ID/1K;1L

EMERGENCY CONDITIONS

200-0 Emergency Conditions	Rev. 8	06-08-82
200-1 Classification of GSEP Conditions	Rev. 3	05-05-82
200-2 Classification of an Incident Involving Hazardous Materials	Rev. 2	01-22-82
200-T1 Quad-Cities Emergency Action Levels	Rev. 5	06-08-82
200-T2 Emergency Action Levels - Procedure Cross Reference	Rev. 1	09-23-81
200-T3 Hazardous Substances	Rev. 1	01-22-82

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Q.C.O.S.R.

ID/2J

QUAD-CITIES EMERGENCY ACTION LEVELS

QEP 200-T1
Revision 5
June 1982

CONDITION	UNUSUAL EVENT	ALERT	SITE EMERGENCY	GENERAL EMERGENCY
Class Description	Events in progress or have occurred which indicate a potential degradation of the level of safety of the plant.	Events in progress or have occurred which involved an actual or potential substantial degradation of the level of safety of the plant.	Events in progress or have occurred which involved actual or likely major failures of plant functions needed for protection of the public.	Events in progress or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity.
1. Aircraft crash or missiles from whatever source.	Impacted on-site	(1) Impacted on-site and equipment described in the Technical Specifications is affected such that it is operated in a degraded mode permitted by a Limiting Condition for Operation. (2) Turbine failure with casing penetration.	Impacted on-site and equipment described in the Technical Specifications is degraded such that an immediate shutdown is required.	
2. Control Room Evacuation		Evacuation is anticipated or required with control established from local stations.	Evacuation is required and control is not established from local stations within 15 minutes.	

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In addition to the Unusual Event, Alert, Site Emergency, and General Emergency, a Transportation Accident class exists. A Transportation Accident condition shall exist if any vehicle transporting radioactive materials or nonradioactive hazardous materials from a generating station is involved in a situation which could possibly breach or has breached the integrity of a shipping container(s).

QUAD-CITIES EMERGENCY ACTION LEVELS

CONDITION	UNUSUAL EVENT	ALERT	SITE EMERGENCY	GENERAL EMERGENCY
3. Earthquake had occurred or is being experienced	Earthquake felt in-plant or detected on Station seismic instrumentation.	Equipment described in the Technical Specifications is affected such that it is operated in a degraded mode permitted by a Limiting Condition for Operation.	Equipment described in the Technical Specifications is is degraded such that an immediate shutdown is required.	
4. Unplanned explosion.		On-site and equipment described in the Technical Specifications is affected such that it is operated in a degraded mode permitted by a Limiting Condition for Operation.	On-site and equipment described in the Technical Specifications is degraded such that an immediate shutdown is required.	
5. Fire.	Requiring off-site assistance.	Equipment described in the Technical Specifications is affected such that it is operated in a degraded mode permitted by a Limiting Condition for Operation.	Equipment described in the Technical Specifications is degraded such that an immediate shutdown is required.	
6. Flood	Mississippi River level > 588 ft. MSL.	Mississippi River level > 589 ft. MSL.		

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QUAD-CITIES EMERGENCY ACTION LEVELS

CONDITION	UNUSUAL EVENT	ALERT	SITE EMERGENCY	GENERAL EMERGENCY
7. Security threat	Security threat (event) which also poses a radiological threat, or has the potential for substantial degradation of the level of physical security at the station. (See generic GSEP Section 10.3.2.)	An ongoing security threat (event) of increasing severity, or a different threat, which involves actual or potential substantial degradation of the level of safety of the station from either the radiological or physical security view point.	Security threat (event) involving an imminent loss of physical control of the facility.	Security threat (event) involving a loss of physical control of the facility.
8. Tornado or severe winds being experienced.	(1) Tornado near facility. (a) Control Room informed by Load Dispatcher or (b) Control Room informed by station personnel who have made visual sighting or (c) Shift Supervisor informed by Weather Alert, or (2) Sustained winds of >80 mph.	(1) Tornado strikes facility. (2) Sustained winds of > 95 mph.	(1) Sustained winds of > 110 mph and both units not in cold shutdown.	

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QUAD-CITIES EMERGENCY ACTION LEVELS

CONDITION	UNUSUAL EVENT	ALERT	SITE EMERGENCY	GENERAL EMERGENCY
9. Toxic or uncontrolled flammable gas (Chlorine, Ammonia, Methane, etc.)	Uncontrolled release of toxic or uncontrolled flammable gas at life threatening levels near or on-site.	Uncontrolled release of toxic or uncontrolled flammable gas at life threatening levels within the protected area.	Uncontrolled release of toxic or uncontrolled flammable gas at life threatening levels within the vital areas.	
10. Loss of AC power.	Loss of all off-site power or loss of all Diesel Generators.	Loss of all off-site power and loss of all diesel generators for ≤ 15 minutes.	Loss of all off-site power and loss of all diesel generators for > 15 minutes.	
11. Loss of DC power.	DC power sources as described in the Technical Specifications are degraded such that a Limiting Condition for Operation requires a shutdown.	Loss of both 125 VDC and 250 VDC battery ≤ 15 minutes.	Loss of both 125 VDC and 250 VDC battery systems > 15 minutes.	

