plant evacuation, the Health Physics Supervisor will:

4.4.1 Assign personnel as follows:

OSC/TSC	SBCC
HP Supervisors (2)	Nuclear Plant Specialist-HP (2)
Nuclear Plant Specialist-Chemistry (2)	Rad Control Operators (4)
Rad Control Operators (4)	Rad/Chem Technicians (2)
Rad/Chem Technicians (4)	AOT assigned to HP (All)

4.4.2 Assign one site boundary control center individual to get a carryall vehicle (other than the assigned site emergency vehicle) and wait with the vehicle at the west entrance door near Ready Stores. This vehicle will be used to transport equipment to the site boundary control center.

4.4.3 Assign two technical support center/operations support center individuals to move the Baird Model 530 SCA or the Canberra Model 30 MCA and detector to the technical support center/ operations support center or to an alternate area determined by the Chemistry/Health Physics Supervisor. Upon completion of this assignment, they are to proceed to the site boundary control center.

4.5 In the event of either a plant evacuation or need for off-site surveys, the acting Health Physics Supervisor will verify that all required equipment indicated in Section 4.3 has been obtained.

4.6 On completion of the above procedural guidelines, the acting Health Physics Supervisor will direct Chemistry & Health Physics Group personnel assigned to the site boundary control center to report utilizing private vehicles and/or health physics assigned Company vehicles (maximum of two).

4.7 Upon arrival at the site boundary control center, personnel are to proceed in accordance with EPIP 7.2.1, "Activation of Health Physics Facilities at the Site Boundary Control Center."

APPENDIX "A"

EPIP 7.1.1 CHECKLIST

CHEMISTRY & HEALTH PHYSICS GROUP PERSONNEL NOTIFICATION AND INITIAL RESPONSE WHEN CHEMISTRY & HEALTH PHYSICS PERSONNEL ARE ON SITE

Date _____

	INITIALS	TIME
1. Chemistry & Health Physics Group personnel report to the health physics station. (Section 5.1 and 5.2)	_____	_____
2. All Chemistry & Health Physics Group personnel on duty present and/or accounted for. (Section 5.3)	_____	_____
3. Chemistry/Health Physics Supervisor (Superintendent - Chemistry & Health Physics) has been notified of accountability.	_____	_____
4. If plant evacuation has been declared, proceed with EPIP 7.1.1. If plant evacuation has not been declared but protected area/off-site surveys are required, proceed as directed by the Health Physics Director (Health Physicist).	_____	_____
5. Health Physics Director (Health Physicist) has obtained the emergency vehicle and reported to the site boundary control center or to the health physics station. (Section 6.1)	_____	_____
6. The acting Health Physics Supervisor at the health physics station will direct Chemistry & Health Physics personnel to collect and make ready for use the following equipment or their equivalents. (Section 4.3)	_____	_____

a.	Dosimeters (0-500 mR)	As available
b.	Dosimeters (0-5000 mR)	25 ea.
c.	Dosimeter chargers	2 ea.
d.	Rad Owl One	1 ea.
e.	Mini-scaler and battery pack	1 ea.
f.	HPI-1010	1 ea.
g.	PIC-6A	5 ea.
h.	Baird Model 530 or Canberra Model 30	1 ea.
i.	Self-contained breathing units	4 ea.
j.	Other instruments and equipment as designated by Chemistry & Health Physics supervision	

	INITIALS	TIME
7. For a plant evacuation, acting Health Physics Supervisor will: (Section 4.4)		
a. Assign personnel to the TSC/OSC to initiate EPIP 7.2.2, "Activation of Health Physics Facilities at the TSC/OSC." (Section 4.4.1)	_____	_____
b. Assign one individual to get a carryall vehicle and wait at the west entrance door by Ready Stores. (Section 4.4.2)	_____	_____
c. Assign two individuals to move the Baird Model 530 or Canberra Model 30 to the technical support center or an alternate area determined by the Chemistry/Health Physics Supervisor. (Section 4.4.3)	_____	_____
8. Monitor loading of equipment (Section 4.3) into carryall and direct driver to proceed to the site boundary control center. (Section 4.5)	_____	_____
9. Direct Chemistry & Health Physics personnel to proceed to the site boundary control center or TSC/OSC as assigned. (Section 4.6)	_____	_____
10. Upon arrival at site boundary control center. Proceed in accordance with EPIP 7.2.1, "Activation of Health Physics Facilities at the Site Boundary Control Center."	_____	_____

EPIP 7.1.2
MINOR
Revision 1
03-17-82

CHEMISTRY & HEALTH PHYSICS GROUP PERSONNEL NOTIFICATION AND INITIAL RESPONSE WHEN CHEMISTRY & HEALTH PHYSICS PERSONNEL ARE OFF SITE

1.0 PURPOSE

The purpose of this procedure is to establish guidelines for the initial response of the Chemistry & Health Physics Group in support of an Alert (as required), Site or General Emergency during other than normal duty hours when Chemistry & Health Physics personnel are not on site. A rapid and organized response by the Chemistry & Health Physics Group is necessary to assist in early assessment of plant and site radiological conditions. The three major areas of concern are as follows:

a. The areas located within the protected area including inside of plant buildings.

b. The areas located outside of the protected area but within the exclusion area (site boundary perimeter lines).

c. Those areas off-site located outside of the exclusion area.

2.0 PRECAUTIONS AND LIMITATIONS

2.1 Health physics response team assignments (refer to EPIP 7.2.1) will be made by a Health Physics Supervisor after a preliminary assessment (Section 1.0) of site radiological conditions.

2.2 Assigned personnel will wear the prescribed protective clothing, dosimetry devices, and other prescribed protective equipment when conducting their job assignments.

2.3 Whenever possible, standard health physics procedures are to be followed at all times.

3.0 CHEMISTRY & HEALTH PHYSICS GROUP RESPONSE

3.1 All Chemistry & Health Physics Group personnel will report to the site boundary control center or stand by at their place of residence as directed by the notification telephone call.

3.2 The Chemistry/Health Physics Supervisor (Superintendent - Chemistry & Health Physics), Health Physics Director (Health Physicist), and the Chemistry & Health Physics Duty & Call Supervisor or their designated

alternate will, upon arrival at the site boundary control center, inquire as to the status of the plant radiological assessment (EPIP 1.0).

3.3 Dependent upon the existing plant radiological conditions, the Chemistry/Health Physics Supervisor, Health Physics Director, Chemistry & Health Physics Duty & Call Supervisor, or their designated alternates, will at this time, determine the necessity for activating the health physics facilities of the site boundary control center and the operations support center as follows.

3.3.1 No Plant Evacuation

a. Chemistry & Health Physics personnel will proceed to the health physics station and establish controls for entry into the auxiliary building and begin implementation of EPIP 7.1.1, "Chemistry & Health Physics Group Personnel Notification & Initial Response when Chemistry & Health Physics Personnel are On Site," as directed by the Health Physics Director.

3.3.2 Plant Evacuation

If plant evacuation is declared, proceed as follows in Section 4.0.

4.0 PLANT EVACUATION DECLARED

4.1 Chemistry & Health Physics Group personnel, upon arrival at the site boundary control center, will be directed to begin implementation of EPIP 7.2.1, "Activation of Health Physics Facilities at Site Boundary Control Center."

4.2 Dependent upon habitability, the Chemistry/Health Physics Supervisor or his designated alternate will proceed to the technical support center whenever a second Chemistry & Health Physics Supervisor is available at the site boundary control center.

4.3 As Chemistry & Health Physics personnel become available, the Health Physics Director will assign them as follows:

OSC/TSC	SBCC
Health Physics Supervisors (all)	Nuclear Plant Specialists-HP (all)
Nuclear Plant Specialist-Chem (all)	Rad/Con Operators (4)
Radiochemist	AOT's Assigned to HP (all)
Rad/Chem Techs (all)	
Rad/Con Operators (4)	

EPIP 7.2.1
MINOR
Revision 2
03-17-82

ACTIVATION OF HEALTH PHYSICS FACILITIES AT SITE BOUNDARY CONTROL CENTER

1.0 PURPOSE

The primary purpose of this procedure is to provide guidelines for activating the site boundary control center during a Site or General Emergency requiring plant evacuation or in the event that surveys outside the protected area are required. Modifications to these guidelines may be implemented by the Health Physics Director (Health Physicist) to meet the existing plant and site radiological conditions so as to ensure the continued safety of plant personnel and the general public.

2.0 ACTIVATION OF HEALTH PHYSICS FACILITIES AT SITE BOUNDARY CONTROL CENTER

2.1 Health Physics Director

The Health Physics Director or his designated alternate is responsible for directing health physics activities at the site boundary control center and for providing radiation protection assistance as requested by the Chemistry/Health Physics Supervisor. When the Radcon/Waste Manager is available, the Health Physics Director should report to him. Appendix "A", Health Physics Director Duties, provides the specific guidelines for accomplishment of these duties.

2.2 Assistant to the Health Physics Director

When manpower allows, the Health Physics Director will assign a Chemistry & Health Physics Supervisor to perform the duties of Assistant to the Health Physics Director. The Assistant Health Physics Director is responsible for directing Chemistry & Health Physics personnel from the site boundary control center and for the coordination of all health physics related activities with the Health Physics Director. Appendix "B" provides the guidelines for accomplishment of these duties.

