GINNA STATION
UNIT #1
COMPLETED

DATE :-

TIME :-

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

PROCEDURE NO. SC-233 REV. NO. 2

SEARCH AND RESCUE OPERATION

TECHNICAL REVIEW

PORC REVIEW DATE 5-18-83

QC REVIEW

PLANT SUPERINTENDENT

MAY 24 1983

EFFECTIVE DATE

QA ~~X~~ NON-QA _____ CATEGORY 1.0

REVIEWED BY: _____

THIS PROCEDURE CONTAINS 3 PAGES

SC-233

SEARCH AND RESCUE OPERATION

1.0 **PURPOSE:**

1.1 Provide a method for a search and rescue operation.

2.0 **REFERENCES:**

2.1 SC-213 Accountability of Personnel

2.2 SC-230 Immediate Entry Procedure

2.3 A-7 Procedure for handling illness or injury at Ginna Station

3.0 **INSTRUCTIONS:**

3.1 The Security Manager at the direction of the Emergency Coordinator will institute a search and rescue operation based upon accountability.

3.1.1 Notify Security to scan area for missing individual(s).

3.1.2 Notify Control Room giving the identity of missing individual(s).

3.1.3 Notify the on-site survey teams to visually scan for the missing individual(s).

3.1.4 Have an announcement made over the page phone "individual's name call security or dial phone number.)

3.2 The radio communicator in TSC shall notify in-plant survey teams of search and rescue operation and name of individual(s).

3.2.1 Should an in-plant survey team discover the missing individual(s):

3.2.1.1 Notify the Radio Communicator in TSC and give assistance as required.

3.3 Establishment of a search and rescue team, where practical, should consist of,

3.3.1 A co-worker that knows the missing individual.

3.3.2 An individual familiar with the use of radiation instruments and Health Physic practices.

3.3.3 Additional personnel as determined appropriate through discussion with Health Physics and Chemistry Manager, Maintenance Assessment Manager, and Security Manager.

3.3.4 The team shall consist of a minimum of two persons.

3.4 The search and rescue team shall commence the search as follows:

3.4.1 Initial briefing prior to beginning search to include:

3.4.1.1 Radiological concerns during search

3.4.1.2 Protective equipment needed

3.4.1.3 Dosimetry and Dose Rate Meter needed

3.4.1.4 Detailed information and description of individual

3.4.1.5 Last known location of individual

3.4.1.6 Communications during the search

3.4.1.7 Do not enter areas where radiation levels are greater than 2 R/hr unless given permission from the Health Physicist.

3.4.2 If dispatched from the Emergency Survey Center enter site using SC-230.

3.4.3 If dispatched from Operation Support Center use guidance of Health Physicist.

3.4.4 Commence search at last known area and expand to adjacent areas and buildings until individual is found.

3.4.5 Upon locating the individual give assistance as required and notify Security Manager.

3.4.6 The Security Manager will coordinate any additional assistance.

3.4.7 Upon removing the individual to a safe location (ESC, TSC, Hospital, etc.) report to Security Manager all events related to the search and rescue operation.

3.4.7.1 Pertinent information from the search and rescue operation shall be reported to the appropriate managers by the Security Manager and a rescue team. They may include:

3.4.7.1.1 Damage noted

3.4.7.1.2 Spills noted

3.4.7.1.3 Doses received

3.4.7.1.4 Radiation Reading

3.4.7.1.5 Unusual situation

3.4.8 The Security Manager will report the completion of the search and rescue operation to the Emergency Coordinator, and other emergency centers.

HP-12.7.1

ESTABLISHMENT OF FLOW RATES FOR CONSTANT FLOW BREATHING AIR SYSTEMS

1.0 **PURPOSE:**

1.1 To develop the necessary requirements to establish the minimum flow rates for the containment constant flow breathing air system setup.

2.0 **REFERENCES:**

2.1 NUREG 0041

2.2 Regulatory Guide 8-15

2.3 10 CFR 20-103

2.4 30 CFR Part II, Subpart J

3.0 **PRINCIPLE:**

3.1 To insure that requirements of the references listed in 2.0 are met when setting up minimum flow rate steps for constant flow breathing air systems.

4.0 **PREREQUISITES AND NEEDED EQUIPMENT OR REAGENTS:**

4.1 Pressure regulator to reduce air pressure to the 10-80 psig range

4.2 "See View" carbon monoxide indicator

4.3 Sample flow meter and thermometer

4.4 Air compressor with overtemperature protection and alarm

4.5 Air reservoir with low pressure alarm

4.6 Purification system

4.7 Schrader Quick disconnects

4.8 Scott or ACME portable air stations

GINNA STATION
UNIT #1
COMPLETED
DATE :-
TIME :-

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

PROCEDURE NO. SC-323 REV. NO. 3

EMERGENCY OFF-SITE RADIATION SURVEY TEAM

TECHNICAL REVIEW

PORC REVIEW DATE 5-18-83

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SC-323

EMERGENCY OFF-SITE RADIATION SURVEY TEAMS

1.0 **PURPOSE:**

1.1 The prime objective of the Emergency Off-Site Radiation Survey Teams is to rapidly survey areas downwind of the plant site in order to determine the extent and magnitude of any uncontrolled release of radioactive materials following an incident. It should be stressed that the initial off-site survey is of great importance. Decisions regarding the extent and types of protective actions required will be based upon data reported by the survey teams.

2.0 **REFERENCES:**

2.1 SC-1, Radiation Emergency Plan

2.2 SC-421, Determination of Iodine or Particulate

2.3 SC-232 Voluntary Acceptance of Emergency Exposure

3.0 **INSTRUCTIONS:**

3.1 Obtain appropriate Off-Site Survey Team footlocker as directed by Tag Board assignment. If seal is broken, use equipment list inside footlocker to inventory equipment. Request the assistance of the Survey Center Manager in obtaining replacement equipment if necessary.

3.2 Obtain the following equipment which is not stored in footlocker.

3.2.1 Personal film badge and TLD.

3.2.2 One full-face mask with voice emitter and charcoal filter for each team member.

3.2.3 One 0-500 mr dosimeter and one 0-5 R dosimeter for each team member. Sign-in on dosimeter log sheet.

3.2.4 Pack of 12 environmental TLD's from lead storage container.

3.2.5 Porta-Mobil II radio and magnetic mount car antenna.

3.2.6 RADECO H-809C Portable High Volume Air Sampler with filter holder.

3.2.7 RM-14 Radiation Monitor with HP-190 Probe.

3.2.8 Auto-Digimaster or RC-2 dose rate meter.

3.3 Complete the following items prior to departing on the assigned survey route.

3.3.1 Check operation of radio system, portable air sampler, radiation count rate monitor, and dose rate meter using equipment check-out procedures in Appendix I.

3.3.2 Obtain transportation and check vehicle for contamination by taking swipe survey or end window survey on the horizontal surfaces with an HP-190 probe and count rate meter. If survey indicates surface contamination of more than 250 CPM above background contact the Survey Center Manager for decontamination instructions.

3.3.3 Load survey equipment into vehicle, fill in Survey Team Status Board, and inform Survey Center Manager of your departure. Obtain wind direction and speed data.

3.3.4 Log time, date, and survey team members on survey map.

3.3.5 Establish radio communications with Technical Support Center Radio Operator and advise of teams departure.

3.4 Perform radiation surveys using the appropriate instructions of Appendix II while following the Primary Survey Route instructions contained in Appendix III.

3.4.1 Do not enter areas where radiation levels are greater than 2 R per hour unless directed by a Health Phyicist.

3.4.2 The dose limitation of the survey team is limited to 1 REM unless the Health Phyicist or Emergency Coordinator authorizes a higher limit.

3.4.3 A one time dose limit of 75 REM may be used to save the life of an individual on a voluntary basis.

3.4.4 A one time dose limit of 25 REM may be used to insure equipment is operational or secured in order to prevent a greater possible hazard to the general public.

3.4.5 At each assigned survey point the team should report the following information to the Radio Operator:

-Location
-Completed Actions
-Results of Surveys
-Departure for next Survey Point

3.4.6 If radio contact cannot be made, report using a telephone. Call collect on one of these numbers.

GINNA	F.C.F.
315-524-4446	
315-524-4984	716-262-5798
315-524-4973	716-262-5799
716-546-7845	
716-546-4015	

3.4.7 Upon completion of Primary Survey Route inform radio operator at the Tech Support Center. The Dose Assessment Manager will assign an Alternate Survey Route or direct you to return to the Survey Center.

3.5 Full face masks with charcoal filters will be worn as directed by the Dose Assessment Manager. Potential internal contamination will be determined by a Whole Body Count after the survey.

3.6 Upon returning to the Survey Center perform a survey of team personnel for contamination. If any contamination greater than 100 CPM above background is found, contact the Survey Center Manager for decontamination instructions.

3.6.1 Conduct a survey of the vehicle for contamination. If any contamination greater than 250 CPM above background is found contact the Survey Center Manager for decontamination instructions.

3.6.2 Give all filter cartridges, particulate filters, survey maps, and data records to Survey Center Manager.

3.6.3 Dispose of contaminated and potentially contaminated waste in an approved manner.

3.6.4 Restock, inventory, and seal Survey Team Equipment Footlocker, stow in an approved manner.

3.6.5 Return radio system, portable air sampler, radiation count rate meter, and dose rate meter to the Survey Team Room and place on charge as appropriate.

3.6.6 Return 0-500 mr and 0-5 R dosimeters and sign-out on dosimeter log sheet.

3.6.7 Fill out Survey Team Status Board and inform Survey Center Manager of teams return.

APPENDIX I

EMERGENCY OFF-SITE RADIATION SURVEY TEAM

EQUIPMENT CHECKOUT AND OPERATION

RADIO SYSTEM

The radio system consists of a hand-held radio and magnetic mount car antenna. To checkout and operate the system, complete the following steps.

Turn ON Radio

1. Remove charger jack from lower side of the radio.

2. Turn the OFF-VOLUME control about half way to the right.

3. Turn the SQUELCH (SQ) control to the right as far as possible. A hissing sound will be heard from the speaker.

4. Adjust the VOLUME control until the hissing sound is easily heard but not annoyingly loud.

5. Turn the SQUELCH control slowly to the left until the hissing noise just fades out. This adjustment is very important, as it eliminates annoying noise when no one is calling you. It also determined how sensitive your radio will be to incoming calls.

6. In multi-frequency units, select the proper frequency. You are now ready to receive messages from other radios in your system.

7. If radio is to be used with car antenna see mounting instructions.

Mount Antenna on Car

1. Ensure the vehicles metal roof is free of ice and snow.

2. Hold the magnetic mount antenna in the palm of your hand with the antenna wire pointed towards the rear or the vehicle and the base of the mount at an angle of about 45 degrees to the vehicle roof.

3. Position the front edge of the mount in the approximate center of vehicle roof.

4. Lower the mount onto the vehicle roof. It will be held in place by the magnetic force.

* * * * * * * * * * * * * * * * CAUTION * * * * * * * * * * * * * * * *

DO NOT ATTEMPT TO MOVE THE ANTENNA BY SLIDING IT. YOU WILL SCRATCH THE SURFACE OF THE VEHICLE. ALWAYS REMOVE THE MOUNT BY LIFTING FROM THE REAR!

* * * * * * * * * * * * * * * * CAUTION * * * * * * * * * * * * * * * *

5. Route the antenna lead wire into the vehicle between the door

jamb. With any amount of weather striping the lead should not be damaged.

6. Affix the lead wire near the head liner with a piece of tape.

Insert the antenna connection plug into the side of the radio and tighten the locking screw in place. Do not remove the short antenna.

PROCEDURE

1. The general procedure for communicating on the radio should be as follows:

a) Station called
b) Red/Green/Orange Team
c) Message
d) "Over"

During a drill or exercise all fictitious data will be preceded with the words "This is a drill...."

Examples:

"Tech Support Center, This is the Red team, at location number 1, Over"

"Tech Support Center, This is the Green team, this is a drill, Results of the general area survey at location 36 are 6,500 counts per minute above background, Over"

2. To transmit, depress the push-to-talk switch on the microphone. Speak in a normal voice across the microphone.

3. To receive, release the push-to-talk switch.

4. There may be time that the TSC or ECF will be receiving communications from a team that you cannot hear. If this happens the Radio Operator will tell you to wait or standby. After he has completed his traffic he will ask you to transmit your information. Remember this is one big party line; everyone can't talk at once.

5. When you have been directed to secure your Survey Team, turn the radio off, disconnect the antenna plug from the radio and remove the magnetic mount antenna from the vehicle by lifting up at the rear of the mount.

6. Connect the radio to the charger located in the Survey Team Room at the Survey Center, and place the magnetic mount antenna on the bench.

RADECO H 809C HIGH VOLUME AIR SAMPLER

EQUIPMENT CHECK

1. Ensure power switch on air sampler is off.
2. Ensure battery charger is not plugged in and on the 12 volt position. Black and red clips of battery charger are not touching.
3. Connect air sampler power cables to the battery charger, RED clip to positive and BLACK clip to negative.
4. Plug in battery charger.
5. Turn power switch on air sampler on.
6. Check flow meter on air sampler. Flow meter should be off scale high with no filters in place.
7. Turn power switch on air sampler off.
8. Unplug battery charger and disconnect air sampler power cables.
9. Separate clips of battery charger and clamp onto cabinet.

EQUIPMENT OPERATION FROM VEHICLE

1. Ensure power switch on air sampler is off.
2. Connect BLACK power clip to vehicle ground (engine block, chassis, etc.) and RED power clip to positive post of vehicle battery.
3. Ensure the filter assembly contains a GY-130 silver zeolite cartridge and a particulate filter.
4. Turn air sampler on and record the sample date, time, location, and air flow rate (normal is 1.5 CFM) on a sample envelope.
5. Run sampler for approximately 10 minutes.
6. Record air flow rate of air sampler in SCFM and time sampler turned off.
7. Turn air sampler off.

RM-14 RADIATION SURVEY METER

EQUIPMENT CHECK:

1. Disconnect power cord from back of meter taking care not to turn test switch on.

2. Ensure that an HP-190 probe is connected to the detector jack.

3. Turn range switch to battery. Meter should read in the "BATT-OK" area.

4. Perform instrument source check. Obtain source from safe and verify meter reading corresponds to attached card then log meter reading onto source check log.

5. Turn range switch off.

EQUIPMENT OPERATION:

1. Turn range switch to X1.

2. Place response switch in the "SLOW" position.

3. Adjust the volume control so that the audio indication (a click) can be heard.

4. The range switch should be adjusted such that the highest reading gives a mid-scale deflection.

5. All readings must be multiplied by the range switch setting (X1, X10, X100).

6. 2,200 CPM is approximately 1 mrem/hour. Maximum scale is 50,000 cpm or 23 mr per hour.

7. Upon completion of the survey turn the unit off and return to the Survey Team Room. Unit should be recharged before the next use.

AUTO DIGI-MASTER DOSE METER

EQUIPMENT CHECK:

1. Turn unit on to be sure that the digital display lights.

2. Perform instrument source check. Obtain source from safe and verify that meter reading corresponds to attached card then log meter reading into source check log.

EQUIPMENT OPERATION:

1. Allow unit to complete one cycle (display will blink) before reading when turning unit on or when radiation level changes significantly.

2. Unit will automatically change from one range to the next. The reading is always direct.

3. The Digi-Master may be used to detect the presence of Beta but cannot be used for dose measurement of Beta. Also, Beta detection is only effective when the unit is operating in the mrem/hour range.

   a. Take a reading with the Beta window closed and record.

   b. Take a reading with the Beta window opened and record.

   c. If the reading with the Beta window open is greater than the reading with the Beta window closed there is Beta radiation present.

   d. If a Beta dose rate is needed a survey with an RO-2 or equivalent instrument must be made.

4. Upon completion of the survey, turn off and return to the Survey Team Room. Unit should be recharged before the next use.

RC-2 DOSE RATE METER

EQUIPMENT CHECK

1. Turn the function selector switch to the "BATT 1" and "BATT 2" positions. Meter should indicate above the battery cut-off line.

2. Perform instrument source check. Obtain source from safe and verify that meter reading corresponds to attached card then log meter reading onto source check log.

EQUIPMENT OPERATION

1. Zero the meter by turning the function selector switch to "ZERO" and turning the "ZERO ADJ" knob as necessary. The zero adjust may be made in a radiation field by placing the function selector switch at "ZERO ADJ".

2. To measure the radiation field position the function selector switch to the lowest range which provides a mid-scale deflection of the meter.

3. With the Beta shield closed the meter will read the whole body Gamma dose rate.

4. To obtain a Beta dose rate measurement perform the following:

   CAUTION: The face of the beta window is very thin. Whenever the Beta shield is open, guard the shield against damage by puncture or contamination by dust or dirt.

   Take an area measurement with the Beta shield closed.

   b. Open the sliding Beta shield on the bottom of the case and take an area measurement.

   c. Subtract the closed shield reading from the open shield reading and multiply by the Beta correction factor marked on the instrument.

   d. This number is the Beta dose rate for that area.

5. When the survey is completed turn the function selector switch to OFF.

APPENDIX II

RADIATION SURVEY INSTRUCTIONS

GENERAL AREA RADIATION SURVEY

1. A general radiation area survey should be conducted while moving between defined survey points, and at the specific survey points.