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QUAD-CITIES EMERGENCY ACTION LEVELS

CONDITION	UNUSUAL EVENT	ALERT	SITE EMERGENCY	GENERAL EMERGENCY
12. Plant Shutdown Functions.		(1) Loss of <u>all</u> systems capable of maintaining cold shutdown. (2) Failure of the Reactor Protection System Instrumentation to initiate and complete a SCRAM which brings the reactor subcritical once a limiting safety system setting, as specified in the Technical Specifications, has been exceeded. (ATWS)	(1) Loss of <u>all</u> systems capable of maintaining hot shutdown or (2) A transient requiring operation of ECCS with failure to SCRAM.	
13. Other conditions or systems required by Technical Specifications (such as ECCS, fire protection system, etc.)	(1) Equipment described in the Technical Specifications is degraded such that a Limiting Condition for Operation requires a shutdown. (2) Loss of communications or instrumentation such that accident assessment or off-site dose assessment cannot be made.	(1) Equipment described in the Technical Specifications is degraded <u>beyond</u> the Limiting Conditions for Operation (as specified that require a shutdown). (2) Technical Specification Safety Limit exceeded. (3) Unplannned loss of most or all annunciators on either panel 901-3 (902-3) or or 901-5 (902-5) for greater than 30 minutes.	Unplanned loss of most or all annunciators on either panel 901-3(902-3) or 901-5(902-5) for greater than 30 minutes, and a plant transient has initiated or is in progress.	

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QUAD-CITIES EMERGENCY ACTION LEVELS

CONDITION	UNUSUAL EVENT	ALERT	SITE EMERGENCY	GENERAL EMERGENCY
14. Loss or Primary Coolant	(1) ECCS Initiation (not spurious). (2) Failure of a Primary System Safety or Relief Valve to close. (3) Total leakage rate to primary containment is greater than 25 gpm.	(1) A $\geq$ 50 gpm leakage rate increase as indicated by surveillance. (2) A main steam line break outside containment with automatic isolation. (FSAR section 14.2.3)	(1) A $\geq$ 500 gpm leakage rate increase as indicated by surveillance. (2) A main steam line break outside containment without the capability of effecting isolation. (3) Circumferential break of a reactor coolant recirculation line. (LOCA; FSAR Section 14.2.4.)	Imminent core melt.
15. Fuel Handling Accident. (Fuel Handlers report damage to irradiated fuel assemblies and Refuel Floor ARM reads 100 mr/hr.)		Standby gas treatment system operational and secondary containment isolation effective or capable of being effected. (Refueling accident; FSAR Section 14.2.2)	Standby gas treatment system not operational or secondary containment isolation incapable of being effected.	

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QUAD-CITIES EMERGENCY ACTION LEVELS

CONDITION	UNUSUAL EVENT	ALERT	SITE EMERGENCY	GENERAL EMERGENCY
14. Loss of fission product barriers.	Coolant activity sample $\geq$ 5 uCi of I-131 dose equivalent per gram of water.	A. $\geq 2 \times 10^2$ R/hr primary containment activity, or B. Loss of 1 of the following 3 fission product barriers: (1) Cladding: grab sample > 300 µCi/cc equivalent of I-131. (Control Rod Drop Accident; FSAR Section 14.2.1) (2) Reactor coolant sys: > +2 psig drywell pressure & < -59 inches vessel level. (3) Primary Containment: (a) > 56 psig containment pressure, or (b) > 281°F containment temperature. (c) Loss of primary containment integrity when required.	A. $\geq 4 \times 10^2$ R/hr primary containment activity, or B. Loss of 2 of the following 3 fission product barriers: (1) Cladding: grab sample > 300 µCi/cc equivalent of I-131. (2) Reactor coolant sys: > +2 psig drywell pressure & < -59 inches vessel level. (3) Primary Containment: (a) > 56 psig containment pressure, or (b) > 281°F containment temperature. (c) Loss of primary containment integrity when required.	A. $\geq 2 \times 10^3$ R/hr primary containment activity, and imminent loss of primary containment, or B. Loss of 2 of the following 3 fission product barriers, with an imminent loss of the 3rd fission product barrier: (1) Cladding: grab sample > 300 µCi/cc equivalent of I-131. (2) Reactor coolant sys: > +2 psig drywell pressure & < -59 inches vessel level. (3) Primary Containment: (a) > 56 psig containment pressure, or (b) > 281°F containment temperature. (c) Loss of primary containment integrity when required.

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QUAD-CITIES EMERGENCY ACTION LEVELS

CONDITION	UNUSUAL EVENT	ALERT	SITE EMERGENCY	GENERAL EMERGENCY
17. Radioactivity Effluent release from the plant.	A. Gaseous Effluents: Technical Specification instantaneous release limits exceeded as measured by effluent radiation monitoring and counting instrumentation. (1) Noble Gases - (a) Main Chimney: Unit 1 or Unit 2 (not both) Release rate $> \frac{2.1 \times 10^5}{E\gamma}$ µCi/sec Both Units 1 and 2 Release rate $> \frac{2.6 \times 10^5}{E\gamma}$ µCi/sec (b) Reactor Bldg Vent Stack: Release rate $> \frac{2.3 \times 10^4}{1.3E\gamma + E\beta}$ µCi/sec	A. Gaseous Effluents: Effluent release > 10 times the Technical Specification instantaneous release limits as measured by radiation monitoring and counting (1) Noble Gases - (a) Main Chimney: Unit 1 or Unit 2 (not both) Release rate $> \frac{21 \times 10^5}{E\gamma}$ µCi/sec Both Units 1 and 2 Release rate $> \frac{26 \times 10^5}{E\gamma}$ µCi/sec (b) Reactor Bldg Vent Stack: Release rate $> \frac{23 \times 10^4}{1.3E\gamma + E\beta}$ µCi/sec	A. Gaseous Effluent: Effluent monitors detect levels corresponding to > 50 mr/hr for 1/2 hour or > 500 mR/hr whole body for 2 minutes at the site boundary. (Adverse Meteorology.)	A. Gaseous Effluent: Monitors detect levels corresponding to > 1 rem/hr whole body at the site boundary. (Actual Meteorology) 2. Liquid Effluents estimated activity liquid release is 2×10^4 Ci.

