

INSPECTION RECORD

Region III Inspection Report No. 030-36584/10-01
License No. 13-32518-01 Docket No. 030-36584

Licensee (Name and Address):

American Consulting, Inc.
7260 Shadeland Station
Indianapolis, IN 46256-3957

Licensee Contact: Christopher Holth – RSO Telephone No. 317-538-5630

Priority: 5 **Program Code:** 3121

Date of Last Inspection: 5/9 and 11/2005 **Date of This Inspection:** 5/10-11/2010
With continued in-office review until 5/20/10 to evaluate dosimetry records

Type of Inspection: Initial Announced Unannounced
 Routine Special

Next Inspection Date: 5/2015 Normal Reduced

Summary of Findings and Actions:

- No violations cited, clear U.S. Nuclear Regulatory Commission (NRC) Form 591 or regional letter issued
- Non-cited violations (NCVs)
- Violation(s), Form 591 issued
- Violation(s), regional letter issued
- Followup on previous violations

Inspectors Andrew M. Bramnik
Andrew M. Bramnik, Health Physicist

Date 6/3/2010

Michael M. LaFranzo
Michael M. LaFranzo, Health Physicist

Date 6/7/2010

Approved Tamara E. Bloomer
Tamara E. Bloomer, Chief, MIB

Date 6/7/10

PART I-LICENSE, INSPECTION, INCIDENT/EVENT, AND ENFORCEMENT HISTORY

1. AMENDMENTS AND PROGRAM CHANGES:

<u>Amendment No.</u>	<u>Date</u>	<u>Subject</u>
0 (Corrected Copy)	7/29/2004	Corrected License and Docket Nos.
0	7/20/2004	New License Issued

2. INSPECTION AND ENFORCEMENT HISTORY:

One previous inspection of this licensee occurred on May 9 and 11, 2005. No violations were identified at that time. The 2005 inspection was the first inspection of this licensee.

3. INCIDENT/EVENT HISTORY:

None

PART II - INSPECTION DOCUMENTATION

1. ORGANIZATION AND SCOPE OF PROGRAM:

Management Structure:

- Company President
- Department Director
- Radiation Safety Officer
- Resident Project Representatives

The licensee operated a portable moisture/density gauge program with a main office in Indianapolis, Indiana, and was authorized to possess and use sealed sources of cesium-137 and americium-241 at locations where the NRC maintains jurisdiction. At the time of the inspection, the licensee possessed four Troxler Model 3440 gauging devices, all of which were in use or in storage at temporary job sites throughout Indiana. As of May 11, 2010, the licensee's temporary job sites were located in Indianapolis, Evansville, Terra Haute, and Hammond, Indiana. The licensee employed approximately ten gauge operators, in addition to the Radiation Safety Officer.

2. SCOPE OF INSPECTION:

Inspection Procedure(s) Used: 87124

Focus Areas Evaluated: Sections 03.01 through 03.07

This inspection included observations of gauges in storage at temporary job sites in Terra Haute and Indianapolis, Indiana. All observed gauges were stored in accordance with regulatory requirements. Appropriate records were maintained for each gauge, including shipping papers and utilization logs.

3. INDEPENDENT AND CONFIRMATORY MEASUREMENTS:

The inspector took independent survey measurements around the licensee's areas for storing radioactive material at two temporary job sites, and at the surface of two Troxler gauges. No radiation levels were above regulatory limits, and radiation levels were within expected levels at the surface of the gauges. The licensee did possess a survey meter at the time of the inspection, however the meter had not been calibrated since August 2004 and the battery was below the operable range. As such, no confirmatory measurements were taken. This issue is discussed in Section 4, below.

4. **VIOLATIONS, NCVs, AND OTHER SAFETY ISSUES:**

Condition 21 of NRC License No. 13-32518-01 requires, in part, that the licensee conduct its program in accordance with the statements, representations, and procedures contained in its application facsimile received July 15, 2004.

- A. Item 10 "Radiation Safety Program – Occupational Dosimetry" of the checklist included in the application received July 15, 2004 states, in part, that the licensee will either maintain documentation demonstrating that unmonitored individuals are not likely to receive a radiation dose in excess of 10% of the allowable limits in Title 10 of the Code of Federal Regulations (10 CFR) Part 20 or provide dosimetry processed and evaluated by a NVLAP-approved processor that is exchanged at a frequency recommended by the processor.

Attachment D titled "RSO Responsibilities" of the application received July 15, 2004 states, in part, that when necessary, personnel monitoring devices are used and exchanged at the proper intervals; records of the results of such monitoring are maintained.

Contrary to the above, as of May 11, 2010, the licensee did not maintain documentation demonstrating that unmonitored individuals were not likely to receive a dose in excess of 10% of the allowable limits in 10 CFR Part 20 and was therefore required to provide dosimetry to its employees to monitor radiation exposure, and the licensee failed to properly implement the personnel dosimetry program. Specifically:

- i. Between November 10, 2009, and May 11, 2010, the licensee failed to exchange dosimetry at the proper intervals. Specifically, on May 11, 2010, the inspectors identified a portable gauge operator wearing a monthly dosimetry badge dated from October 10 through November 9, 2009. Records indicated that the operator had used or transported portable gauges between November 10 and 13, 2009, and on April 29, 2010. The licensee exchanged dosimetry badges on a monthly frequency.
- ii. Between March 18 and November 3, 2009, the licensee failed to maintain records of dosimetry monitoring. Specifically:
 - a. Between March 18 and August 24, 2009, licensee utilization logs indicated that an individual used or transported portable gauges on multiple occasions. However, no dosimetry records were available for this individual in 2009. The licensee's dosimetry records indicated that no "spare" dosimetry badges were used during July or August, 2009. A May 14, 2010 e-mail from the RSO indicated that the only "spare" badges used during May and June 2009, were assigned to a different individual;

- b. Between October 2 and November 3, 2009, licensee utilization logs indicated that an individual used or transported portable gauges on multiple occasions. However, no dosimetry records were available for this individual in 2009. The licensee's dosimetry records indicated that no "spare" dosimetry badges were used during October or November, 2009.