2. The survey should be conducted using an RM-14 Radiation Monitor with an HP-190 probe.

3. When conducting a moving survey, the HP-190 probe should be installed in the mounting bracket and positioned outside a vehicle window. The detection window of the HP-190 probe should be horizontal position and pointed to the rear of the vehicle to protected the detector from the elements and wind.

4. Vehicle speed should not exceed 15 mph during a mobile survey.

5. If the RM-14 reading changes more than 1,000 CPM stop and conduct a survey for Beta using the Auto Digi-Master or RO-2.

6. Report the results of the mobile survey to the Radio Operator at the next survey point, or after completion of the Beta survey.

SURVEY TO DETERMINE PRESENCE OF BETA RADIATION

1. If the General Area Radiation Survey shows a change of 1000 CPM on the RM-14, or if the "plume" is suspected to be in your area, a survey to detect the presence of Beta radiation should be conducted.

2. Using an Auto Digi-Master, or PC-2 dose rate meter conduct the following surveys.

   a. With the detector window aimed up:

      Beta shield open _____

      Beta shield closed _____

      Difference #1 = (open reading - closed reading)

   b. With the detector window aimed down:

      Beta shield open _____

      Beta shield closed _____

      Difference #2 = (open reading - closed reading)

3. If either difference #1 or difference #2 from Step 2 is positive this is an indication that Beta radiation is present.

   a. If both difference #1 and #2 are positive, this is an indication that you are in the plume.

   b. If only difference #1 is positive, this is an indication that the plume is overhead.

4. Repeat the results of the survey to the Radio Operator and await further instructions from the Dose Assessment Manager.

INSTALLATION OF TLD

1. Specific locations for TLD's will be listed on the survey route instructions of will be given by the Dose Assessment Manager.

2. Hammer a nail into a utility pole at the specified location. The nail should be positioned on the pole at head height and on the side closest to the site.

3. Affix a TLD to the nail using tape. Ensure the TLD window is oriented towards the site.

4. Record the location (either survey point number or road intersections), utility pole number, date time, and TLD number on the back of the survey map.

HIGH VOLUME AIR SAMPLE

1. Draw approximately 15 cubic feet of air through a GY-130 silver zeolite cartridge and particulate filter using a RADECO H 809C High volume air sampler. This will take approximately 10 minutes.

2. Record the sample date, time, and location (either survey point number or road intersections) on two sample envelopes and on the back of the survey map.

3. Determine the background radiation level using the RM-14 Radiation Monitor and HP-190 probe. Record the reading on each envelope, and on the survey map. If background reading is greater than 200 CPM move to lower background prior to taking readings.

4. Using onion skins remove the GY-130 silver zeolite cartridge from the sample holder and read the activity level with the RM-14 Radiation Monitor and HP-190 probe by holding the probe window on the inlet side of the cartridge filter. DO NOT TOUCH THE PROBE WINDOW WITH THE CARTRIDGE. Record the reading on one envelope and place the cartridge in the envelope. Record the reading on the back of the survey map.

   NOTE: If cartridge is reading off scale move probe approximately 1" from cartridge. Report and log data as being taken at 1".

5. Read the activity level of the particulate filter using the RM-14 Radiation Monitor and HP-190 probe. DO NOT TOUCH THE PROBE WINDOW WITH THE PARTICULATE FILTER. Record the reading on the other envelope and place the particulate filter in the envelope. Record the reading on the back of the survey map.

6. Remove the onion skins and discard in a plastic bag. Treat as contaminated material.

7. Report the following information to the Radio Operator:

   a. Sample location
   b. Time sample was taken
   c. Volume of air sample in CF (See page 16 for calculations)
   d. Background count rate in cpm
   e. GY-130 silver zeolite cartridge count rate in cpm
   f. Particulate filter count rate in cpm

NOTE: Field calculations of the airborne activity level may be performed as follows:

Sampler volume in cubic feet equals the flow rate of the sampler in SCFM times minutes the sampler.

Iodine-131 (CY-130 cartridge)

$$\frac{(\text{CPM Sample} - \text{CPM Background})(3.0 \times E\text{-}9)}{(\text{Volume of Sample in Cubic Feet})} = \_\_\_\_\_ \text{ uCi/cc Iodine-131}$$

Particulate

$$\frac{(\text{CPM Sample} - \text{CPM Background})(8.38 \times E\text{-}10)}{(\text{Volume of Sample in Cubic Feet})} = \_\_\_\_\_ \text{ uCi/cc Particulate}$$

CHANGING FILTERS AT FIXED ENVIRONMENTAL STATIONS

1. Record the following information on the sample envelope left from the previous filter change:

   a. Date
   b. Time
   c. System Vacuum (inches)
   d. Gasmeter reading (cubic feet)
   e. Total hour meter (record in column marked "OFF")

2. Turn pump off

3. Using onion skins remove the filter holder at the quick disconnect joint.

4. Unscrew the outside retaining ring and remove the particulate filter from the holder and place in the sample envelope.

5. If a charcoal cartridge was in use transfer the information on the particulate filter envelope to a new envelope and place the charcoal cartridge in the envelope.

6. Place a new GY-130 silver zeolite cartridge in the sample head.

7. Place a new particulate filter in the holder, replace the retaining ring and reconnect holder to the pump at the quick disconnect joint.

8. Remove onion skins and place in a plastic bag. Treat as contaminated.

9. Turn the pump on.

10. Record the following information to two new envelopes. Mark one envelope "GY-130 silver zeolite".

    a. Station number
    b. Date
    c. Time
    d. System vacuum (inches)
    e. Gasmeter reading (cubic feet)
    f. Total hour meter (record in the "ON" column)

11. Place the new envelopes inside the monitor cabinet.

12. Bring the envelopes containing the cartridge/filter removed to the Survey Center at the completion of your assigned route or when directed by the Dose Assessment Manager.

APPENDIX III

OFF SITE RADIATION SURVEY TEAM INSTRUCTION

RED TEAM

PRIMARY SURVEY ROUTE INSTRUCTIONS

NOTE: Numbers given in parentheses are predesignated survey points. Mileages given are approximate.

1. From the Training Center driveway travel east on Lake Road to Knickerbocker Road (1.1 miles). Place a TLD near the intersection of Lake Road and Knickerbocker Road (#1).

2. Go south on Knickerbocker Road to Brick Church Road (1.6 miles). Place a TLD near the intersection of Knickerbocker Road and Brick Church Road (#2).

3. Continue south on Knickerbocker Road to Kenyon Road (1.3 miles). Place a TLD near the intersection of Knickerbocker Road and Kenyon Road (#9).

4. Go west on Kenyon Road to Slocum Road (1.9 miles).

5. Go north on Slocum Road to Brick Church Road (1.3 miles). Place a TLD near the intersection of Slocum Road and Brick Church Road (#4).

6. Continue north on Slocum Road to Lake Road (1.0 miles).

7. Report to Radio Operator for further instructions.

RED TEAM

SECONDARY SURVEY ROUTE (WEST OR NORTHWEST WINDS) INSTRUCTIONS

NOTE: Numbers given in parentheses are predesignated survey points. Mileages given are approximate.

1. From the intersection of Lake and Slocum Road.

2. Go east on Lake Road to Ontario Center Road (1.0 mile)

3. Go south on Ontario Center Road to Route 104 (3.1 miles)

4. Continue south on Ontario Center Road/Route 350 to Route 441/Walworth Road (6.3 miles).

5. Go east on Route 441/Walworth Road to main intersection in Village of Walworth (Walworth-Ontario Road, 1.0 miles). Place a TLD near the intersection (#26).

6. Report to the Radio Operator for further instructions.

RED TEAM

SECONDARY SURVEY ROUTE (EAST OR NORTHEAST WINDS) INSTRUCTIONS

NOTE: Numbers given in parentheses are predesignated survey points. Mileages given are approximate.

1. From the intersection of Lake and Slocum Road.

2. Go south on Slocum Road to State Route 104 (3.1 miles).

3. Go east on State Route 104 to State Route 350/Ontario Center Road (1.0 miles).

4. Go south on State Route 350 to Plank Road (3.2 miles).

5. Go west on Plank Road to County Line Road (4.1 miles). Place a TLD near the intersection of Plank Road and County Line Road (#46).

6. Continue west on Plank Road to Salt Road (1.5 miles). Place a TLD near the intersections of Plank Road and Salt Road (#39).

7. Go north on Salt Road to Schlegel Road (4.1 miles). Place a TLD near the intersection of Salt Road and Schlegel Road (#42).

8. Continue north on Salt Road to Lake Road and report to Radio Operator for further instructions.

GREEN TEAM

PRIMARY SURVEY ROUTE INSTRUCTIONS

NOTE: Numbers given in parentheses are predesignated survey points. Mileages given are approximate.

1. Travel west on Lake Road to Lakeside Road (1.7 miles). Place a TLD near the intersection of Lake Road and Lakeside Road (#17).

2. Go south on Lakeside Road to Boston Road (1.0 miles). Take a high volume air sample near the intersection of Lakeside Road and Boston Road (#16).

3. Continue south on Lakeside Road to State Route 104 (2.0 miles).

4. Go east on State Route 104 to Ontario Center Road (1.6 miles).

5. Go north on Ontario Center Road to Brick Church Road (2.1 miles). Place a TLD near the intersection of Ontario Center Road and Brick Church Road (#3).

6. Continue north to Lake Road.

7. Report to Radio Operator for further instructions.

GREEN TEAM

SECONDARY SURVEY ROUTE (WEST OR NORTHWEST WINDS) INSTRUCTIONS

NOTE: Numbers given in parentheses are predesignated survey points. Mileages given are approximate.

1. From Lake Road and Ontario Center Road, go east to Pultneyville (7.0 miles). Place a TLD in the Pultneyville area (#28) near white settler monument at the Lake.

2. Go south from Pultneyville on State Route 21 to Pound Road (3.4 miles). Place a TLD along State Route 21 south of Pound Road (#48).

3. Continue south on State Route 21 to Farnsworth Road (4.6 miles). Place a TLD near the intersection of State Route 21 and Farnsworth Road (#47).

4. Continue south on State Route 21 and into the Village of Marion (3.0 miles).

5. Return to Main Street in the Village of Williamson on State Route 21 (5.3 miles).

6. Report to Radio Operator for further instructions.

GREEN TEAM

SECONDARY SURVEY ROUTE (EAST OR NORTHEAST WINDS) INSTRUCTIONS

NOTE: Numbers given in parentheses are predesignated survey points. Mileages given are approximate.

1. From Lake Road and Ontario Center Road, go west to State Route 250. Place a TLD near intersection of Lake Road and State Route 250 (#45) (6.0 miles).

2. Continue west on Lake Road to Whiting Road (1.8 miles).

3. Go south on Whiting Road to Klem Road (1.0 miles).

4. Go west on Klem Road to Five Mile Line Road (0.4 miles).

5. Go south on Five Mile Line Road to Plank Road (3.4 miles). Place a TLD near the intersection of Five Mile Line Road and Plank Road (#51).

6. Continue south on Five Mile Line Road to Penfield Four Corners (intersection with Penfield Road, State Route 441) (3.6 miles). Place a TLD near back of Baptist Church parking lot, 500' east of intersection on north side of Penfield Road (#41).

7. Report to Radio Operator for further instructions.

CRANGE TEAM

PRIMARY SURVEY RCUTE INSTRUCTIONS

NCTE: Numbers given in parentheses are predesignated survey points. Mileages given are approximate.

1. Travel east on Lake Road to Fisher Road (2.7 miles).

2. Go south on Fisher Road to Shepherd Road (Ø.7 miles). Take an air sample near the intersection of Fisher Road and Shepherd Road (#19).

3. Place a TLD near the intersection of Fisher Road and Shepherd Road (#19).

4. Continue south on Fisher Road to Trimble Road (1.1 miles). Place a TLD near the intersection of Fisher Road and Trimble Road (#2Ø).

5. Continue south on Fisher Road to Kenyon Road (Ø.7 miles). Go west on Kenyon Road to Furnace Road (1.1 miles). Place a TLD near the intersection of Kenyon Road and Furnace Road (#49).

6. Go north on Furnace Road to Lake Road (2.7 miles).

7. Report to Radio Operator for further instructions.

ORANGE TEAM

SECONDARY SURVEY ROUTE (WEST OR NORTHWEST WINDS) INSTRUCTIONS

NOTE: Numbers given in parentheses are predesignated survey points. Mileages given are approximate.

1. From Lake Road and Furnace Road, go south to Ridge Road (4.2 miles).

2. Go south on Walworth-Ontario Road to Trummonds Road (2.3 miles).

3. Go east on Trummonds Road to Arbor Road (1.1 miles). Place a TLD near the intersection of Trummonds Road and Arbor Road (#22).

4. Go north on Arbor Road to Ridge Road (2.3 miles).

5. Go east on Ridge Road to Eddy Ridge Road (2.2 miles). Place a TLD near the intersection of Ridge Road and Eddy Ridge Road.

6. Continue east on Ridge Road to Tuckahoe Road (0.3 miles).

7. Go north on Tuckahoe Road to Salmon Creek Road (2.5 miles). Place a TLD near the intersection of Tuckahoe Road and Salmon Creek Road.

8. Continue north on Salmon Creek Road to Lake Road and report to Radio Operator for further instructions.

ORANGE TEAM

SECONDARY SURVEY ROUTE (EAST OR NORTHEAST WINDS) INSTRUCTIONS

NOTE: Numbers given in parentheses are predesignated survey points. Mileages given are approximate.

1. From Lake Road and Furnace Road, go west on Lake Road to Roder Parkway (access road to Ontario on the Lake) (5.1 miles). Go north on Roder Parkway to intersection with Ontario Drive and place a TLD near intersection (#18) (0.5 miles).

2. Return to Lake Road, continue west to County Line Road (2.4 miles).

3. Go south on County Line Road to Berg/Schlegel Road (2.0 miles). Place a TLD near the intersection of County Line Road and Berg /Schlegel Road (#36).

4. Continue south on County Line Road to State Route 104 (1.2 miles). Turn right onto State Route 104 and go to Salt Road (1.2 miles). Turn left onto Salt Road to Road (2.1 miles).

5. Go west on Plank Road to State Route 250 (2.8 miles).

6. Continue west on Plank Road to RG&E Eastern Monroe Service Center, 1270 Plank Road. Report results of surveys to Radio Operator.

7. Return to Route 250 and go north on Route 250 to State Road (1.2 miles). Place a TLD at the intersection of State Road and Route 250 (#38).

8. Continue north on Route 250 to Main Street in the Village of Webster (2.3 miles).

9. Go east on Main Street to Phillips Road (0.6 miles).

10. Go north on Phillips Road to substation #74 driveway which is 20' north of access road to State Route 104.

11. Report to Radio Operator for further instructions.

GINNA STATION
UNIT #1
COMPLETED
DATE :-
TIME :-

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

PROCEDURE NO. SC-324 REV. NO. 2

EMERGENCY ON-SITE RADIATION SURVEY TEAMS

TECHNICAL REVIEW

PORC REVIEW DATE 5-18-83

QC REVIEW

PLANT SUPERINTENDENT

MAY 24 1983
EFFECTIVE DATE

QA ✓ NON-QA _____ CATEGORY 1.0

REVIEWED BY: _____

THIS PROCEDURE CONTAINS 19 PAGES

SC-324

EMERGENCY ON-SITE RADIATION SURVEY TEAMS

1.0 **PURPOSE:**

1.1 The prime objective of the Emergency On-Site Radiation Survey Teams is to rapidly survey areas immediately surrounding the restricted area in order to determine the extent and magnitude of any uncontrolled release of radioactive materials following an incident. It should be stressed that the initial on-site survey is of great importance. Decisions regarding the extent and types of protective actions required will be based upon data reported by the survey teams.

2.0 **REFERENCES:**

2.1 SC-1, Radiation Emergency Plan

2.2 SC-421, Determination of Iodine or Particulate

2.3 SC-232 Voluntary Acceptance of Emergency Exposure

3.0 **INSTRUCTIONS:**

3.1 Obtain appropriate On-Site Survey Team footlocker as directed by Tag Board Assignment. If seal is broken, use equipment list inside footlocker to inventory equipment. Request the assistance of the Survey Center Manager in obtaining replacement equipment if necessary.

3.2 Obtain following equipment which is not stored in footlocker.

3.2.1 Personal film badge and TLD.

3.2.2 One 0-5R dosimeter for each team member, Sign-in on dosimeter log sheet.

3.2.3 One full-face mask with charcoal filter and voice emitter for each Team member.

3.2.4 Handi-Talkie radio.

3.2.5 Victoreen Portable Low Volume Air Sampler with filter holder.

3.2.6 RM-14 Radiation Monitor with HP-190 Probe.

3.2.7 Auto Digi-master or RO-2 dose rate meter.

3.3 Complete the following items prior to departing on the assigned survey route.

3.3.1 Check operation of radio system, portable air sampler, radiation count rate monitor, and dose rate meter using equipment check-out procedures in Appendix I.

3.3.2 Load survey equipment onto equipment belts and back packs, fill in Survey Team Status Board, and inform Survey Center Manager of your departure.

3.3.3 Log time, date, and survey team members on survey map.

3.3.4 Establish radio communication with Technical Support Center Radio Operator and advise of teams departure.

3.3.5 Log time, date, totalizer number and start time of low volume air sampler on reverse of survey map.

3.4 Protective clothing and full face masks with charcoal filters will be worn as directed by the Dose Assessment Manager. Internal contamination will be determined by a Whole Body Count after the survey.

