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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
2443 Warrenville Road, Suite 210  
Lisle, Illinois 60532-4352

TELEFAX TRANSMITTAL

DATE: 12/10/2009 NUMBER OF PAGES: 6  
(including this page)

SEND TO: Jim Glover, RSO

LOCATION: Occidental Chemical Corporation

FAX NUMBER: 231 - 845 - 4246  **VERIFY BY CALLING SENDER**

FROM: Jose Macatangay *JM*  
(SENDER)

TELEPHONE NUMBER: 630 - 829 - 9892 FAX NUMBER: 630 - 515 - 1078

If you do not receive the complete fax transmittal, please contact the sender as soon as possible at the telephone number provided above.

MESSAGE



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MESSAGE

**NOTICE**

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential, or exempt from disclosure under applicable law. If the reader of this message is not the intended recipient or the employee responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately by telephone and return the original to the above address, by U.S. Mail. Thank you.

**JOSE D. MACATANGAY  
MATERIALS LICENSING BRANCH  
UNITED STATES NUCLEAR REGULATORY COMMISSION**

REGION III  
2443 WARRENVILLE ROAD STE 210  
LISLE, ILLINOIS 60532-4352  
OFFICE: (630)-829-9841 FAX: (630) 515-1078

**CONVERSATION RECORD**

|TIME

|DATE

**ACTUALLY FAXED?**

Yes.

12/10/2009

NAME OF PERSON(S) CONTACTED

Jim Glover, RSO

ORGANIZATION

Occidental Chemical Corporation

TELEPHONE NO.

O: 231-845-4474

F: 231-845-4246

SUBJECT

License No.: 21-17772-01

Control No.: 318583

SUMMARY

We have reviewed your amendment request dated October 15, 2009, and find that we need additional information as follows:

1. Please submit your non-routine maintenance operational procedures referencing the attached Appendix N of NUREG 1556, Vol. 4. Please ensure you address at the least the following: proof of training for personnel performing the non-routine operations, statements that manufacturer's or distributor's instructions and recommendations are followed, non-manufacturer/non-distributor components or parts other than those specified or recommended by manufacturer or distributor are evaluated to ensure that they do not degrade the engineering safety analysis performed and accepted as part of the device registration, etc.

We will be unable to continue processing your request until we receive this information. In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). The NRC's document system is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

ACTION REQUIRED

Please submit a **signed written response** within 7-days or contact me to arrange an alternate response date. Be sure to reference control number 318583 to facilitate correct processing of your response.

If we do not receive a written response within 7-days, please note that we may void this request in order to enable you to prepare a quality response without time constraints. This would be done without prejudice to the resubmission of your request at a later date. Upon receipt of your response we will resume our review. Address your written response to my attention at the above address.

Upon receipt of your response we will resume our review.

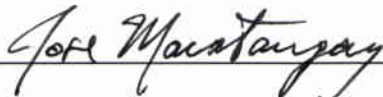
**PLEASE DIRECT ANY QUESTIONS YOU MAY HAVE TO ME AT (630) 829-9892.**

NAME OF PERSON DOCUMENTING CONVERSATION

SIGNATURE

DATE

Jose Macatangay



December 10, 2009



## **Appendix N**

# **Information Needed to Support Applicant's Request to Perform Non-Routine Operations**

## Information Needed to Support Applicant's Request to Perform Non-Routine Operations

Applicants should review the section in this document on "Maintenance," which discusses, in general, licensee responsibilities before any maintenance or repair is performed.

Non-routine operations include installation of the gauge, initial radiation survey, repair or maintenance involving or potentially affecting components, including electronics, related to the radiological safety of the gauge (e.g., the source, source holder, source drive mechanism, shutter, shutter control, or shielding), gauge relocation, replacement, and disposal of sealed sources, alignment, removal of a gauge from service, and any other activities during which personnel could receive radiation doses exceeding NRC limits. See Figure 8.9.

Any non-manufacturer/non-distributor supplied replacement components or parts, or the use of materials (e.g., lubricants) other than those specified or recommended by the manufacturer or distributor need to be evaluated to ensure that they do not degrade the engineering safety analysis performed and accepted as part of the device registration. Licensees also need to ensure that, after maintenance or repair is completed, the gauge is tested and functions as designed, before the unit is returned to routine use.

