

January 28, 2014

Mr. Vito Nuccio  
Reactor Administrator  
Department of the Interior  
U.S. Geological Survey  
PO Box 25046 MS 975  
Denver Federal Center  
Denver, CO 80225-0046

SUBJECT: U.S. GEOLOGICAL SURVEY – REQUEST FOR ADDITIONAL INFORMATION  
RE: REVIEW OF THE EMERGENCY PLAN FOR THE LICENSE RENEWAL  
FOR THE GEOLOGICAL SURVEY TRIGA REACTOR (TAC NO. ME1593)

Dear Mr. Nuccio:

The U.S. Nuclear Regulatory Commission (NRC) is continuing its review of the U.S. Geological Survey (USGS, the licensee) application dated January 5, 2009 (a redacted version of the safety analysis report provided with the application is available on the NRC's public Web site at [www.nrc.gov](http://www.nrc.gov) under Agencywide Documents Access and Management System Accession No. ML092120136), as supplemented, for the renewal of Facility Operating License No. R-113 for the USGS TRIGA Reactor (GSTR). Your license renewal application letter indicated that there were no changes needed to your current emergency plan. However, the NRC staff review of your license renewal application includes a review of your current emergency plan, titled "Emergency Plan for the U.S. Geological Survey TRIGA Reactor Facility," Revision 13, dated October 2013, submitted to the NRC via letter dated December 6, 2013. Our review identified one question, which is provided in the enclosed request for additional information (RAI). Please provide your response to the enclosed RAI within 30 days from the date of this letter

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.30(b), you must execute your response in a signed original document under oath or affirmation. Your response must be submitted in accordance with 10 CFR 50.4, "Written communications." Information included in your response that is considered sensitive, or proprietary, that you seek to have withheld from the public, must be marked in accordance with 10 CFR 2.390, "Public inspections, exemptions, requests for withholding." Any information related to security should be submitted in accordance with 10 CFR 73.21, "Protection of Safeguards Information: Performance requirements." Following receipt of the additional information, we will continue our evaluation of your license renewal request.

V. Nuccio

- 2 -

If you have any questions about this review, or if you need additional time to respond to this request; please contact me by telephone at 301-415-0893 or by electronic mail at [Geoffrey.Wertz@nrc.gov](mailto:Geoffrey.Wertz@nrc.gov).

Sincerely,

***/RA Alexander Adams for/***

Geoffrey A. Wertz, Project Manager  
Research and Test Reactors Licensing Branch  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

Docket No. 50-274

Enclosure:  
RAI

cc: See next page

U.S. Geological Survey TRIGA Reactor  
cc:

Docket No. 50-274

Environmental Services Manager  
480 S. Allison Pkwy.  
Lakewood, CO 80226

State of Colorado  
Radiation Management Program  
HMWM-RM-B2  
4300 Cherry Creek Drive South  
Denver, CO 80246

Mr. Timothy DeBey  
Reactor Director  
U.S. Geological Survey  
Box 25046 - Mail Stop 424  
Denver Federal Center  
Denver, CO 80225

Test, Research, and Training  
Reactor Newsletter  
Universities of Florida  
202 Nuclear Sciences Center  
Gainesville, FL 32611

V. Nuccio

- 2 -

If you have any questions about this review or if you need additional time to respond to this request; please contact me by telephone at 301-415-0893 or by electronic mail at [Geoffrey.Wertz@nrc.gov](mailto:Geoffrey.Wertz@nrc.gov).

Sincerely,

*/RA Alexander Adams for/*

Geoffrey A. Wertz, Project Manager  
Research and Test Reactors Licensing Branch  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

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Enclosure:  
RAI

cc: See next page

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MWasem, NSIR

PBlechman, NRR

GShoenebeck, NRR

**ADAMS Accession No.: ML14023A795; \*concurrent via e-mail**

**NRR-106**

OFFICE	DPR/PRLB/PM*	DPR/PRLB/LA	NSIR/DPR/DDEP/ORLOB	DPR/PRLB/BC	DPR/PRLB/PM
NAME	GWertz	PBlechman	JAnderson	AAdams	(AAdams for) GWertz
DATE	01/23/2014	01/27/2014	01/28/2014	01/28/2014	01/28/2014

OFFICIAL RECORD COPY

**OFFICE OF NUCLEAR REACTOR REGULATION**  
**REQUEST FOR ADDITIONAL INFORMATION**  
**REGARDING REVIEW FOR THE EMERGENCY PLAN**  
**FOR THE RENEWAL OF THE FACILITY OPERATING LICENSE**  
**FOR THE U.S. GEOLOGICAL SURVEY TRIGA REACTOR**  
**LICENSE NO. R-113; DOCKET NO. 50-274**

The U.S. Nuclear Regulatory Commission (NRC) is continuing its review of the U.S. Geological Survey (USGS, the licensee) application dated January 5, 2009 (a redacted version of the safety analysis report provided with the application is available on the NRC's public Web site at [www.nrc.gov](http://www.nrc.gov) under Agencywide Documents Access and Management System Accession No. ML092120136), as supplemented, for the renewal of Facility Operating License No. R-113 for the USGS TRIGA Reactor (GSTR). The NRC staff review of your current emergency plan identified one question provided below. Please provide your response within 30 days from the date of this letter.

1. In the GSTR Emergency Plan, Section 4.2.1.5, on page 9, the sentence in Revision 12 states, "Continuous air monitor reading exceeds 10K [1000] cpm [counts per minute] above background," while Revision 13 states, "Continuous air monitor reading exceeds 10K cpm above background from radionuclides being released from the reactor." The licensee's letter dated December 6, 2013, describing the changes made in Revision 13 of the emergency plan, states that this change was made "...to prevent a radionuclide release from a non-USGS reactor source from initiating a reactor emergency. The reactor building has other laboratories in it that are doing research with radionuclides, but they are not a part of the reactor operations. It would not be appropriate to declare a reactor emergency when a radionuclide release occurs from a different facility."

Explain how the responsible GSTR staff member would differentiate a release from the reactor versus a release from other laboratories when using this criterion to determine an Unusual Event emergency declaration. Are there other specific reactor or facility parameters that would exist prior to, or simultaneously with, the release, to differentiate the source? Provide detailed information in your response.

Enclosure