3.5 Perform radiation surveys using the appropriate instructions of Appendix II while following the Survey Route instructions contained in Appendix III.

3.5.1 Do not enter areas where radiation levels are greater than 2 R/hr unless directed by a Health Physicist.

3.5.2 The dose limitation of the survey team is limited to 1 REM unless the Health Physicist or Emergency Coordinator authorizes a higher limit.

3.5.3 A ONETIME dose limit of 75 REM may be used to save the life of an individual on a voluntary basis.

3.5.4 A ONETIME dose limit of 25 REM may be used to insure equipment is operational or secured in order to prevent a greater possible hazard to the general public.

3.5.5 At each assigned survey point the team should report the following information to the Radio Operator:

-Location
-Completed Actions
-Results of Surveys
-Departure for next Survey Point

3.5.6 Upon completion of Survey Route inform radio operator at Tech Support Center. The Dose Assessment Manager will

APPENDIX I

EMERGENCY ON-SITE RADIATION SURVEY TEAM

EQUIPMENT CHECKOUT AND OPERATION

RADIO SYSTEM

The radio system consists of a hand-held radio and attached antenna. To checkout and operate the system, complete the following steps.

1. Ensure the antenna is securely screwed into the connection on top of the radio. If a telescoping antenna is installed ensure it is extended to its full length when operating the radio.

2. Turn the channel selector switch to Channel 1.

3. Turn the squelch knob full CCW.

4. Turn the volume knob CW to turn the radio on and adjust the volume level. A rushing sound should be heard.

   NOTE: If no sound is heard, unit is inoperable. Obtain new unit and inform Survey Center Manager.

5. Adjust squelch knob CW just enough to quiet the radio. If squelch knob is turned too far CW weak signals will not be heard.

6. The general procedure for communicating on the radio should be as follows:

   a) Station Called
   b) Blue/Yellow Team
   c) Message
   d) "Over"

   During a drill or exercise all fictitious data will be preceded with the words "This is a drill....."

   Examples:

   "Tech Support Center, This is the Blue Team, At location number 1, Over"

   "JTech Support Center, This is the Yellow Team, This is a drill, Results of the general area survey at location 6 are 6,500 Counts Per Minute above background, Over"

7. To transmit depress the push-to-talk switch on the side of the radio. Speak in a normal voice into the speaker/mike.

8. To receive, release the push-to-talk switch.

9. There may be times that TSC of EOF will be receiving communications from a team that you cannot hear. If this happens the Radio Operator will tell you to wait or standby. After he has completed his traffic he will ask you to transmit your information. Remember this is one big party line; everyone can't talk at once.

10. When you have been directed to secure your Survey Team, turn the radio off and place it in the charger located in the Survey Team Room at the Survey Center.

RM-14 RADIATION SURVEY METER

EQUIPMENT CHECK

1. Disconnect power cord from back of meter taking care not to turn test switch on.
2. Ensure that an HP-190 probe is connected to the detector jack.
3. Turn range switch to battery. Meter should read in the "BATT-OK" area.
4. Perform instrument source check. Obtain source from safe and verify meter reading corresponds to attached card then log meter reading onto source check log.
5. Turn range switch to off.

EQUIPMENT OPERATIONS

1. Turn range switch to XI.
2. Place response switch in the "SLOW" position.
3. Adjust the volume control so that the audio indication (a clock) can be heard.
4. The range switch should be adjusted such that the highest reading gives a mid-scale deflection.
5. All readings must be multiplied by the range switch setting (X1, X10, X100).
6. 2,200 CPM is approximately 1 mrem/hour maximum scale is 50,000 CPM or 23 mR/hr.
7. Upon completion of the survey turn the unit off the return and return to the Survey Team Room. Unit should be recharged before the next use.

AUTO DIGI-MASTER DOSE RATE METER

EQUIPMENT CHECK

1. Turn unit on to be sure that the digital display lights.

2. Perform instrument source check. Obtain source from safe and verify that meter reading corresponds to attached card then log meter reading into source check log.

EQUIPMENT OPERATIONS

1. Allow unit to complete one cycle (display will blink) before reading when turning unit on or when radiation level changes significantly.

2. Unit will automatically change from one range to the next. The reading is always direct.

3. The Digi-Master may be used to detect the presence of Beta but cannot be used for dose measurement of Beta. Also, Beta detection is only effective when the unit is operating in the mrem/hour range.

   a. Take a reading with the Beta window closed and record.

   b. Take a reading with the Beta window opened and record.

   c. If the reading with the Beta window open is greater than the reading with the Beta window closed there is Beta radiation present.

   d. If a Beta dose rate is needed a survey with an RO-2 or equivalent instrument must be made.

4. Upon completion of the survey, turn off and return to the Survey Team Room. Unit should be recharged before the next use.

RO-2 DOSE RATE METER

EQUIPMENT CHECK

1. Turn the function selector switch to the "BATT 1" and "BATT 2" positions. Meter should indicate above the battery cut-off line.

2. Perform instrument source check. Obtain source from safe and verify that meter reading corresponds to attached card then log meter reading onto source check log.

EQUIPMENT OPERATION

1. Zero the meter by turning the function selector switch to "ZERO" and turning the "ZERO ADJ" knob as necessary. The zero adjust may be made in a radiation field by placing the function selector switch at "ZERO ADJ".

2. To measure the radiation field position the function selector switch to the lowest range which provides a mid-scale deflection of the meter.

3. With the Beta shield closed the meter will read the whole body Gamma dose rate.

4. To obtain a Beta dose rate measurement perform the following:

   CAUTION: The face of the beta window is very thin. Whenever the Beta shield is open, guard the shield against damage by puncture or contamination by dust or dirt.

   Take an area measurement with the Beta shield closed.

   b. Open the sliding Beta shield on the bottom of the case and take an area measurement.

   c. Subtract the closed shield reading from the open shield reading and multiply by the Beta correction factor marked on the instrument.

   d. This number is the Beta dose rate for that area.

5. When the survey is completed turn the function selector switch to OFF.

BATTERY POWERED LOW VOLUME AIR SAMPLER

EQUIPMENT CHECK

1. Disconnect from Battery Charger
2. Turn power switch on.
3. Observe totalizer for movement.
4. Turn power switch off.

EQUIPMENT OPERATION

1. Record on sample envelopes following information:

   a. Date
   b. Time ON
   c. Location
   d. Totalizer Reading (A)

2. Ensure filter cartridge contains a GY-130 Silver Zeolite cartridge and a particulate filter. Connect filter cartridge to sampler.
3. Turn sampler ON and run sampler for the entire route.
4. Turn sampler OFF at end of route and record following information on sample envelopes:

   a. Time OFF
   b. Totalizer Reading (B)

5. Sample volume in cubic centimeters (cc) =

   (totalizer Reading B minus Totalizer A) times (Calibration Factor)

   NOTE: CF, Calibration Factor is noted on calibration sticker of sampler.

6. _____ Stop totalizer (B)

   _____ Start totalizer (A)

   _____ x _____ CF = _____ CC's sampled

APPENDIX II

RADIATION SURVEY INSTRUCTIONS

GENERAL AREA RADIATION SURVEY

1. A general radiation area survey should be conducted while moving between defined survey points, and at the specific survey points.

2. The survey should be conducted using an RM-14 Radiation Monitor with an HP-190 probe.

3. When conducting a moving survey, the HP-190 probe should be held in a horizontal position and protected from the elements and wind.

4. If the RM-14 reading changes more than 1,000 CPM stop and conduct a survey for Beta using the Auto Digi-Master or RO-2.

5. Report the results of the survey to the Radio Operator at the next survey point, or after completion of the Beta survey.

SURVEY TO DETERMINE PRESENCE OF BETA RADIATION

1. If the General Area Radiation Survey shows a change of 1000 CPM on the RM-14, or if the "plume" is suspected to be in your area, a survey to detect the presence of Beta radiation should be conducted.

2. Using an Auto Digi-Master, or RO-2 dose rate meter conduct the following surveys.

   a. With the detector window aimed up:

      Beta shield open _____

      Beta shield closed _____

      Difference #1 = (open reading - closed reading)

   b. With the detector window aimed down:

      Beta shield open _____

      Beta shield closed _____

      Difference #2 = (open reading - closed reading)

3. If either difference #1 or difference #2 from Step 2 is positive this is an indication that Beta radiation is present.

   a. If both difference #1 and #2 are positive, this is an indication that you are in the plume.

   b. If only difference #1 is positive, this is an indication that the plume is overhead.

4. Repeat the results of the survey to the Radio Operator and await further instructions from the Dose Assessment Manager.

LOW VOLUME AIR SAMPLE

1. Draw air through a GY-130 silver zeolite cartridge and particulate filter using a low volume air sampler for approximately 30 minutes.

2. Record the sample date, time, and location on two sample envelopes and on the back of the survey map.

3. Determine the background radiation level using the RM-14 Radiation Monitor and HP-190 probe. Record the reading on each envelope, and on the survey map.

4. Using onion skins remove the GY-130 silver zeolite cartridge from the sample holder and read the activity level with the RM-14 Radiation Monitor and HP-190 probe by holding the probe window on the inlet side of the silver zeolite cartridge. DO NOT TOUCH THE PROBE WINDOW WITH THE CARTRIDGE. Record the reading on one envelope and place the cartridge in the envelope. Record the reading on the back of the survey map.

5. Read the activity level of the particulate filter using the RM-14 Radiation Monitor and HP-190 probe. DO NOT TOUCH THE PROBE WINDOW WITH THE PARTICULATE FILTER. Record the reading on the other envelope and place the particulate filter in the envelope. Record the reading on the back of the survey map.

6. Remove the onion skins and discard in a plastic bag. Treat as contaminated material.

7. Report the following information to the Radio Operator:

   a. Sample location
   b. Time sample was taken
   c. Volume of air sample in cc (See page 10 for calculations)
   d. Background count rate in cpm
   e. GY-130 silver zeolite cartridge count rate in cpm
   f. Particulate filter count rate in cpm

NOTE: Field calculations of the airborne activity level may be performed as follows:

(See page 10 for calculation of volume of sample in cubic centimeters.)

Iodine-131 (GY-130 cartridge)

$$\frac{(\text{CPM Sample} - \text{CPM Background})(2.4 \times 10\text{-}5)}{(\text{Volume of Sample in Cubic Centimeters})} = \underline{\qquad} \text{ uCi/cc Iodine-131}$$

Particulate

$$\frac{(\text{CPM Sample} - \text{CPM Background})(8.34 \times 10\text{-}5)}{(\text{Volume of Sample in Cubic Centimeters})} = \underline{\qquad} \text{ uCi/cc Particulate}$$

CHANGING FILTERS AT FIXED ENVIRONMENTAL STATIONS

1. Record the following information on the sample envelope left from the previous filter change:

   a. Date
   b. Time
   c. System Vacuum (inches)
   d. Gasmeter reading (cubic feet)
   e. Total hour meter (record in column marked "OFF")

2. Turn pump off

3. Using onion skins remove the filter holder at the quick disconnect joint.

4. Unscrew the outside retaining ring and remove the particulate filter from the holder and place in the sample envelope.

5. If a charcoal cartridge was in use transfer the information on the particulate filter envelope to a new envelope and place the charcoal cartridge in the envelope.

6. Place a new GY-130 silver zeolite cartridge in the sample head.

7. Place a new particulate filter in the holder, replace the retaining ring and reconnect holder to the pump at the quick disconnect joint.

8. Remove onion skins and place in a plastic bag. Treat as contaminated.

9. Turn the pump on.

10. Record the following information to two new envelopes. Mark one envelope "GY-130 silver zeolite".

    a. Station number
    b. Date
    c. Time
    d. System vacuum (inches)
    e. Gasmeter reading (cubic feet)
    f. Total hour meter (record in the "ON" column)

11. Place the new envelopes inside the monitor cabinet.

12. Bring the envelopes containing the cartridge/filter removed to the Survey Center at the completion of your assigned route or when directed by the Dose Assessment Manager.

APPENDIX III

ON SITE RADIATION SURVEY TEAM INSTRUCTIONS

BLUE TEAM

SURVEY ROUTE INSTRUCTIONS

1. From the Survey Center proceed northeast to the edge of the grass.
2. Turn south across the lawn and proceed to environmental station #4 and change the filter cartridge.
3. Proceed southeast to Manor House driveway, follow driveway to where it turns north, proceed east out of the trees into orchard.
4. Go through orchard, then turn north and proceed to environmental station #3 and change the filter cartridge.
5. Proceed west across field and through woods to Manor House driveway.
6. Go north on Manor House driveway to the lake shore.
7. Proceed east to environmental station #2 and change the filter cartridge.
8. Proceed west along the lake shore to the plant fence.
9. Proceed along the plant fence to the Guard House.
10. If the Central Alarm Station (CAS) and Secondary Alarm Station (SAS) are manned contact CAS on the radio for access to the site. Otherwise obtain a "hard key" to gain access to the site from the Survey Manager.
11. Proceed east from the Guard House along access road and across south side of plant building.
12. Circle across grass towards Upper-Radwaste Storage Area, continuing to plant fence.
13. Continue west along plant fence to the Screenhouse.
14. Proceed south along side of plant building and return to Guard House.
15. Report to Radio Operator for instructions.

YELLOW TEAM

SURVEY ROUTE INSTRUCTIONS

1. Proceed west from the Survey Center to the plant site road.
2. Continue north across the bridge to environmental station #5 and change the filter cartridge.
3. Proceed west along Deer Creek and the parking lot to environmental station #6 and change the filter cartridge.
4. Proceed west through the apple orchard approximately 100 yards.
5. Turn north through the apple orchard, towards the hill, to the northwest corner of the plant fence.
6. Proceed south along the plant fence to environmental station #7 and change the filter cartridge.
7. Continue along the plant fence to the Guard House.
8. If the Central Alarm Station (CAS) and Secondary Alarm Station (SAS) are manned contact CAS on the radio for access to the site. Otherwise obtain a "hard key" to gain access to the site from the Survey Manager.
9. Proceed west from Guard House to the access road.
10. Continue north on the access road and across the grass to the plant fence.
11. Proceed east along the plant fence to the discharge canal.
12. Proceed south along the west side of the plant building and return to the Guard House.
13. Report to Radio Operator for instructions.

ONSITE SURVEY MAP

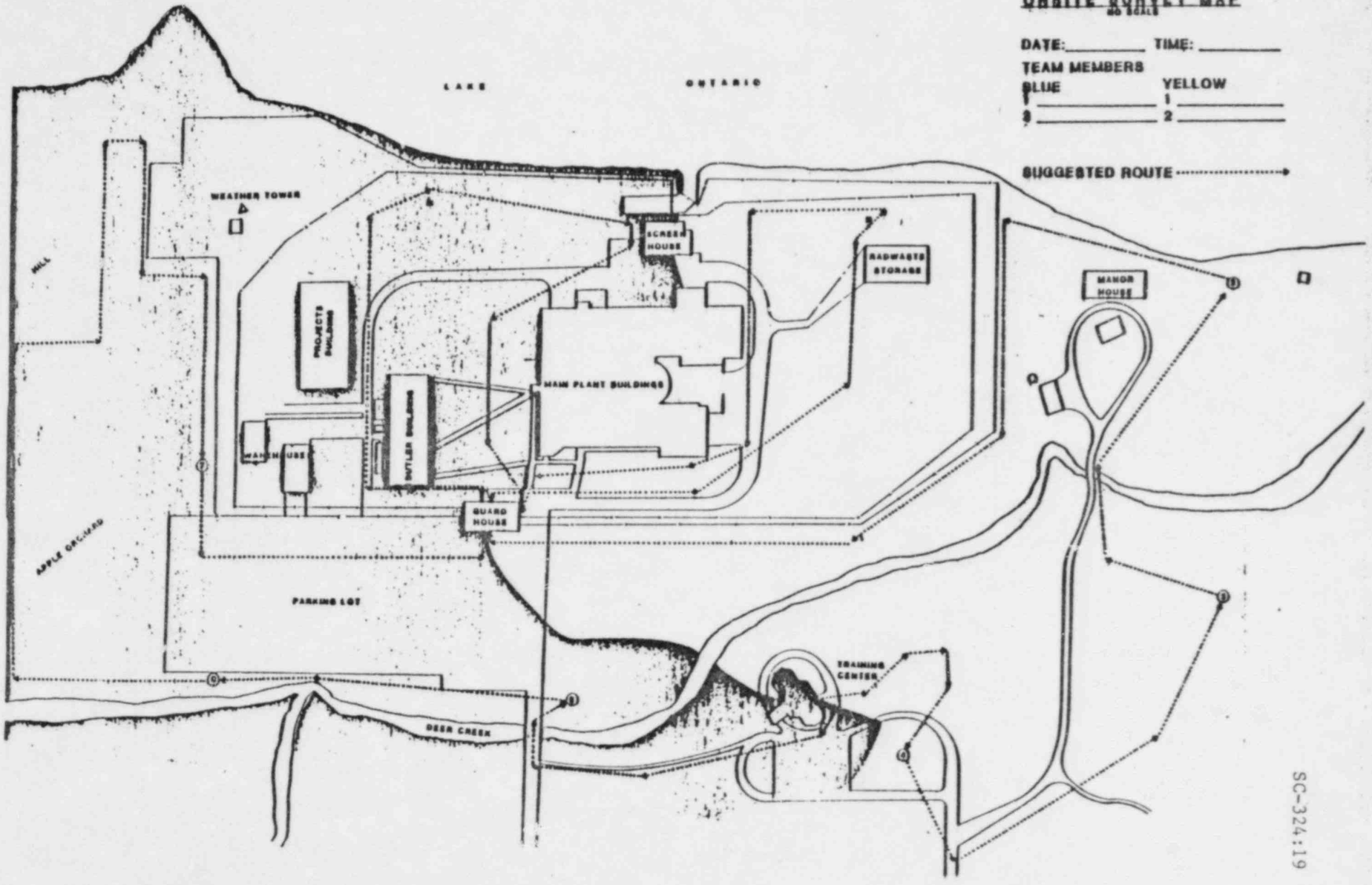
NO SCALE

DATE:_____ TIME:_____

TEAM MEMBERS

BLUE	YELLOW
1 _____	1 _____
2 _____	2 _____

SUGGESTED ROUTE ·····→



SC-324:19

GINNA STATION
UNIT #1
COMPLETED
DATE :-
TIME :-

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

PROCEDURE NO. SC-410 REV. NO. 9

INSPECTION OF EMERGENCY EQUIPMENT

TECHNICAL REVIEW

PORC REVIEW DATE 5-18-83

QC REVIEW

PLANT SUPERINTENDENT

MAY 24 1983
EFFECTIVE DATE

CA X NON-CA _____ CATEGORY 1.C

REVIEWED BY: _____

THIS PROCEDURE CONTAINS 13 PAGES

SC-410

INSPECTION OF EMERGENCY EQUIPMENT

1.0 **PURPOSE:**

1.1 The equipment required by the emergency plan and the means of assuring it is available is outlined in this procedure. Inspection will be made monthly as required by Technical Specifications and after each drill or use.

