

ID/1K, 1L

EMERGENCY CONDITIONS

<u>200-0</u> Emergency Conditions	Rev. 10	09-10-82
<u>200-1</u> Classification of GSEP Conditions	Rev. 3	05-05-82
<u>200-2</u> Classification of an Incident Involving Hazardous Materials	Rev. 2	01-22-82
<u>200-T1</u> Quad-Cities Emergency Action Levels	Rev. 7	09-10-82
<u>200-T2</u> Emergency Action Levels - Procedure Cross Reference	Rev. 1	09-23-81
<u>200-T3</u> Hazardous Substances	Rev. 1	01-22-82

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SEP 10 1982
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QUAD-CITIES EMERGENCY ACTION LEVELS

QEP 200-T1
Revision 7
September 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 <u>and</u> 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 <u>and</u> 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.	APPROVED SEP 10 1982 Q.C.O.S.R.

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

QEP 200-T1
Revision 7

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 degraded such that an immediate shutdown is required.	
4. Unplanned explosion.		On-site <u>and</u> 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 <u>and</u> 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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SEP 10 1982
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QUAD-CITIES EMERGENCY ACTION LEVELS

QEP 200-T1
Revision 7

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 9.3.2.)	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 <u>and</u> both units <u>not</u> in cold shutdown.	

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SEP 1 0 1982

Q.C.O.S.R.

QUAD-CITIES EMERGENCY ACTION LEVELS

QEP 200-T1
Revision 7

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 <u>and</u> loss of all diesel generators for \leq 15 minutes.	Loss of all off-site power <u>and</u> 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 \leq 15 minutes.	Loss of both 125 VDC and 250 VDC battery systems $>$ 15 minutes.	

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SEP 10 1982
Q.C.O.S.R.

QUAD-CITIES EMERGENCY ACTION LEVELS

QEP 200-T1
Revision 7

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

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SEP 10 1982
Q.C.O.S.R.

QUAD-CITIES EMERGENCY ACTION LEVELS

QEP 200-T1
Revision 7

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 <u>increase</u> 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 <u>increase</u> 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 <u>not</u> operational or secondary containment isolation incapable of being effected.	

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SEP 10 1982
Q.C.O.S.R.

QUAD-CITIES EMERGENCY ACTION LEVELS

QEP 200-T1
Revision 7

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

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SEP 10 1982
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QUAD-CITIES EMERGENCY ACTION LEVELS

QEP 200-T1
Revision 7

CONDITION	UNUSUAL EVENT	ALERT	SITE EMERGENCY	GENERAL EMERGENCY
17. Radio-activity Effluent release from the plant.	<p>A. Gaseous Effluents: Technical Specification instantaneous release limits exceeded as measured by effluent radiation monitoring and counting instrumentation.</p> <p>i</p> <p>(1) Noble Gases -</p> <p>(a) Main Chimney: Unit 1 or Unit 2 (not both) Release rate $> \frac{2.1 \times 10^5}{E\gamma} \mu\text{Ci/sec}$</p> <p>Both Units 1 and 2 Release rate $> \frac{2.6 \times 10^5}{E\gamma} \mu\text{Ci/sec}$</p> <p>(b) Reactor Bldg Vent Stack: Release rate $> \frac{2.3 \times 10^4}{1.3E\gamma + E\beta} \mu\text{Ci/sec}$</p>	<p>A. Gaseous Effluents: Effluent release > 10 times the Technical Specification instantaneous release limits as measured by radiation monitoring and counting instrumentation</p> <p>(1) Noble Gases -</p> <p>(a) Main Chimney: Unit 1 or Unit 2 (not both) Release rate $> \frac{21 \times 10^5}{E\gamma} \mu\text{Ci/sec}$</p> <p>Both Units 1 and 2 Release rate $> \frac{26 \times 10^5}{E\gamma} \mu\text{Ci/sec}$</p> <p>(b) Reactor Bldg Vent Stack: Release rate $> \frac{23 \times 10^4}{1.3E\gamma + E\beta} \mu\text{Ci/sec}$</p>	<p>A. Gaseous Effluent: Effluent monitors detect levels corresponding to > 50 mR/hr (1.3 x 10⁷ μCi/sec) for 1/2 hour or > 500 mR/hr (1.3 x 10⁸ μCi/sec) for 2 minutes at the site boundary. (Adverse Meteorology.)</p>	<p>A. Gaseous Effluent: Monitors detect levels corresponding to > 1 rem/hr whole body at the site boundary. This condition exists when: Q/U > 4.5 x 10⁷ where Q = release rate in μCi/sec U = mean wind speed in mph</p> <p>OR</p> <p>Q/U > 1.0 x 10⁸ where Q = release rate in μCi/sec U = mean wind speed in meters per second</p>

where: E γ = average gamma energy per disintegration (MeV/dis).