where: Eγ = average gamma energy per disintegration (MeV/dis).
Eβ = average beta energy per disintegration (MeV/dis).
These quantities are determined monthly and are prominently posted in the Control Room.

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QUAD-CITIES EMERGENCY ACTION LEVELS

CONDITION	UNUSUAL EVENT	ALERT	SITE EMERGENCY	GENERAL EMERGENCY
17. (Cont.)	(2) Iodine and Particulates - Summation of release rate for halogens and particulates with half-lives > 8 days: $7.3Qv + 2.6Qc > 10^{-11}$	(2) Iodine and Particulates - Summation of release rate for halogens and particulates with half-lives > 8 days: $7.3Qv + 2.6Qc > 10^{-10}$		

where: Qv = release rate from the reactor building vent stack in μCi/sec.
Qc = release rate from the main chimeny in μCi/sec.

	B. Liquid effluents concentration of: (1) Gross beta activity (above background) in the discharge bay in excess of the Technical Specification limit, or (2) Isotopic activity in the discharge bay in excess of 10 CFR 20 App. B Table II Column 2 MPCw limits.	B Liquid effluents: (1) Concentration of gross beta activity in the discharge bay > 10 times the Technical Specification Limit or (2) Concentration of isotopic activity in the discharge bay > 10 times the 10 CFR 20 App. B Table II Column 2 MPCw limits or (3) Estimated activity of liquid release > 40 Curies but < 2000 Curies.	B. Liquid effluents estimated activity of liquid release is > 2000 Ci but < 20000 Ci.	

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QUAD-CITIES EMERGENCY ACTION LEVELS

CONDITION	UNUSUAL EVENT	ALERT	SITE EMERGENCY	GENERAL EMERGENCY
18. Personnel Injury	Transportation of radioactivity contaminated injured person to hospital.			
19. Hazardous Materials	As a direct result of hazardous materials a person is killed or hospitalized or estimated property damage exceeds $50,000.	(1) Warrants precautionary activation of the TSC and placing the EOF and other key emergency personnel on standby. (2) ARM readings(s) indicate a severe degradation in the control of radioactive material.	Warrants activation of emergency centers and monitoring teams, or a precautionary notification to the public near the site.	
20. Any other conditions of equivalent magnitude to the criteria used to define the accident as determined by Station Director*	Warrants increased awareness on the part of the state and/or local off-site officials.			Imminent core melt.

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* Other emergency conditions that require an emergency response are those involving:

a. Incident reporting per 10 CFR 50.72.
b. Hazardous material incident reporting per P.A. 79-1442.
c. Oil discharges to waterways per the SPCC Plan.
d. Security contingency events per the Station Security Plan.

The Station Director may, at his discretion, categorize the above situations as GSEP emergencies, depending upon the seriousness of the situation. (Refer to Section 9.3 of the generic plan for additional information.)

DENTON

QAP 1100-T5
Revision 6
October 1981

STATION PROCEDURE REVISION COVER SHEET

ID/1X
Revision Description This revision provides for Identification of a called or Station Director in the event a Director for a given responsibility cannot be contacted and also clarifies the procedure

QEP — Chapter
320-1 — Procedure
Gerner — Originator
5 — Revision

This procedure is required to be implemented prior to _____ Date

because of _____

DRAFT REVIEW		FINAL APPROVAL	
Tech. Staff Supervisor	Date	Thomas J. Kovach, Dept. Head ENG CHEM	6-15-82 Date
Department Head	Date	G. Tate, Tech. Staff Supervisor	6/15/82 Date
Originator	Date	L. Gerner, Asst. Supt. ADMIN	6/17/82 Date
		AUTHORIZATION: N. E. Kurkendall, Station Superintendent	6/21/82 Effective Date

INSTRUCTIONS FOR REVISION INSERTION

REMOVE	INSERT
QEP 320-0 REV 4	QEP 320-0 REV 5
QEP 320-1 REV 4	QEP 320-1 REV 5

REVISION RECEIPT FORM

Please sign and date below, and return this sheet to the Officer Supervisor - Quad Cities Station. Your Station Procedure copy number is 41.

Signature _____ Date _____

APPROVED
NOV 6 1981
Q.C.O.S.R.

ID/1M,1N GSEP ACTIVATION

APPROVED
JUN 21 1982
Q.C.O.S.R.

ACTIVATION OF THE EMERGENCY ORGANIZATION

ID/5B

A. PURPOSE

The purpose of this procedure is to outline the method to provide for the activation of the Quad-Cities GSEP organization.

B. REFERENCES

1. GSEP Tables 6.1-1 through 6.1-5.
2. GSEP-QCA Section 6.1.
3. QEP 310-1.
4. QEP 310-T1.
5. QEP 310-T2.
6. QEP 310-T3.
7. ED-17.