- iii. Between February 10, 2009, and April 9, 2010, the licensee failed to maintain records of dosimetry monitoring. Specifically:
 - a. Between February 10, 2009, and April 9, 2010, records indicated an "unused" result for one individual's dosimetry badge. However, licensee utilization logs indicated that this individual used or transported gauges on multiple occasions in April, June, and September through December, 2009;
 - b. Between February 10 and March 9, 2009, and September 10 and October 9, 2009, records indicated an "unused" result for one individual's dosimetry badge. However, licensee utilization logs indicated that this individual used or transported gauges between March 4 and 9, and October 1 and 9, 2009;
 - c. Between September 10 and October 9, 2009, and November 10 and December 9, 2009, records indicated an "unused" result for one individual's dosimetry badge. However, licensee utilization records indicated that this individual used or transported gauges between September 11 and 29, 2009, and November 10 and 13, 2009;
 - d. Between May 10 and June 9, 2009, records indicated an "unused" result for one individual's dosimetry badge. However, licensee utilization records indicated that this individual used or transported gauges between May 19 and June 2, 2009;
 - e. Between August 10 and October 9, 2009, November 10 and December 9, 2009, and March 10 and April 9, 2010 records indicated an "unused" result for one individual's dosimetry badge. However, licensee utilization records indicated that this individual used or transported gauges on multiple occasions in August, September, October, and November 2009, and March 2010;
 - f. Between February 10, 2009, and April 9, 2010, records indicated an "unused" result for one individual's dosimetry badge. However, licensee utilization logs indicated that this individual transported gauges in September and December, 2009, and March 2010.

This is a Severity Level IV violation (Supplement VI)

There were several causes of this violation: portable gauge operators not being responsible for picking-up, properly wearing, or exchanging badges; high personnel turnover; and a lack of adequate oversight of the dosimetry program by the RSO.

As corrective actions, the licensee reviewed their dosimetry program to determine if there were any other discrepancies. The licensee contacted all of their gauge operators following the inspection to remind them of the monthly exchange frequency, and to stress the importance of wearing the current months' badge. The licensee committed to reviewing their process for sending and receiving dosimetry badges from the gauge operators, and evaluated communications with management for potential consequences if badges were not being worn or exchanged properly. This included how the RSO would check to see if badges were being returned and accounted for. The licensee's management reviewed and approved the changes to the dosimetry program on May 19, 2010. The licensee committed to assign doses to individuals during the times when they used or transported gauges in the past by the first week of June 2010.

- B. Item 10.2 of the licensee's application received July 15, 2004 states, in part, that the licensee shall have a survey meter available for use in the event of an incident involving the gauge, and that the survey meter shall be calibrated annually by the manufacturer and checked for functionality prior to use. Contrary to the above, as of May 11, 2010, the licensee's survey meter had not been calibrated since August 2004. Additionally, the battery was below the operable range.

This is a Severity Level IV violation (Supplement VI)

The root cause of this violation was that the licensee was not aware of the annual calibration requirement. The RSO contacted the survey meter manufacturer (Troxler) to obtain information on how to ship the meter for calibration, and planned to ship the survey meter for calibration by May 21, 2010. The licensee also planned to purchase two additional survey meters in June 2010.

- C. Item 10.4 "Inventories" of the application sent July 15, 2004 states, in part, that six months inventories shall be recorded by portable gauge serial numbers. Contrary to the above, as of May 11, 2010, the licensee was tracking and recording gauges by an internal ID number (1, 2, 3, or 4) instead of by serial number.

This is a Severity Level IV violation (Supplement VI)

This resulted in a situation where the licensee was potentially unable to determine the locations of their gauges. On May 10, 2010, the inspectors

observed a portable gauge (identified as Gauge #2) in storage at a temporary job site. However, the utilization log at the site identified the gauge with the serial number for Gauge #3, and the licensee was unable to immediately determine if the gauge's serial number actually corresponded to Gauge #1 or #2.

The licensee was able to determine that the gauge in question was Gauge #2, and confirmed that they had not lost any of their gauges at all of their temporary job sites. However, this incident highlighted an increased potential for loss or theft of a portable gauge when the serial numbers were not verified and recorded in the licensee's inventory process.

The root cause of this violation was that the licensee was not aware of the requirement to record six month inventories by serial number. As corrective actions, the licensee immediately reviewed their records, compared them against their leak test records for completeness, and updated their six month inventories with the appropriate information. The licensee e-mailed the updated six-month inventories to the NRC on May 18, 2010. The licensee also committed to following the inventory and recordkeeping requirements in their application in the future.

5. PERSONNEL CONTACTED:

Todd Rutledge – Administrative Manager
Scott Scoville – Chief Financial Officer
Daniel Osborn – Resident Project Representative
Marshall Rector – Portable Gauge Operator
John Day – Resident Project Representative, Portable Gauge Operator
* Charles Snyder – Department Director
*& Christopher Holth – Radiation Safety Officer
& John Tucker – Area Field Manager

Use the following identification symbols:

- # Individual(s) present at entrance meeting
- * Individual(s) present at preliminary on-site exit meeting
- & Individual(s) present at telephone exit meeting

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