E β = average beta energy per disintegration (MeV/dis).

These quantities are determined monthly and are prominently posted in the Control Room.

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SEP 10 1982

Q.C.O.S.R.

QUAD-CITIES EMERGENCY ACTION LEVELS

QEP 200-T1
Revision 7

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; $7.3Q_v + 2.6Q_c > 10^{-11}$	(2) Iodine and Particulates - Summation of release rate for halogens and particulates with half-lives > 8 days; $7.3Q_v + 2.6Q_c > 10^{-10}$		

where: Q_v = release rate from the reactor
building vent stack in $\mu\text{Ci}/\text{sec}$.
 Q_c = release rate from the main
chimney in $\mu\text{Ci}/\text{sec}$.

B. Liquid effluents
concentration of:
(1) Gross beta activity
(above background)
in the discharge
bay in excess of
the Technical
Specification
limit ($> 1 \times 10^{-7}$
 $\mu\text{Ci}/\text{ml}$) unless
discharge is
controlled on a
radionuclide basis
in accordance with
Appendix B, Table II,
Column 2 of 10 CFR 20
and note 1 thereto.

B. Liquid effluents:
(1) Concentration of
gross beta activity
in the discharge
bay > 10 times the
Technical Specifi-
cation Limit
($> 1 \times 10^{-6}$ $\mu\text{Ci}/\text{ml}$)
unless discharge is
controlled on a
radionuclide basis
in accordance with
Appendix B, Table II
Column 2 of 10 CFR
20 and note 1 thereto.
OR
(2) Estimated activity
of liquid release
> 40 Curies but
< 2000 Curies.

B. Liquid effluents:
Estimated activity
of liquid release
is > 2000 Ci but
< 20,000 Ci.

B. Liquid effluents:
Estimated activity
of liquid release
is > 2.4×10^4 Ci.

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SEP 1 0 1982

Q.C.O.S.R.

QUAD-CITIES EMERGENCY ACTION LEVELS

QEP 200-T1
Revision 7

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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SEP 10 1982

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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/LX

Revision Description This revision
provides a new procedure
for SPING. control
terminal operation.

QEP

330-3

Chapter

Procedure

Gary

4

Originator

Revision

This procedure is required to be implemented prior to _____
because of _____ Date

DRAFT REVIEW

Tech. Staff Supervisor

Date

Department Head

Date

Originator

Gail Gary 9-22-82

Date

FINAL APPROVAL

Dept. Head

Date

Tech. Staff Supervisor

Date

Asst. Supt.

Date

AUTHORIZATION

Station Superintendent

Effective Date

INSTRUCTIONS FOR REVISION INSERTION

REMOVE

QEP 330-0 REV 13

INSERT

QEP 330-0 REV 14

QEP 330-3 REV 4

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 _____

Signature

Date

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NOV 6 1981

-1-(final)

O.C.C.S.P.

ID/10,1P

ASSESSMENT ACTIONS

<u>330-0</u> Assessment Actions	Rev. 14	09-23-82
<u>330-1</u> Abnormal Personnel Exposure	Rev. 3	08-10-81
<u>330-2</u> Accidental Release of Radioactivity Within the Site Boundary	Rev. 2	02-22-81
<u>330-3</u> SPING Control Terminal Operation	Rev. 4	09-23-82
<u>330-4</u> Estimation of Off-Site Dose from an Unplanned Release of Radioactive Effluents	Rev. 1	12-17-80
<u>330-5</u> Estimating High Activity Releases during Accident Conditions	Rev. 1	12-17-80
<u>330-6</u> Air Sampling Under Accident Conditions	Rev. 2	03-10-82
<u>330-7</u> In-Plant Iodine-131 Measurement During Post-Accident Conditions	Rev. 4	03-10-82
<u>330-8</u> Handling and Analysis of Post Accident Reactor Coolant Samples	Rev. 4	08-23-82
<u>330-9</u> Estimating Plant Release Using the Stack Gas Monitors	Rev. 1	12-17-80
<u>330-10</u> On-Site Sampling During Emergency Situations	Rev. 1	06-01-82
<u>330-T1</u> Quad-Cities Station Environs Monitoring-Dairy Farms	Rev. 1	06-20-80
<u>330-T2</u> Dose Factors for Gaseous Releases	Rev. 2	03-10-82
<u>330-T3</u> Dose Factors for Liquid Releases	Rev. 1	12-17-80

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SEP 23 1982
Q.C.O.S.R.

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

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SPING CONTROL TERMINAL OPERATION

QEP 330-3
Revision 4
September 1982

ID/5G

A. PURPOSE

The purpose of this procedure is to provide instructions for operating the SPING control terminal.