C. PREREQUISITES

1. None.

D. PRECAUTIONS

1. None.

E. LIMITATIONS AND ACTIONS

1. None.

F. PROCEDURE

1. QEP 310-1 outlines the responses necessary for the various GSEP conditions. GSEP Tables 6.1-1 through 6.1-5 provide for the total scope of responses for all parties involved.
2. QEP 310-1 outlines the agency notifications necessary.
3. QEP 310-T1 gives the augmentation scheme for the Quad-Cities Station GSEP Directors and Support Personnel. QEP 310-T3 identifies the individuals capable of serving in the positions specified in QEP 310-T1. The call out lists of QEP 310-T3 are prioritized to facilitate achieving acceptable staff augmentation within 30 minutes.

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JUN 21 1982

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a. QEP 310-T3 is arranged so that the appropriate Director/Department Head/Group Leader is notified first. In all cases except for the Maintenance Director, these personnel can be on-site within 30 minutes of being notified.

b. All other personnel listed in QEP 310-T3 are shown by priority with respect to distance from the site.

c. In the case of the Maintenance Director, the lead person should be notified first, even though he cannot be on-site within 30 minutes. Then, the back-up Maintenance Director should be notified by priority to augment the site staff.

d. If no Director for a given responsibility can be contacted, an appropriate Caller or a Station Director may be deputized to act as an interim Director.

4. The TSC and OSC are activated for an alert, site emergency, or general emergency.

5. For a general emergency, the Station Director must immediately notify the Illinois Emergency Services and Disaster Agency, the Iowa Office of Disaster Services, the Rock Island Communications Center, the Scott County Sheriff's Office, the Clinton County EOC, and the Whiteside County Sheriff and EOC. He recommends protective actions as necessary. Actions will be taken in accordance with state and local plans. The NARS system and Nuclear Accident Reporting Form should be used for this purpose.

G. CHECKLISTS

1. None.

H. TECHNICAL SPECIFICATION REFERENCES

1. None.

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JUN 21 1982
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QAP 1100-T5
Revision 6
October 1981

STATION PROC DENTON SION COVER SHEET

ID/1X
Revision Description This revision provides new procedures for On-Site Environmental Sampling.

QEP — Chapter
330-10 REV 1
330-T8 REV 1 — Procedure
Carson — Originator
Revision

This procedure is required to be implemented prior to _____ Date

because of _____

DRAFT REVIEW

Tech. Staff Supervisor — Date

Department Head — Date

Robert Carson 5-27-82
Originator — Date

FINAL APPROVAL

Thomas Rausch 5-28-82
Dept. Head RAD CHEM — Date

G. C. Tate 5/28/82
Tech. Staff Supervisor — Date

L. Horner 5/28/82
Asst. Supt. ADMIN — Date

AUTHORIZATION

D. L. Farrell 6/1/82
Station Superintendent — Effective Date

INSTRUCTIONS FOR REVISION INSERTION

REMOVE	INSERT
QEP 330-0 REV 10	QEP 330-0 REV 11
	QEP 330-10 REV 1
	QEP 330-T8 REV 1

REVISION RECEIPT FORM

Please sign and date below, and return this sheet to the Officer Supervisor - Quad Cities Station. Your Station Procedure copy number is 41.

Signature — Date

APPROVED
NOV 6 1981
QCOSR

ID/10,1P

ASSESSMENT ACTIONS

330-0 Assessment Actions	Rev. 11	06-01-82
330-1 Abnormal Personnel Exposure	Rev. 3	08-10-81
330-2 Accidental Release of Radioactivity Within the Site Boundary	Rev. 2	02-22-81
330-3 Procedure Deleted	Rev. 3	01-21-82
330-4 Estimation of Off-Site Dose from an Unplanned Release of Radioactive Effluents	Rev. 1	12-17-80
330-5 Estimating High Activity Releases during Accident Conditions	Rev. 1	12-17-80
330-6 Air Sampling Under Accident Conditions	Rev. 2	03-10-82
330-7 In-Plant Iodine-131 Measurement During Post-Accident Conditions	Rev. 4	03-10-82
330-8 Sampling, Handling, and Analysis of Post Accident Reactor Coolant Samples	Rev. 2	05-18-81
330-9 Estimating Plant Release Using the Stack Gas Monitors	Rev. 1	12-17-80
330-10 On-Site Sampling During Emergency Situations	Rev. 1	06-01-82
330-T1 Quad-Cities Station Environs Monitoring-Dairy Farms	Rev. 1	06-20-80
330-T2 Dose Factors for Gaseous Releases	Rev. 2	03-10-82
330-T3 Dose Factors for Liquid Releases	Rev. 1	12-17-80

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330-T4 Main Chimney Release Rate Table	Rev. 1	12-17-80
330-T5 Typical Gas Stack Monitor Calibration Curve	Rev. 1	12-17-80
330-T6 Sample Cave	Rev. 1	05-18-81
330-T7 Sample Dilution Equipment	Rev. 1	05-18-81
330-T8 On-Site Environmental Sampling Locations	Rev. 1	06-01-82

APPROVED
JUN 01 1982
Q.C.O.S.R

QEP 330-10
Revision 1
May 1982

ON-SITE ENVIRONMENTAL SAMPLING DURING EMERGENCY SITUATIONS

ID/5D

A. PURPOSE

The purpose of this procedure is to outline the steps necessary to assure proper on-site environmental sampling during emergency situations.