2.3 The following teams will be manned by personnel as assigned by the Health Physics Director or the Assistant to the Health Physics Director. Team duties are outlined in the respective appendix.

Team	Appendix
Site Boundary Control Center/Radiation Control Team	B
Counting Team	C
Survey Teams	C
Kewaunee Shuttle Team	C

APPENDIX "A"

SITE BOUNDARY CONTROL CENTER
HEALTH PHYSICS DIRECTOR RESPONSIBILITIES AND DUTIES

1. Obtain environmental data (wind speed, direction and stability class) from the Chemistry/Health Physics Supervisor in the technical support center.

2. Use results from EPIP 1.4, "Radiological Dose Evaluation," and EPIP 1.5, "Protective Action Evaluation," procedures and determine the extent and location for the initial and followup environmental surveys as required.

3. When manpower allows, designate a Chemistry & Health Physics Supervisor to perform the duties of Assistant to the Health Physics Director at the site boundary control center (EPIP 7.2.1, Appendix "B"). If manpower is not sufficient, perform the duties listed in Appendix "B".

4. Coordinate with the RadCon/Waste Manager, when available, control and exposure documentation within the exclusion area and off-site.

5. Coordinate with the RadCon/Waste Manager when available on the evaluation of environmental radiological survey results, project dose consequences, and make recommendations consistent with the Emergency Plan with respect to the general population (EPIP 1.4 and EPIP 1.5).

6. Coordinate off-site surveys with Radiation Control/Waste Manager when available.

7. Assist in evaluating medical emergencies and coordinate use of the site emergency vehicle with the Chemistry/Health Physics Supervisor.

8. Establish access controls to coordinate access to the operations support center and the protected area. Ensure that all personnel entering or exiting the site are properly accounted for and are equipped with the necessary dose evaluation devices.

APPENDIX "B"

SITE BOUNDARY CONTROL CENTER
HEALTH PHYSICS RESPONSIBILITIES
ASSISTANT TO THE HEALTH PHYSICS DIRECTOR

1. Direct the available Chemistry & Health Physics Group personnel in setting up and making available for use all site boundary control center health physics equipment. Verify the availability and operational status of equipment after it is checked out.

2. Designate Chemistry & Health Physics personnel to man the following radiation control teams as personnel become available for duty.

   a. Counting team (one Nuclear Plant Specialist-HP, one Radiation Control Operator).

   b. Survey teams; two, two-man teams. One survey team should be given primary responsibility for plume and whole body gamma measurements at locations to be specified.

   c. Site boundary control center/radiation support team (remaining Radiation Control Operators and Auxiliary Operator Trainees).

   d. Kewaunee shuttle team (if required).

3. Initiate health physics radio communications network (KRQ-717) radio check. Ask control room personnel to ask Appleton to minimize radio traffic.

4. Receive environmental radiological survey instructions from the Health Physics Director and direct survey team leader to conduct the surveys.

5. Coordinate all environmental radiological surveys. Ensure that all surveys are properly logged and identified.

6. Coordinate counting of air samples and smear surveys with the counting team leader. Receive and review the completed sample results from the sample team leader.

7. Report all environmental radiological surveys in their completed form to the Health Physics Director for evaluation.

8. Coordinate with the Health Physics Director on samples requiring multi-channel analyzer counting. Direct the site boundary control center/radiation support team leader to transport samples to the operations support center or as otherwise directed for MCA counting. Receive and report the completed analysis to the Health Physics Director.

SITE BOUNDARY CONTROL CENTER
HEALTH PHYSICS RESPONSIBILITIES
SITE BOUNDARY CONTROL CENTER/RADIATION CONTROL TEAM

1. Set up and verify operational status of personnel friskers.

2. Monitor personnel and equipment for contamination and perform decontamination as necessary.

3. Implement control and documentation of personnel entering or exiting the exclusion area.

4. Implement controls for dosimetry issue, use, and documentation of personnel exposure and control of exposure data.

5. Coordinate all health physics activites with the Assistant to the Health Physics Director.

6. Perform other duties as directed.

APPENDIX "C"

SITE BOUNDARY CONTROL CENTER
HEALTH PHYSICS RESPONSIBILITIES
COUNTING TEAM

1. Set up and verify the operational status of all site boundary control center counting equipment.

2. Log all environmental radiological samples and smear surveys. Count all samples and smear surveys. Calculate activities and document results. Report all analysis results to the Assistant to the Health Physics Director.

3. Perform other duties as directed.

SITE BOUNDARY CONTROL CENTER
HEALTH PHYSICS RESPONSIBILITIES
SURVEY TEAM

1. Set up and verify the operational status of the site boundary control center air sampling and radiological survey equipment.

2. Conduct all radiological surveys and air sampling. Record all air sample data and radiological survey results.

3. Ensure that all air samples and radiological surveys are properly logged and identified prior to turn in to the Assistant to the Health Physics Director.

4. Perform other duties as directed.

SITE BOUNDARY CONTROL CENTER
HEALTH PHYSICS RESPONSIBILITIES
KEWAUNEE SHUTTLE TEAM

1. Transport samples to Kewaunee Nuclear Plant for analysis as directed by the Assistant to the Health Physics Director.

2. Document results of analysis and report results to the Health Physics Director by radio (KRQ-717) or telephone.

3. Perform other duties as directed.

ACTIVATION OF CHEMISTRY & HEALTH PHYSICS AT TECHNICAL SUPPORT CENTER/OPERATIONS SUPPORT CENTER

1.0 PURPOSE

1.1 The purpose of this procedure is to establish guidelines for activating the Chemistry & Health Physics facilities at the technical support center/operations support center (TSC/OSC) in support of an emergency situation which may require evacuation of the main plant buildings.

1.2 The Chemistry/Health Physics Supervisor and certain designated members of the Chemistry & Health Physics Group are responsible for activating the health physics equipment at the TSC/OSC The extent and sequence of implementation of these guidelines will be outlined in EPIP 7.1.1.

2.0 ACTIVATION OF HEALTH PHYSICS FACILITIES AT TSC/OSC

2.1 For emergency conditions during which a plant evacuation is not required, the Chemistry/Health Physics Supervisor and Health Physics Director will determine to what extent, if any, health physics coverage will be provided at the TSC/OSC.

2.2 For emergency conditions which require plant evacuation, Appendix "A" guidelines of EPIP 7.1.1 should be followed. The sequence for implementation of Appendix "A" guidelines depends upon whether Chemistry & Health Physics Group personnel are on or off-site when notification is received (EPIP 7.1.1 and EPIP 7.1.2).

3.0 HEALTH PHYSICS RESPONSIBILITIES FOR TSC/OSC/RAD SUPPORT TEAM

3.1 When Chemistry & Health Physics Personnel are On-Site (EPIP 7.1.1)

3.1.1 Obtain five (5) PIC-6A survey instruments.

3.1.2 Proceed to the TSC/OSC and:

a. Move the AMS-2 continuous air sampler (cart-mounted) into the TSC/OSC hallway and set up for operation.

b. Place the Vamp area monitor at the south gate in operation.

c. Set up and place into operation the south gate low volume air sampler.

d. Collect two portable radios (KRQ 717) and:

1. Return one (1) radio (KRQ 717) to the TSC.

2. The second radio (KRQ 717) should be taken to the OSC counting room.

e. Proceed to the TSC/OSC and begin preparation to provide health physics support as described under OSC/HP equipment activation, Section 3.3 of this procedure.

3.2 Notification When Chemistry & Health Physics Personnel are Off-Site (EPIP 7.1.2)

3.2.1 Upon receipt of instruction to activate the TSC/OSC, one member of the OSC/rad support team will proceed to the ESC located in the basement of the Energy Information Center and:

a. Set up and place into operation the low volume air sampler and Vamp area monitor.

b. Perform a communications check of the portable radio (KRQ 717) located in the Duty Technical Advisor's sleeping quarters.

c. Proceed to the TSC/OSC.

3.2.2 The remainder of the OSC/rad support team will proceed to the south gate and:

a. Set up and place into operation the Vamp area monitor and the low volume air sampler at the south gate.

b. Pick up two (2) portable radios (KRQ 717) and distribute as in Step 3.1.2(d) above.

3.2.3 Proceed to the TSC/OSC and move the AMS-2 continuous air sampler (cart-mounted) into the TSC/OSC hallway; set up and place the AMS-2 into operation.

3.2.4 Begin preparation to provide health physics coverage as described under OSC/HP equipment activation, Section 3.3 of this procedure.

3.3 OSC/HP Equipment Activation

3.3.1 Prepare the health physics equipment from the emergency locker for use.

3.3.2 Prepare KRQ 717 radio for communications check.

3.3.3 Provide health physics support as required at the TSC/OSC and in-plant support as requested by the Chemistry/Health Physics Supervisor.

3.3.4 Assist in response to medical emergencies within the protected area (EPIP 11.0).

3.3.5 Coordinate with the Chemistry/Health Physics Supervisor at the TSC/OSC on in-plant personnel exposure and documentation.

3.3.6 Verify that all personnel who are departing from the OSC are certain as to details of their approved assignments and are complying with all health physics requirements. Whenever practicable, entries into high radiation or airborne areas will be made under the radiation work permit system.

EPIP 7.2.4
MINOR
Revision 1
03-17-82

HEALTH PHYSICS COMMUNICATIONS

1.0 PURPOSE

The purpose of this procedure is to provide communications guidelines for the Chemistry & Health Physics group to assist in the performance of their duties during an Emergency Plan situation requiring plant evacuation and/or in the event that surveys outside of the protected area are required.