If non-routine operations are not performed properly with attention to good radiation safety principles, the gauge may not operate as designed and personnel performing these tasks could receive radiation doses exceeding NRC limits. Radionuclides and activities in fixed gauges vary widely. For illustrative purposes in less than one minute, an unshielded cesium-137 source with an activity of 100 millicuries can deliver 0.05 Sv (5 rems) to a worker's hands or fingers (i.e., extremities), assuming the extremities are 1 centimeter from the source. However, gauges can contain sources of even higher activities with correspondingly higher dose rates. The threshold for extremity monitoring is 0.05 Sv (5 rems) per year.

Thus, applicants wishing to perform non-routine operations must use personnel with special training and follow appropriate procedures consistent with the manufacturer's or distributor's instructions and recommendations that address radiation safety concerns (e.g., use of radiation survey meter, shielded container for the source, and personnel dosimetry (if required)). Accordingly, provide the following information:

Describe the types of work, maintenance, cleaning, repair that involve:

- Installation, relocation, or alignment of the gauge
- Components, including electronics, related to the radiological safety of the gauge (e.g., the source, source holder, source drive mechanism, shutter, shutter control, or shielding)
- Replacement and disposal of sealed sources
- Removal of a gauge from service

## APPENDIX N

- A potential for any portion of the body to come into contact with the primary radiation beam; or
- Any other activity during which personnel could receive radiation doses exceeding NRC limits.

The principal reason for obtaining this information is to assist in the evaluation of the qualifications of individuals who will conduct the work and the radiation safety procedures they will follow.

A licensee may initially mount a gauge, without specific NRC or Agreement State authorization, if the gauge's SSD Certificate explicitly permits mounting of gauges by users and under the following conditions:

- The gauge must be mounted according to written instructions provided by the manufacturer or distributor;
- The gauge must be mounted in a location compatible with the "Conditions of Normal Use" and "Limitations and/or Other Considerations of Use" in the certificate of registration issued by NRC or an Agreement State;
- The on-off mechanism (shutter) must be locked in the off position, if applicable, or the source must be otherwise fully shielded;
- The gauge must be received in good condition (package was not damaged); and
- The gauge must not require any modification to fit in the proposed location.

Mounting does not include electrical connection, activation, or operation of the gauge. The source must remain fully shielded and the gauge may not be used until it is installed and made operational by a person specifically licensed by the Commission or an Agreement State to perform such operations.

- Identify who will perform non-routine operations and their training and experience. Acceptable training would include manufacturer's or distributor's courses for non-routine operations or equivalent.
- Submit procedures for non-routine operations. These procedures should ensure the following:
  - doses to personnel and members of the public are within regulatory limits and ALARA (e.g., use of shielded containers or shielding);
  - the source is secured against unauthorized removal or access or under constant surveillance;
  - appropriate labels and signs are used;
  - manufacturer's or distributor's instructions and recommendations are followed;
  - any non-manufacturer/non-distributor supplied replacement components or parts, or the use of materials (e.g., lubricants) other than those specified or recommended by the

manufacturer or distributor are evaluated to ensure that they do not degrade the engineering safety analysis performed and accepted as part of the device registration; and

- before being returned to routine use, the gauge is tested to verify that it functions as designed and source integrity is not compromised.
- Confirm that individuals performing non-routine operations on gauges will wear both whole body and extremity monitoring devices or perform a prospective evaluation demonstrating that unmonitored individuals performing non-routine operations are not likely to receive, in one year, a radiation dose in excess of 10% of the allowable limits.
  - Verify possession of at least one survey instrument that meets the criteria in “Radiation Safety Program - Instruments in NUREG-1556, Vol. 4, ‘Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Fixed Gauges Licenses,’ dated October 1998.”
  - Describe steps to be taken to ensure that radiation levels in areas where non-routine operations will take place do not exceed 10 CFR 20.1301 limits. For example, applicants can do the following:
    - commit to performing surveys with a survey instrument (as described above);
    - specify where and when surveys will be conducted during non-routine operations; and
    - commit to maintaining, for 3 years from the date of the survey, records of the survey (e.g., who performed the survey, date of the survey, instrument used, measured radiation levels correlated to location of those measurements), as required by 10 CFR 20.2103.