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July 31, 2000

SVP-00-123

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

Quad Cities Nuclear Power Station, Units 1 and 2  
Facility Operating License Nos. DPR-29 and DPR-30  
NRC Docket Nos. 50-254 and 50-265

Subject: Changes to Emergency Plan Procedures

In accordance with 10 CFR 50, Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," Quad Cities Station is submitting the following Emergency Plan Procedures within 30 days pursuant to Section V, "Implementing Procedures." These changes were implemented on July 7, 2000. Attachment A, "Summary of Changes," contains a brief summary of the changes to the following procedures:

QEP 0150-00, "Radiation Protection Director," Revision 50  
QEP 0150-T02, "Emergency Exposure Limits and Risks," Revision 7

Attachment B, "Revised Procedures," contains the procedures.

Should you have any questions concerning this letter, please contact Mr. C.C. Peterson at (309) 654-2241, extension 3609.

Respectfully,

A handwritten signature in cursive script that reads "George P. Barnes for".

Joel P. Dimmette, Jr.  
Site Vice President  
Quad Cities Nuclear Power Station

Attachments:

Attachment A: Summary of Changes  
Attachment B: Revised Procedures

cc: Regional Administrator – NRC Region III

A045

Attachment A, Summary of Changes  
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Procedure:

QEP 0150-00, "Radiation Protection Director," Revision 50

Description of Change:

Administrative change that does not change the intent.

Procedure:

QEP 0150-T02, "Emergency Exposure Limits and Risks," Revision 7

Description of Change:

Clarify approval authority for GSEP exposure extensions.

Attachment B,  
Revised Procedures

RADIATION PROTECTION DIRECTOR

<u>QEP 0150-00</u> Radiation Protection Director	Rev. 50	07-07-00
<u>QEP 0150-01</u> Radiation Protection Director Implementing Procedure	Rev. 10	05-13-99
<u>QEP 0150-02</u> Onsite Radiation Protection Controls	Rev. 3	02-09-96
<u>QEP 150-3</u> Procedure Deleted (no longer needed)	Rev. 5	12-29-93
<u>QEP 150-4</u> Procedure Deleted (See QEP 175-2)	Rev. 3	03-01-91
<u>QEP 0150-05</u> Accidental Release of Radioactivity Within the Site Boundary	Rev. 3	02-09-96
<u>QEP 0150-S01</u> Radiation Protection Director Alert Checklist	Rev. 18	05-13-99
<u>QEP 0150-S02</u> Radiation Protection Director Site Area Emergency Checklist	Rev. 14	05-13-99
<u>QEP 0150-S03</u> Radiation Protection Director General Emergency Checklist	Rev. 14	05-13-99
<u>QEP 0150-S04</u> Radiation Protection Director Downgrade, Termination, and Recovery	Rev. 5	05-13-99

<u>QEP 0150-S05</u> Area Radiation Monitor System	Rev. 12	02-28-00
<u>QEP 150-S6</u> Thyroid Blocking Agent Issuance Log	Rev. 3	03-31-95
<u>QEP 150-S7</u> Procedure Deleted (See QEP 175-S5)	Rev. 2	03-01-91
<u>QEP 150-T1</u> Procedure Deleted (See QEP 175-T1)	Rev. 3	03-01-91
<u>QEP 0150-T02</u> Emergency Exposure Limits and Risks	Rev. 7	07-07-00
<u>QEP 0150-T03</u> Shift Turnover Briefing	Rev. 5	05-13-99
<u>QEP 0150-T04</u> Radiation Protection (QCRP) Procedures Applicable to Emergency Conditions	Rev. 7	11-18-99
<u>QEP 150-T5</u> Procedure Deleted (no longer needed)	Rev. 5	12-29-93
<u>QEP 150-T6</u> Procedure Deleted (See QEP 175-T3)	Rev. 3	03-01-91
<u>QEP 150-T7</u> Procedure Deleted (See QEP 175-T4)	Rev. 3	03-01-91
<u>QEP 0150-T08</u> Procedure Deleted (See QEP 0150-T09)	Rev. 5	08-09-96
<u>QEP 0150-T09</u> Protective Action Recommendations	Rev. 10	05-22-00
<u>QEP 150-T10</u> Recommended Protective Actions for Gaseous Release Conditions	Rev. 5	04-15-97

EMERGENCY EXPOSURE LIMITS AND RISKS

DAILY LIMIT

300 mRem/day (TEDE)

The daily administrative limit is waived during emergency conditions. No approval documentation is required.