B. REFERENCES

1. QEP 330-T8, On-Site Environmental Sampling Locations.
2. EG-11, Environmental Sample Collection Procedures and Transport of Low-Specific Activity (<.002 μCi/g) Environmental Radiological Samples.
3. QEP 550-T2, Operational Support Center Emergency Supplies Cabinet.
4. Post Accident Radiation Levels - Quad-Cities Station, Sargent and Lundy.

C. PREREQUISITES

1. Only instruments calibrated within the frequency designated for those instruments should be used. The calibration due date shall be indicated on the instrument.

D. PRECAUTIONS

1. Environmental dose rates during accident situations may be higher than usual.

E. LIMITATIONS AND ACTIONS

1. The Radiation-Chemistry Director will instruct on-site health physics teams on which samples are needed.
2. The equipment stored in the Operational Support Center (designated in QEP 550-T2) may be used for on-site environmental sampling if deemed necessary by the Radiation-Chemistry Director.

F. PROCEDURE

1. The health physics teams should be chosen by the Radiation-Chemistry Director or his alternate from the Radiation Chemistry personnel assembled in the Operational Support Center (OSC). After completing assigned sampling, the teams will return to the O.S.C.
2. Sample locations will be chosen by the Radiation-Chemistry Director or his alternate using QEP 330-T8, On-Site Environmental Sampling Locations. Sampling points are designated by a capital "X".

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3. All samples should be obtained using the procedures outlines in EG-11 unless otherwise specified by the Radiation-Chemistry Director. The Sample Collection Data Sheet in EG-11 should be used to log all samples.

4. Samples will usually be transported to the Technical Support Center, where they will be analyzed using the PARAPS analytical equipment located in the TSC storeroom.

G. CHECKLISTS

1. EG-11, page 8 - Sample Collection Data Sheet.

H. TECHNICAL SPECIFICATION REFERENCES

1. None.

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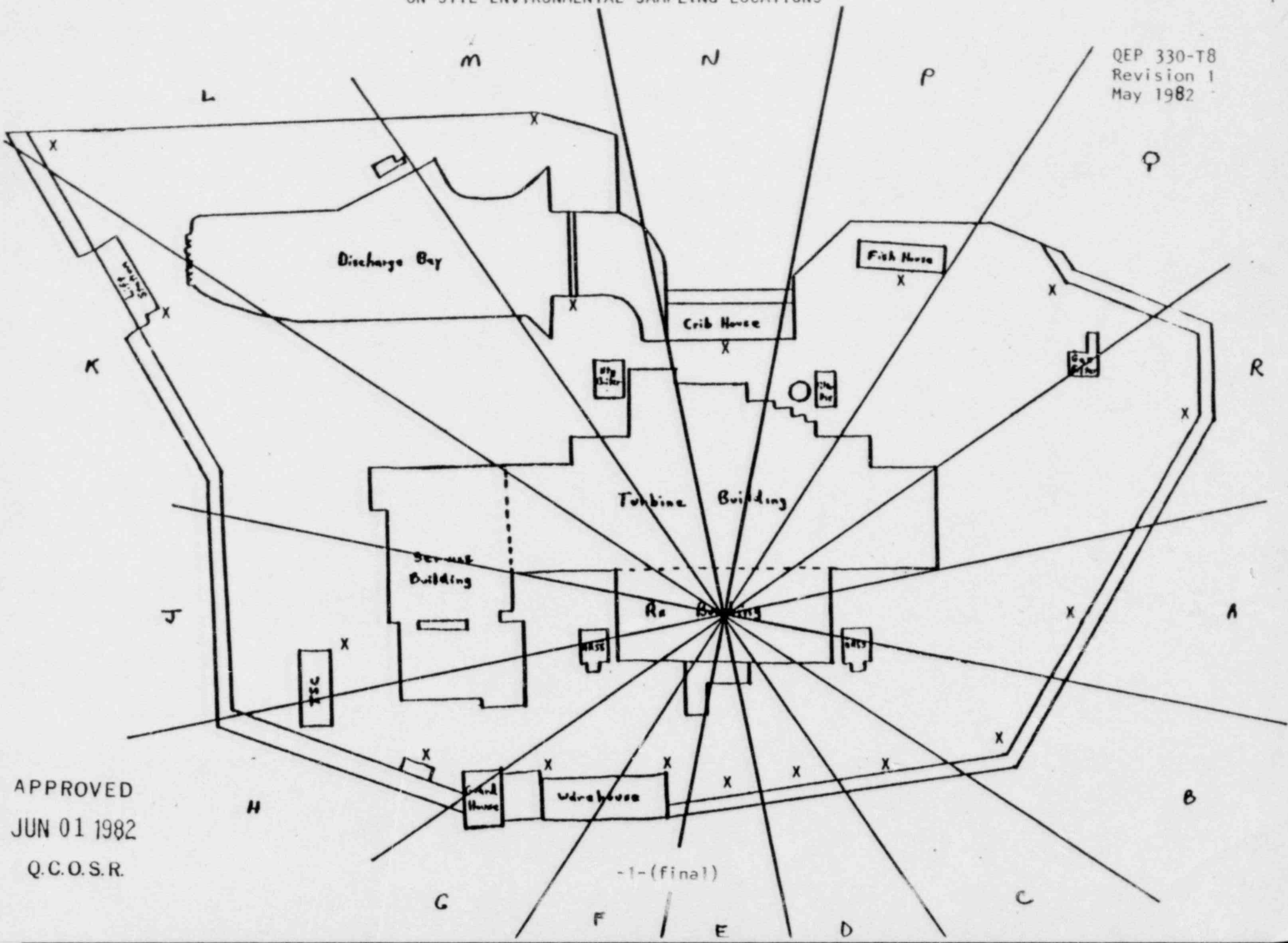
JUN 01 1982
Q.C.O.S.R

