Appendix 4

UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION NOTICE OF ADDENDUM TO REVISED EMERGENCY ACTION PLAN GUIDELINES Issued February 22, 1988

(Issued September 9, 1988)

Pursuant to the authority in Section 12.22(a) (1) of the Commission's Regulations, the Director, Office of Hydropower Licensing, revised the guidelines for the preparation of emergency action plans (EAP) on February 22, 1988. An addendum has been prepared to clarify and enhance sections of the guidelines and to correct typographical errors in the guidelines.

Copies of the addendum are available from the Director, Division of Dam Safety and Inspections or the Regional Director.

UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

ADDENDUM TO REVISED EMERGENCY ACTION PLAN GUIDELINES Issued February 22, 1988

(Issued September 9, 1988)

The purpose of this Addendum is to clarify and to make typographical corrections to the EAP Guidelines.

<u>Page 1, Item 1, First Paragraph, lines 3-4</u>. The definition of emergency is revised to read as follows: "An emergency is defined as an impending or actual sudden release of water caused by an accident to, or failure of, a dam or other water retaining structure."

<u>Page 1, Item 1, Second Paragraph, line 1</u>. "Applicant" should be changed to "applicant for license". (Throughout guidelines all references to applicant refer to applicant for license).

<u>Page 1. Bottom of Page</u>. The following sentence is added as a footnote to the bottom of page 1: "Throughout the guidelines, the work "dam" henceforth refers to a dam or other water retaining structure".

<u>Page 2, Item 3</u>. This item states that a need exists for a periodic reprinting and redistribution of the complete EAP. The licensee/exemptee/applicant for license has the option to place Appendix B (page 17-19) of the guidelines (Summary of Study and Analyses to Determine Extent of Inundation) in a separate volume which only has to be provided to the Commission. This volume would need to be reprinted only when analyses are redone. <u>All other sections</u> of the EAP must be reprinted at least every five years.

<u>Page 2-3, Item 4, Paragraph a through i</u>. The referenced item number in each of these paragraphs is deleted and replaced with the word "see".

<u>Page 3, Item 4, Paragraphs e and f</u>. It is not expected that new dam break analyses be performed unless the current analyses are inadequate. However, inundation maps must comply with the criteria in Appendix C (page 19-21) of the guidelines.

<u>Page 3, Item 4, Paragraph C and Page 4, Item 5, line 13</u>. The phrase "three-ring binder" is revised to read "loose-leaf binder". All updated pages must contain pre-punched holes so that updates can easily be inserted into the binder.

<u>Page 5</u>. The verification form is to be completed only by the licensee, exemptee, or applicant for license that prepared the plan, not by agencies that receive copies of the plan.

Page 9, First Subparagraph, lines 1-2. The first sentence is revised to read: "Describe specific actions

operators are to take after completing all of their notification responsibilities.

<u>Page 9, Second Subparagraph, lines 4-8</u>. The two sentences beginning with "Advice may be needed..." and "For example, a person may..." are deleted.

<u>Page 9, Third Subparagraph, lines 2-3</u>. In the second sentence, the phrase "such as where failure is imminent or has occurred" is deleted and the phrase "may have to" is revised to read "should".

<u>Page 9, Third Subparagraph, lines 5-8</u>. The last two sentences are reworded to read: "Throughout the United States, the National Weather Service and/or other agencies have the general responsibility to issue flood warnings. Therefore, it would be beneficial to include the appropriate agency having this responsibility on the notification list so that its facilities could enhance warnings being issued."

<u>Page 11, Item IV</u>. The heading "Mitigation Activities" is changed to "Preventive Actions". This same heading change is also appropriate for Page 6, Item IV. Page 6 is the contents for the plan.

<u>Page 12, Item IV, Paragraph B, Second Subparagraph</u>. The words in line 1, "must install" in the first sentence are changed to read "should consider installing". Other alternatives, in lieu of remote surveillance systems, will be acceptable provided they can be demonstrated to be workable in the event of an emergency ensuring the timely implementation of the EAP. In the second sentence, line 5, the words "must include" are changed to "should consider including". In the third sentence, line 11, the words "must be adjustable" are changed to "should be adjustable".

Page 12, Third Subparagraph, Line 1. The word "required" is revised to read "recommended".

<u>Page 13, Third Subparagraph, line 3</u>. The second sentence is revised to read: "In addition to having instrumentation, it may be necessary to send an observer to the dam.

