

**King, Mike**

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**From:** Records Resource  
**Sent:** Thursday, October 27, 2016 4:09 PM  
**To:** King, Mike  
**Cc:** Mullins, Alicia; Pinckney, David; Conti, Tony; Records Resource  
**Subject:** Assigned to Mike: Records Request 2017-2 has been received.  
**Attachments:** NRC 665S Revision April 2015 Errata into ADAMS.DOC; April 97 NUREG0849 Appendix I.PDF

Mike,  
Please see attached form 665 and the copied document.

Thanks.  
Sunny

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**From:** Form 499 Record Request [mailto:SVCportaladmin@nrc.gov]  
**Sent:** Thursday, October 27, 2016 3:53 PM  
**To:** Records Resource <Records.Resource@nrc.gov>  
**Subject:** Records Request 2017-2 has been received.

Request ID: 2017-2

Submitted by: geoffrey wertz  
Office/Div/Branch: NRR/DPR/PRLB  
Telephone Number: 301-45-0893

Date Submitted: 10/27/2016 12:00:00 AM  
Date Records Required: 11/2/2016 12:00:00 AM

Review Records at T-5 F17: No  
Pick-up Records at T-5 F17: No  
Mail Records To MailStop: OWFN 12D03  
To Be Placed In ADAMS - Form 665 Attached: Yes

Purpose of Request: ;#General Research;#  
List of Records Attached?: Yes  
Total Number of Records Requested: 1

Library or Legacy Accession Number #1: 9704240204  
Author Name #1: NRC  
Addressee Name #1: NRC  
Document Date #1: 4/30/1997 12:00:00 AM  
Microfiche Address #1: 92601:356 - 92601:359  
Additional Information/Comments #1:

Item is in Microform 9704240204, 92601:356 - 92601:359. I need it added to ADAMS. I have attached an NRC665 and a copy of the document. Call me with questions: 415-0893.

Library or Legacy Accession Number #2:  
Author Name #2:



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

April 1997

ERRATA

**Report number:** NUREG-0849

**Report title:** Standard Review Plan for the Review and Evaluation of  
Emergency Plans for Research and Test Reactors

**Date published:** October 1983

**Prepared by:** Division of Reactor Program Management  
Office of Nuclear Reactor Regulation

**Instructions:** Please replace Appendix I with the attached reprinted copy.

DFU20/1

Office of Information Resources Management

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PDR NUREG  
0849 R PDR



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# APPENDIX I EMERGENCY CLASSES

ACTION LEVEL*	PURPOSE
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## Notification of Unusual Events (NOUE)

Actual or projected radiological effluent<sup>†</sup> at the site boundary which is calculated (or measured) to result in either of the following conditions, both of which are based on an exposure of 24 hours or less:

- (1) A deep dose equivalent of 0.15 mSv (15 mrem)  
OR
- (2) A committed effective dose equivalent of 0.15 mSv (15 mrem) based on the following considerations:
  - $100 \text{ EC} \times 24 \text{ hr}^{**} = 2.4 \times 10^3 \text{ EC-hr} = 0.15 \text{ mSv (15 mrem)}$  (for radionuclides other than noble gases)
  - $50 \text{ EC} \times 24 \text{ hr}^{**} = 1.2 \times 10^3 \text{ EC-hr} = 0.15 \text{ mSv (15 mrem)}$  (for noble gases)<sup>†</sup>

Report or observation of a severe natural phenomenon affecting the reactor site

Receipt of bomb threat affecting the reactor facility

Fire within the reactor facility not extinguished within 15 minutes

- Ensure that the first step in any response later found to be necessary has been carried out.
- Bring the operating staff to a state of readiness.
- Provide systematic handling of unusual events information and decisionmaking.