ON-SITE ENVIRONMENTAL SAMPLING LOCATIONS

QEP 330-T8
Revision 1
May 1982



APPROVED
JUN 01 1982
Q.C.O.S.R.

QAP 1100-T5
Revision 6
October 1981

DENTON

STATION PROCEDURE REVISION COVER SHEET

ID/1X
Revision Description This revision changes the telephone number for the NRC Operations Center

QEP — Chapter
530-2 — Procedure
Gerner — Originator
6 — Revision

This procedure is required to be implemented prior to _____ Date

because of _____

DRAFT REVIEW

_____ Tech. Staff Supervisor Date

_____ Department Head Date

_____ Originator Date

FINAL APPROVAL

Thomas J. Kovach 6-4-82
Dept. Head RAB CHEM Date

J. D. Lisan 6/4/82
Tech. Staff Supervisor Date

L. Gerner 6/4/82
Asst. Supt. Admin Date

AUTHORIZATION

L. Gerner for 6/7/82
Station Superintendent Effective Date

INSTRUCTIONS FOR REVISION INSERTION

REMOVE	INSERT
QEP 530-0 REV 8	QEP 530-0 REV 9
QEP 530-2 REV 5	QEP 530-2 REV 6

REVISION RECEIPT FORM

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_____ Signature _____ Date

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NOV 6 1981
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1D/2W,2X EXERCISES AND DRILLS

530-0 Exercises and Drills	Rev. 9	06-07-82
530-1 Emergency Exercise	Rev. 1	12-16-80
530-2 Emergency Drills	Rev. 6	06-07-82
530-3 Off-Shift Augmentation Drill	Rev. 1	05-26-82
530-S1 Monthly NARS Drill Quad-Cities Station	Rev. 3	10-06-81
530-S2 Monthly Test of the NRC Health Physics Network	Rev. 1	01-05-82
530-S3 Monthly Test of the NRC Emergency Notification System	Rev. 1	02-17-82

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JUN 07 1982
Q.C.O.S.R.

QEP 530-2
Revision 6
June 1982

EMERGENCY DRILLS

ID/30

A. PURPOSE

The purpose of this procedure is to list the required drills and their frequencies and to test specific facets of the Generating Station Emergency Plans.

B. REFERENCES

1. GSEP, Section 8.3.2.
2. GSEP, Section 7.2.
3. QEP 440-1, Emergency Communication Facilities.

C. PREREQUISITES

1. None.

D. PRECAUTIONS

1. None.

E. LIMITATIONS AND ACTIONS

1. The communications drill is rated satisfactory if the initiating party is able to transmit and receive acknowledgement for a brief exercise message to each of the agencies, designated in the site specific annex within 15 minutes of the simulated declaration. (Simulated declaration will be established immediately prior to picking up the NARS phone to initiate the drill.) The drill can be rated satisfactory even if NARS fails and backup systems are used to complete notification; however, corrective actions are required in event of NARS failure. The drill is rated unsatisfactory if the required transmission and acknowledgement is not completed within 15 minutes.

2. If communications equipment fails to operate properly, contact Illinois ESDA; phone (217) 782-7860 and the Corporate Command Center immediately following the drill. If the drill is rated unsatisfactory, immediately notify the Production Nuclear Duty Person during normal business hours, or the Production Nuclear Duty Person through the System Power Dispatcher during other hours in addition to initiating action to have the system repaired. An additional drill will be conducted immediately upon completion of equipment repairs any time a drill is rated unsatisfactory.

3. If the NRC health physics network fails, notify the NRC Region III office at (312)-932-2500.

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4. If the NRC Emergency Notification System phone fails, notify the NRC Operations Center at (202) 951-0550.

F. PROCEDURE

1. Emergency drills, as described in GSEP, Section 8.3.2, GSEP, Section 7.2., and this procedure shall be conducted at a frequency as listed in the below table:

DRILL	DESCRIPTION	FREQUENCY
1. Communications Systems	QEP 530-2 step F.2	ANNUAL
a. Microwave/radio communications	GSEP 7.2.2	ANNUAL
b. NRC communications	GSEP 7.2.4	ANNUAL
c. Station communications	GSEP 7.2.2	ANNUAL
d. N.A.R.S.	QEP 530-2 step F.3 GSEP 7.2.1	MONTHLY
e. NRC health physics network	GSEP 7.2.4 QEP 530-2 step F.7	MONTHLY
f. NRC Emergency Notification System	GSEP 7.2.4 QEP 530-2 step F.8	MONTHLY
2. Environmental Monitoring Drill	QEP 530-2 step F.4 GSEP 8.3.2.3	ANNUAL
3. Medical Emergency Drill	QEP 530-2, step F.5 GSEP 8.3.2.5	ANNUAL
4. Health Physics Drill	QEP 530-2, step F.6 GSEP 8.3.2.4	SEMI-ANNUAL

2. Communications drill.

a. To verify communications procedures and communications equipment that would be required in the event of a major accident, the capability to communicate on the microwave/radio communications, NRC communications, station communications and the N.A.R.S communications systems will be tested during the annual communications drill.