<u>Page 13, Fourth Subparagraph</u>. This sentence is revised to read: "If the project is continuously observed, and the action discussed in Item IV, Paragraph B is not applicable, so state."

Page 14, Paragraph E, Second Subparagraph. The second sentence "Remember that you direct...." is deleted.

<u>Page 14, Paragraph F, Item 1</u>. The words "of dams or dikes" are added to the end of the sentence "Stockpiling of materials..."

<u>Page 14, Paragraph F, Item 1, First and Second Subparagraphs</u>. It is suggested that business and nonbusiness telephone numbers of construction equipment operators and sources of construction equipment and emergency supplies be provided.

<u>Page 14, Paragraph F, Item 1, Third Subparagraph.</u> The subparagraph is revised to read: "Describe how the equipment operator is contacted."

Page 14, Item 2, First Subparagraph. All references to the NWS are followed by the words: "or other

appropriate agency."

<u>Page 16-17, Appendix B</u>. New dam break analyses are not required unless the present analyses are inadequate. Usually, an assumed failure during "sunny-day" conditions results in the worst-case condition for EAP planning purposes since a failure during flooding conditions, when people are "on-alert", will usually require no changes to the notification flowchart. When it is not obvious whether the same notification list would be appropriate for a failure during major flood conditions, a sensitivity analysis should be performed. The sensitivity analysis should vary key assumptions to identify their effect on various failure scenarios in order to select the most appropriate failure mode for developing the EAP. The recommendation on Page 18, Item 4, lines 4-7 to perform sensitivity analyses is included for two primary reasons:

- 1. A sensitivity analysis should be performed when it is not obvious that failure during a "sunny-day" condition would constitute the worst-case condition. For example, situations occur where failure during a "sunny-day" condition will not result in a hazard to downstream life and property. In this situation, a failure during flood flow conditions should be investigated to determine if notification procedures are necessary in the event of an emergency. In addition, if a failure during a flood condition will result in a different notification list or priority of notification from that considered appropriate for a "sunny-day" failure, the EAP should be modified accordingly. This condition often occurs in sparsely populated areas. A sensitivity analysis is necessary in this case to ensure that all structures that could realistically be impacted are included on the inundation map and all necessary local officials are included on the inundation map and all necessary local officials are included in the notification procedures. However, as indicated above, in many cases only one failure scenario, whether it be a "sunny-day" failure or a failure during a flood condition, requires analysis since the notification list and the priority for notification usually remains the same regardless of the antecedent condition investigated. In all cases, practical considerations should govern in conducting dambreak analyses since the ultimate goal is to develop the best workable EAP.
- 2. A sensitivity analysis is also necessary when a licensee/exemptee/applicant for license desires to demonstrate that a failure under any foreseeable failure scenario would not constitute a hazard to life and/or property, and an exemption from EAP requirements may be justified. In requesting such an exemption, a supporting sensitivity analysis is required.

<u>Page 18, Item 4, First Sentence</u>. This sentence is revised to read: "The best available maps for evacuation planning should be used. Topographic or orthographic mapping or street maps may prove suitable".

<u>Page 19, Appendix D, Item 1, Second Subparagraph</u>. The second sentence is revised to read: "A list of the locations of all functional copies of the notification flow chart and the EAP should be provided in this section."

Page 20, Item 3, First Subparagraph, line 1-2. The words "prior to December 31" are deleted from the

first sentence. The test of the EAP can be performed anytime during the calendar year.

Page 20, Item 4, Second Subparagraph, line 2. The word "simulated" is deleted form this paragraph.

Page 20, Line 5. After the words "...current EAP" insert the phrase "(Including inundation maps)".

<u>Page 21, Appendix E, Item 1, line 1</u>. Insert after the word "Provide" the words "the most recent". Only the most recent documentation should be maintained in the EAP. Copies of the actual documentation sheets should be submitted to the Commission. All other copies of the EAP need only contain general statements pertaining to the documentation (e.g. a list of agencies involved, a statement that up-to-date documentation is on file, a statement that necessary coordination meetings have been held, etc.)

<u>Page 24 -25</u>. The "m" in the word "Manning's" should be capitalized wherever it appears in the test of the Guidelines.

Page 28, EAP at a Government Dam. All references in this paragraph to Exemptee are deleted.