2.0 **REFERENCES:**

2.1 SC-1, Emergency Plan

2.2 Tech. Specs, Table 4.1-1

3.0 **INSTRUCTIONS:**

3.1 Inspect each location using attached appendices. Indicate number of items present in blank space on appendix.

3.1.1 Emergency Survey Center - Appendix A

3.1.2 Control Room - Appendix B

3.1.3 Health Physics Office, Auxiliary Building, Operational Support Center - Appendix C

3.1.4 Technical Support Center - Appendix D

3.1.5 Monthly Inspection Log - Appendix E

3.2 If any discrepancies are found make note on the Monthly Inspection Log (Appendix E). If there are no discrepancies, enter NONE on Log Sheet.

3.2.1 Discrepancies are to be corrected (or a trouble card submitted) as soon as possible and so noted on the log sheet and filed per A-1701.

3.3 Perform monthly operational check with check source on Emergency Plant Vent monitor (Padector III). Record discrepancies on Monthly Inspection Log - Appendix E and advise Health Physicist.

3.4 Notify Control prior to initiating Survey Center and TSC Communication checks.

APPENDIX "A"

EMERGENCY EQUIPMENT IN SURVEY CENTER

1. Assignment tag board - all tags in place _____

2. Survey team maps - Red, Green, Orange, Blue, Yellow 15_____

3. Survey team boxes - Red, Green, Orange, Blue, Yellow, White - If seal is unbroken assume equipment is intact. Inventory boxes and change batteries in January and July. 6_____

4. Low range survey instruments, PM-14 with HP-190 probe battery check. Source check per HP-7.31 5_____

5. Mid range survey instruments RO2 (1 mR/hr to 5 R/hr) battery check, source check per HP-7.31 and check calibration date. 6_____

6. High level dose rate meters - battery check, calibration check, source check per HP-7.31. Xetec 305 series instruments (0.1 mR/hr to 99.9 R/hr) Xetec 303 series instruments may be substituted. 5_____

7. Extendable high level survey meter - battery check, source check, calibration check. Xetec 302 series instruments (0.01 R/hr to 999 R/hr) Eberline Teletector (.01 mR/hr to 1k R/hr) 1_____

8. Nucleus scaler with probe and count shelf-frequency check, source check, efficiency calibration semi-annually. 1_____

9. Radiation monitor PM-3C or equivalent, with HP-260 probe equivalent, source check, calibration check. 1_____

10. Area radiation monitor, stationary - change chart paper, operational check. 1_____

11. Dosimeter charger with battery. 2_____

12. Dosimeter (High Range) - check calibration C-5R 8_____

C-10R 8_____

13. Dosimeter (0-500mr) - check calibration 12_____

14. Thermal luminesent dosimeters 10_____

15. Packages of (6) environmental TLD badges (off-site only) 3_____

APPENDIX "A" (con't)

16.	Battery operated, low volume air samplers - calibration check. Run air sampler several minutes to check operation, semi-annually totally discharge and recharge samplers (February and August)	6
17.	Battery charger - operation check, disconnect	1
18.	RADECO H 809 B2 air sampler - run 120 minutes	2
19.	RADECO H 809 C air sampler - run 1 minute	4
20.	Filters for air samplers - particulate	100
21.	Filters for air samplers - silver zeolite	50
22.	Envelopes for air samples - particulate	100
23.	Envelopes for air samples - iodine	100
24.	Envelopes for smear papers	100
25.	Smear papers	1000
26.	Decontamination kit (NMC - 3 piece)	1
27.	Radios, Handi-Talkie - radio check with security	6
28.	Radios, Porta-mobile II - radio check with Security	6
29.	Magnetic car mount antenna	3
30.	Radio, stationary - radio check with security - log book entry.	1
31.	Full face respirator with charcoal filter - inspect mask, mark bag with inspection date and initials check filter expiration date	22
32.	Charcoal Respirator Filters - check expiration date	22
33.	Voice emitters for respirators - operational check	13
34.	Contaminated clothing & waste containers, 55 gal drum	2
35.	Anti - contamination clothing, sets	25
36.	Step off pads	10
37.	Tape, rolls (replace January)	1 BOX

APPENDIX A (con't)

38.	Plastic Bags, poultry	1 BOX_____
39.	Plastic bags, clean, large	20_____
40.	Radioactive material bags, yellow, large	1 ROLL_____
41.	Radiation rope	1 ROLL_____
42.	Radiation hazard signs with inserts	10_____
43.	Thyroid block tablets, bottles	25_____
44.	Pens and pencils	10_____
45.	Batteries, D size	10_____
46.	Batteries, 9V	10_____
47.	Extension cord	3_____
48.	NMC CAM - Check flow CAM test (60 ~), & check switch positions.	1_____
49.	Intercom "A" - communication check with Control Room. Call Control Room on GAI page, have them plug in Intercom A and contact survey center.	1_____
50.	NRC Red telephone - lift receiver, tell party "This is a Ginna Station Survey Center Communications Check."	1_____
51.	New York State Red telephone - Push button, lift receiver, wait 10 seconds, state "This is Ginna Station Emergency Survey Center Communications Check, this is a test." Then say "All Stations Standby for Roll Call", then ask one at a time if New York State, Monroe County, Wayne County and the Control Room are listening.	1_____
52.	Telephone Books - Rochester 1, Wayne County 1	1_____
53.	Wayne County (946-4878)	1_____
54.	Monroe County (9-716-473-0710)	1_____
55.	New York State (9-518-457-2200)	1_____
56.	National Weather Service, Rochester (9-716-328-7633)	1_____
57.	National Weather Service, Buffalo (9-716-632-2223)	1_____

APPENDIX A (con't)

58. From 524-6711 call Control Room at 524-4984 and TSC at 524-4973 1_____

59. From extension 331 call TSC at 280 1_____

60. From extension 332 call TSC at 281 1_____

61. From extension 333 call ESC at 207 1_____

62. Semi-annually discharge all rechargeable equipment completely then recharge and check operation. (Feb. & Aug.) _____

Initials_____ Date_____

APPENDIX "A" (continued)

EMERGENCY EQUIPMENT PER SURVEY BOX

If box is sealed inventory not required. Boxes shall be opened in January and July for battery change and inventory.

1.	Coveralls	2
2.	Hoods, disposable	2
3.	Gloves, pair	2
4.	Booties, pair	2
5.	Hats, Surgeon	2
6.	Hoods, Rain	2
7.	Coats, Rain	2
8.	Boots, Rain, pair	2
9.	Flashlight with Batteries	1
10.	Plastic Bags	2
11.	Masking Tape, rolls (replace January)	2
12.	Pencils	2
13.	Pencil Sharpener	1
14.	Tablet, writing	1
15.	Survey Route Maps	2
16.	Air Sampler Filters - Particulate	5
17.	Air Sampler Filters - Silver Zeolite CY-130	5
18.	Air Sample Envelopes (Iodine)	10
19.	Air Sample Envelopes (Environmental)	10
20.	Clipboard	1
21.	Appropriate procedure for team (Remove survey route instructions in Appendix III that do not apply to that survey team)	
22.	Procedure SC-452, Sampling Snow, Grass, Soil and Vegetation.	

23. Thyroid Block Tablets (bottle)	3_____
24. Suits, cold weather (carhart) (on-site team only)	2_____
25. Equipment Belts with Bags (on-site team only)	2_____
26. First Aid Room key (onsite team only)	1_____
27. Backpacks - 2 (on-site teams only)	2_____
28. Respirator hip pouches (on-site only)	2_____
29. Dimes for Telephones (Off-site team only)	10_____
30. Hammer and 10 nails (off-site only)	1_____
31. HP-100 window clamp (off-site teams only)	1_____
32. Garden Trowel	1_____
33. Tags with wire tie	10_____

Initials_____ Date_____

APPENDIX "B"

EMERGENCY EQUIPMENT IN CONTROL ROOM

1.	Scott Air Pack (SCBA) - monthly inspection	2_____
2.	High range dosimeters - calibration check	10_____
3.	Dosimeter charger with battery - operability check	1_____
4.	High range dose rate meter - battery check, source check per HP-7.31 and calibration check (RO2A)	1_____
5.	Plant radiation survey maps (sets)	3_____
6.	Smear papers	100_____
7.	Envelopes for smear papers	10_____
8.	Thyroid block tablets (bottle)	10_____
9.	Air sampler, low volume - operability check, calibration check	1_____
10.	Air sampler filters - particulate	3_____
11.	Air sampler filters - silver zeolite	3_____
12.	Radiation monitor RM-14 or equivalent with HP-190 probe, battery check, source check, calibration check	1_____
13.	Tape, roll (replace January)	1_____
14.	Anti-contamination clothing (sets)	6_____
15.	Semi-annually discharge fully all rechargeable equipment, recharge then check operation (Feb. & Aug.)	_____

Initial_____ Date_____

APPENDIX "C"

EMERGENCY EQUIPMENT

OPERATIONAL SUPPORT CENTER

1.	Full face respirators - inspect mask and mask bag with inspection date and initials	6_____
2.	Respirator charcoal filters - expiration date	6_____
3.	Anti-contamination clothing (sets)	6_____
4.	Flood lights, portable - operational check	2_____
5.	Thyroid block tablets (bottles)	15_____
6.	Dosimeters 0-500 mRem - check calibration	10_____
7.	Dosimeters 0-10R - check calibration	10_____
8.	Dosimeter charger with battery - operational check	1_____
9.	Daily exposure record sheets	5_____
10.	Pens	5_____
11.	Rolls masking tape (replace January)	2_____

AUXILIARY BUILDING

1.	Scott air pack (SCBA) - monthly inspection	1_____

HEALTH PHYSICS OFFICE

1.	Scott air pack (SCBA) - monthly inspection	2_____
2.	High range dosimeter - calibration check	20_____
3.	Anti-contamination clothing (sets)	20_____
4.	High range dose rate meter - battery check, source check per HP-7.31 and check calibration (RO2A, Radector III, Xetec 305 series or Eberline Teletector)	5_____

Initials_____ Date_____

APPENDIX "D"

EMERGENCY EQUIPMENT IN TECHNICAL SUPPORT CENTER

1.	Radiation monitor RM-14 or equivalent with HP-190 probe battery check, source check, check calibration	1
2.	Area radiation monitor - battery check, source check, check calibration	1
3.	Full face respirator - inspect mask mark bag with inspection date and initials	10
4.	Respirator charcoal filter - check expiration date	10
5.	Thyroid block tablets (bottles) check expiration date	25
6.	Dosimeter, 500mr - check calibration	25
7.	Dosimeter, high range - check calibration	10
8.	Dosimeter charger with battery - operability check	1
9.	RADECO H-809 B2 air sampler - run 120 minutes	1
10.	Air sample filters - particulate	4
11.	Air sample filters - silver zeolite	4
12.	Anti-contamination clothing (sets)	25
13.	Step Off Pads	10
14.	Daily exposure records sheets	5
15.	Radioactive materials bags (yellow)	5
16.	Tape, rolls (replace January)	5
17.	Smear papers	100
18.	Envelopes for smears	10
19.	Envelopes for particulate air sample	10
20.	Envelopes for iodine air samples	10
21.	Pens and pencils	5ea
22.	Radio, Portable - radio check with security	4

APPENDIX "D" (con't)

23. Radio, Stationary - radio check with security - log book entry 1_____

24. NRC Red telephone - lift receiver, tell party "This is a Ginna Station TSC Communication Check." 1_____

25. New York State Red Telephone - push button, lift receiver, wait 10 seconds, ask if New York State, Wayne County, Monroe County are listening? Tell them "This is Ginna Station TSC Communication Check." 1_____

26. HPN telephone - dial selected station to confirm communication check 1_____

27. ECF Direct line (63PL5187) Telephone 1_____

28. Silent 700 operational check 1_____

1. Place switches in the following positions:

   A) Upper case switch - depress right

   B) Half Dup switch - depress left

   C) On-line switch - depress left

   D) Low Speed switch - depress right

   E) On/Off switch - push forward

2. Dial Ginna ext. 244

3. Place phone into terminal as shown above, ensure phone is placed securely.

4. Enter TSC as your user ID

5. Enter Request - "time"

6. Log off with - "bye"

Initials_____ Date_____

APPENDIX "E"

EMERGENCY EQUIPMENT MONTHLY INSPECTION LOG

	DISCREPANCIES NOTED	DISCREPANCIES CORRECTED
Survey Center	Date_____ Initials_____	Date_____ Initials_____
Control Room	Date_____ Initials_____	Date_____ Initials_____
HP Office	Date_____ Initials_____	Date_____ Initials_____
Auxiliary Bldg.	Date_____ Initials_____	Date_____ Initials_____

Technical Support Center Date_____Initials_____ Date_____Initials_____

Operational Support Center Date_____Initials_____ Date_____Initials_____

Emergency Plant Vent Monitor Date_____Initials_____ Date_____Initials_____

REVIEWED BY:_____

GINNA STATION
UNIT #1
COMPLETED
DATE :-
TIME :-

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

PROCEDURE NO. SC-420 REV. NO. 2

ESTIMATING OFF-SITE DOSES

TECHNICAL REVIEW

PORC REVIEW DATE 5-18-83

QC REVIEW

PLANT SUPERINTENDENT

MAY 24 1983

EFFECTIVE DATE

QA X NON-QA _____ CATEGORY 1.0

REVIEWED BY: _____

THIS PROCEDURE CONTAINS 25 PAGES

SC-420

ESTIMATING OFF-SITE DOSES

1.0 **PURPOSE:**

1.1 The purpose of this procedure is to provide estimates of the post accident dose in the areas around the plant and guidance for the selection of sampling locations. Information is needed early to decide what action be taken to limit the exposure of the general public. Steps must be taken to define the affected areas, assess the extent and significance of the release and provide data on which appropriate protective actions can be based.

2.0 **REFERENCES:**

2.1 Radiation Emergency Plan, SC-1

2.2 N.Y.S. Radiological Emergency Preparedness Plan

2.3 SC-100, SC-442, SC-450

2.4 PC-23.3, PC-23.5 and S-14.2

2.5 EPA-520, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (Feb. 1980).

2.6 Regulatory Guide 1.109

3.0 **INSTRUCTIONS:**

3.1 The following equipment is available for use in estimating doses.

3.1.1 Xu/Q Isopleths, and Xu/Q tabulated values (Table 1).

3.1.2 Map of surrounding area, U.S. Geological Survey (1 inch: 24000 inch scale).

3.1.3 Control Room wind and temperature indicators.

3.1.4 Control Room Radiation Monitor System.

3.1.5 Back-up wind speed and direction indicators at Station 137, and National Weather Service.

3.2 Preliminary Radiological Estimates and Event Classification

3.2.1 For initial notification purposes, a first-cut estimate of potential offsite doses and releases may be obtained by the Control Room using SC-240, Attachment II. Levels are provided for various accidents evaluated in the Cinna FSAR and in previous AEC Safety Evaluations for Cinna plant siting and design.

3.2.2 It is preferable to base offsite estimates upon measured release values. Vent activity concentrations and release rates can be determined from curves in Procedure S-14.2, and from Procedure PC-23.5. Should vent monitors be inoperable, procedure PC-23.3 should be used estimating plant and steam vent releases, respectively.

