

**SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION**

<b>1. LICENSEE/LOCATION INSPECTED:</b> Thermal Engineering International Utility Products Division 2702 West 9th Street Joplin, Missouri <b>REPORT NUMBER(S)</b> 2010-001		<b>2. NRC/REGIONAL OFFICE</b>  <b>Region III</b> <b>U.S. Nuclear Regulatory Commission</b> <b>2443 Warrenville Road, Suite 210</b> <b>Lisle, Illinois 60532-4351</b>	
<b>3. DOCKET NUMBER(S)</b> 030-17798	<b>4. LICENSEE NUMBER(S)</b> 24-19500-01	<b>5. DATE(S) OF INSPECTION</b> 6/29/10	

**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, NUREG-1600, to exercise discretion, were satisfied.

\_\_\_\_\_ Non-Cited Violation(s) was/were discussed involving the following requirement(s) and Corrective Action(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. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.  
(Violations and Corrective Actions)

10 CFR 34.27(c)(1) requires, in part, that each licensee who uses a sealed source have the source tested for leakage at intervals not to exceed 6 months. Contrary to the above, the licensee used a sealed source containing cobalt-60, and failed to ~~test~~ test the source for leakage between 2/13/09 and 6/29/10, a period exceeding 6 months.

10 CFR 34.27(e) requires, in part, that each exposure device using depleted uranium (DU) shielding and an "S" tube configuration be tested for DU contamination at intervals not to exceed 12 months. Contrary to the above, the licensee failed to test two devices which used DU shielding and an "S" tube configuration for DU contamination between 2/13/09 and 6/29/10, a period exceeding 12 months.

As corrective action for these two violations, the licensee will ~~test~~ test the cobalt-60 source for leakage and the two exposure devices for DU contamination no later than 7/9/10, and will place both requirements on a calendar to remind of future tests.

Licensee's Statement of Corrective Actions for Item 4, above.

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	Edmund L. Cochran Senior QHE		6/29/10
NRC INSPECTOR	Geoffrey M. Warren		6/29/10

*gcp*

**SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION**

1. LICENSEE Thermal Engineering International REPORT NUMBER(S) 2010-001		2. NRC/REGIONAL OFFICE <b>NRC Region III 2443 Warrenville Road, Suite 210 Lisle, Illinois 60532-4351</b>	
3. DOCKET NUMBER(S) 030-17798	4. LICENSE NUMBER(S) 24-19500-01	5. DATE(S) OF INSPECTION June 29, 2010	
6. INSPECTION PROCEDURES USED 87121	7. INSPECTION FOCUS AREAS 03.01 – 03.07		

**SUPPLEMENTAL INSPECTION INFORMATION**

1. PROGRAM CODE(S) 03320	2. PRIORITY 1	3. LICENSEE CONTACT Nick Darnell, RSO	4. TELEPHONE NUMBER 417-782-5080
-----------------------------	------------------	--	-------------------------------------

Main Office Inspection      Next Inspection Date: June 2011

Field Office \_\_\_\_\_

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

**PROGRAM SCOPE**

The licensee manufactured tanks for power plants, performing industrial radiography to verify the welds. While authorized to work at temporary job sites, the licensee operated only at the authorized facility in Joplin, Missouri. All radiography was performed as temporary job sites at that facility, though they were preparing to add a permanent vault for radiography. The licensee employed three certified radiographers and one assistant radiographer who performed radiography approximately two days weekly using one iridium-192 and one cobalt-60 camera as authorized in the license.

The maximum radiation exposure for any radiographer was 70 mrem whole body for calendar year 2009 and 14 mrem whole body exposure for January through May 2010.

**Performance Observations**

During the inspection, the licensee's staff demonstrated a typical radiographic exposure, performed as a temporary job site, utilizing an exposure device in the licensee's facility. The inspector noted no concerns with the activity. Interviews with licensee personnel indicated adequate knowledge of radiation safety concepts and procedures. The inspector performed independent and confirmatory radiation measurements which indicated results consistent with licensee survey records and postings.

The inspector identified two violations concerning the licensee's failure to leak test the cobalt-60 source or test either device for depleted uranium contamination, as described on Part 1 of this form.