2.0 COMMUNICATIONS, GENERAL

2.1 Radiological response activity communications between the health physics response teams (EPIP 7.2.1) will normally be accomplished utilizing the KRQ 717 radio network. Telephone communications should be held to a minimum.

2.2 The following locations of KRQ 717 radios will be maintained during a Site or General Emergency:

	Location	Type
2.2.1	Control Room	Base station
2.2.2	Technical Support Center	Portable*
2.2.3	Operations Support Center	Portable*
2.2.4	Site Boundary Control Center	Portable
2.2.5	Emergency Vehicle	Mobile
2.2.6	Other Plant Vehicles (2 each)	Mobile
2.2.7	Emergency Support Center	Portable**

*Obtained from south gate guardhouse
**One available from Duty Technical Advisor rest station

2.3 KRQ 717 radio communications network functional check:

2.3.1 Upon arrival at their assigned locations, health physics personnel shall place the radios (KRQ 717) in an operating mode and stand by for a radio check. The site boundary control center is responsible for initiating the radio check. The results of the communications check should be recorded in the site boundary control center logbook.

2.3.2 Mobile or portable radio units should also be given a functional check prior to departing from the site boundary control center for the performance of assigned duties.

2.3.3 Communications between portable or mobile radio units is limited by the distance or terrain between them. In some cases, communications to another portable or mobile unit will have to be relayed through the control room base station.

2.3.4 Radio antennas must not be in contact with metal structures when being used to transmit.

3.0 RADIO PROTOCOL

3.1 To eliminate confusing radio transmissions and to expedite communications, the following should be adhered to:

3.1.1 Identify the radio call-sign and your unit or location at the start of each transmission.

EXAMPLE: THIS IS KRQ 717, SURVEY TEAM #1

3.1.2 Identify unit or location being called.

EXAMPLE: THIS IS KRQ 717, SITE BOUNDARY CONTROL CENTER CALLING THE TECHNICAL SUPPORT CENTER.

3.1.3 Use of radios are for business purposes only.

3.1.4 Limit the time of all transmissions.

3.1.5 FCC regulations prohibit the use of vulgar or profane language.

3.1.6 Upon completion of the conversation, sign off as follows:

EXAMPLE: KRQ 717, SURVEY TEAM #1, CLEAR & STANDING BY.

4.0 USE OF TELEPHONES

4.1 The use of the telephone communications network by health physics personnel during an Emergency Plan situation will be limited to the following:

4.1.1 NRC Health Physics Dedicated Line

These lines are located in the Chemistry & Health Physics group office and at the site boundary control center. They provide a means of direct communications with the NRC health physics offices during an emergency. The use of these lines will be only as directed by the Chemistry/Health Physics Supervisor, the Health Physics Director or other ranking plant supervisors.

4.1.2 Plant PBX Telephone System

This system provides direct dialing between plant locations within the on-site and protected areas. The use of these lines is to be limited to business-related calls.

4.1.3 Off-Site Telephone Lines

These lines provide for direct dialing to off-site locations. The use of these lines is to be limited to business-related calls. Use should be minimized to the extent practicable.

EPIP 7.2.5
MINOR
Revision 1
03-17-82

CONTROL & USE OF VEHICLES

1.0 PURPOSE

The purpose of this procedure is to provide Chemistry & Health Physics group personnel with guidelines for controlling the use of personal and Company vehicles during a Site or General Emergency on a plant evacuation or in the event that surveys outside of the protected area are required.

2.0 COMPANY VEHICLE USE

2.1 Site Emergency Vehicle

2.1.1 During a plant evacuation the emergency vehicle is under the direct control of the Health Physics Director at the site boundary control center. This vehicle is equipped with a mobile radio (KRQ 717) and is designated for emergency medical transportation (EPIP 11.1).

2.1.2 The Health Physics Director may authorize use of the emergency vehicle for activities within the plant exclusion area. The vehicle is not to be taken off-site except for transportation of medical emergencies.

2.1.3 At any time the emergency vehicle is in use, the operator will ensure that the radio (KRQ 717) is in the operating mode. The emergency vehicle's ignition switch must be on, and the engine running before a radio transmission can be made.

2.2 Other Company Vehicles

2.2.1 Mobile radios (KRQ 717) are installed in three (3) Company carryall-type vehicles, including the emergency vehicle. Two of these vehicles, including the emergency vehicle, are assigned to health physics during an emergency situation. The third vehicle will be utilized by the security guard force.

2.2.2 There are ten Company vehicles that are not equipped with mobile radios. They are as follows:

Stakebed truck	1 each
Pickup truck	1 each
Sedan	1 each
Security truck	1 each
Sedan 4WD	6 each

3.0 PERSONAL VEHICLE USE IN SUPPORT OF A SITE OR GENERAL EMERGENCY

3.1 Due to the varying requirements for transportation which might be experienced during an emergency condition, it may become necessary for personnel to utilize their personal vehicles in accomplishment of their assigned duties. The following guidelines shall be followed:

3.1.1 The Chemistry/Health Physics Supervisor or the Health Physics Director may authorize the use of personal vehicles in the accomplishment of assigned duties.

3.1.2 Personnel utlizing their personal vehicles shall maintain a record of mileage driven and furnish such record to a Chemistry & Health Physics Supervisor for verification of reimbursement claims.

4.0 EMERGENCY DELIVERY OF TLD'S

Should it be necessary, a Company vehicle will be utilized to transport TLD's to the vendor for emergency processing.

EPIP 7.3.1
MINOR
Revision 3
03-17-82

AIRBORNE SAMPLING & DIRECT DOSE RATE SURVEY GUIDELINES

1.0 PURPOSE

The purpose of this procedure is to establish guidelines for (1) the collection of various air samples, and (2) the performance of direct plume and ground deposition surveys for use in verifying the initial dose rate estimates obtained in EPIP 1.4, "Radiological Dose Evaluation."

2.0 PRECAUTIONS AND LIMITATIONS

2.1 Personnel assigned to survey teams shall wear the prescribed protective clothing, dosimetry devices, and other protective equipment as required when conducting surveys.

2.2 Survey teams shall be aware of the exposure authorized for a specific job assignment and shall not exceed the maximum authorized exposure.

2.3 Survey teams shall carry survey instruments and continuously monitor the areas they are entering.

2.4 Standard Health Physics procedures are to be followed if and when radioactive contaminated material is being handled.

3.0 GENERAL INFORMATION

3.1 To accomplish the objectives of this procedure, with a minimum of delay, survey teams will be designated by the Health Physics Director and/or Assistant Health Physics Director (EPIP 7.2.1). These survey teams will obtain airborne (particulate, iodine, noble gas) and direct plume and ground deposition beta-gamma and beta dose rate surveys as directed from specific locations within the exclusion zone and, if deemed necessary, from specified off-site locations.

3.2 To facilitate identification of sample locations, the area surrounding the plant has been identified by quadrants radiating outward at 22.5 degree angles. Each quadrant has been identified by a letter of the alphabet starting with the letter "A" and radiating clockwise from due north. To avoid confusion, the letters "I" and "O" are not used. The Health Physics Director or Assistant Health Physics Director will indicate the designated survey locations to the survey team leader on appropriate survey maps (EPIP-01 and EPIP-02).

3.3 The attached partial listing of Maximum Permissible Concentrations (MPC) in air of selected isotopes will aid in determining exposure limits to airborne materials. For isotopes not listed, refer to Table 1, Column 1, of 10 CFR 20.

4.0 AIR SAMPLING INSTRUCTIONS

4.1 Standard health physics air sampling procedures will normally be utilized whenever possible. The following samples will be collected at each location unless otherwise directed. Record all airborne sample data on EPIP-01.

Type Sample	Sample Volume
Air particulate	1 E 6 cc (1)
Iodine	1 E 6 cc (1)(3)
Noble gas	1,075 cc (2)

Note 1: Air sampler flow rates vary depending upon the type of sampler used. The battery-powered air samplers normally provide the lowest flow rates (4 cfm). To obtain the suggested minimum sample volume a sample time of 10 minutes should be used. For sample flow rates less than 4 cfm the total sample time should be extended.

Note 2: One liter (1,075 cc) polybottles will be used to collect noble gas samples.

Note 3: If significant noble gas is suspected, silver zeolite filter cartridges will be used for iodine collection.

4.2 When collecting air samples, the following precautions should be observed.

4.2.1 The air sampler should be placed approximately four to five feet above the ground so as to sample the breathing zone. DO NOT place the air sampler on the ground.

4.2.2 During inclement weather it is necessary to shield the filters from rain or snow. This may be accomplished by operating the sampler inside of an open vehicle or by providing other methods of shielding.

5.0 DIRECT RADIATION PLUME SURVEYS

5.1 Direct radiation surveys within the plume area provide a means of determining whole body gamma dose rates and for estimating beta dose rates to the skin. Since most beta-gamma survey instruments are sensitive to the higher beta energies only, it is necessary that a thin window detector be used for plume beta dose rate estimations. To obtain estimated beta dose rates using the Eberline Rad Owl instruments, proceed as follows.