3.2.3 An estimate of the 0-2 hr site boundary whole body dose from plant vent noble gas concentration, obtained from S-14.2 (low range monitor), PC-23.5 (hi range monitor) or PC-23.3 (back-up monitor), may be obtained using the following equation:

$$\text{Plant vent (uCi/cc)} \times 18 \frac{\text{Rem}}{\text{uCi/cc}} = \text{0-2 hr whole body dose Rem at site boundary}$$

NOTE: The following assumptions were made for these calculations:

$X/Q = 4.8 \times 10 E^{-4}$ sec/m^3 (default value in lieu of actual meteorology data; assuming downwind mixing conditions 100 times more conservative than annual average conditions.)

Plant vent flow = 77,000 cfm (3.63×10^7 cc/sec)

EPA-520 whole body dose curve (t = 0hr)

3.2.4 Determine the classification of the emergency with respect to plant releases and site boundary doses from the following criteria (from SC-100):

RADIOLOGICAL ESTIMATE	CLASSIFICATION
Radiological effluent Technical Specification limits exceeded (T.S.3.9)	Unusual Event
Radiological effluent greater than 10 times Technical Specification limits.	Alert

Effluent monitors indicate levels corresponding to greater than 50 mrem/hr whole body or 0-2 hr. thyroid dose greater than 500 mrem at the site boundary. Or these doses projected based upon plant parameters, or actual offsite measurements.	Site Emergency
Effluent monitors show levels corresponding to 500 mrem/hr whole body or a 0-2 hr. thyroid dose greater than 1 rem. Or these doses indicated by offsite measurements.	General Emergency

3.2.5 Any preliminary dose estimates used as a basis for emergency classification or protective action recommendations should be refined as follows using release measurements and actual meteorological and field sampling data as they become available.

3.3 Use of Meteorological and Release Data with EPA Curves to Project Doses

3.3.1 Obtain the temperature at 33' and 250' from the "Status Report Form", Control Room, TSC or Computer Terminal. From the 33' temperatures subtract the 250' temperature. If readings from the main weather tower are unavailable, proceed to step 3.3.2.1.

T33'_____

-T250'_____

T_____

3.3.1.1 The mini-computer in the Met. Trailor can be quizzed using the TI-Silent Electronic Data 700 terminal to obtain the last 15 min. averages by dialing 524-5711. When carrier light comes on, type AV77 [RETURN]. The 15 min. average will then be printed.

3.3.2 If Delta T is 2.0 or greater condition is unstable (lapse).

If Delta T is between 0.5 and 2, condition is neutral.

If Delta T is less than .5 or is negative (T250' > T33'), condition is stable (inversion).

Condition is _____

3.3.2.1 In the event that meteorological data are unavailable from the main weather tower, the Emergency Coordinator should direct an individual to proceed to the back-up weather instrument recorder inside the Station 13A control building. The recorder is located next to the communications desk on the north wall.

3.3.2.2 If the primary tower temperature sensors are not available to determine stability, the individual taking the readings should note wind speed (mph) wind direction (degrees) and approximate fluctuation in wind direction (degrees) averaged over the last hour. The wind direction fluctuation is determined by eyeballing or by drawing 2 average lines through the last hour's wind direction extremes, and subtracting the difference.

3.3.2.3 Station 13a wind speed, wind direction and wind direction fluctuation readings are reported to the Technical Support Center by phone (ext. 500 through 507) or by the plant P.A. The individual at Station 13A should request for further instructions from the Emergency Coordinator.

3.3.2.4 To determine atmospheric stability from wind fluctuation, use the following table:

Wind Fluctuation	Stability
< 45 degrees anytime	stable (inversion)
> 45 degrees night time	neutral
45 degrees - 75 degrees daytime	neutral
> 75 degrees daytime	unstable (lapse)

3.3.3 Select the Xu/Q plastic overlay matching the condition determined in 3.3.2 and attach to the area map. (Also tabulated Xu/Q values are given in the attached Table 1).

3.3.4 Obtain wind speed and direction data from the "Status Report Form", the Control Room, TSC, Computer Terminal or alternatively from Station 13A. The direction given will be that <u>from which the wind is blowing</u>.

Wind Speed_____(mph)

Wind Direction_____(degrees)

<u>NOTE</u>: Supplemental weather information is also available from the National Weather Service Offices in Rochester (716-328-7633) or Buffalo (716-632-2223), if necessary.

3.3.5 Align the centerline of the overlay in the downwind direction. The mark on the centerline at the bottom of the overlay should be aligned on a compass point on the map 180 degrees from the degrees given in 3.3.4. To determine this point, do one of the following:

If the degrees given in step 3.3.4 is between 180 and 360, subtract 180.

If the degrees given in step 3.3.4 is between 0 and 180, subtract 180.

Degrees wind is blowing from _____ Degrees

+ or - 180 Degrees

Align mark on centerline of overlay (at bottom) at _____ Degrees

3.3.6 The Xu/Q plastic overlays and Table 1 values have, for convenience been calculated based upon a wind speed of 1 mph. Thus, in order to determine X/Q $\frac{sec}{m^3}$, it is necessary to divide the isopleth value by the actual wind speed, in mph.

3.3.7 To calculate the downwind concentration of noble gas, particulates or radioiodine, multiply the release rate of radioactivity (Ci/sec) from the plant times the X/Q (sec/m^3) dispersion coefficient determined in step 3.3.6. The resultant concentration will be in Ci/m^3 or uCi/cc. Perform these calculations on Attachment 1 .

3.3.8 Obtain an initial estimate of release duration from the Emergency Coordinator or Recovery Manager. If this estimate is unavailable, use an initial release duration estimate of 2 hours for dose projection purposes.

3.3.9 Whole body gamma dose is then estimated using Figures 1 through 7, according to the approximate time after shutdown. To estimate gamma dose rate for a given noble gas downwind concentration (right vertical scale) find the corresponding whole body dose rate (mrem/hr) along the left vertical scale.

3.3.10 To estimate whole body gamma dose, find the point on the graph where the noble gas concentration line intersects the projected exposure time. The integrated whole body dose is then found along the diagonal lines on the graph.

3.3.11 To estimate child and adult thyroid dose, find the point on the Figure 8 graph where the downwind radioiodine concentration line intersects the projected exposure time. The integrated thyroid doses for the adult and child are indicated along the diagonal lines (the child dose being twice the adult's).

3.3.12 Correct thyroid dose estimates for time after shutdown, by multiplying by the appropriate factor indicated in Figure 9.

3.4 Survey Team Data

3.4.1 Note the sample locations on the map that are covered by the Xu/Q overlay. The initial sample taken should be in a high concentration area and on a first stage survey route. Using the attached list of sample locations and teams, notify proper teams where to take samples. When results are received, mark results on appropriate map and status board.

3.4.2 When the initial field sampling results are received, assign a Xu/Q value to the sample results using the Xu/Q value for the line closest to the sample location. For the plastic overlays, all points along a given line are assumed to have the same concentration as the initial sample. The concentration at any other point of interest can be estimated by multiplying the sample concentration by the ratio of the respective Xu/Q values.

EXAMPLE: A sample taken on a Xu/Q line of 5 x 10 E-6 indicated an iodine concentration of 5 x 10 E-7 uCi/cc and dose rate of 100 mrem/hr. Determine the concentration and dose rate expected at a Xu/Q value of 2 X 10 E-7?

SOLUTION:

$$\text{Iodine at } 2 \text{ X } 10 \text{ E-7} = \frac{2 \text{ x } 10 \text{ E-7}}{5 \text{ x } 10 \text{ E-6}} \text{ x } 5 \text{ x } 10 \text{ E-7} \frac{\text{uCi}}{\text{cc}} = 2 \text{ x } 10 \text{ F-8} \frac{\text{uCi}}{\text{cc}}$$

$$\text{Dose Rate at } \frac{2 \text{ x } 10 \text{ E-7}}{5 \text{ x } 10 \text{ E-6}} \text{ x } 100 \text{ (mrem/hr)} = 4 \text{(mrem/hr)}$$

3.4.3 Compare measured dose rates and air concentrations to predicted values, and adjust dose projections accordingly.

3.4.4 Notify the survey team to continue surveying the affected area looking for high concentration areas and hot spots.

3.4.5 If the wind direction changes, realign overlay using 3.3.5. Sample new locations indicated by the overlay.

3.4.6 If the wind speed changes, recalibrate the overlay by dividing the original speed by the new wind speed and multiply by the concentration or dose. Resample to check new overlay calibration.

3.4.7 For puff type releases multiply wind speed by elapsed time to find distance radioactive cloud has traveled.

3.4.8 Environmental TLD's, (SC-442) and Post Accident Environmental Samples, (SC-450) may be used to give better values for off-site doses.

3.5 Protective Action Guides

3.5.1 Recommend the appropriate measures to be followed with respect to the general public. Table 2, 3 and 4 give the projected whole body and thyroid dose levels which warrant given protective actions (e.g. sheltering, evacuation) indicated.

3.5.2 Weather forecast information should be considered when planning protective actions.

TABLE I

GINNA SITE VALUES OF $\frac{Xu}{Q}$ AS A FUNCTION

OF STABILITY AND DISTANCE
(computed by Pickard, Lowe & Garrick 1/82)

DOWNWIND DISTANCE					
METERS	FEET	MILES	UNSTABLE	NEUTRAL	STABLE
200	660	0.1	2.42 E-4	1.17 E-3	2.06 E-3
400	1,310	0.2	1.06 E-4	6.33 E-4	1.42 E-3
600	1,970	0.4	5.88 E-5	4.02 E-4	1.10 E-3
800	2,620	0.5	3.71 E-5	2.80 E-4	8.78 E-4
1,000	3,280	0.6	2.34 E-5	2.13 E-4	7.17 E-4
1,200	3,940	0.7	1.62 E-5	1.68 E-4	5.97 E-4
1,400	4,590	0.9	1.19 E-5	1.36 E-4	5.05 E-4
1,600	5,250	1.0	9.13 E-6	1.12 E-4	4.42 E-4
1,800	5,910	1.1	7.18 E-6	9.45 E-5	3.91 E-4
2,000	6,560	1.2	5.20 E-6	8.22 E-5	3.48 E-4
2,500	8,200	1.6	2.83 E-6	6.02 E-5	2.70 E-4
3,000	9,840	1.9	1.99 E-6	4.67 E-5	2.23 E-4
3,500	11,500	2.2	1.69 E-6	3.76 E-5	1.88 E-4
4,000	13,100	2.5	1.46 E-6	3.10 E-5	1.61 E-4
4,500	14,800	2.8	1.27 E-6	2.60 E-5	1.39 E-4
5,000	16,400	3.1	1.12 E-6	2.21 E-5	1.22 E-4
5,500	18,000	3.4	9.99 E-7	1.91 E-5	1.08 E-4
6,000	19,700	3.7	9.11 E-7	1.68 E-5	9.78 E-5
6,500	21,300	4.0	8.53 E-7	1.52 E-5	8.89 E-5
7,000	23,000	4.3	8.03 E-7	1.38 E-5	8.12 E-5
7,500	24,600	4.7	7.58 E-7	1.25 E-5	7.45 E-5
8,000	26,200	5.0	7.18 E-7	1.15 E-5	6.86 E-5
8,500	27,900	5.3	6.82 E-7	1.05 E-5	6.34 E-5
9,000	29,500	5.6	6.49 E-7	9.72 E-6	5.88 E-5
9,500	31,200	5.9	6.19 E-7	8.99 E-6	5.49 E-5
10,000	32,800	6.2	5.94 E-7	8.40 E-6	5.24 E-5
11,000	36,100	6.8	5.53 E-7	7.50 E-6	4.79 E-5
12,000	39,400	7.5	5.18 E-7	6.74 E-6	4.40 E-5
13,000	42,700	8.1	4.86 E-7	6.09 E-6	4.06 E-5
14,000	45,900	8.7	4.59 E-7	5.54 E-6	3.76 E-5
15,000	49,200	9.3	4.34 E-7	5.50 E-6	3.49 E-5
16,000	52,500	10.0	4.12 E-7	4.63 E-6	3.26 E-5

NOTE: VALUES ARE BASED ON 1 MPH WINDS

TABLE II

PROTECTIVE ACTION GUIDES FOR WHOLE BODY

EXPOSURE TO AIRBORNE RADIOACTIVE MATERIALS

POPULATION AT RISK	PROJECTED WHOLE BODY GAMMA DOSE (REM)
GENERAL POPULATION	1 TO 5[A]
EMERGENCY WORKERS	25
LIFESAVING ACTIVITIES	75

[A] WHEN RANGES ARE SHOWN, THE LOWEST VALUE SHOULD BE USED IF THERE ARE NO MAJOR LOCAL CONSTRAINTS IN PROVIDING PROTECTION AT THAT LEVEL, ESPECIALLY TO SENSITIVE POPULATIONS. LOCAL CONSTRAINTS MAY MAKE LOWER VALUES IMPRACTICAL TO USE, BUT IN NO CASE SHOULD THE HIGHER VALUE BE EXCEEDED IN DETERMINING THE NEED FOR PROTECTIVE ACTION.

TABLE III

PROTECTIVE ACTION GUIDES FOR THYROID DOSE

DUE TO INHALATION FROM A PASSING PLUME

POPULATION AT RISK	PROJECTED THYROID DOSE REM
GENERAL POPULATION	5 - 25
EMERGENCY WORKERS	125
LIFESAVING ACTIVITIES	(A)

(A) NO SPECIFIC UPPER LIMIT IS GIVEN FOR THYROID EXPOSURE SINCE IN THE EXTREME CASE COMPLETE THYROID LOSS MIGHT BE AN ACCEPTABLE PENALTY FOR A LIFE SAVED. HOWEVER, THIS SHOULD NOT BE NECESSARY IF RESPIRATORS AND/OR THYROID PROTECTION FOR RESCUE PERSONNEL ARE AVAILABLE AS THE RESULT OF ADEQUATE PLANNING.

TABLE IV

PROJECTED DOSE (REM) TO THE POPULATION	RECOMMENDED ACTIONS[a]	COMMENTS
Whole Body < 1 Thyroid < 5	No planned protective actions [b] State may issue an advisory to seek shelter and await further instructions. Monitor environmental radiation levels.	Previously recommended protective actions may be reconsidered or terminated.
Whole Body 1 to < 5 Thyroid 5 to < 25	Seek shelter as a minimum. Consider evacuation. Evacuate unless constraints make it impractical. Monitor environmental radiation levels. Control access.	If constraints exist, special consideration should be given for evacuation of children and pregnant women.
Whole body 5 and above Thyroid 25 and above	Conduct mandatory evacuation. Monitor environmental radiation levels and and adjust area for mandatory evacuation based on these levels. Control access.	Seeking shelter would be an alternative if evacuation were not immediately possible.
Projected Dose (Rem) to Emergency Team Workers		
Whole Body 25 Thyroid 125	Control exposure of emergency team members to these levels except for lifesaving missions. (Appropriate controls for emergency workers, include time limitations, respirators, and stable iodine.)	Although respirators and stable iodine should be used where effective to control dose to emergency team workers, thyroid dose may not be a limiting factor for lifesaving missions.
Whole body 75	Control exposure of emergency team members performing lifesaving missions to this level. (Control of time of exposure will be most effective.)	

(a) These actions are recommended for planning purposes. Protective action decisions at the time of the incident must take existing conditions into consideration.

(b) At the time of the incident, officials may implement low-impact protective actions in keeping with the principle of maintaining radiation exposures as low as reasonably achievable.

