



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION I  
2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

September 5, 2013

Docket No. 15000009

License No. FL 4077-1

Larry R. Ostarly  
ISC Program Manager  
URS Federal Technical Services, Inc.  
P.O. Box 21025  
Kennedy Space Center, FL 32815

SUBJECT: NRC INSPECTION REPORT NO. 15000009/2013001, URS FEDERAL  
TECHNICAL SERVICES, INC., CAPE CANAVERAL AIR FORCE STATION,  
CAPE CANAVERAL, FLORIDA

Dear Mr. Ostarly:

On January 29 - August 14, 2013, Craig Gordon of this office conducted a safety inspection at the Cape Canaveral Air Force Station, Cape Canaveral, Florida of activities authorized under the license listed above. Your activities in NRC jurisdiction are authorized by a general license granted by 10 CFR 150.20(a). The inspection was an examination of your licensed activities as they relate to radiation safety and to compliance with the Commission's regulations and the license conditions. The inspection consisted of observations by the inspector, interviews with personnel, and a selective examination of representative records. The findings of the inspection were discussed with Dennis Taylor of your organization at the conclusion of the inspection.

Within the scope of this inspection, no violations were identified.

Current NRC regulations and guidance are included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select **Nuclear Materials; Med, Ind, & Academic Uses**; then **Regulations, Guidance and Communications**. The current Enforcement Policy is included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select **About NRC, Organizations & Functions; Office of Enforcement; Enforcement documents**; then **Enforcement Policy (Under 'Related Information')**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

The NRC's Safety Culture Policy Statement became effective in June 2011. While a policy statement and not a regulation, it sets forth the agency's *expectations* for individuals and organizations to establish and maintain a positive safety culture. You can access the policy statement and supporting material that may benefit your organization on NRC's safety culture Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/safety-culture.html>. We strongly encourage you to review this material and adapt it to your particular needs in order to develop and maintain a positive safety culture as you engage in NRC-regulated activities.

L. Ostarly

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No reply to this letter is required. Please contact Mr. Gordon at 610-337-5216 if you have any questions regarding this matter.

Sincerely,

*/RA/*

Blake Welling, Chief  
Materials Security and Industrial Branch  
Division of Nuclear Materials Safety

Enclosure:  
Inspection Report

cc w/Enclosure:  
State of Florida

L. Ostarly

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State of Florida

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U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

INSPECTION REPORT

Inspection No. 15000009/2013001  
Docket No. 15000009  
License No. Florida 4077-1  
Licensee: URS Federal Technical Services, Inc.  
Address: P.O. Box 21025  
Kennedy Space Center 32815  
Locations Inspected: Cape Canaveral Air Force Station  
Cape Canaveral, FL  
Inspection Dates: January 29, 2013- August 14, 2013

Inspector: /RA 08/30/13  
\_\_\_\_\_ date  
Craig Z. Gordon  
Senior Health Physicist  
Materials Security and Industrial Branch  
Division of Nuclear Materials Safety

Approved By: /RA/ 09/05/13  
\_\_\_\_\_ date  
Blake D. Welling, Chief  
Materials Security and Industrial Branch  
Division of Nuclear Materials Safety

## **EXECUTIVE SUMMARY**

URS Federal Technical Services  
NRC Inspection Report No. 15000009/2013001

An unannounced reciprocity inspection was conducted on January 29 - August 14, 2013 of the URS Federal Technical Services, Inc.'s (URS) industrial radiography activities at the Cape Canaveral Air Force Station, Cape Canaveral, Florida. During radiographic exposures, the inspector observed the licensee using rigid guide tubes which did not meet the requirements for associated equipment in 10 CFR 34.20, and the related testing criteria in ANSI N432-1980, "Radiological Safety for the Design and Construction of Apparatus for Gamma Radiography." An exemption to the associated equipment requirement was granted to URS's former owner by the State of Florida in 1997 based upon compensatory operating procedures. NRC staff determined that the URS license and the State of Florida exemption were acceptable, and the licensee's activities involving the use of rigid guide tubes are permitted in NRC jurisdiction. No violations were identified.

## REPORT DETAILS

### I. Organization and Scope of the Program

#### a. Inspection Scope

The organization and scope of the licensee's industrial radiography program as related to work activities in NRC jurisdiction conducted under the reciprocity requirements of 10 CFR 150.20 was reviewed.

#### b. Observations and Findings

An unannounced reciprocity inspection was conducted on January 29, 2013 (with continued in-office review through August 14, 2013) of the URS Federal Technical Services, Inc.'s activities at the Cape Canaveral Air Force Station, FSA #1 site, Cape Canaveral, Florida. NRC-Form 241, "Report of Proposed Activities in Non-Agreement States, Areas of Exclusive Federal Jurisdiction, or Offshore Waters," requested by the licensee on 1/23/13, was approved by NRC on 1/24/13 to authorize industrial radiography operations at the site for the period 1/28/13-2/1/13. The licensee conducts radiography work at temporary job sites during daytime hours from their Kennedy Space Center (KSC), Florida office, returning material and devices to the home office at the end of each day. The device was transferred to the site in a designated vehicle and properly secured.

The inspector observed several radiographic exposures of welds on a series of large tanks. While preparing for exposures, radiographers coordinated well with KSC project management staff and construction personnel. A 2 mR/hr roped boundary was established and tested before radiographic exposures were performed, and all personnel were cleared from the area until exposures were completed.