5.1.1 Hold the instrument (Rad Owl One or Two) approximately four to five feet above the ground with the detector facing upwards in the suspected direction of the plume and obtain a gamma dose rate (beta shield covering the detector window). In the event that dose rates from the plume are low, use the integrating mode on the Eberline Rad Owl One and obtain a timed integrated dose rate. This should be accomplished for both the beta-gamma and gamma dose rate. (The HP-1010 survey instrument may also be used to obtain a gamma integrated dose rate.) Record results on form EPIP-02. Then, holding the instrument at approximately the same position, remove the beta shield and obtain a beta-gamma dose rate. Record results.

5.1.2 Estimate beta dose rate as follows. Subtract the gamma dose rate from the beta-gamma dose rate. Multiply the result by 1.5, an empirically determined correction factor suitable for Xe-133 betas, to determine an estimate of the beta dose rate. Record results.

NOTE: RADIO THE RESULTS OF THESE DIRECT EXPOSURE MEASUREMENTS TO THE SITE BOUNDARY CONTROL CENTER AS SOON AS THEY ARE AVAILABLE.

5.2 Isotopic Determination of Beta-Gamma Skin Dose Rates from Noble Gases

5.2.1 Upon completion of multi-channel analysis of the noble gas samples collected in Section 4.1 above, the true beta-gamma skin dose rate may be calculated using form EPIP-03, or determined by use of Table 2 (attached).

5.3 Thyroid Exposure Calculations

The dose to the thyroid from airborne concentrations of radioiodine can be estimated using plume gamma whole body dose rates and Section 5.3 of EPIP 1.4. It is emphasized that thyroid dose rates derived in this manner greatly overestimate actual conditions. They should only be used until measurements of airborne iodine concentrations can be obtained by multi-channel analysis of plume iodine samples.

6.0 GROUND DEPOSITION SURVEYS AND CALCULATION

6.1 Ground contamination by radioactive material from the plume may be determined by direct radiation dose rate surveys as follows.

6.1.1 An Eberline Rad Owl type instrument should be used for obtaining ground deposition dose rates.

6.1.2 With the beta shield in place and the detector facing the ground (held in a vertical position), obtain the beta-gamma dose rates at positions of one foot and three feet above the surface of the ground. Record results on form EPIP-02.

NOTE: THE FOLLOWING CALCULATIONS OF ESTIMATED GROUND DEPOSITION TAKE INTO CONSIDERATION THAT THE DETECTOR IS AFFECTED BY RADIOACTIVE MATERIAL EVENLY DEPOSITED OVER THE ENTIRE AREA WITHIN ABOUT 10 FEET OR SO OF THE DETECTOR. INSURE THAT THE DETECTOR IS NOT SHIELDED BY BUILDINGS, VEHICLES, ETC., WHEN OBTAINING THE SURVEY READINGS.

6.1.3 Calculate the estimated ground deposition at three feet as follows:

$$\text{Ground Deposition in } \mu Ci/m^2 = \text{Gamma Dose Rate at 3 ft. in mR/hr.} \times 2.6E2 \frac{\mu Ci - hr.}{m^2 - mR}$$

6.1.4 Calculate estimated ground deposition at one foot as follows:

$$\text{Ground Deposition in } \mu Ci/m^2 = \text{Gamma Dose Rate at 1 ft. in mR/hr.} \times 1.5E2 \frac{\mu Ci - hr.}{m^2 - mR}$$

6.1.5 Record results in Column "G" of EPIP-02 on "Ground Survey Results."

NOTE: CALCULATIONS ARE BASED ON AN AVERAGE OF 0.7 MEV AND PROVIDE A REASONABLE ESTIMATE OF GROUND DEPOSITION OF MIXED FISSION PRODUCTS.

6.2 It should be noted that smear surveys for determining ground contamination must be taken with care. The surface being smeared should be relatively smooth (vehicles, metal, mail boxes, etc.) with a hard surface.

6.2.1 In the event smear surveys are not feasible, vegetation type samples may be obtained. For this type of sample, carefully collect the vegetation (grass, leaves, etc.) from an area of approximately 100 cm^2. Package in plastic bags and record the necessary sample data.

6.2.2 Ground scrapings may also be used to determine ground contamination. When obtaining this type of sample, care should be used to collect only the surface material from an area of approximately 100 cm^2. Package in plastic bags and record the necessary sample data.

7.0 ROUTING OF AIR SAMPLES AND SURVEYS FOR COUNTING AND EVALUATION

7.1 Complete documentation of all airborne and direct dose rate surveys is very important. Insure that sample locations are properly identified and that all required information is entered on the air sample (EPIP-01) or survey (EPIP-02) forms. Return all surveys to the Health Physics Director or Assistant Health Physics Director.

7.2 The Assistant Health Physics Director will assign survey numbers and record the following information in the SBCC health physics activities log:

Survey Number _____
Survey Location _____
Type of Survey _____
Time Received at the SBCC _____

Samples will then be directed to the SBCC/counting team for gross counting and to the operations support center (OSC) or the Kewaunee Nuclear Plant for multi-channel analyzer (MCA) counting as required. Direct radiation dose rate surveys will be reported to the Health Physics Director for further evaluation.

7.3 The SBCC/counting team will do a gross count all air particulate samples prior to their being sent, if necessary, for multi-channel analyzer counting. They will also purge all silver zeolite and/or charcoal filter cartridges of noble gases in accordance with Attachment 7.3.1-1, "Atmospheric Radioactive Iodine Sample Collection and Counting," prior to samples being sent for multi-channel analyzer analysis.

7.4 The SBCC/radiation support team members will normally be utilized for transportation of samples between the SBCC and the OSC.

TABLE 1

MAXIMUM PERMISSIBLE CONCENTRATIONS - AIR

The following table is a partial listing of isotopes from Table 1, Column 1, of 10 CFR 20. Where different values are listed for both soluable and insoluable forms, only the most restrictive concentration is listed.

Noble Gases	MPC µCi/cc
Ar-41	2×10^{-6}
Kr-85m	6×10^{-6}
Kr-85	1×10^{-5}
Kr-87	1×10^{-6}
Kr-88	1×10^{-6}
Xe-131m	2×10^{-5}
Xe-133	1×10^{-5}
Xe-133m	1×10^{-5}
Xe-135	4×10^{-6}

Iodines	MPC µCi/cc
I-131	9×10^{-9}
I-132	2×10^{-7}
I-133	3×10^{-8}
I-134	5×10^{-7}
I-135	1×10^{-7}

Alpha Emitters

Isotope	MPC µCi/cc
Unknown	6×10^{-13}

Other Isotopes	MPC µCi/cc
Sb-124	2×10^{-8}
Sb-125	3×10^{-8}
Ba-140	4×10^{-8}
Bi-212	1×10^{-7}
Cd-109	5×10^{-8}
Ce-141	2×10^{-7}
Ce-144	6×10^{-9}
Cs-134	1×10^{-8}
Cs-136	2×10^{-7}
Cs-137	1×10^{-8}
Cs-138	1×10^{-6}
Cr-51	2×10^{-6}
Co-57	2×10^{-7}
Co-58	5×10^{-8}
Co-60	9×10^{-9}
F-18	3×10^{-6}
H-3	5×10^{-6}
Fe-59	5×10^{-8}
La-140	1×10^{-7}
Pb-212	2×10^{-8}
Mn-54	4×10^{-8}
Mo-99	2×10^{-7}
Ni-59	5×10^{-7}
Nb-95	1×10^{-7}
Rb-88	1×10^{-6}
Ru-103	8×10^{-8}
Ru-106	6×10^{-9}
Na-22	9×10^{-9}
Na-24	1×10^{-7}
Te-132	1×10^{-7}

TABLE 2

DOSE FACTORS FOR NOBLE GASES
(Rem/Hour per μCi/cc)

Isotope	β-Skin(1)	ϒ-Skin(2)	Total Skin(3)	ϒ-Whole Body(4)
Kr-83m	Negligible	2.45	2.45	.00863
Kr-85m	167.	156.	323.	134.
Kr-85	153.	2.18	155.	1.84
Kr-87	1110.	782.	1892.	676.
Kr-88	271.	1926.	2197.	1678.
Kr-89	1153.	2192.	3345.	1895.
Kr-90	832.	2065.	2897.	1781.
Xe-131m	54.3	19.8	74.1	10.4
Xe-133m	114.	41.4	155.4	28.7
Xe-133	34.9	44.7	79.6	33.6
Xe-135m	81.2	426.	507.	356.
Xe-135	212.	243.	455.	207.
Xe-137	1393.	191.	1584.	162.
Xe-138	471.	1167.	1638.	1008.
Ar-41	307.	1178.	1485.	1009.

(1) Beta dose to skin takes credit for absorption in outer dead layer of skin, 7 mg/cm.

(2) Gamma dose to skin is calculated from gamma dose to air by multiplying by 1.11, the average tissue/air energy absorption coefficient.

(3) Total skin dose is the sum of (1) and (2).

(4) Gamma dose to the whole body takes credit for absorption in the first 5 cm of tissue.

c) Sample Calculation

Assume an air sample analysis indicates a total noble gas activity of 4.6E-04 μCi/cc composed of 95% Xe-133 and 5% Kr-85:

(1) Skin Dose Calculation

Xe-133

0.95 (4.5E-04) = 4.37E-04 μCi/cc

Beta: 4.37E-04 (34.9) = 1.53E-02 Rem/hour (a)

Gamma: 4.37E-04 (44.7) = 1.95E-02 Rem/hour (b)

Table 2 continued ...