ATTACHMENT I

RELEASE VENT: _____

TIME/DATE: _____

POST-SHUTDOWN TIME: _____ (HP)

EFFLUENT MONITOR READINGS:

_____ uCi/cc Gas (Monitor No._____)

_____ uCi/cc Particulate (Monitor No._____)

_____ uCi/cc Radioiodine (Monitor No._____)

_____ CFM Vent Flow

(1) To convert CFM to cc/sec

_____CFM x 2.83 x E + 4 cc/CFM x 1 min/60 sec = _____cc/sec

NOBLE GAS:

(2) To calculate release RATE in Ci/sec from monitors

_____uCi/cc x _____cc/sec x E - 6 Ci/uCi = _____Ci/sec

(2) To predict downwind concentration

$\underset{(Xu/Q)}{\_\_\_\_\_}$ $\frac{\text{sec-mph}}{m^3}$ x _____Ci/sec x 1/( )mph = _____uCi/cc at _____
(windspeed) (distance)

PARTICULATE:

(4) To calculate release RATE in Ci/sec from monitors

_____uCi/cc x _____cc/sec x E - 6Ci/uCi = _____Ci/sec

(5) To predict downwind concentration

$\underset{(Xu/Q)}{\_\_\_\_\_}$ $\frac{\text{sec-mph}}{m^3}$ x _____Ci/sec x 1/( )mph = _____uCi/cc at _____
(windspeed) (distance)

RADIOIODINE:

(6) To calculate release RATE in Ci/sec from monitors

_____uCi/cc x _____cc/sec x E - 6Ci/uCi = _____Ci/sec

(7) To predict downwind concentration

$\underset{(Xu/Q)}{\_\_\_\_\_}$ $\frac{\text{sec-mph}}{m^3}$ x _____Ci/sec x 1/( )mph = _____uCi/cc at _____
(windspeed) (distance)

EMERGENCY OFF-SITE SAMPLE POINTS

SAMPLE POINT NUMBER	LOCATION	TEAM			FIRST STAGE			SECOND STAGE		
		PED	OPERN	CRANCE	RED	OPERN	CRANCE	PED	OPERN	CRANCE
1	LAKE & KNICKERBOCKER	X	X	X	X		X		X	X
2	BRICK CHURCH & KNICKERBOCKER	X			X					
3	BRICK CHURCH & ONTARIO CENTER		X			X				
4	BRICK CHURCH & SLOCUM	X			X					
5	LAKE & SLOCUM	X	X	X	X	X			X	X
6	BEAR CREEK HARBOR		X	X			X		X	
7	PUTMAN & FURNACE			X			X			
8	TRIMPLE & FURNACE			X			X			
9	KNICKERBOCKER & KENYON			X			X			
10	ONTARIO CENTER RD. & KENYON	X	X		X	X				
11	SLOCUM & KENYON	X			X					
12	RT-104 & ONTARIO CENTER	X	X			X		X		
13	RT-104 & KNICKERBOCKER	X					X			
14	RT-104 & LAKESIDE		X			X				
15	PERC & LAKESIDE		X			X				
16	POSTON & LAKESIDE		X			X				
17	LAKE & LAKESIDE		X			X			X	X
18	ONTARIO-ON-THE-LAKE									X
19	SHEPHERD & FISHER			X			X			
20	TRIMPLE & FISHER			X			X			X
21	RT-104 & FISHER			X						X
22	TRUMMONDS & ARBOR			X						X

EMERGENCY OFF-SITE SAMPLE POINTS

SAMPLE POINT NUMBER	LOCATION	TEAM			FIRST STAGE			SECOND STAGE		
		RED	GREEN	ORANGE	RED	GREEN	ORANGE	RED	GREEN	ORANGE
23	TRUMMONDS & WALWORTH-ONTARIO			X						X
24	RT-350 & PADDY LANE	X						X		
25	RT-350 & 286	X						X		
26	WALWORTH	X						X		
27	STONY LONESOME & LAKE		X						X	
28	PULTNEYVILLE		X	X					X	X
29	SALMON CREEK & EATON			X						X
30	SALMON CREEK & RT-104			X						X
31	RT-21 & RT-104		X						X	
32	MARION (RG&E) SUB-STATION		X						X	
33	PLANK ROAD & LINCOLN	X						X		
34	COUNTY LINE & LAKE		X	X					X	X
35	COUNTY LINE & BOSTON			X						X
36	COUNTY LINE & BERG			X						X
37	COUNTY LINE & RT-104			X						X
38	RT-250 & STATE			X						X
39	SALT & PLANK	X						X		
40	EASTERN MONROE SERVICE CENTER PLANK ROAD			X						X
41	PENFIELD		X						X	
42	SALT & SCHLEGEL	X						X		
43	SALT & WOODWARD	X						X		
44	KLEM & WHITING		X						X	

EMERGENCY OFF-SITE SAMPLE POINTS

SAMPLE POINT NUMBER	LOCATION	TEAM			FIRST STAGE			SECOND STAGE		
		RED	PERSON	CRANCE	RED	CPERSON	CRANCE	RED	CPERSON	CPANCE
45	LAKE ROAD & ROUTE 250		X						X	
46	COUNTY LINE & PLANK	X						X		
47	RT-21 & FARNSWORTH		X						X	
48	RT-21 & POUND		X						X	
49	FURNACE & KENYON			X			X			
50	RT-250 & PLANK	X						X		
51	PLANT & FIVE MILE LINE		X						X	

Projected whole body gamma dose as a function of gamma exposure rate and projected duration of exposure

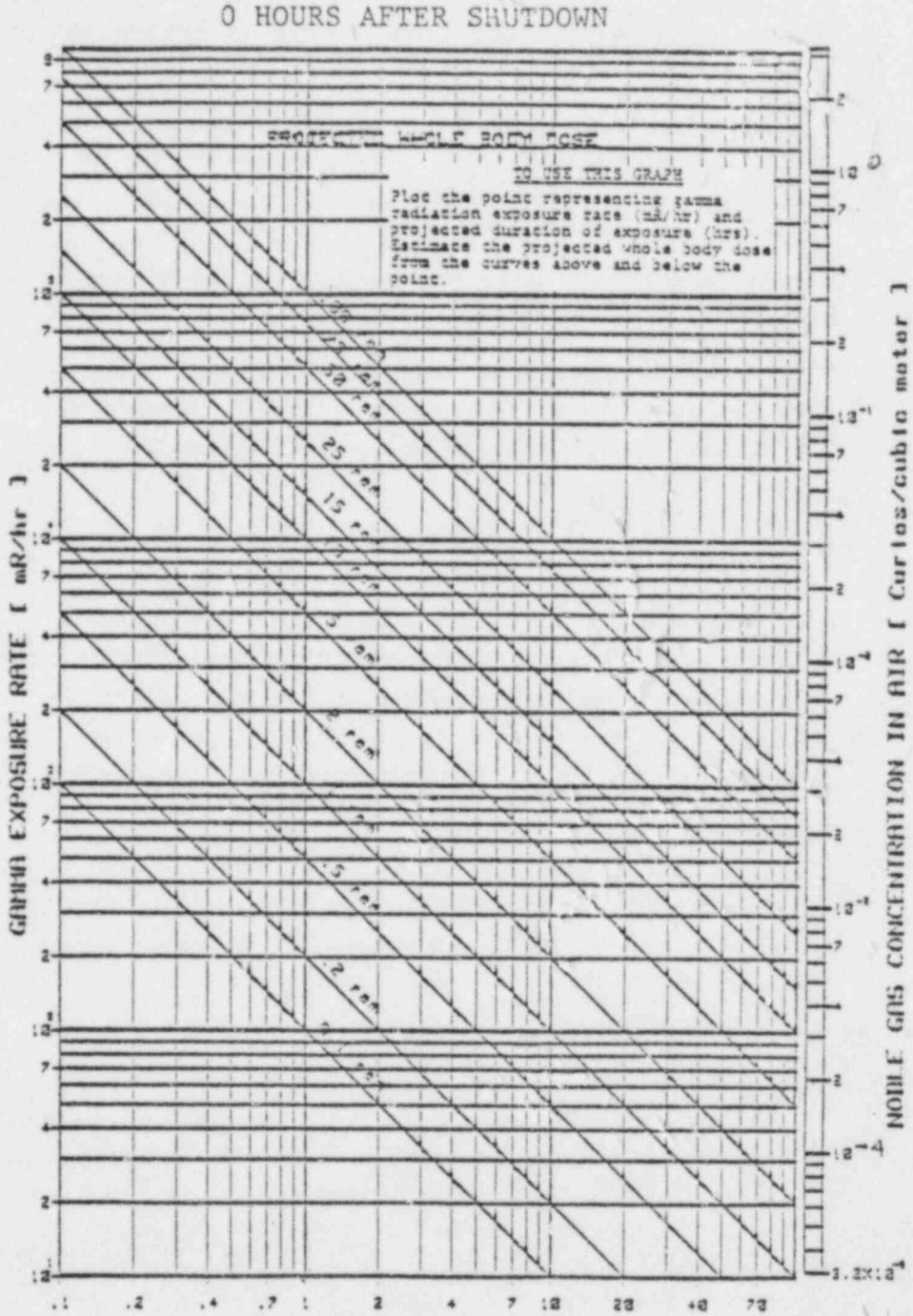


Figure /

Projected whole body gamma dose as a function of gamma exposure rate and projected duration of exposure

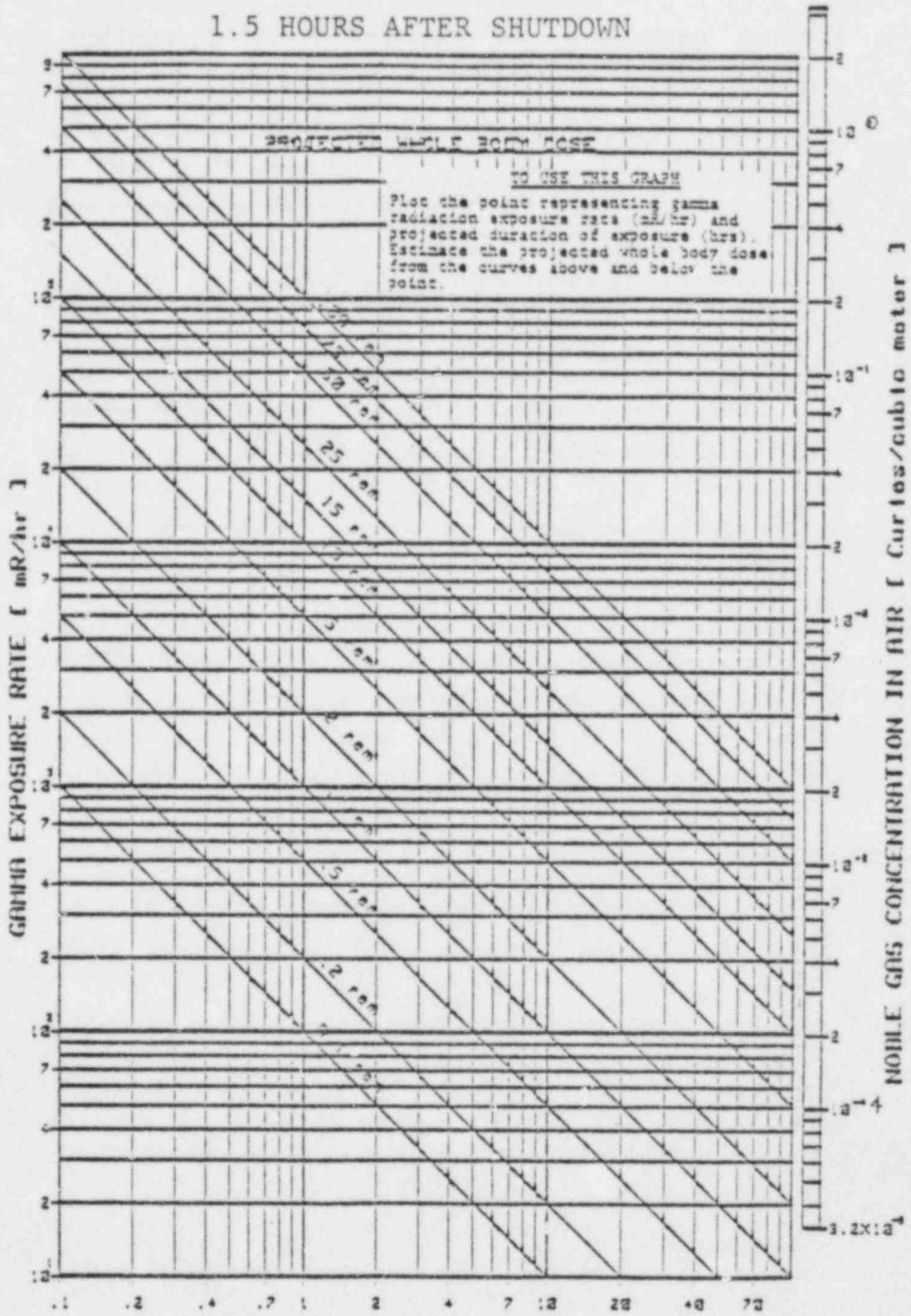
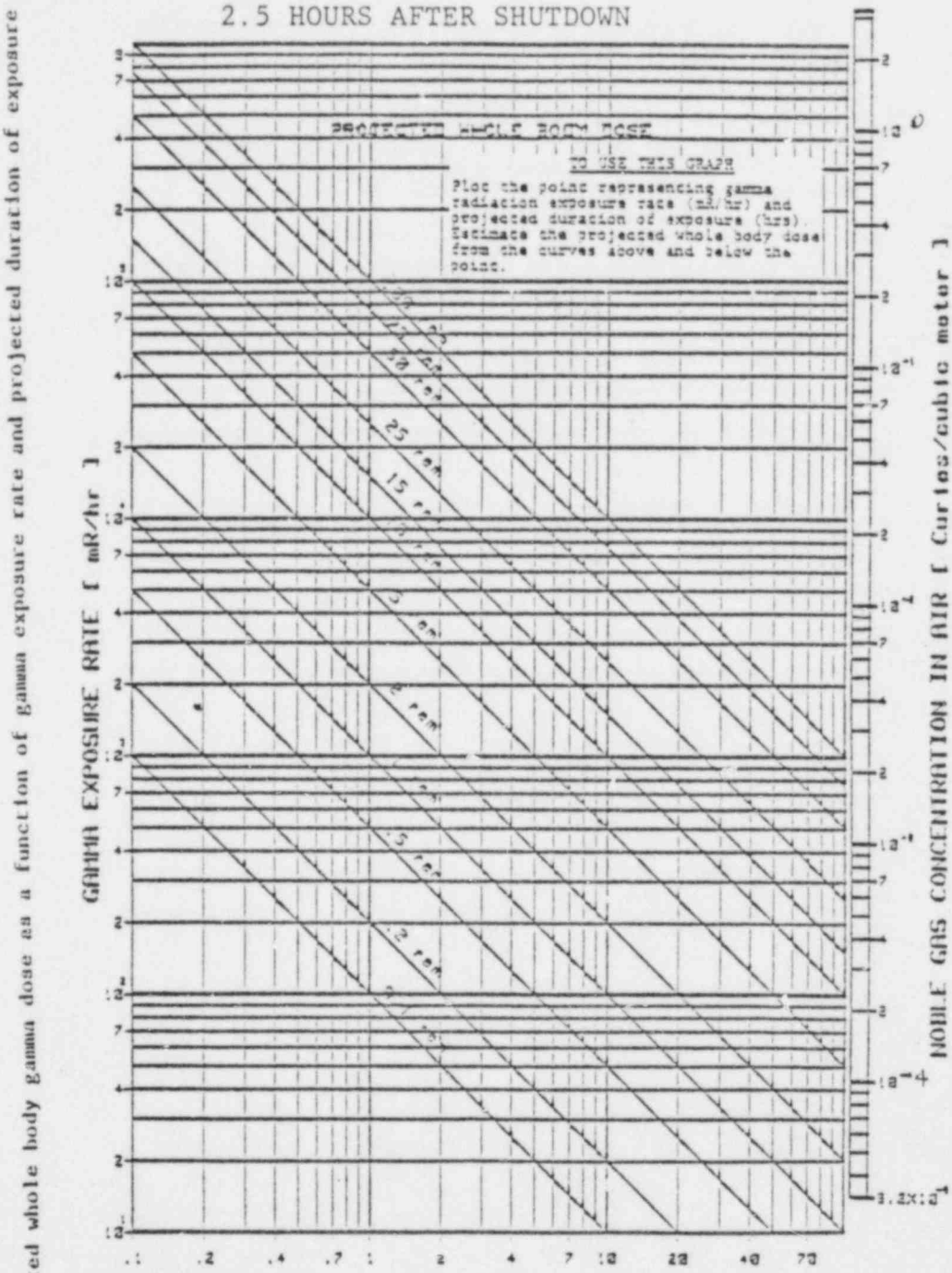


Figure 2



Projected whole body gamma dose as a function of gamma exposure rate and projected duration of exposure

Figure 3

Projected whole body gamma dose as a function of gamma exposure rate and projected duration of exposure

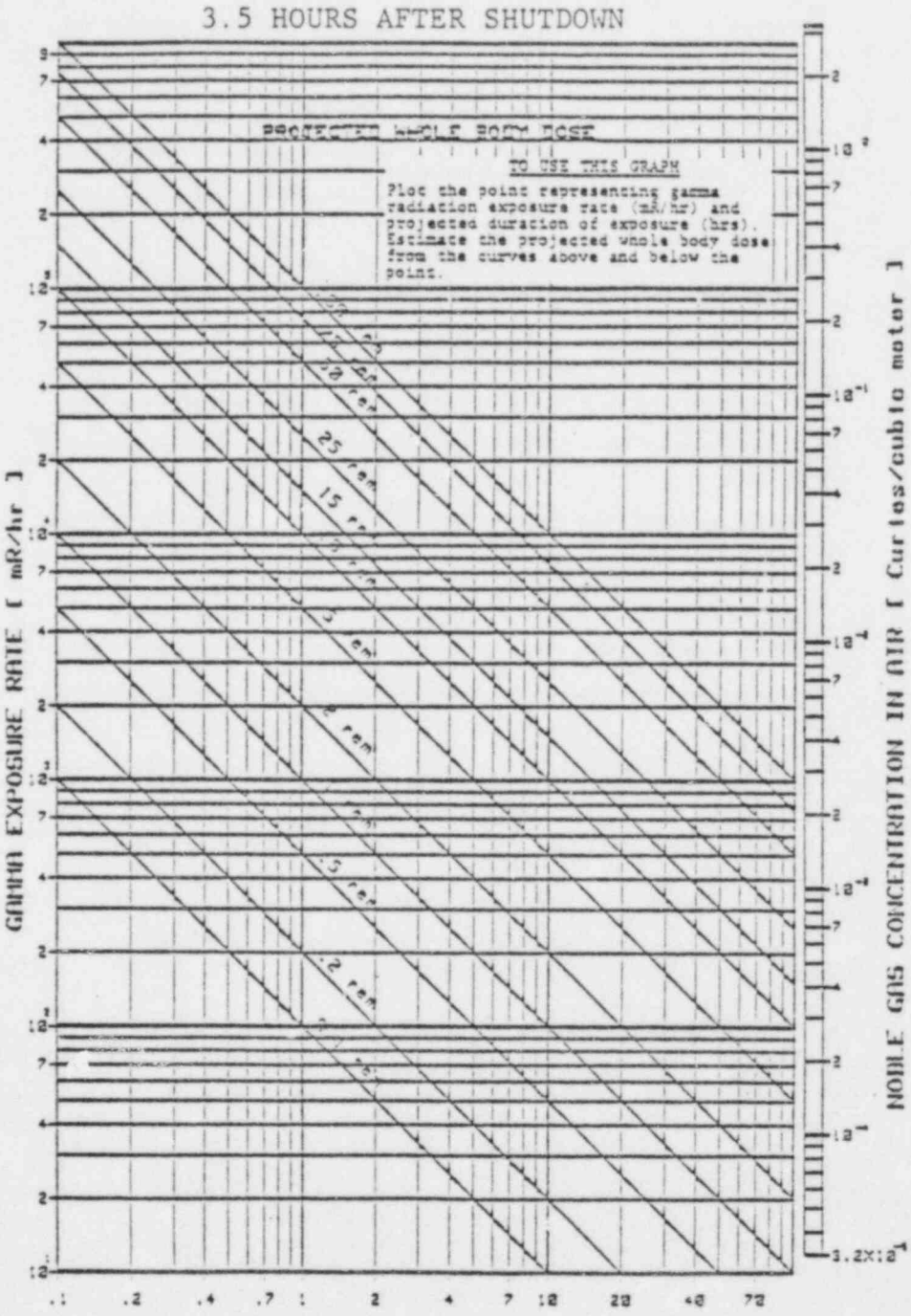


Figure 4

Projected whole body gamma dose as a function of gamma exposure rate and projected duration of exposure