B. REFERENCES

1. Eberline CT-2 Technical Manual.

C. PREREQUISITES

1. Obtain a keyboard key from the Shift Engineer.

D. PRECAUTIONS

1. The keys on the keyboard are touch sensitive. There is no need to press hard when entering data.

E. LIMITATIONS AND ACTIONS

1. The calibration constants in the noble gas channels are based on Xe-133 calibrations.

F. PROCEDURE

1. The keypad has two keypad subgroups. The upper keypad group is the instruction pad, while the lower keypad group is the data pad. An entry of both an instruction and data is then a command. All commands begin with a single entry via the instruction pad, followed by an entry or entries via the data pad, and terminate with the ENTER key.
2. The instruction pad is color-keyed according to function. The blue keys are for inquiries of data or parameters. The green keys are for control functions. The black key (edit) is used to command changes of parameters in the channel files. The red key (print) is used to print the status of all channels and to perform calculations on history data.

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3. An address is the complete numerical identification of a detector and comprises the field unit address plus the channel number of the detector. The addresses are as follows.

Rx Vent Low Range Noble Gas - 0105
Rx Vent Mid Range Noble Gas - 0107
Rx Vent High Range Noble Gas - 0109
Rx Vent Area Monitor - 0106
Rx Vent Background - 0108

Main Chimney Low Range Noble Gas - 0305
Main Chimney Mid Range Noble Gas - 0307
Main Chimney High Range Noble Gas - 0309
Main Chimney Area Monitor - 0306
Main Chimney Background - 0308

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SEP 23 1982

Q.C.O.S.R.

4. To have information output from the control terminal the following commands should be performed.

a. Open the control terminal drawer, insert the key in the keyboard slot and turn it on.

b. Determine the system status as follows.

(1) Check the lights located above the pull-out drawer.

(2) The lights and their associated meaning are, from left to right.

NORMAL (green) - normal status.

MAINTENANCE (white) - a unit is in flush, check source, or calibrate.

FAIL (amber) - a unit has failed on low flow, low counts, communication, or loss of power.

TREND (amber) - a unit has trend alarm status. Trend alarm is a condition that relates present values with past values. A preset percentage difference, high or low, causes an alarm.

ALERT (amber) - high alarm condition exists.

HIGH ALARM (red) - high-high alarm condition exists. By pressing the high alarm light the red light to the right of it will go off.

RED LIGHT - this will light with any change in status of any unit or on a high-high alarm condition.

- c. Type in PRINT, ALL STAT, ENTER. This will give you the day and time, the other control terminal communication status (Bro) and the status of all initialized channels in each SPING unit. Channels not initialized will have a star in front of them and no status.

5. Determine the present $\mu\text{ci/cc}$ value for each channel of the reactor vent and main chimney monitors.
 - a. Type in DATA, 0105, ENTER. This will give you the present value of the low range noble gas channel of the reactor vent monitor and its status.
 - b. Repeat the DATA, XXXX, ENTER command for each of the desired noble gas channels listed in Step F.3.
6. Determine the history data for each desired channel.
 - a. Type in HIST MIN, 0105, ENTER. This will give the last 23 ten-minute averages of the reactor vent low range noble gas with the present value printed last to give 24 data points.
 - b. Type in HIST HR, 0105, ENTER. This will give the last 24 one-hour averages for the reactor vent low range noble gas with the most recent value printed last.
 - c. Type in HIST DAY, 0105, ENTER. This will give the last 24 day averages for the reactor vent low range noble gas with the most recent value printed last.
 - d. Repeat the appropriate history command for the desired noble gas channels listed in Step F.3.
7. To turn the pump of any unit ON or OFF, type as follows:
 - a. For main chimney; PUMP, ON (OFF), 030, ENTER
 - b. For reactor vent; PUMP, ON (OFF), 010, ENTER.
8. To take any unit IN or OUT of flush, type as follows:
 - a. For main chimney; FLUSH, ON (OFF), 030, ENTER.
 - b. For reactor vent; FLUSH, ON (OFF), 010, ENTER.
9. To clear an alarm on any unit, type as follows:

NOTE

Value must be <80% of alarm value to clear.

- a. For main chimney; ALMCLR, 030, ENTER.
- b. For reactor vent; ALMCLR, 010, ENTER.

NOTE

Unit-channel numbers are listed in Step F.3.

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SEP 23 1982
Q.C.O.S.R.

10. To check a detectors response, type in: CKSRC, unit channel #, ENTER.

NOTE

Only channels 5, 6, and 9 have checksources.

11. To print the parameter file for any channel, type in: FILE, unit-channel #, ENTER.
12. If power is lost to any field unit (SPING), the unit will need to be re-initialized as follows:
 - a. Type in FILE, UNIT-CHANNEL #, ENTER. This will cause the printout of the channel parameter file for the specified unit and channel.
 - b. All of the calibration constants and units will have to be edited in.
 - c. To type in any value type: EDIT, line number (2 digits), data (either numerical value, channel number, or yes/no), ENTER.