Kr-85

0.05 (4.6E-04) = 2.3E-05 µCi/cc

Beta: 2.3E-05 (153) = 3.52E-02 Rem/hour (c)

Gamma: 2.3E-05 (2.18) = 5.01E-05 Rem/hour (d)

Total Skin Dose = (a) + (b) + (c) + (d) = 7.01E-02 Rem/hour

= 70.1 mRem/hour

ATTACHMENT 7.3.1-1

ATMOSPHERIC RADIOACTIVE IODINE SAMPLE COLLECTION AND COUNTING

1.0 GENERAL

In the event of a plant emergency requiring initiation of the Point Beach Nuclear Plant Emergency Plan, air sampling is necessary to determine the habitability of the operations support center (OSC), the technical support center (TSC), the site boundary control center (SBCC) and manned areas inside of the plant. In addition, it is necessary to determine airborne radioactivity concentrations at designated points around the plant site, as determined by the Health Physics Director, to facilitate entry into the plant and to determine the risk involved from the standpoint of health and safety of the public and/or plant personnel. This procedure does not cover the mechanics of air sampling, but is specifically directed towards the processing of radioiodine filter cartridges once the sample has been collected. This procedure recognizes that masking of radioiodine peaks may occur during multichannel analysis (MCA) if the radioiodine charcoal filter is contaminated by radioactive air particulates, external contamination and/or radioactive noble gases. The purpose of this procedure is to outline specific steps to be taken to prevent charcoal filter contamination and thereby reduce this masking effect.

2.0 PROCEDURE

2.1 When sampling for radioiodine, an air particulate filter will be placed in front of the charcoal filter to collect particulate matter and prevent charcoal filter contamination. The air particulate filter will be processed for MCA counting and any radioiodine collected will be added to the total concentration of iodine on the charcoal filter.

2.2 Prior to MCA analysis of the charcoal filter for radioiodine, the filter must be purged with nonradioactively contaminated air to displace the radioactive noble gases that may have accumulated in the filter. This purge may be accomplished through the use of plant service air (verify that service air is not contaminated) if access to the plant is possible. It may be accomplished by placing the filter in another air sampler and operating it in an area outside of the known radioactive airborne area. If an air sampler is used for purging, a clean particulate filter will be used to prevent charcoal filter particulate contamination.

NOTE: (1) THIS SHOULD BE ACCOMPLISHED INSIDE A CHEM LAB HOOD OR IN AN OPEN AREA AWAY FROM PERSONNEL TO PREVENT UNNECESSARY EXPOSURE TO THE POTENTIAL NOBLE GASES.

(2) PURGE UNTIL CONTACT READING ON FILTER IS <5 mR/HOUR.

2.3 All handling and transfer of the various filter media should be done so as not to externally contaminate it. Samples should be handled with clean gloves and individually placed in plastic bags to prevent any cross contamination.

2.4 The charcoal air particulate filter and sample forms will be set up for delivery to the OSC for multichannel analysis is to be performed.

NOTE: ROUTINE PROCEDURES FOR HANDLING RADIOACTIVE CONTAMINATED MATERIAL WILL BE FOLLOWED AT ALL TIMES.

2.5 Upon completion of counting, the Health Physics Director or his designated alternate will be notified of the results of all air sample analyses. He will be responsible for determining the habitability of the area sampled and respiratory equipment requirements.

EPIP 7.4.1
MINOR
Revision 4
03-17-82

ROUTINE CHECK, MAINTENANCE, CALIBRATION & INVENTORY SCHEDULE FOR HEALTH PHYSICS EMERGENCY PLAN EQUIPMENT

1.0 PURPOSE

The purpose of this procedure is to establish the routine checks, maintenance, calibration and inventory schedules for health physics related material and equipment applicable to the Emergency Plan.

2.0 EMERGENCY PLAN EQUIPMENT STORAGE LOCATIONS

2.1 Emergency Plan equipment is normally maintained in a state of operational readiness at the following locations.

2.1.1 Health physics station

2.1.2 Emergency support center (ESC)

2.1.3 Operations support center (OSC)

2.1.4 Site boundary control center (SBCC)

2.1.5 Control room

2.1.6 Two Rivers Community Hospital (NFAR and triage area)

2.1.7 Point Beach Nuclear Plant first aid room (see EPIP 11.0)

2.1.8 South gatehouse.

2.1.9 Other items of Emergency Plan equipment such as first aid kits, burn kits, stretchers, and the emergency vehicle are maintained at specified locations throughout the plant.

3.0 ROUTINE CHECK, MAINTENANCE AND CALIBRATION SCHEDULES

Routine checks, maintenance and calibration of Emergency Plan equipment will be consistent with the schedule outlined in Attachment "A" and the instructions contained in EPIP 7.4.2, "Emergency Plan Equipment Routine Check, Maintenance & Calibration Instructions."

4.0 INVENTORY SCHEDULE

4.1 Inventory of health physics related Emergency Plan equipment will be consistent with the schedules provided in Attachment "A".

4.2 Inventory of Emergency Plan equipment will be accomplished utilizing the inventory checklists listed below and attached to this procedure. Missing or deficient items noted by the inventory will be promptly replaced by personnel assigned to accomplish the inventory. The results of all inventories will be reviewed by the Health Physics Supervisor who will ensure that all discrepancies are corrected. The completed inventory forms will then be forwarded to the Superintendent - Technical Services and the Health Physicist.

4.2.1 Inventory Checklists

a. Site boundary control center (form EPIP-24a)*

b. OSC, ESC, and South Gatehouse (form EPIP-24b)*

c. Two Rivers Community Hospital (form EPIP-24c)*

d. Control room (form EPIP-24d)*

e. Emergency vehicle (form EPIP-24e)

f. First aid kits (form EPIP-24f)

g. Burn kits (form EPIP-24g)

h. PBNP first aid room (form EPIP-24h)*

i. Stretchers (form EPIP-24i)

*The form needs to be filled out with an item by item count on an annual basis. Quarterly checks can be accomplished by verification of administrative controls such as seals.

ATTACHMENT "A"

EMERGENCY PLAN EQUIPMENT ROUTINE CHECK, MAINTENANCE, CALIBRATION AND INVENTORY SCHEDULE

No.	Item	Cross Ref.	Weekly	Monthly	Quarterly	Semi-Annual	Annual
1.	Emergency Vehicle						
	a. Radio operational test		X				
	b. Vehicle visual inspection and engine start		X				
	c. Emergency equipment inventory			X			
	d. Vehicle test drive		X[1]	X[2]			
	1. November through March						
	2. April through October						
2.	First Aid Burn Kits and Stretchers						
	a. Inventory				X[3]		
	3. January, April, July, September						
3.	Vamp Portable Area Monitors						
	a. Functional check			X			
	b. Calibration					X	
4.	Emergency Center Air Samplers (115 V AC)						
	a. Functional test			X			
	b. Preventive maintenance (where applicable)					X	
	c. Flow rate calibration					X	
5.	SBCC Air Sampler (Battery 12 V DC)						
	a. Functional test			X			
	b. Flow rate calibration					X	

No.	Item	Cross Ref.	Weekly	Monthly	Quarterly	Semi-Annual	Annual
6.	SBCC Air Sampler (Gasoline Powered)						
	a. Functional test			X			
	b. Flow rate calibration					X	
	c. Spare gasoline changed					X	
7.	Batteries - Replacement						
	a. Traffic warning lights				See Note 4		X
	b. Survey/counting instruments						X
	c. Flashlights						X
	d. Portable radios (KRQ 717)						X
	e. Dosimeter chargers						X
	4. Alkaline type batteries to be used where possible and to be replaced yearly. Standard carbon cells, if used, to be replaced quarterly.						
8.	Potable Water (Stored)						
	a. Water changed					X	
9.	Counting Instruments						
	a. Functional test			X			
	b. Calibration					X	
	c. Counting efficiency determination					X	
10.	Frisker Type Instruments						
	a. Functional test			X			
	b. Calibration					X	
	c. Efficiency determination					X	
11.	Portable Survey Instruments						
	a. Functional test			X			
	b. Calibration					X	

No.	Item	Cross Ref.	Weekly	Monthly	Quarterly	Semi-Annual	Annual
12.	Pocket Dosimeters and TLD's						
	a. Dosimeter drift/response check					X	
	b. TLD's changed					X	
13.	Respirators						
	a. Inspection				X		
14.	MSC SCBA Units						
	a. Inspection				X		
	b. Functional test				X		
15.	Bio-Paks (Oxygen Rebreathers)						
	a. Inspection				X		
	b. Functional test					X	
	c. Periodic maintenance					X	
16.	Inventory of Emergency Plan Equipment - Complete				X[5]		
	5. This inventory includes all equipment listed for each center on forms EPIP-24a, b, c, d and h.						
17.	Portable Radio (KRQ 717) Functional Check				X		
18.	Traffic Warning Light Functional Check				X		
19.	Technical Support Center AMS-2/RM-14 Air Monitoring System						
	a. Calibration						X
20.	Silver Zeolite (AgZ) Moisture Indicator Check						X

PERSONNEL ASSEMBLY AND ACCOUNTABILITY

1.0 GENERAL

The purpose of this procedure is to detail a method for (1) the assembly of personnel on the plant site in the event of an emergency situation and (2) the subsequent accounting of personnel.