Radiographers were ASNT certified and were knowledgeable of radiography operations. Survey meters were available, operable, and within calibration. TLDs, alarming dosimeters, and pocket dosimeters (0-200 mR) were worn by the radiography crew members. The inspector surveyed the device with a Ludlum 14C survey meter (NRC S/N 23178G), and found radiation readings to be within regulatory limits at the roped boundary. Discussion with the assistant RSO indicated that the State of Florida reviewed the program for Increased Controls and found it met the requirements of the IC Order.

#### c. Conclusions

Implementation of radiation safety and security practices were demonstrated effectively during radiographic exposure testing and no violations were identified.

## II. Facilities and Equipment

### a. Inspection Scope

The licensee's facilities and equipment were observed during industrial radiographic exposures for compliance with the requirements in 10 CFR 34.

### b. Observations and Findings

While the radiography crew set up for an exposure of a weld located on the inside section of a large enclosed tank, the inspector noted that the guide tube assembly contained a rigid guide tube (RGT) extension attached to the flexible guide tubing at the posterior end of the radiography camera. The licensee explained that the extension was used because standard manufacturer-issued flex tubing could not be properly placed at remote tank locations to allow optimal weld exposures. Observation of exposures with the RGT found radiation levels comparable to those using a flexible tube, and all readings were < 2mR/hr in the immediate tank area.

Although the RGT enhanced the weld exposure operation, discussion with the URS assistant Radiation Safety Officer indicated that other rigid tubes of varying lengths were also used in the operation. The tubes were custom made, designed and manufactured by the engineering department of URS's previous owner. The assistant RSO presented supporting documentation and related information from the previous owner's engineering analysis to justify use of the RGTs. Upon review, the inspector noted the engineering analysis did not certify the RGTs could meet all testing requirements (kinking and crush tests) of ANSI N432-1980, "Radiological Safety for the Design and Construction of Apparatus for Gamma Radiography." Because 10 CFR 34.20 requires equipment used in industrial radiographic operations must meet ANSI N432-1980, it appeared the licensee may have been using unapproved equipment while working in an area under exclusive federal jurisdiction.

The assistant RSO stated that the RGTs had been used routinely and without incident by URS and their previous owners since an exemption to the associated equipment requirement was granted by the State of Florida in 1997. The State issued the exemption based upon compensatory procedures which addressed the RGT design, fabrication, operation, and emergency instructions. The inspector questioned whether the licensee's activities involving the State-approved RGT were permitted in NRC jurisdiction, and if the NRC could accept the State's exemption for use of associated equipment that did not meet 10 CFR 34.20 or ANSI N432-1980 requirements.

Under the reciprocity provisions in 10 CFR 150.20, URS's general license is subject to the requirements for granting an exemption in 10 CFR 34.111. The State of Florida authorized the exemption from compatible 10 CFR 34.20 requirements based upon the adequacy of URS's operating procedures. If an NRC licensee wanted to use an RGT without certification, it would require the same authorization of an exemption from the requirements of 10 CFR 34.20(a) relative to ANSI N432-1980. The URS license issued by Florida is identical in this respect to an NRC license with regard to associated equipment. The inspector also noted that 10 CFR 150.20(b)(5) requires that the NRC

general licensee performing work under reciprocity must comply with all the terms and conditions of its Agreement State license.

NRC Regulatory Information Summary RIS-2005-10, "Performance-Based Approach for Associated Equipment in 10 CFR 34.20," states that if a licensee needs to modify associated equipment it should implement engineering procedures to ensure the modified component will not compromise the design safety features of the industrial radiography system, and continues to meet the performance criteria in 10 CFR 34.20. Florida authorized the use of the RGT under an exemption from the ANSI requirements based upon compensating operating procedures because rigid tubes cannot be subject to the required ANSI-N432-1980 kinking and crushing tests. URS presented an acceptable engineering analysis of RGT tensile testing (the only applicable ANSI criteria) and had demonstrated safe use of the RGT through performance-based operational history since 1997.

NRC staff determined that, if requested, the NRC would consider granting an exemption from the requirements of 10 CFR 34.20(a)(1) in accordance with RIS 2005-10 on the basis of an engineering analysis or the licensee's use of performance-based operational and implementing procedures.

c. Conclusions

No violations were identified. The URS license and the State of Florida exemption were acceptable, and the licensee's activities and related use of rigid guide tubes are permitted in NRC jurisdiction.

### **III. Exit Meeting**

On August 14, 2013, the inspector contacted the URS assistant RSO and presented the results of the inspection.



## **PARTIAL LIST OF PERSONS CONTACTED**

### **Licensee (URS Federal Technical Services)**

Dennis Taylor, Asst. RSO, Kennedy Space Center site  
Rod Nickell, HP Supervisor

## **INSPECTION PROCEDURES USED**

Inspection Procedure, IP 87121, "Industrial Radiography Programs"

## **LIST OF DOCUMENTS REVIEWED**

1. Federal Technical Services, Inc., Florida License No. 4077-1
2. Florida DoH letter to EG&G Florida, Inc., dated January 10, 1997
3. EG&G Florida, Inc. Radiography Equipment Engineering Analysis, dated April 12, 1996
4. NRC Form 241 authorizing work activities for URS Federal Technical Services, Inc.