

**SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION**

1. LICENSEE/LOCATION INSPECTED:

Thermal Engineering International Utility Products Division  
2702 W. 9th Street  
Joplin, MO

REPORT NUMBER(S) 2019001

2. NRC/REGIONAL OFFICE

Region III  
U. S. Nuclear Regulatory Commission  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352

3. DOCKET NUMBER(S)

030-17798

4. LICENSE NUMBER(S)

24-19500-01

5. DATE(S) OF INSPECTION

7/9-18/2019

**LICENSEE:**

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

- ☐ 1. Based on the inspection findings, no violations were identified.
- ☐ 2. Previous violation(s) closed.
- ☐ 3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, to exercise discretion, were satisfied.

Non-cited violation(s) were discussed involving the following requirement(s):

- ☒ 4. During this inspection, certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited in accordance with NRC Enforcement Policy. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.

(Violations and Corrective Actions)

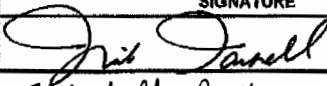
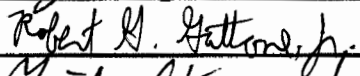
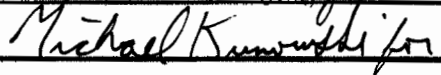
Title 10 of the Code of Federal Regulations Section 20.1101(c) states, "The licensee shall periodically (at least annually) review the radiation protection program content and implementation."

Contrary to the above, the licensee did not conduct a review of the radiation protection program content and implementation for Calendar Year 2017 until July 10, 2019, a time period greater than annually.

As corrective actions to prevent a similar violation, the licensee entered a calendar reminder that shall not be closed out until the review of the radiation protection program content and implementation is completed. With the reminder left open, there is a constant reminder that the radiation protection program content and implementation has not been completed.

**Statement of Corrective Actions**

I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

TITLE	PRINTED NAME	SIGNATURE	DATE
LICENSEE'S REPRESENTATIVE	Nick Darnell		7/22/2019
NRC INSPECTOR	Robert G. Gattone, Jr.		7/22/2019
BRANCH CHIEF	Aaron T. McCraw		7/23/2019

**Docket File Information**

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3. DOCKET NUMBER(S)  030-17798	4. LICENSE NUMBER(S)  24-19500-01	5. DATE(S) OF INSPECTION  7/9-18/2019	
6. INSPECTION PROCEDURES USED  87121 & 87137		7. INSPECTION FOCUS AREAS  87121: 03.01 - 03.07; 87137: 03.01 & 03.02	

**SUPPLEMENTAL INSPECTION INFORMATION**

1. PROGRAM CODE(S)  03320	2. PRIORITY  1	3. LICENSEE CONTACT  Nick Darnell, RSO	4. TELEPHONE NUMBER  (417) 291-7867
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☒ Main Office Inspection      Next Inspection Date: 07/09/2020

☐ Field Office Inspection \_\_\_\_\_

☐ Temporary Job Site Inspection \_\_\_\_\_

**PROGRAM SCOPE**

This was an unannounced, routine inspection. The licensee is authorized to conduct industrial radiography in a permanent radiographic installation (PRI) at their facility in Joplin, Missouri, and at temporary job sites under NRC jurisdiction. The licensee manufactured large industrial feed water heaters, condensers, and heat exchangers, and utilized gamma radiography equipment to verify the quality of welds. The licensee had one PRI where the majority of radiography was performed. For manufactured product that would not fit in the PRI, the licensee would establish a temporary job site within their facility in Joplin. The licensee was staffed by a radiation safety officer (RSO)/ radiographer, one other radiographer, and two radiographer's assistants. The licensee had a QSA Global Model 880 radiography device, and an Amersham Model 680A radiography device.

**Performance Observations**

The inspector: (1) noted there was no temporary job site nor permanent radiographic installation (PRI) radiography activities during the onsite inspection; (2) noted that stuck source retrieval is done by QSA Global; (3) noted that the licensee had not had any stuck source events ever; (4) noted that there were no incidents regarding licensed activities since the last inspection; (5) noted that a radiographer and a radiographer's assistant conducted radiography at temporary job sites; (6) observed a radiographer demonstrate how he had conducted radiography in a PRI (e.g., use of a direct reading dosimeter, and use of a whole body dosimeter badge) based on a scenario proposed by the inspector, and there were no concerns; (7) observed a Texas Certification Card showing that the radiographer was certified as a radiographer, and the expiration date was in 2021; (8) observed that the PRI roof was video-monitored using two video cameras to identify if anyone is on the roof to prevent/mitigate radiation exposure to anyone on the roof when radiography is done in the PRI; (9) the licensee used an area radiation detection device to monitor the radiation exposure rates in the PRI; (10) observed three licensee survey meters and they were calibrated as required; (11) observed a radiographer demonstrate how he would respond to a stuck, unshielded radiography source based on a scenario proposed by the inspector, and there were no concerns; (12) reviewed sealed source inventory records and there were no concerns; and (13) reviewed dosimeter badge results for 2018 and 2019 (through 6/18/19), and the results were well below the regulatory dose limits. One violation was identified as a result of this inspection.