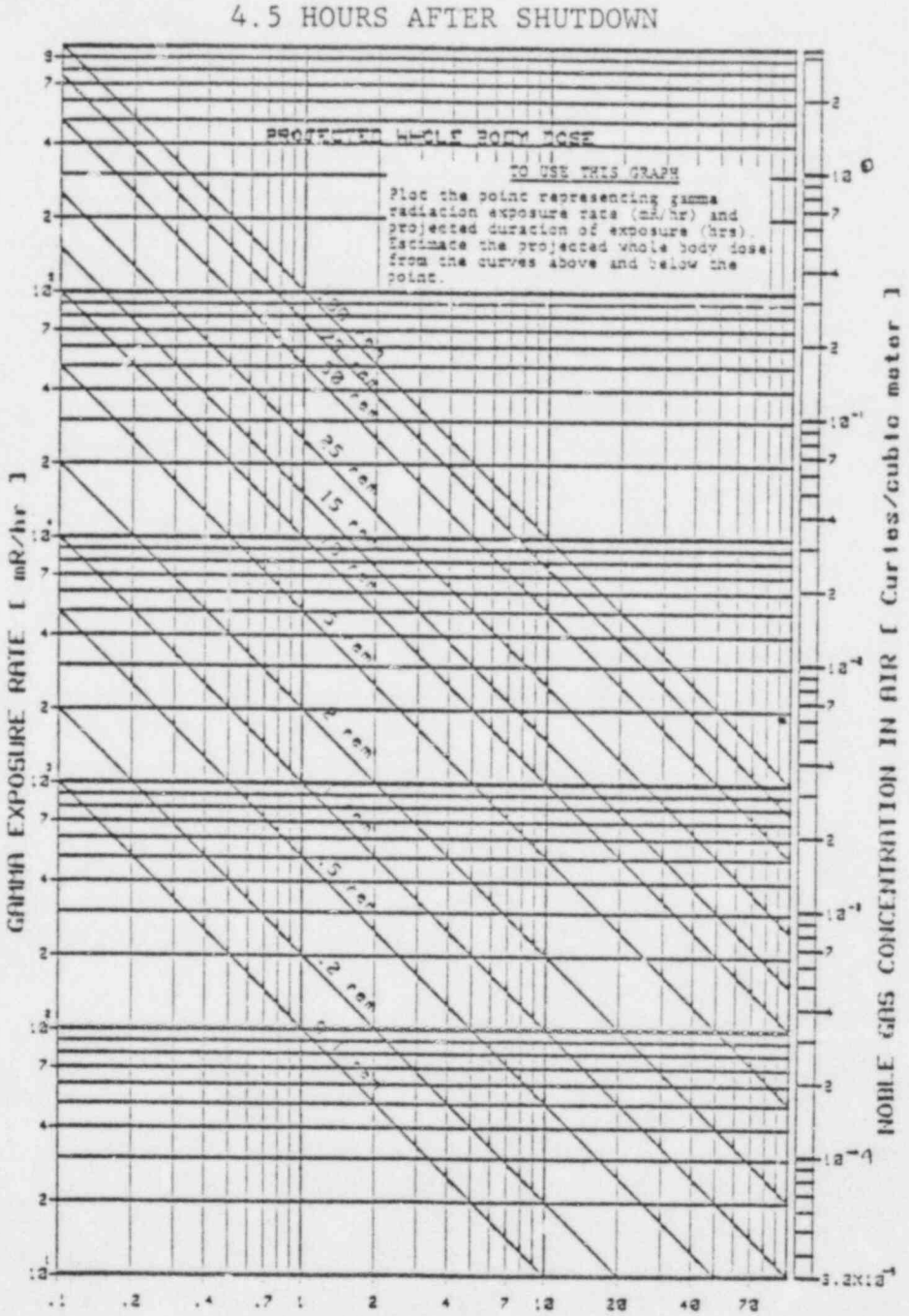


Figure 5

Projected whole body gamma dose as a function of gamma exposure rate and projected duration of exposure

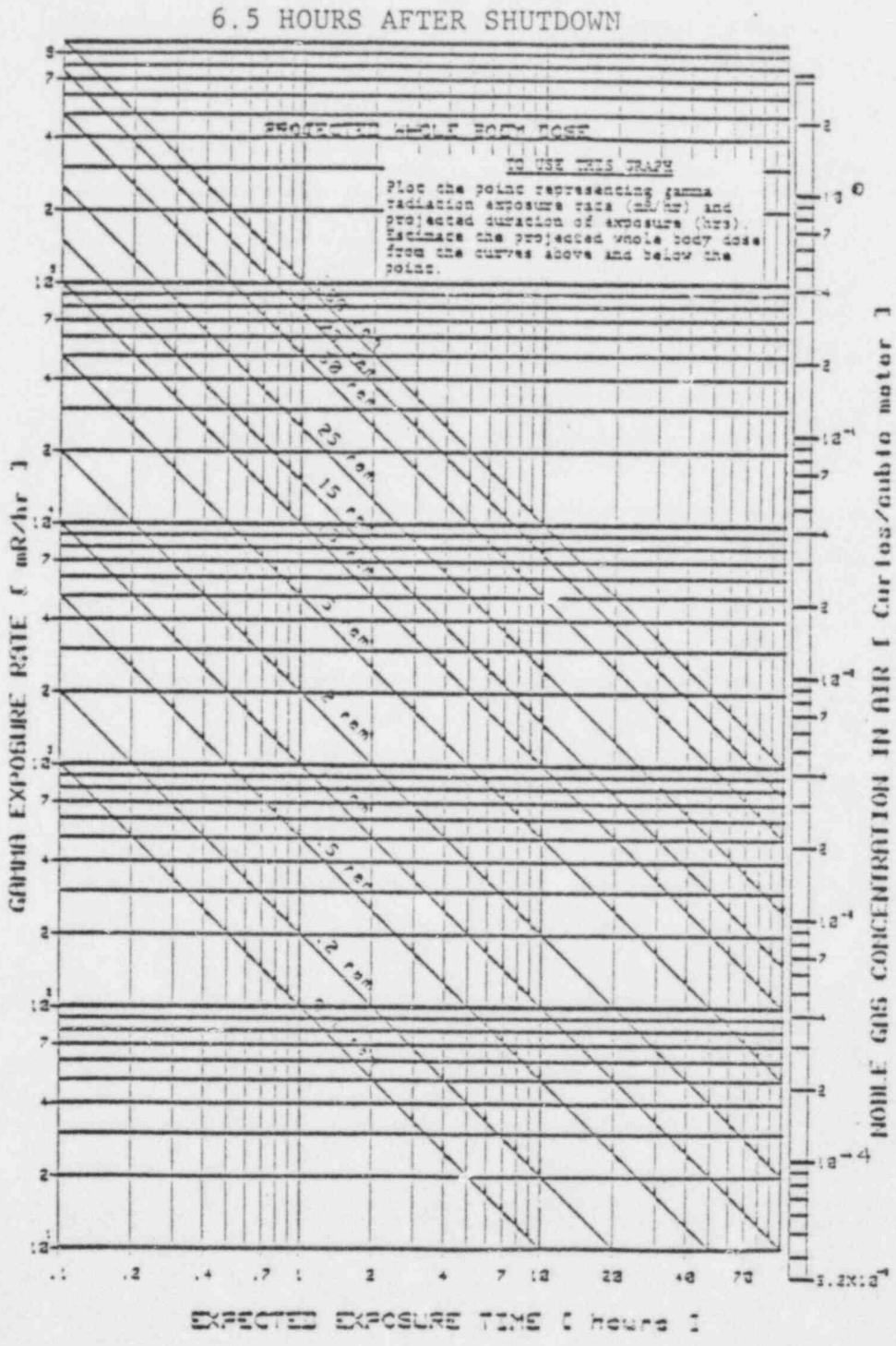


Figure 6

Projected whole body gamma dose as a function of gamma exposure rate and projected duration of exposure

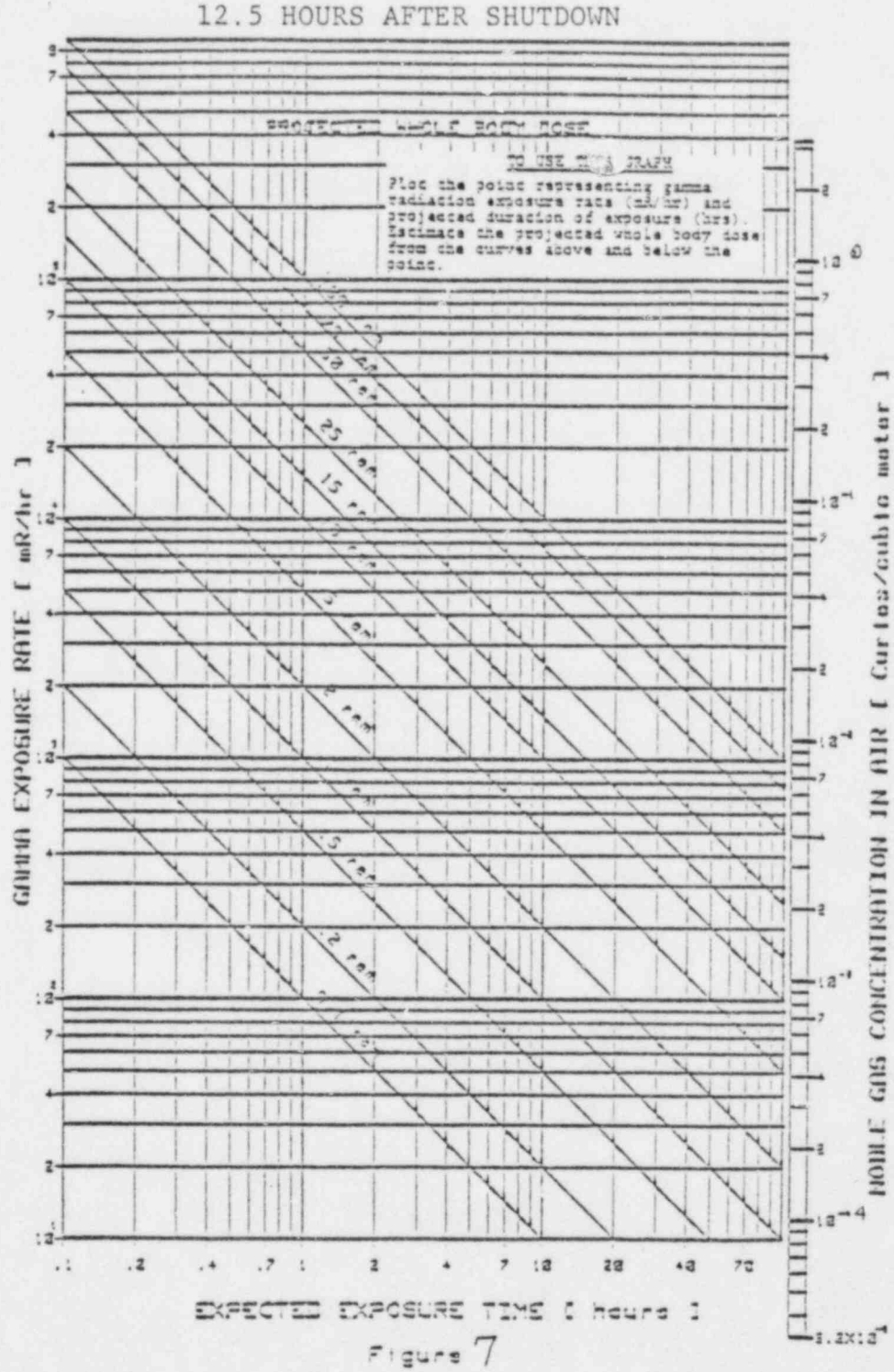


Figure 7

Projected-thyroid dose as a function of either gamma exposure rate, or radioiodine concentration in air and the projected exposure time

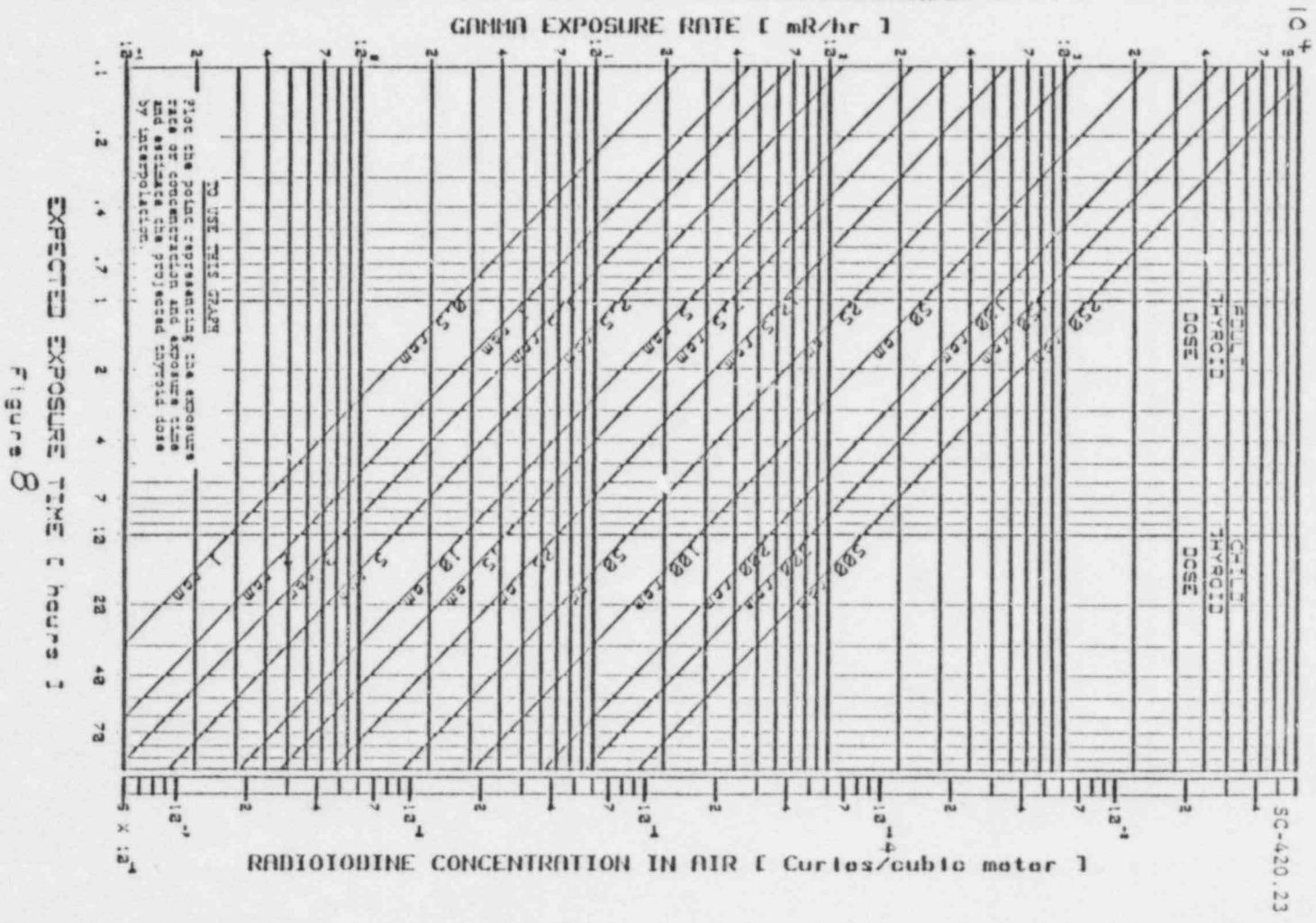


Figure 8

KEY FACILITIES LOCATED ABOUT GINNA SITE

Company and Product	Distance from Site	Direction from Site
Duffy-Mott Co., Inc. Williamson Baby Foods	8-1/2 miles	Southeast
The Waterman Food Products Co. Food Processing	3-4 miles	South
Ontario Kraut Corp. 7 Railroad Ave. Food Processing	3-4 miles	South SW
Victor Preserving Co. Food Processing	3-4 miles	South
Ontario Cold Storage Food Processing	3-4 miles	South SW
Waterman Fruit Products Co. Food Processing	3-4 miles	South SW
Ontario Food Products Food Processing	3-4 miles	South SW
Lyndan Products Co. Food Processing	3-4 miles	South SW
Ontario Water District	1.1 mile	East
Williamson Water District	5 1/4 miles	East
Ontario Fire Department	4 miles	Southeast
Ontario Center Fire Department	3.5 miles	South
Union Hill Fire Department	5 miles	Southwest
Ontario Town Hall	4 miles	South

HOUSES IN AND ABOUT CINNA SITE

House on Lake Road directly south of plant	Beebee	1,500 ft.	South
House on S.W. corner of Lake Road and Ontario Ctr. Rd.	Loomis	2,000 ft.	South SE
House on North side of Lake Rd. S.E. of Science Center access Road	Taillee	2,500 ft.	Southeast
House on private road north of above house		2,000 ft.	Southwest

GINNA STATION
UNIT #1
COMPUTED
DATE :-
TIME :-

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

PROCEDURE NO. SC-701 REV. NO. 3

INITIAL NOTIFICATION STATUS REPORT

TECHNICAL REVIEW

PORC REVIEW DATE 5-4-83

QC REVIEW

PLANT SUPERINTENDENT

MAY 10 1983

EFFECTIVE DATE

QA X NON-QA _____ CATEGORY 1.0

REVIEWED BY: _____

THIS PROCEDURE CONTAINS 5 PAGES

SC-701

INITIAL NOTIFICATION STATUS REPORT

1.0 PURPOSE:

1.1 Provide a list of important information to be provided to offsite agencies during an emergency situation.

1.2 Provide information in a standardized format similar to that of the receiving party.

2.0 REFERENCES:

2.1 SC-1 Radiation Emergency Plan.

2.2 NYS Radiological Emergency Preparedness Plan.

3.0 INSTRUCTIONS:

3.1 The initial notification of an accident is to be reported to the USNRC, within one hour.

3.2 The Notification Fact Sheet, Attachment I should be filled out with the assistance of the Shift Supervisor and Health Physics Personnel.