EXAMPLE: A calibration constant is $+4.08e-08$. To input this number find the line number associated with it (ie 03). The command, EDIT, 03, +4.08 - 08, ENTER will cause the value to be input into the file. Note the format for numbers. To check the value, turning the edit key off will cause the channel parameter file to be printed again with the new value.

- d. Any other significant data should be edited in a similar manner.
13. If power is lost to a CT-2 terminal a FILE 0 command will need to be executed.
 - a. Type in FILE, 0, ENTER. This will show the day and time and follow with "ENTER DAY TIME". If this needs to be changed, enter a 3-digit number for the day of the year (001-365), a 4-digit number for the time of day (0000-2359) and terminate with enter. This value is then printed. If no change is needed, enter "no" (-/off key).
 - b. Next the 24-hour log time will be presented. Enter the time desired as in step F.13.a. or "no" (-/off key).
 - c. Next the 4-hour log will be presented. Answer "yes" (+/on key) or "no" (-/off key).
 - d. The instrument then asks four questions (see the CT-2 technical manual for instructions). If nothing is to be added or deleted answer "no" (-/off key).

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SEP 23 1982
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14. If any log time or time-date needs to be changed follow steps F.13.a. to F.13.d.
15. If any problems arise not covered in this procedure consult the CT-2 technical manual and radiation chemistry supervision.

G. CHECKLISTS

1. None.

H. TECHNICAL SPECIFICATION REFERENCES

1. None.

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SEP 23 1982
Q.C.O.S.K

ID/1S,1T

PROTECTIVE MEASURE FOR
ONSITE PERSONNEL

<u>360-0</u> Protective Measures for Onsite Personnel	Rev. 12	09-03-82
<u>360-1</u> Drywell Evacuation	Rev. 1	06-20-80
<u>360-2</u> Plant Evacuation and Assembly	Rev. 8	08-17-82
<u>360-3</u> Site Evacuation	Rev. 2	03-02-82
<u>360-4</u> Use of Potassium Iodide (KI) as a Thyroid Blocking Agent	Rev. 2	05-18-81
<u>360-5</u> Issuance of Emergency Film During GSEP Conditions	Rev. 1	05-18-81
<u>360-S1</u> Emergency Film Distribution Log	Rev. 1	05-18-81
<u>360-T1</u> Evacuation Assembly Areas for Visitors and Contractors	Rev. 2	03-02-82
<u>360-T2</u> Evacuation Routes by Wind Direction	Rev. 5	09-03-82
<u>360-T3</u> Site Evacuation Routes	Rev. 1	06-20-80
<u>360-T4</u> Evacuation Relocation Centers	Rev. 1	06-20-80
<u>360-T5</u> Iodine - 131 Dose Equivalent to Thyroid Reference Reg. Guide 1.109	Rev. 1	04-01-81
<u>360-T6</u> Iodine - 133 Dose Equivalent to Thyroid Reference Reg. Guide 1.109	Rev. 1	04-01-81
<u>360-T7</u> Iodine - 135 Dose Equivalent to Thyroid Reference Reg. Guide 1.109	Rev. 1	04-01-81
<u>360-T8</u> Potassium Iodide Distribution Record	Rev. 1	05-18-81

APPROVED
SEP 03 1982

Q.C.O.S.R.

EVACUATION ROUTES BY WIND DIRECTION

QEP 360-T2
Revision 5
August 1982

ID/IN	WIND DIRECTION (Determined from Control Room or Metro Tower)	SITE EVACUATION ROUTE (See QEP 360-T3)	RELOCATION CENTER (See QEP 360-T4)
	N (0°)	A	PARK ¹
	NNE	A	PARK
	NE (45°)	A	PARK
	ENE	A	PARK
	E (90°)	A	PARK
	ESE	A	RHS ²
	SE (135°)	A	RHS
	SSE	A ₃	RHS
	S (180°)	A ₃	RHS
	SSW	A ₃	RHS
	SW (225°)	A ₃	RHS
	WSW	A ₃	RHS
	W (270°)	A ₃	RHS
	WNW	B	PARK
	NW (315°)	B	PARK
	NNW	A	PARK

¹PARK: Proceed north on Route 84 to Albany Road. Turn right on Albany Road.
~~Park is on left hand side of the road.~~

²RHS: (Riverdale High School/COE Elementary School). Proceed south on Route 84 to Hillsdale Road. Turn left on Hillsdale Road. Proceed to 256th Street North. Turn left on 256th Street North. The Riverdale High School and COE Elementary School are on the left hand side of the road.

³EVACUATION ROUTE C: This route may be used at the discretion of the Technical Director or Shift Engineer.

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