2.0 PRECAUTIONS AND LIMITATIONS

2.1 Personnel accountability roster sheets (forms EPIP-17 and EPIP-18, attached) must be completed quickly and accurately and forwarded to the appropriate supervisor as soon as possible.

3.0 INITIAL CONDITIONS

3.1 An emergency has been declared as a result of plant conditions.

3.2 A limited plant, plant, or an exclusion area evacuation has been ordered requiring the accountability of all personnel on the plant site.

3.3 The Shift Supervisor has determined that personnel assembly and accountability is necessary.

4.0 PROCEDURE

4.1 Shift Supervisor

4.1.1 Determine and communicate as required any special instructions necessary for safe evacuation of personnel in the plant (for example, verbally communicate the assembly areas, designate any assembly area not to be used, designate certain areas of the plant to be avoided, etc.).

Assembly Areas

For Evacuation:

1. Control Room*

2. Technical Support Center*

3. Site Boundary Control Center*

4. Emergency Support Center*

5. Security Building (Extension Building)* and Gatehouse

For Limited Plant Evacuation:

6. Health Physics Station
7. Cafeteria

For Plant Evacuation:

6. Onsite Operations Support Center*

For Exclusion Area Evacuation:

6. Two Creeks Town Hall

*Center for emergency operation.

4.2 Security Shift Lieutenant

4.2.1 Designate an individual to perform Section 4.4 of this procedure for security posts.

4.2.2 Obtain a list of all personnel currently on the plant site from the appropriate security systems (badge checks, computer printouts, etc.)

4.2.3 As attendance is reported from the assembly areas (see Section 4.1.1), indicate on the list obtained in Step 4.2.2 that the individual has been accounted for.

4.2.4 After the assembly areas and security personnel have submitted their rosters, compile a list of missing personnel using form EPIP-17.

4.2.5 Attempt to contact missing personnel using the Gai-tronics system.

4.2.6 If unable to contact the missing personnel, obtain from the missing person's supervisor the last known or probable location and/or job assignment. Enter this data on form EPIP-17.

4.2.7 Transmit copies of form EPIP-17 to the Maintenance Supervisor.

4.2.8 Update form EPIP-17 as changes to rosters arrive and as missing personnel are located.

4.2.9 Transmit any changes in form EPIP-17 to the Maintenance Supervisor immediately.

4.3 Designated Supervisor at the Assembly Area (Including Centers for Emergency Operations)

4.3.1 Upon arrival at the assembly area, one supervisor should compile a roster of all personnel in his group who are present and accounted for using form EPIP-18 (attached). At each in-plant center, there should be a roster of persons who are to report to that center. Each person present should be checked off.

4.3.2 When it is felt that the roster is completed as well as possible, notify the Security Shift Lieutenant at the central alarm station (CAS) or at the site boundary control center of any missing people by badge number.

4.3.3 Update the respective group roster as personnel arrive at or depart from the assembly area.

4.3.4 Report changes of the roster to the Security Shift Lieutenant periodically or as determined necessary by the Security Shift Lieutenant.

4.4 Security Officer/Designee

4.4.1 Compile a roster of all security personnel using form EPIP-18.

4.4.2 Upon completion of the roster, notify the Security Shift Lieutenant. Alert him to any missing personnel.

4.4.3 Maintain the roster current as personnel arrive at or depart from the security building or security posts.

EPIP 12.1
MINOR
Revision 1
03-17-82

REENTRY PROCEDURES FOR EMERGENCY OPERATIONS

1.0 GENERAL

The purpose of this procedure is to detail the method for monitoring personnel during emergency repair/operation or search and rescue operations and provide instructions for reentering areas that have become radioactively contaminated and/or have high or uncertain radiation levels. Monitoring of personnel for purposes other than the reentry for emergency repair/operation or search and rescue operations will be in accordance with the normal health physics procedures or as delineated in the Point Beach Nuclear Plant Emergency Plan.

2.0 PRECAUTIONS AND LIMITATIONS

2.1 Personnel engaged in either emergency repair/operation or search and rescue operations should keep in mind the concept of time-distance-shielding to minimize radiation exposure as much as possible.

2.2 The "buddy system" is in effect and an individual will not be allowed to travel through potentially high radiation areas alone unless he is within sight of a buddy.

2.3 For purposes of emergency repair/operation, personnel will not receive a dose exceeding 25 Rem to the whole body.

2.4 For purposes of search and rescue operations, personnel should not receive a dose exceeding 100 Rem to the whole body.

2.5 All personnel who may receive radiation doses greater than 25 Rem will participate on a voluntary basis only.

2.6 Any exposure to radiation in excess of 10 CFR 20 limits should be authorized by the Health Physicist or Superintendent - Chemistry & Health Physics and have the concurrence of a Duty & Call Superintendent or Site Manager. In an emergency, the Shift Supervisor should try to notify these persons for extended exposure authorization in excess of 10 CFR 20 limits, but has the authority to take immediate actions as required.

3.0 INITIAL CONDITIONS

3.1 As a result of previous training all participating personnel will be aware of the possible hazards associated with radiation doses greater than 25 Rem to the whole body.

3.2 Any completed radiation surveys of areas to be entered by emergency repair/operations or search and rescue personnel will be made available to the teams.

4.0 PROCEDURE

4.1 Team Leader

4.1.1 Determine with the Shift Supervisor and Chemistry/HP Supervisor which route to take to the location of interest. Review any surveys of areas to be travelled or occupied by the team.

4.1.2 With the Chemistry/HP Supervisor, determine each team member's allowable dose and calculate the stay time for each member.

4.1.3 Arrange, in advance, for any anticipated necessary reliefs for the team members.

NOTE: STEPS 4.1.4 THROUGH 4.1.6 ARE DEPENDENT UPON THE RADIOLOGICAL CONDITIONS BOTH EXISTING AND POTENTIAL. IF, FOR EXAMPLE, THE EMERGENCY IS CONFINED TO THE AUXILIARY BUILDING, THE TEAM MAY REQUIRE LITTLE DOSIMETRY TO SEARCH THE TURBINE HALL.

4.1.4 Determine with the Chemistry/HP Supervisor the protective clothing and respiratory equipment necessary.

4.1.5 Equip team members with the following personnel dosimetry:

a. Low range self-reading dosimeter (0-200 mR).

b. Medium range self-reading dosimeter (0-5R)

c. High range self reading dosimeter (0-200R)

d. Personnel TLD capable of recording doses in excess of 100 Rem.

e. Extremity monitoring dosimeter(s) as prescribed by the Chemistry/Health Physics Supervisor.

4.1.6 Equip at least one team member with a high range beta-gamma detector, such as Teletector.

4.1.7 Each team will have a portable radio for communications capability with the control room and Health Physics supervision.

4.1.8 Ensure the team has proper keys.

4.2 Repair/Operation Team

4.2.1 Determine with the Shift Supervisor exactly what work is to be performed, how many people will be required, and what tools and spare parts are needed.

4.2.2 Equip each team member with protective clothing, respiratory protection equipment and personnel monitoring devices. All clothing openings are to be taped.

4.3 Chemistry/HP Supervisor or Designee

4.3.1 Determine if potassium iodide administration is necessary and administer it to the search and rescue, repair/operation team members if needed. See EPIP 1.6, "Radioiodine Blocking and Thyroid Exposure Accounting," for guidance.

4.3.2 Brief all repair/operation and search and rescue members of the hazards of radiation doses in excess of 25 Rem to the whole body.

4.3.3 Ensure that the teams have met all the necessary requirements prior to entering a contaminated or radiation area.

4.3.4 During the team effort monitor the radio and log radiation levels as reported by the team and compare the readings to those expected. Keep track of the team's time and estimate the dose they are receiving as appropriate. Note also Bio-Pak depletion time.

4.3.5 10 CFR 20 limits exposure to the whole body, extremities, skin, and internals. The exposure records of any team member who exceeds 10CFR 20 limits should be forwarded to the Company Medical Director.

4.3.6 If the whole body dose of a team member exceeds 25 rem or his dose is uncertain or suspected of exceeding 25 rem or his internal dose is estimated to be greater than or equal to 10,000 MPC hours, he should be referred to a physician for appropriate medical care.

4.4 Maintenance Supervisor

4.4.1 The Maintenance Supervisor is responsible for accountability and search and rescue. He will work with the Chemistry/Health Physics Supervisor in the selection of the team.

4.4.2 As soon as one team is sent out, a second team should be set up and dressed.

4.4.3 The Maintenance Supervisor should work with the Plant Operations Manager and Chemistry/Health Physics Supervisor.

PERSONNEL EXPOSURE & SEARCH AND RESCUE TEAMS

1.0 GENERAL

The purpose of this procedure is to provide the guidance and requirements necessary to conduct efficient search and rescue operations.

2.0 PRECAUTIONS AND LIMITATIONS

2.1 Proper radiological controls are to be maintained during search and rescue operations. Proper health physics practices must be adhered to in accordance with EPIP 12.1, "Reentry Procedures for Emergency Operations."

3.0 INITIAL CONDITIONS

3.1 EPIP 8.1, "Personnel Assembly and Accountability," is completed or persons are known to be missing or in need of help.

3.2 Review EPIP 12.1, "Reentry Procedures for Emergency Operations."

4.0 PROCEDURE

4.1 Maintenance Supervisor

4.1.1 Assemble a search and rescue team or teams, each team consisting of at least two persons. Of the two personnel, at least one will be trained in first aid. At least one will be qualified in health physics and both will be familiar with the plant.