3.2.1 Obtain weather information, step 11 of form, using Control Room weather indication or the computer.

3.2.2 For step 10 Shift Supervisor may use, SC-240 Protective Action Recommendations.

3.3 Report the information on the completed Notification Fact Sheet to USNRC, New York State, Wayne and Monroe County using SC-601, or SC-602, or SC-603, or SC-604.

3.3.1 Report only Steps 1 through 11 on the initial contact.

3.3.2 Report the information by reading the statement including the designation letter. i.e. |A|

3.3.3 The Notification Fact Sheet, Attachment 1 information will be reported when the event is initially classified, during the Emergency, and any time the classification is changed, using a new Attachment I each time.

3.3.4 Data in steps 12 through 17 should be reported as information becomes available.

ATTACHMENT I

NOTIFICATION FACT SHEET

Roll Call Response - New York State Warning Point |_|

Monroe County |_|

Wayne County |_|

1. Date_____ and Time_____ of Message Transmittal.
2. Nuclear Facility providing this report is |C| Ginna Station.
3. Reported by _____Title_____
   (name)
4. This |A| is an exercise.

   This |B| is not an exercise.
5. Emergency Classification: (See SC-100)

   |A| Unusual Event

   |B| Alert

   |C| Site Emergency

   |D| General Emergency

   |E| Transportation Accident
6. The Event occurred at Date_____Time_____
7. Event Description/Initiating Condition_____

   _____
8. There |A| has not been a release of radioactivity

   |B| has been a release of radioactivity to the atmosphere

   |C| has been a release of radioactivity to Lake Ontario

   |D| has been a Ground Spill of radioactivity
9. The release |A| is continuing

   |B| has terminated

   |C| intermittent

   |D| not applicable

10. Protective Actions (See SC-240)

|A| There is no need for protective actions

|B| Protective Actions are under consideration

|C| Protective Action Recommended is:

Shelter within_____miles downwind/or EPPA's #___

Evacuate within_____miles downwind/or EPPA's #___

11. Weather

|A| Wind speed_____miles per hour

|B| Direction (from)_____degrees

Stability Class Work Sheet

Temperature at 33 ft_____ °F

Temperature at 250 ft_____ °F

Difference in Temperature_____ °F

Condition is Unstable if difference is greater than +2°F

Condition is Neutral if difference is between +.5°F and +1.9°F

Condition is Stable if difference is less than +.5°F or negative

Record condition in Stability Class

|C| Stability class_____

|D| General Weather is known; clear, cloudy, rain, snow,_____

_____

For initial report, stop after Step 11

Report data in steps 12 through 17 as information becomes available

12. Prognosis for worsening or termination of the Emergency (if known)

_____

_____

13. In-Plant Emergency Response Actions Underway

- Technical Support Center is is not manned
- Operation Support Center is is not manned
- Emergency Survey Center is is not manned

14. Utility Off-Site Emergency Response Action Underway

- Emergency Off-Site Facility is is not manned
- Media Center is is not manned
- Emergency Personnel are being called in YES NO

15. Release Information

|A| Atmospheric Release

Release started at _____ hours on _____ (date)

	Actual		Projected	
Duration of Release	_____	hours	_____	hours
Noble Gas Release Rate	_____	Curie/sec	_____	Curie/sec
Iodine Release Rate	_____	Curie/sec	_____	Curie/sec

Release is at Ground

|B| Waterborne Release

Release started at _____ hours on _____ (date)

	Actual		Projected	
Duration of Release	_____	hours	_____	hours
Volume of Release	_____	gallons	_____	gallons
Radioactivity Concentration (gross)	_____	Microcurie/ Milliliter	_____	Microcurie/ Milliliter

	Actual	Projected
Total Radioactivity Release	_____ Curie	_____ Curie
Radionuclides in Release	_____ Microcurie/ Milliliter	_____ Microcurie/ Milliliter
	_____ Microcurie/ Milliliter	_____ Microcurie/ Milliliter
	_____ Microcurie/ Milliliter	_____ Microcurie/ Milliliter

|C| Basis for Release Data eg. effluent monitor, grab sample, composite sample and sample location_____

_____

16. Dose Measurements and Projections

|A| Site Boundary	Actual	Projected
- Whole Body Dose Rate	_____ millirem/hr	_____ millirem/hr
- Whole Body Committment (for duration of incident)		_____ Rem
- Thyroid Dose Committment (one hour exposure)	_____ millirem/hr	_____ millirem/hr
- Thyroid Dose (Total for duration of incident)		_____ Rem

|B| Projected Off-Site

	2 miles	5 miles	10 miles
- Whole Body Dose Rate	_____millirem/hr	_____millirem/hr	_____ millirem/hr
- Whole Body Dose	_____Rem	_____Rem	_____Rem
- Thyroid Dose Committment (1 hr. Exposure)	_____millirem/hr	_____millirem/hr	_____millirem/hr
- Thyroid Dose (Total Commitment)	_____Rem	_____Rem	_____Rem

17. Protective Action Recommendation and the Basis for the Recommendation

GINNA STATION
UNIT #1
COMPLETED

DATE :-

TIME :-

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 18

PROCEDURE NO. SC-703 REV. NO. 0

PLANT STATUS REPORT

TECHNICAL REVIEW

PORC REVIEW DATE 5-4-83

QC REVIEW

PLANT SUPERINTENDENT

MAY 10 1983
EFFECTIVE DATE

QA X NON-QA _____ CATEGORY 1.C

REVIEWED BY: _____

THIS PROCEDURE CONTAINS 3 PAGES

SC-703

PLANT STATUS REPORT

1.0 PURPOSE:

1.1 Provide a list of important plant parameters that can be provided to the TSC, ECF or other agencies.

1.2 Provide information in a standardized format similar to that of the receiving party and capable of computer print out.

2.0 REFERENCES:

2.1 SC-1 Radiation Emergency Plan.

2.2 NYS Radiological Emergency Preparedness Plan.

3.0 INSTRUCTIONS:

3.1 This form may be used to update other emergency centers of parameters which may be used in the evaluation of the emergency condition.

3.2 Attachment 1 should be filled out with the assistance of the Shift Supervisor and Control Room personnel.

3.2.1 The computer may be used to obtain information.

3.3 Report the information on the completed Attachment 1 "Plant Status Form" as directed by the Shift Supervisor or Emergency Coordinator.

3.3.1 This information may be taken during the emergency.

3.3.2 The completed forms shall be returned to the Shift Supervisor or Emergency Coordinator after transfer of the data.

ATTACHMENT 1

R. E. Ginna Nuclear Power Plant

Plant Status Form

*NOTE: If the information is not known, mark "Do not know" in blank

1. Date_____and time_____information collected.
2. Reactor Coolant System (RCS) Pressure _____ psig
3. Reactor Coolant System (RCS) Temperature _____ °F
4. Pressurizer Level _____ %
5. "A" Steam Generator (S/G) Level _____ %
6. "B" Steam Generator (S/G) Level _____ %
7. "A" Steam Generator (S/G) Pressure _____ psig
8. "B" Steam Generator (S/G) Pressure _____ psig
9. Containment Vessel (CV) Pressure _____ psig
10. Sump "A" Level _____ inches
11. Sump "B" Level _____ inches
12. Reactor Sub Cooled _____ °F
13. Reactor Core Circulation Natural Circulation _____
    Forced Circulation _____
    A RCP Running _____
    B RCP Running _____
14. On-Site Power

    Main Generator Operating (Yes/No)

    Bus 11A and 11B Energized (Yes/No)

    Bus 11's Supplied From (Main Gen/Bus 12)

    A and/or B Diesel Generators Operating (Yes/No)

    Diesel Generators Supplying buses Bus 14
    16
    17
    18

15. Off-Site Power

Bus 12A and 12B energized (Yes/No)

Bus 12A and 12B supplied from (767/751)

Bus 12A and 12B supplying Bus 14
16
17
18

16. Information provided to _____

_____

_____

at _____ hours on _____ (date)

by _____
(Signature)

GINNA STATION
UNIT #1
COMPLETED
DATE :-
TIME :-

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 18

PROCEDURE NO. SC-704 REV. NO. 0

SAFEGUARD STATUS FORM

TECHNICAL REVIEW

PORC REVIEW DATE 5-11-83

QC REVIEW

PLANT SUPERINTENDENT

MAY 16 1983
EFFECTIVE DATE

QA X NON-QA _____ CATEGORY 1.0

REVIEWED BY: _____

THIS PROCEDURE CONTAINS 4 PAGES

SC-704

SAFEGUARD STATUS REPORT

1.0 PURPOSE:

1.1 Provide a list for safeguard equipment to denote equipment operating and where appropriate, the tank levels.

1.2 Provide information in a standardized format similar to that of the receiving party and capable of computer print out.

2.0 REFERENCES:

2.1 SC-1 Radiation Emergency Plan.

2.2 NYS Radiological Emergency Plan.

3.0 INSTRUCTIONS:

3.1 This form may be used to update non Control Room emergency centers of safeguard status to be used in evaluation of the emergency condition.

3.2 Attachment 1 should be filled out with the assistance of the Shift Supervisor and Control Room personnel.

3.2.1 The computer may be used to obtain information.

3.3 Report the information on the completed Attachment 1 "Safeguard Status Form" as directed by the Shift Supervisor or Emergency Coordinator.

3.3.1 This information should be taken during the emergency.

3.3.2 The completed forms shall be returned to the Shift Supervisor or Emergency Coordinator after transfer of the data.

Attachment 1

R. E. Ginna Nuclear Power Plant

Safeguard Status Form

*NOTE: If the information is not known, mark "Do not know" in blank

1. Date_____and time_____information collected.

2.	Auxiliary Feedwater System	Operating	Yes/No/Not Required
	"A" Auxiliary Feedwater Pump	Operating	Yes/No
	"B" Auxiliary Feedwater Pump	Operating	Yes/No
	Turbine Drive Aux. Feedwater	Operating	Yes/No
3.	Safety Injection System	Operating	Yes/No/Not Required
	"A" SI Pump	Operating	Yes/No
	"B" SI Pump	Operating	Yes/No
	"C" SI Pump	Operating	Yes/No
	"A" RHR Pump	Operating	Yes/No
	"B" RHR Pump	Operating	Yes/No

A Loop Safety Injection flow_____gpm

B Loop Safety Injection flow_____gpm

RHR flow_____gpm

Reactor Coolant System pressure_____psig

Accumulator 1A Level _____ %

Accumulator 1B Level _____ %

Accumulator 1A Pressure _____ psig

Accumulator 1B Pressure _____ psig

Other (explain) _____

4.	A Diesel Generator	Operating	Yes/No/Not Required
	A Diesel Generator	Supplying Bus 14	Yes/No
	A Diesel Generator	Supplying Bus 18	Yes/No
	B Diesel Generator	Operating	Yes/No
	B Diesel Generator	Supplying Bus 16	Yes/No
	B Diesel Generator	Supplying Bus 17	Yes/No

Other (explain) _____

Attachment 1

R. E. Ginna Nuclear Power Plant

Safeguard Status Form

(continued)

5. A Service Water Pump Operating Yes/No
   B Service Water Pump Operating Yes/No
   C Service Water Pump Operating Yes/No
   D Service Water Pump Operating Yes/No

   Service Water Loop A pressure _____ psig

   Service Water Loop B pressure _____ psig

   Other (explain) _____

6. A Containment Recirc. Fan Operating Yes/No
   B Containment Recirc. Fan Operating Yes/No
   C Containment Recirc. Fan Operating Yes/No
   D Containment Recirc. Fan Operating Yes/No

7. Post Accident Charcoal Filter 1A Damper:

   _____Closed (Green Light On)

   _____Open (Green Light Off)

   Post Accident Charcoal Filter 1B Damper:

   _____Closed (Green Light On)

   _____Open (Green Light Off)

8. A Containment Spray Pump Operating Yes/No/Not Required
   B Containment Spray Pump Operating Yes/No/Not Required
   NaOH Addition in Progress Yes/No

   Other (explain) _____

9. A Component Cooling Water Pump Operating Yes/No
   B Component Cooling Water Pump Operating Yes/No

   Component Cooling Water Surge Tank Level _____ %

10. A Station Battery Voltage _____ volts

    B Station Battery Voltage _____ volts

Attachment 1

R. E. Ginna Nuclear Power Plant

Safeguard Status Form

(continued)

11. NaOH Tank Level _____ %

12. RWST Level _____ %

13. BAST Level _____ %

Information provided to _____

_____

_____

at _____ hours on _____ (date)

by _____

GINNA STATION
UNIT #1
COMPLETED
DATE :-
TIME :-

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 18

PROCEDURE NO. SC-705 REV. NO. 0

WEATHER AND RADIATION MONITOR REPORT

TECHNICAL REVIEW

PORC REVIEW DATE 5-11-83

QC REVIEW

PLANT SUPERINTENDENT

MAY 16 1983
EFFECTIVE DATE

QA A NON-QA _____ CATEGORY 1.0

REVIEWED BY: _____

THIS PROCEDURE CONTAINS 2 PAGES

SC-705

WEATHER AND RADIATION MONITOR REPORT

1.0 PURPOSE:

1.1 Provide a status list for reporting weather and Radiation Monitor Reading during an emergency.

1.2 Provide information in a standardized format similar to that of the receiving party and capable of computer print out.

2.0 REFERENCES:

2.1 SC-1 Radiation Emergency Plan.

2.2 NYS Radiological Emergency Plan.

3.0 INSTRUCTIONS:

3.1 This form may be used to update non Control Room emergency centers of weather and Radiation Monitor Reading to be used in evaluation of the emergency condition.

3.2 Attachment 1 should be filled out with the assistance of the Shift Supervisor and Control Room personnel.

3.2.1 The computer may be used to obtain information.

3.3 Report the information on the completed Attachment 1 "Weather and Radiation Monitor Status Form" as directed by the Shift Supervisor or Emergency Coordinator.

3.3.1 This information should be taken during the emergency.

3.3.2 The completed forms shall be returned to the Shift Supervisor or Emergency Coordinator after transfer of the data.

Attachment 1

R. E. Ginna Nuclear Power Plant

Weather and Radiation Monitor Status Form

*NOTE: If the information is not known, mark "Do not know" in blank

1. Date_____and time_____information collected.
2. Wind Speed _____mile per hour
3. Wind Direction (from) _____° Degrees
4. Temperature 33 ft. _____° Degrees Farenheit
5. Temperature 250 ft. _____° Degrees Farenheit

Radiation Monitor Readings

6. R-1 Control Room _____milliroentgen/hour
7. R-2 Containment _____milliroentgen/hour
8. R-29 "A" Containment Hi Range _____Roentgen/hour
9. R-30 "B" Containment Hi Range _____Roentgen/hour
10. R-9 Letdown Monitor _____milliroentgen/hour
11. R-13 Plant Vent Particulate _____counts/minute
12. R-14 Plant Vent Gas _____counts/minute
13. R-15 Air Ejector _____counts/minute
14. R-31 Steam Line A _____milliroentgen/hour
15. R-32 Steam Line B _____milliroentgen/hour