EMERGENCY LIMIT

The dose-limiting recommendations for emergency situations are as follows:

NOTE: Authorization documentation shall be provided on QEP 0165-S05.

DOSE LIMIT (TEDE)* rem	ACTIVITY	CONDITION
5	ALL	PERSONNEL SHOULD BE KEPT WITHIN NORMAL 10CFR20 LIMITS DURING BONAFIDE EMERGENCIES, EXCEPT AS AUTHORIZED FOR ACTIVITIES AS INDICATED BELOW.
10	PROTECTING VALUABLE PROPERTY	ONLY ON A VOLUNTARY BASIS WHEN A LOWER DOSE IS NOT PRACTICAL.
25	LIFE SAVING OR PROTECTION OF LARGE POPULATIONS	ONLY ON A VOLUNTARY BASIS WHEN A LOWER DOSE IS NOT PRACTICAL.
>25	LIFE SAVING OR PROTECTION OF LARGE POPULATIONS	ONLY ON A VOLUNTARY BASIS TO PERSONS FULLY AWARE OF THE RISKS INVOLVED.

\* Dose Equivalent Limit (TEDE in rems). Workers performing services during emergencies should limit dose to the lens of the eye to three times the listed value and doses to any other organ (including skin and body extremities) to ten times the listed value.

APPROVAL

DOSE (TEDE), Rem	RESPONSIBILITY	APPLICABLE PROCEDURE
Less than 5 Rem <sup>(1)</sup>	TSC Radiation Protection Director	QCAP 0630-06
<u>≥</u> 5 Rem <sup>(2)</sup>	<p><b>ERO position in Command &amp; Control:</b></p> <ul style="list-style-type: none"> <li>• (CR) Acting Sta. Director,</li> <li>• (TSC) Station Director, or</li> <li>• (EOF) Manager of Emerg. Operations (MEO)</li> </ul>	CEPIP 2041-01

- (1) Approval for exposure extensions less than 5 Rem TEDE shall be documented in GSEP Log. Per QCAP 0630-06, approval of exposure extensions less than 5 Rem TEDE may be delegated by the TSC Radiation Protection Director to the OSC Supervisor.
- (2) QEP 0165-S05, "Emergency Exposure Limit/Potassium Iodide Issuance Approval Form, shall be completed for each individual authorized to exceed 5 Rem TEDE.

EMERGENCY EXPOSURE RISKS

1. Health effects associated with whole body absorbed doses received within a few hours<sup>a</sup>

Dose in rad (≈ rem DDE)	Percent of population affected by prodromal <sup>b</sup> effects (e.g., reddening of skin, loss of appetite, nausea, fatigue, diarrhea)	Dose in rad (≈ rem DDE)	Early fatalities <sup>c</sup> (percent affected)
50 rad	2 %	140 rad	5 %
100 rad	15 %	200 rad	15 %
150 rad	50 %	300 rad	50 %
200 rad	85 %	400 rad	85 %
250 rad	98 %	460 rad	95 %

2. Approximate cancer risk to average individuals from 25 rem TEDE received promptly

Age at exposure (years)	Risk of premature death (deaths per 1000 persons exposed)	Average years of life lost if premature death occurs (years)
20 to 30	9.1	24
30 to 40	7.2	19
40 to 50	5.3	15
50 to 60	3.5	11

<sup>a</sup> Risks will be lower for extended exposure periods.

<sup>b</sup> Forewarning symptoms of more serious health effects associated with large doses of radiation.

<sup>c</sup> Supportive medical treatment may increase the dose at which these frequencies occur by approximately 50 percent.