

June 17, 2010

Melinda P. Krahenbuhl, PhD
Facility Director
Dow Chemical TRIGA Research Reactor
Dow Chemical Company
Building 1602
Midland, MI 48674

SUBJECT: DOW CHEMICAL COMPANY — REQUEST FOR ADDITIONAL INFORMATION
REGARDING LICENSE RENEWAL OF THE TRIGA RESEARCH REACTOR
(TAC NO. ME1595)

Dear Dr. Krahenbuhl:

The U.S. Nuclear Regulatory Commission (NRC) is continuing its review of your application for the renewal of Facility Operating License No. R-108 for the Dow Chemical TRIGA Research Reactor (DTRR), dated April 1, 2009, a redacted version of the safety analysis report is available on the NRC's public Web site at www.nrc.gov (Agencywide Documents Access and Management System Accession No. ML0921504430).

During our review questions have arisen that we require additional information and clarification. Please provide responses to the enclosed request for additional information within 60 days of the date of this letter. In accordance with Title 10 of the *Code of Federal Regulations* Section 50.30(b), your response must be executed in a signed original document under oath or affirmation.

Should you have any questions or if you require additional time to respond to this request, please contact me by telephone at 301-415-1127 or by electronic mail at Alexander.Adams@nrc.gov.

Sincerely,

/RA/

Alexander Adams, Senior Project Manager
Research and Test Reactors Licensing Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-264

Enclosure: As stated

cc w/encl: See next page

Dow Chemical Company

Docket No. 50-264

cc:

Office of the Mayor
333 West Ellsworth
Midland, MI 48640

Office of the Governor
Room 1 - Capitol Building
Lansing, MI 48913

Alex Pollock
Chair, Radiation Safety Committee
2030/410 Dow Center
Midland, MI 48674

Dr. Kevin Hool, Level 1 Manager,
The Dow Chemical Company
1897 Building
Midland, MI 48667

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

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OFFICE OF NUCLEAR REACTOR REGULATION

REQUEST FOR ADDITIONAL INFORMATION

REGARDING FINANCIAL QUALIFICATIONS FOR THE RENEWED LICENSE FOR

THE DOW CHEMICAL COMPANY TRIGA RESEARCH REACTOR

LICENSE NO. R-108; DOCKET NO. 50-264

As required by Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.33(f)(2):

“[a]pplicants to renew or extend the term of an operating license for a nonpower reactor shall include the financial information that is required in an application for an initial license.”

To comply with this requirement, please provide the following updated and supplemental information to the April 1, 2009, Dow Chemical Company (Dow) application for renewed license for the Dow TRIGA Research Reactor (DTRR).

1. Pursuant to 10 CFR 50.33(d), “Contents of applications; general information,” certain information is required by the applicant, Dow, as applicable. To comply with the regulation, update the application to include the following additional information:
 - (a) The names, addresses and citizenship of Dow’s directors and principal officers.
 - (b) A statement as to whether Dow is owned, controlled, or dominated by an alien, a foreign corporation, or foreign government, and if so give details.
2. The Nuclear Regulatory Commission (NRC) staff will analyze the financial statements for the current year, which are required by 10 CFR 50.71(b), to determine if Dow is financially qualified to operate the DTRR. Since Dow’s financial statements were not included with the application, please provide a copy of the latest annual financial statements for the NRC staff’s review.
3. Pursuant to 10 CFR 50.33(f)(2), “[t]he applicant shall submit estimates for total annual operating costs for each of the first five years of operations of the facility.” While the application states that a “[s]worn statement...certifying Dow’s funding source for operating...funds,” was included, the NRC staff needs the following additional information to complete its review:
 - (a) Projected operating costs of the DTRR for each of the fiscal years (FYs) 2012 through FY2016 (the first five years of operation after the projected license renewal).
 - (b) Dow’s source(s) of funding to cover the operating costs for the above fiscal years, FY2012 through FY2016.

ENCLOSURE

4. Pursuant to 10 CFR 50.75(d)(1), “[e]ach non-power reactor applicant for or holder of an operating license for a production or utilization facility shall submit a decommissioning report as required by §50.33(k) of this part.

Since the application does not clearly provide certain details regarding the eventual decommissioning of the DTRR, the NRC staff requests that Dow complete and/or update the 2009 submittal by providing the following additional information:

- (a) A current decommissioning cost estimate (2011 dollars) for the DTRR to meet the NRC’s radiological release criteria for decommissioning the facility for unrestricted use, pursuant to 10 CFR 50.75(d)(2)(i). Accordingly, describe the basis on how the decommissioning cost estimate was developed.
 - (b) A summary of total decommissioning costs broken down into the categories of labor, waste disposal, other items (such as energy, equipment, and supplies) in current dollars, and a contingency factor (normally 25 percent).
 - (c) A statement of the decommissioning method to be used (i.e., DECON).
 - (d) A statement of whether decommissioning funding assurance will continue to be provided by the Surety Method, as allowed by 10 CFR 50.75(e)(1)(iii). Assuming the Surety Method will continue to be used to provide decommissioning funding assurance, please state how Dow plans to adjust its Surety Bond periodically over the life of the facility to meet changes in the decommissioning cost estimate.
 - (e) A description of the means of adjusting the cost estimate and associated funding level periodically over the life of the facility, pursuant to 10 CFR 50.75(d)(2)(iii). Since the application does not provide this information, please update the application to include a full description of the method to be used as the means of adjusting the cost estimate periodically over the life of the facility (e.g., Consumer Price Indices, independent study, etc.). Also, provide a detailed numerical example updating the cost estimate to 2011 dollars.
5. Section 103d of the Atomic Energy Act prohibits the NRC from issuing a license to:
- . . . an alien or any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation or a foreign government.

Section 50.38 of 10 CFR is the regulatory provision that implements this statutory prohibition. The NRC staff notes that six out of 26 of Dow’s current Directors and Officers, as stated within the April 1, 2009, submittal are foreign citizens (e.g., Director and President, Chief Executive Officer and Chairman). In order for the NRC staff to complete its review of the application, please provide the following additional information:

- (a) Provide information in the form of a negation action plan that will describe how Dow will segregate decisions relating to safety, security, etc. from foreign Directors, Officers, investors, etc. Also, please state if Dow intends to establish a Nuclear Advisory Group, and if so, please provide details concerning this group.
- (b) State whether the foreign Directors and Officers will have any special veto or approval rights, quorums, with respect to the DTRR.