NOTE: FOR THE PURPOSES OF THIS PROCEDURE, THE HEALTH PHYSICS QUALIFIED PERSON WILL BE CALLED THE HEALTH PHYSICS REPRESENTATIVE.

4.1.2 Appoint the most qualified team member as the search and rescue team leader. The search and rescue team leader will be in charge of the team while conducting search and rescue operations.

4.1.3 Coordinate all search and rescue teams so that duplication of effort and unnecessary radiation exposure does not occur.

4.1.4 Work with the Plant Operations Manager and Chemistry/Health Physics Supervisor.

4.1.4 Use a map of the plant to mark off areas which have been searched.

4.1.5 Recall the search and rescue team(s) when search and rescue operations are no longer necessary or when all missing persons are accounted for.

4.2 Health Physics Representative

4.2.1 Ensure that all team members meet the personnel dosimetry, protective clothing and respiratory requirements of EPIP 12.1, "Reentry Procedures for Emergency Operations."

4.2.2 Ensure that no team member receives a whole body dose greater than 100 Rem while conducting search and rescue operations.

4.2.3 The Health Physics representative will have the authority to secure search and rescue operations of the team and to order the team out of contaminated or radiation areas.

4.3 Search and Rescue Team Leader

4.3.1 Obtain the following information prior to performing search and rescue operations:

a. Identification of each missing individual.

b. Last known location of each individual.

c. The job each individual was working on.

d. Any significant plant status known that may affect the search.

e. Allowable radiation exposure limits for each team member.

4.3.2 Ensure that the team is equipped with a first aid kit and knows the locations of stretchers.

4.3.3 Proceed to the last known location of the missing individual and if necessary expand the search to adjacent areas.

4.3.4 Maintain close communications with the Chemistry/HP Supervisor on all team actions including notification when any personnel are located.

NOTE: TEAM MEMBERS SHOULD NOT SEPARATE WITHOUT THE DIRECT PERMISSION OF THE CHEMISTRY/HP SUPERVISOR AND TEAM LEADER.

4.3.5 Provide first aid and medical care as necessary and transport or escort the located individual(s) to a safe location as soon as possible.

POINT BEACH NUCLEAR PLANT

TSC, ESC, SOUTH GATE & OSC
EMERGENCY PLAN INVENTORY CHECKLIST

Date _____

		Suggested Inventory	Inv. Check
	Air Sampling Equipment		
1.	Low volume air sampler	1	____
2.	High volume air sampler	2	____
3.	AMS-2 cart mounted air sampler	1	____
4.	Particulate filters, low volume, box	1	____
5.	Charcoal filters, low volume, box	1	____
6.	Particulate filters, high volume, box	1	____
7.	Charcoal filters, high volume, box	1	____
8.	Silver zeolite filters	15	____
9.	Plastic bottles, 1 liter	12	____
10.	50' extension cord	2	____
	Dosimetry Equipment		
11.	Dosimeters (0-5,000 mR)	40	____
12.	Dosimeters (0-200 R)	6	____
13.	Dosimeter charger	2	____
14.	Batteries, Size AA, pkg.	1	____
	Survey & Monitoring Equipment		
15.	Victoreen Vamp	1	____
16.	Rad Owl II	1	____
17.	Thyac III - side window probe	1	____
18.	Batteries, Size D	24	____
19.	Batteries, Size 9 volt	6	____
20.	Smear filters, box	20	____
21.	Smear envelopes, box	2	____
21a.	¼" lead detector shield (teletector)	1	____
	Signs		
22.	Three-pocket placards	24	____
23.	"Radiation Area" inserts	24	____
24.	"High Radiation Area" inserts	24	____
25.	"RWP Required" inserts	24	____
26.	"Airborne Area" inserts	24	____
27.	"Contaminated Area" inserts	24	____
28.	"Radioactive Materials" inserts	24	____

Item No.	Item	Suggested Inventory	Inv. Check
	Respiratory Protection Equipment		
29.	Clear-Vue respirator	6	____
30.	Ultra-Vue respirator	6	____
31.	Filter cartridges, box	1	____
32.	Smoke test kit	1	____
33.	Bio-Pak 60	7	____
	CHP Forms		
34.	CHP-02, Iodine Airborne Survey, pad	1	____
35.	CHP-21, Miscellaneous Surveys, pad	1	____
36.	CHP-31, Radiation Work Permit, pad	1	____
37.	CHP-34, Dosimeter Rezero, pad	1	____
38.	CHP-37, Irregular or Offscale Dosimeter Report, pad	1	____
39.	CHP-22, Air Particulate Sample, pad	1	____
	EPIP Forms		
40.	EPIP-01, Emergency Plan Airborne Radiation Survey	10	____
41.	EPIP-02, Emergency Plan Survey Record	10	____
42.	EPIP-03, Dose Factor Calculation Sheet	10	____
43.	EPIP-04, Status Report on Plant Systems & Controls	5	____
44.	EPIP-05, Work Sheet for Status Report on RMS for Unit	5	____
45.	EPIP-06, Work Sheet for Status Report on RMS for Plant	5	____
46.	EPIP-07, X/Q Determination	5	____
47.	EPIP-08, Estimated Whole Body & Thyroid Projected	5	____
48.	EPIP-09, Estimated Whole Body Calculation Work Sheet	5	____
49.	EPIP-10, Estimated Ground Deposition Calculation	5	____
50.	EPIP-17, List of Missing Personnel	5	____
51.	EPIP-18, Assembly Area Roster	5	____
52.	Xe-133 Equivalent Release Rate, Worksheet No. 1	5	____
	EPIP Procedures		
53.	EPIP 1.4, Radiological Dose Evaluation	5	____
54.	EPIP 1.5, Protective Action Evaluation	5	____
55.	EPIP 7.1.1, Chemistry & Health Physics Personnel Notification & Initial Response When Chemistry & Health Physics Personnel are On-Site	5	____

Item No.	Item	Suggested Inventory	Inv. Check
	EPIP Procedures, continued ...		
56.	EPIP 7.2.1, Activation of Health Physics Facilities at Site Boundary Control Center	5	____
57.	EPIP 7.2.2, Activation of Health Physics Facilities at Technical Support Center/ Operations Support Center	5	____
	Miscellaneous		
58.	Barricade tape, yellow/magenta, rolls	5	____
59.	Tuck tape, rolls	2	____
60.	Hot spot tags	50	____
61.	Radiation material hazard tags	50	____
62.	Radioactive material contamination tags	50	____
63.	Yellow/magenta tape, rolls	6	____
64.	Yellow/black warning tape, roll	5	____
65.	Plastic bags, 3 x 5	50	____
66.	Plastic bags, 5 x 7	50	____
67.	Potassium iodine use (personnel list)	1	____
	EMERGENCY SUPPORT CENTER		
68.	Coveralls, cotton	12 pr	____
69.	Gloves, cotton	12 pr	____
70.	Hoods, cloth	12	____
71.	Low volume air sampler	1	____
72.	Filters, charcoal	6	____
73.	Filters, air particulate	1 box	____
74.	Rad Owl II survey instrument	1	____
75.	Cs-137 check source	1	____
76.	Dosimeters, high range (0-5,000 mR)	12	____
77.	Dosimeter rezero unit	1	____
78.	Shoecovers, white plastic	50 pr	____
79.	Victoreen Vamp	1	____
80.	Respirators, clear-vue	6	____
81.	Respirators, ultra-vue	6	____
82.	Filters, respirator particulate	1 box	____
83.	PBNP Emergency Plan	1	____
84.	Emergency Plan Implementing Procedures	1	____
	SOUTH GATE		
	Air Sampling		
85.	Low volume air sampler	1	____
86.	Particulate filters, box	1	____
87.	Charcoal filters, box	1	____
88.	Extension cord, 50'	1	____

Item No.	Item	Suggested Inventory	Inv. Check
	Radiation Survey & Monitoring Instruments		
89.	Vamp area monitor	1	____
	Protective Clothing		
89.	Coveralls	20 pr	____
90.	Cotton gloves	20 pr	____
91.	Rubber gloves	20 pr	____
92.	Pallbearer gloves	20 pr	____
93.	Cloth hoods	20	____
94.	Canvas booties	20 pr	____
95.	Plastic suits	20 sets	____
96.	Shoecovers, white plastic	1 cs	____
97.	PBNP Emergency Plan	1	____
98.	Emergency Plan Implementing Procedures	1	____
99.	PBNP HP Administrative Policies & Procedures Manual	1	____
100.	Air sample number assignment list	1	____
101.	Bio-Pak 60 manual	1	____
102.	Log book	1	____
103.	Cs-137 Check Source	1	____

By _____ Date _____

Reviewed By _____ Date _____
(Health Physics Supervisor)

Item No.	Item	Suggested Inventory	Inv. Check
	Radiation Survey & Monitoring Instruments		
89.	Vamp area monitor	1	____
	Protective Clothing		
90.	Coveralls	20 pr	____
91.	Cotton gloves	20 pr	____
92.	Rubber gloves	20 pr	____
93.	Pallbearer gloves	20 pr	____
94.	Cloth hoods	20	____
95.	Canvas booties	20 pr	____
96.	Plastic suits	20 sets	____
97.	Shoecovers, white plastic	1 cs	____
98.	PBNP Emergency Plan	1	____
99.	Emergency Plan Implementing Procedures	1	____
100.	PBNP HP Administrative Policies & Procedures Manual	1	____
101.	Air sample number assignment list	1	____
102.	Bio-Pak 60 manual	1	____
103.	Log book	1	____
104.	Cs-137 Check Source	1	____

