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Location	Lisle, Illinois	Date	July 13, 2016
From	Jacob T. Bilello	Time	11:00 AM
Subject	License No. 24-18839-02		

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Ms. Shaffer,

Attached is the resubmittal of Attachments #16, #17, and #18 for the renewal of License No. 24-18839-02. If you have any comments or questions, please contact me.

The original of this fax *will* *will not* be mailed.

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SHANNON & WILSON, INC.**ATTACHMENT #16****NRC Form 313 Item 10 – Radiation Safety Program (Continued)**

The Radiation Safety Officer (RSO) is responsible for implementing the radiation safety program and ensuring that radiation safety activities are performed in accordance with approved procedures and regulatory requirements. The RSO's duties and responsibilities include:

1. Acting as the point of contact for communication with the Nuclear Regulatory Commission (NRC), the Illinois Emergency Management Agency (IEMA), and any other Agreement States as applicable, including:
 - a. Maintaining and reviewing copies of NRC, IEMA and other applicable regulations.
 - b. Revising operating procedures, as needed, to comply with new or amended regulations.
 - c. Obtaining license amendments whenever there are changes to licensed activities, procedures, responsible individuals, or commitments as provided in the license.
2. Notifying the proper authorities including the NRC in case of accident, damage to gauges, fire, or theft.
3. Investigating all incidents, accidents, and personnel exposure to radiation in excess of ALARA limits and reporting to the NRC and other authorities, as appropriate, within required time limits.
4. Completing audits at least annually to ensure that:
 - a. The licensee is abiding by NRC and DOT regulations and the terms and conditions of the license;
 - b. The licensee's radiation protection program and implementation achieve occupational doses and doses to members of the public that are ALARA (as low as reasonably achievable);
 - c. The licensee maintains all records (for at least 3 years) with all information sufficient to comply with NRC requirements;
 - d. Results of audits, identification of deficiencies, and recommendations for change are documented, provided to management for review; and
 - e. Prompt action is taken to correct deficiencies.
5. Ensuring that licensed material possessed by the licensee is limited to the kinds and quantities of byproduct material listed on the license and that the quantities of source materials do not exceed the limits that would require financial assurance for decommissioning as noted in 10 CFR 30.35 (or applicable Agreement State regulation).

SHANNON & WILSON, INC.**ATTACHMENT #17****NRC Form 313 Item 10 – Radiation Safety Program (Continued)**

6. Having gauges leak tested and records maintained for at least 3 years.
 - a. Testing to be provided at intervals not exceeding 6 months.
 - b. Testing to be provided if the gauge integrity has become suspect.
 - c. Testing to be provided by a firm licensed to provide testing services.
 - d. Testing to be sensitive to 0.005 microcurie (185 Bq) on the wipe sample.
 - e. Quarantining any gauge from service that tests higher than 0.005 microcurie.
 - f. Contacting the manufacturer (e.g. Troxler) for instructions on handling the quarantined gauge.

7. Preparing an inventory at intervals not to exceed 6 months, to account for all sealed sources and devices received and possessed under the license. Inventory records will:
 - a. Be maintained for a period of three years;
 - b. Include: radionuclide and activity (millicuries) of each sealed source;
 - c. Include the manufacturer name, model number and serial number of each device;
 - d. Include the location of each device; and
 - e. Include the date of inventory.

8. Determining that gauges are properly secured against unauthorized removal when gauges are not in use and transported in properly secured and labeled cases in accordance with all applicable Department of Transportation (DOT) requirements.

9. Managing gauge maintenance
 - a. Maintenance that includes removal of the source from the gauge shall only be done by the manufacturer or a licensed maintenance facility.
 - b. Maintenance that includes REMOVAL OF THE SOURCE SHALL NEVER BE DONE BY SHANNON & WILSON EMPLOYEES.
 - c. Routine maintenance and periodic cleaning NOT INVOLVING THE REMOVAL OF THE SOURCE can be performed in accordance with the manufacturer's instructions, by authorized employees. Radiation monitoring devices must be worn during maintenance and cleaning.

10. Ensuring that licensed material is disposed of properly by transfer to either another licensee specifically licensed to possess the radioactive material (obtain and file copy of license), to the manufacturer, or to a licensed disposal facility; and that records relevant to decommissioning are maintained and include information related to spills, leaking sources or unusual incidents that involve the spread of contamination.

SHANNON & WILSON, INC.**ATTACHMENT #18****NRC Form 313 Item 10 – Radiation Safety Program (Continued)**

11. Ensuring that a radiation survey meter having a range from 0.01 to 100 mR/hr is:
 - a. Available to perform a survey following an incident where there may have been damage to a gauge;
 - b. Calibrated at intervals not to exceed 1 year;
 - c. Checked for proper response; and
 - d. Replaced if an improper response is noted.

12. Ensuring that individuals using gauges:
 - a. Are specifically authorized to do so by the RSO;
 - b. Are properly trained;
 - c. Receive refresher training at least annually to include:
 - i. participation in a "practice exercise" of emergency procedures,
 - ii. operating and emergency procedures,
 - iii. Department of Transportation (DOT) requirements (49 CFR 172, Part H), and
 - iv. deficiencies and corrective actions identified during audits and inspections.
 - d. Receive a copy of the Standard Operating Procedures and the Emergency Procedures before operating any gauge;
 - e. Are advised that a copy of the Standard Operating Procedures and the Emergency Procedures must be maintained at each jobsite (within the transport case is sufficient)
 - f. Are advised that testing requiring the insertion of the density source rod to a depth greater than 3 feet is prohibited.

13. Ensuring that personal monitoring devices, either a thermoluminescent dosimeter (TLD) or film badge are:
 - a. Worn by gauge users;
 - b. Furnished by a supplier accredited by the National Voluntary Laboratory Accreditation Program as required by 10 CFR 20.1501; and
 - c. Exchanged at monthly intervals or quarterly intervals (depending on type).