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b. Conduct of test.

Standard messages will be transmitted from key locations to verify that information transmitted in the nuclear accident report and environmental assessment formats can be accurately transmitted and readily understood. Each message will be independent and will not relate to other messages. The communicators who ultimately receive the messages will be requested to return the completed message forms so that a comparative evaulation can be made.

c. Critique.

The communications drill checklist will be used as a guide while the drill is in progress. A verbal critique of communications procedures will be conducted immediately following the drill. A written critique will be provided for records.

d. Standard.

The drill is rated satisfactory if:

(1) The Exercise Nuclear Accident Report message is accurately received by the CCC, State EOC's and REAC, and local EOC's within 15 minutes from the simulated declaration of an emergency.

(2) The environmental assessment messages are accurately received by Illinois REAC.

(3) Federal Emergency Response agencies are contacted by any facility.

(4) Communications by either primary or backup means is established from:

(a) the control room to CCC, SPS, TSC, EOF, EOC and REAC;

(b) TSC to EOF and CCC;

(c) EOF to TSC, EOC, CCC, SPS and REAC;

(d) CCC to TSC, EOF, EOC and REAC;

(e) Field assessment teams to EOF, TSC or CCC.

The drill is rated unsatisfactory if any of the above standards are not achieved. Corrective action is required if any primary or backup system fails to operate properly.

3. N.A.R.S. Communications System.

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a. The dedicated Nuclear Accident Reporting System (NARS) communications is the primary communication system to be tested. If NARS does not enable understandable communication, available backup system, to include dial phone, will be employed to contact designated agencies to demonstrate communications procedures to be used in the event of NARS failure. Each station will initiate a monthly communications drill to verify the capability to notify designated company, state and local agencies if a general emergency was declared. Initiation capabilities from the EOF, TSC and Control Room will be demonstrated periodically.

b. Conduct of test.

The drill will be conducted in the following manner using QEP 530-S1.

(1) Establish and record declaration time.

(2) Activate NARS:

(a) Remove handset.

(b) Dial required code (23).

(c) Confirm stations on line.

NOTE

The hand set button must be pressed when transmitting.

(3) Transmit message test: "THIS IS A TEST. THIS IS (NAME OF FACILITY). STAND BY FOR NOTIFICATION DRILL. THE SIMULATED DECLARATION TIME IS (DECLARATION TIME). THE CURRENT TIME IS (CURRENT TIME). STAND BY TO ACKNOWLEDGE RECEIPT OF THIS EXERCISE MESSAGE BY STATING YOUR AGENCY AND INITIALS."

(4) Call roll of activities (site specific annex) and record initials of acknowledging individual.

(5) Upon completion of acknowledgements, inquire if anyone has not been called and close the conference call.

(6) Contact agencies not acknowledging the drill by backup communications means.

(7) Record times of all acknowledgements.

(8) Initiate corrective actions if required.

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c. Agencies to be notified:

Illinois Emergency Services & Disaster Agency

Illinois Department of Nuclear Safety*

Rock Island Communications

Rock Island E.S.D.A.*

Scott County Sheriff, Davenport, Iowa

Corporate Command Center*

System Power Supply

Clinton County EOC

Iowa Office of Disaster Services

Whiteside County EOC*

Whiteside County Sheriff

NOTE

Extensions with an asterisk are not manned 24 hours a day. Successful communications with all other agencies constitutes a successful test, if during other than normal working hours.

4. Environmental Monitoring Drill.

a. Field monitoring teams will be selected to operate under the direction of a Rad/Chem Director or an Environs Director from the station. Two teams will be utilized unless otherwise specified. A situation will be portrayed to indicate a simulated release based on actual meteorological conditions at the time of the drill. The teams will conduct sampling of water, grass or other vegetation, soil, and air and conduct actual field monitoring of samples. The controller accompanying each team will provide simulated readings to indicate the level of radiation expected from the plume at that location. Teams will record and report findings to the Environs Director in the EOF using radio or backup communications. Samples will be transported to and analyzed in the station laboratory facilities. Procedures used in analysis will be evaluated.

The corporate Environmental Center will be activated and its personnel will be required to process and analyze the simulated field readings and laboratory findings. Communications between field personnel, the Environs Director, and the environmental center will be tested. A controller will judge the performance of corporate personnel to support field activities and reach the appropriate recommendation for protective action.

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b. Responsibilities.

The CECo. General Office will schedule, direct, and evaluate the drill. Environmental Center participants will be selected by the General Office from a list of qualified personnel. The Generating Station will:

(1) Provide two qualified individuals to act as controllers and to assist in preparing the drill.

(2) Provide a list of personnel designated as qualified to perform duties of Rad/Chem Director, Environs Director, and Environs Group field team member. Provide selected personnel that are reasonably available to participate in the drill.

(3) Provide communication, protective, sample gathering and transportation equipment to conduct the drill.

(4) Provide EOF and laboratory facilities to conduct the drill.

c. Critique.

A verbal critique will be conducted at the conclusion of the drill by the control team from the General Office and the station.