By _____ Date _____

Reviewed By _____ Date _____
(Health Physics Supervisor)

POINT BEACH NUCLEAR PLANT

MONTHLY HEALTH PHYSICS INSTRUMENT AND
AIR SAMPLER FUNCTIONAL TEST CHECKLIST

DATE _____

Reference: EPIP 7.4.1 - Routine Check, Maintenance, Calibration and Inventory Schedule of Health Physics Emergency Plan Equipment

EPIP 7.4.2 - Emergency Plan Equipment Routine Checks, Maintenance and Calibration Instructions

SITE BOUNDARY CONTROL CENTER

INSTRUMENTATION

Item No.	Type of Equipment	Serial Number	Check Source Used	Source Check Criteria		Results	
1.	Thyac III	_____	Installed	_____	cpm	_____	cpm
2.	GSM-5	_____	S-23	_____	cpm	_____	cpm
3.	RM-3C	_____	S-23	_____	cpm	_____	cpm
4.	PIC-6A	_____	Cs-11	_____	mR/hr	_____	mR/hr
5.	PIC-6A	_____	Cs-11	_____	mR/hr	_____	mR/hr
6.	PIC-6A	_____	Cs-11	_____	mR/hr	_____	mR/hr
7.	PIC-6A	_____	Cs-11	_____	mR/hr	_____	mR/hr
8.	Radector III	_____	Cs-11	_____	mR/hr	_____	mR/hr
9.	HPI-1010	_____	Cs-11	_____	mR/hr	_____	mR/hr
10.	Nuclear Chicago	_____	S-23	_____	cpm	_____	cpm

AIR SAMPLERS

Item No.	Type	Satisfactory Functional Test
1.	High Volume	_____
2.	Gasoline Powered	_____
3.	Battery (12 V DC)	_____

NOTE: SOURCE CHECK CRITERIA TO BE ENTERED FROM CURRENT CALIBRATION STICKER ON EACH UNIT. RESULTS MUST BE WITHIN ±20% OF THIS VALUE.

OPERATIONS SUPPORT CENTER

INSTRUMENTATION

Item No.	Type of Equipment	Serial Number	Check Source	Source Check Criteria		Results	
1.	Rad Owl II	_____	Cs-6	_____	mR/hr	_____	mR/hr
2.	Thyac III	_____	Int.	_____	cpm	_____	cpm
3.	Thyac III	_____	Int.	_____	cpm	_____	cpm
4.	Vamp Area Monitor	_____	Cs-6	_____	mR/hr	_____	mR/hr

AIR SAMPLERS

Item No.	Description	Satisfactory Functional Test
1.	Low Volume (115 V AC)	_____
2.	High Volume (115 V AC)	_____
3.	High Volume (115 V AC)	_____
4.	AMS-2 (cart-mounted)	_____

	Check Source Criteria		Check Source Criteria	
a. AMS-2	_____	cpm	_____	cpm
b. RM-14	_____	cpm	_____	cpm

Use check source CS-6.

EMERGENCY SUPPO

INSTRUMENTATION

Item No.	Type of Equipment	Serial Number	Check Source
1.	Rad Owl II	_____	Cs-5
2.	Vamp Area Monitor	_____	Cs-5

AIR SAMPLERS

Item No.	Description	Satisfactor Functional
1.	Low Volume (115 V AC)	_____

INSTRUMENTATION — SOUTH GATE

Item No.	Type of Equipment	Serial Number	Check Source Used	Sc Ch Cri
1.	VAMP Monitor	_____	Cs-6	_____

AIR SAMPLERS

Item No.	Type of Equipment	Satisfactory Functional Test
1.	Low Volume	_____

INSTRUMENTATION — CONTROL ROOM

Item No.	Type of Equipment	Serial Number	Check Source Used	Source Check Criteria
1.	Radector III	_____	Cs-3	_____ m

FIRST AID ROOM

INSTRUMENTATION

Item No.	Type of Equipment	Serial Number	Check Source Used	Source Check Criteria		Results	
1.	Thyac III	_____	Internal	_____	cpm	_____	cpm

EMERGENCY VEHICLE

INSTRUMENTATION

Item No.	Equipment	Number	Used	Criteria		Results	
1.	Thyac III	_____	Internal	_____	cpm	_____	cpm
2.	Thyac III	_____	Internal	_____	cpm	_____	cpm
3.	Mini-Rad	_____	Cs-3	_____	mR/hr	_____	mR/hr
4.	Mini-Rad	_____	Cs-3	_____	mR/hr	_____	mR/hr

Checked By _____ Date _____

Reviewed By _____ Date _____
Health Physics Supervisor

POINT BEACH NUCLEAR PLANT

SEMI-ANNUAL AND ANNUAL EMERGENCY PLAN CHECKLIST

DATE _____

Reference: EPIP 7.4.1 - Routine check, Maintenance, Calibration and Inventory of Schedule of Health Physics Emergency Plan Equipment

EPIP 7.4.2 - Emergency Plan Equipment Routine Checks, Maintenance and Calibration Instructions

SITE BOUNDARY CONTROL CENTER

AIR SAMPLERS

Item No.	Type	Preventive Maintenance	Flow Rate Calibration
1.	High Volume (115 V AC)	_____	_____
2.	Gasoline Powered	_____	_____
3.	Powered	_____	_____

DOSIMETERS

Pocket Dosimeters — Drift/Response Checked

Date Last Completed _____

Date Due _____

TLD's

TLD's Changed* — Date Changed _____

Date Due _____

*Includes TLD's from emergency vehicle.

ANNUAL BATTERY REPLACEMENT

NOTE: If regular carbon batteries have been used, they should be replaced quarterly.

Item No.	Type of Equipment	Battery Type	Quantity	Changed	Date Due
1.	Traffic Warning Light	_____	_____	_____	_____
2.	Survey/Frisker Instruments	_____	_____	_____	_____
3.	Flashlights	_____	_____	_____	_____
4.	Portable Radio	_____	_____	_____	_____
5.	Dosimeter Charger	_____	_____	_____	_____

MISCELLANEOUS

Item No.		
1.	Potable Water (20 gal.)	a. Date Changed _____ b. Date Due _____
2.	Gasoline/Oil (Air Sampler)	a. Date Changed _____ b. Date Due _____
3.	Fire Extinguisher	Serial Number _____ Date Last Inspected _____
4.	AgZ Filters	Moisture Indicator Checked _____

TECHNICAL SUPPORT CENTER

AIR SAMPLERS

Item No.		Preventive Maintenance	Flow Rate Calibration
1.	High Volume (115 V AC)	_____	_____
2.	Low Volume (115 V AC)	_____	_____
3.	AMS-2 Cart Mounted	_____	_____

DOSIMETERS

Pocket Dosimeters — Drift/Response Checked

Date Last Completed _____

Date Due _____

MISCELLANEOUS

1. AgZ Filters — Moisture Indicator Checked _____

RESPIRATORY EQUIPMENT

Item No.		Serial Number	Functional Test	Periodic Maintenance
1.	Bio-Pak	_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____

OPERATIONS SUPPORT CENTER

AIR SAMPLERS

Item No.	Type	Preventive Maintenance	Flow Rate Calibration
1.	High Volume (115 V AC)	_____	_____
2.	Low Volume (115 V AC)	_____	_____

DOSIMETERS

Pocket Dosimeters — Drift/Response Checked

Date Last Completed _____

Date Due _____

RESPIRATORY EQUIPMENT

Item No.	Type of Equipment	Functional Test	Periodic Maintenance
1.	Bio-Pak	_____	_____
		_____	_____
		_____	_____

MISCELLANEOUS

1. AgZ Filters Moisture Indicator Checked _____

SOUTH GATE

AIR SAMPLERS

Item No.	Equipment	Preventive Maintenance	Flow Rate Calibration
1.	Low Volume	_____	_____

CONTROL ROOM

DOSIMETERS

Pocket Dosimeters Drift/Response Checked

Date Last Completed _____

Date Due _____

RESPIRATORY EQUIPMENT

Item No.	Type of Equipment	Serial Number	Inspection	Functional Test	Periodic Maintenance
1.	Bio-Pak	_____	_____	_____	_____
2.	Bio-Pak	_____	_____	_____	_____
3.	MSA SCBA	_____	_____	_____	N/A
4.	MSA SCBA	_____	_____	_____	N/A
5.	Supplied Air	___/___	_____	_____	N/A
	(Comp. Unit)	___/___	_____	_____	N/A
6.	Supplied Air	___/___	_____	_____	N/A
	(Comp. Unit)	___/___	_____	_____	N/A
7.	Supplied Air	___/___	_____	_____	N/A
	(Comp. Unit)	___/___	_____	_____	N/A
8.	Supplied Air	___/___	_____	_____	N/A
	(Comp. Unit)	___/___	_____	_____	N/A

Item No.	Type of Equipment	Serial Number	Inspection	Functional Test	Periodic Maintenance
9.	Supplied Air	/			N/A
	(Comp. Unit)	/			N/A
10.	Supplied Air	/			N/A
	(Comp. Unit)	/			N/A

REMARKS: _____

Checked By _____ Date _____

Reviewed By _____ Date _____
Health Physics Supervisor