## Alert

Actual or projected radiological effluent<sup>†</sup> at the site boundary which is calculated (or measured) to result in either of the following conditions, both of which are based on an exposure of 24 hours or less:

- (1) A deep dose equivalent of 0.75 mSv (75 mrem)  
OR
- (2) A committed effective dose equivalent of 0.75 mSv (75 mrem) based on the following considerations:
  - $500 \text{ EC} \times 24 \text{ hr}^{**} = 1.2 \times 10^4 \text{ EC-hr} = 0.75 \text{ mSv (75 mrem)}$  (for radionuclides other than noble gases)
  - $250 \text{ EC} \times 24 \text{ hr}^{**} = 6 \times 10^3 \text{ EC-hr} = 0.75 \text{ mSv (75 mrem)}$  (for noble gases)<sup>\*\*</sup>

Actual or projected radiation levels<sup>†</sup> at the site boundary of 0.2 mSv/hr deep dose equivalent [20 mrem/hr] for 1 hour or 1.0 mSv [100 mrem] to the thyroid (committed dose equivalent)

- Ensure that emergency personnel are readily available to respond if the situation becomes more serious or to perform confirmatory radiation monitoring if required.
- Provide current offsite authorities with status information.

## APPENDIX I (cont'd)

ACTION LEVEL*	PURPOSE
<b>Site Area Emergency</b>	
<p>Actual or projected radiological effluent<sup>†</sup> at the site boundary which is calculated (or measured) to result in either of the following conditions, both of which are based on an exposure of 24 hours or less:</p>	<ul style="list-style-type: none"> <li>• Ensure that response centers are manned.</li> <li>• Ensure that monitoring teams are dispatched.</li> <li>• Ensure that personnel required for evacuation of onsite areas are at duty stations.</li> <li>• Provide consultation with offsite authorities.</li> <li>• Provide information for the public through offsite authorities.</li> </ul>
<p>(1) A deep dose equivalent of 3.75 mSv [375 mrem] OR (2) A committed effective dose equivalent of 3.75 mSv [375 mrem] based on the following considerations:</p> <ul style="list-style-type: none"> <li>• <math>2500 \text{ EC} \times 24 \text{ hr}^{**} = 6 \times 10^4 \text{ EC-hr} = 3.75 \text{ mSv [375 mrem]}</math> (for radionuclides other than noble gases)</li> <li>• <math>1250 \text{ EC} \times 24 \text{ hr}^{**} = 3 \times 10^4 \text{ EC-hr} = 3.75 \text{ mSv [375 mrem]}</math> (for noble gases)<sup>††</sup></li> </ul>	
<p>Actual or projected radiation levels<sup>†</sup> at the site boundary of 1.0 mSv/hr [100 mrem/hr] deep dose equivalent for 1 hour or 5.0 mSv [500 mrem] to the thyroid (committed dose equivalent)</p>	
<b>General Emergency</b>	
<p>Sustained actual or projected radiation levels<sup>†</sup> at the site boundary of 5.0 mSv/hr [500 mrem/hr] deep dose equivalent</p>	<ul style="list-style-type: none"> <li>• Initiate predetermined protective actions for the public.</li> <li>• Provide continuous assessment of information from licensee and offsite organization measurements.</li> <li>• Initiate additional measures as indicated by actual or potential releases.</li> <li>• Provide consultation with offsite authorities.</li> <li>• Provide updates for the public through offsite authorities.</li> </ul>
<p>Actual or projected dose<sup>†</sup> at the site boundary in the plume exposure pathway of 10 mSv [1 rem] (total effective dose equivalent) or 50 mSv [5 rem] to the thyroid (committed dose equivalent)</p>	

\* The situation that may lead to an emergency class described in the subsections of Section 4.0 may be referenced as emergency action levels appropriate to the emergency class.

<sup>†</sup> It is expected that licensees will determine the relationship of the EAL dose levels at the site boundary to instrumentation readings and/or safety analyses accident conditions for their specific facilities.

<sup>\*\*</sup> Effluent concentration (EC) as listed in Title 10 of the Code of Federal Regulations, Part 20 (10 CFR Part 20),

"Standards for the Protection Against Radiation," Appendix B, Table 2. If the exposure time is less than 24 hours, the EC multiplier can be increased proportionately, provided that the values of  $2.4 \times 10^3$  and  $1.2 \times 10^3 \text{ EC-hr}$  are used to declare a NOUE; the proportional increase for an alert is 5 and for a site area emergency it is 25.

<sup>††</sup> Table 2 of Appendix B to 10 CFR Part 20 lists the concentration values that are equivalent to the radionuclide concentrations which, if inhaled or ingested continuously over the course of a year, would produce a total effective dose equivalent of 0.5 mSv [50 mrem]. However, for noble gases where the submersion (external dose) is limiting, the concentration values would produce a total effective dose equivalent of 1 mSv [100 mrem].