Following the verbal critique, the control team will meet to provide comments for the written critique to the General Office representative. The written critique will be provided to the station after review at the General Office.

5. Medical Emergency Drill.

a. Commonwealth Edison employs the Radiation Mangement Corporation (RMC) to provide procedures, training and drills for onsite and off-site organizations dealing with emergency medical treatment. RMC will conduct the training and supervise medical and decontamination aspects of the drill. CECo will supervise GSEP related notification aspects of the drill. The drill will normally be conducted on the day following the training sessions. Victims simulated to be contaminated and injured will be used as controllers. The drill will include treatment and decontamination of the victims from the time the accident is reported until the hospital has decontaminated and treated the simulated patients. The drill will be followed by a critique.

b. Responsibilities.

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The CECo General Office will:

(1) Prepare a general schedule for the drill.

(2) Provide backup assistance in concluding local scheduling when needed.

(3) Provide an observer to control and evaluate portions of the exercise outside of RMC's area of expertise.

(4) Provide written and oral critique comments.

The Generating Station will:

(1) Arrange exact dates of drill with RMC, CECo. General Office and off-site support agencies.

(2) Assign personnel to participate in on-site training.

(3) Assign personnel to participate as victims under RMC direction.

(4) Participate in the drill.

Radiation Management Corporation will:

(1) Conduct a training program.

(2) Control the medical portion of the drill.

(3) Evaluate the drill with qualified medical and health physics controllers.

(5) Conduct an oral and written critique.

c. Corrective actions.

Deficiencies in team or individual actions during the drill will be corrected by instruction during the critique. Deficiencies in equipment or physical arrangements discovered during the exercise will be evaluated by RMC, CECo., and off-site support agencies and resolved following the written report.

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6. Health Physics Drill.

   a. One team of Rad/Chem Technicians will be selected to perform direct monitoring and sample collecting functions. Controllers will provide the initial situation and meter readings to simulate elevated radiation levels. The team will report elevated measurements in accordance with station procedures. Airborne and liquid samples collected will be analyzed in accordance with station procedures. Results of the analysis will be recorded. At least once each year the drill will include obtaining and analyzing an actual liquid sample from the plant. The controller will specify collection of a sample that is required to be analyzed for normal plant operations whenever possible. Results of the analysis will be processed in accordance with normal procedures.

   b. Responsibilities.

      The CECO General Office will:

      (1) Schedule, direct and evaluate the drill.

      The Generating Station will:

      (1) Provide a technically qualified individual to act as a controller and to assist in planning the drill.

      (2) Provide a list of qualified technicians. Provide selected personnel to participate in the drill.

      (3) Provide equipment and facilities to conduct the drill.

   c. Critique.

      A verbal critique will be conducted at the conclusion of the drill by the controllers from the General Office and the station. Following the verbal critique, the control team will discuss comments for the written critique. The written critique will be provided to the station after review at the General Office.

7. NRC health physics network.

   a. The NRC health physics network provides dedicated communications between the Station and NRC headquarters in Bethesda, Maryland, and Glen Ellyn, Illinois.

   b. Phones are located in the Rad-Chem Supervisor's office, the on-site NRC office, and the emergency operations facility

   c. Conduct of test. The drill will be conducted in the following manner using QEP 530-S2:

      (1) Choose one of the three phones available. Each phone must be tested once every three months, on a rotating basis, testing one phone per month.

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(2) Pick up the receiver and dial 22. This number should reach NRC headquarters in Bethesda, Maryland. Pick up the receiver and dial 23. This number should reach Region III headquarters in Glen Ellyn, Illinois.

NOTE

No dial tone or ringing will be heard.

(3) The test message should be:

This is a test. This is the Quad-Cities Nuclear Power Station. Please verify that communications have been established by stating your initials.

(4) Should a test be unsuccessful, the NRC shall be notified and one of the other HP network phones shall be tested to verify that communication is possible. NRC Region III should be notified so that appropriate corrective actions may be taken.

8. NRC Emergency Notification System (red phone).

a. The NRC Emergency Notification System provides dedicated communications between the station and the NRC Operations Center in Bethesda, Maryland.

b. Phones are located in the on-site NRC office, the Emergency Operations Facility, the Technical Support Center, and the station Control Room.

c. Conduct of test. The drill will be conducted in the following manner using QEP 530-S3:

(1) Choose one of the following phones: EOF, TSC, Control Room. Each phone must be tested once every three months, on a rotating basis, testing one phone per month.

(2) Pick up the receiver and wait. The phone should automatically reach NRC headquarters in Bethesda, Maryland.

(3) The test message should consist of:

This is (NAME) from the Quad-Cities Nuclear Power Station. I'm calling from our (FACILITY NAME) to test the Emergency Notification System. Please acknowledge the receipt of this message by stating your initials.

(4) Record the initials of the call receiver on QEP 530-S3.

(5) Should a test be unsuccessful, one of the other ENS phones shall be tested to verify that communication is possible. NRC Operations Center shall be notified so that appropriate corrective actions my be taken. The Operations Center number is (202) 951-0550.

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G. CHECKLISTS

1. QEP 530-S1, Monthly NARS Drill Quad-Cities Station.

2. QEP 530-S2, Monthly Test of the NRC Health Physics Network.

3. QEP 530-S3, Monthly Test of NRC Emergency Notification System.

H. TECHNICAL SPECIFICATION REFERENCES

1. None.

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