

# Well Logging Source Abandonments

**LICENSEE:** Precision Energy Services, Inc.

**NRC License:** 42-26891-01

**Docket:** 030-30118

**Abandonment Location:** Land-based Well near Sweetwater, Wyoming  
Devon Energy  
Rig Name: Red Lakes 9-6-18-94

**Licensee's Notification To NRC:** August 14, 2007 @ 9:30 a.m. EST

**Source(s) Abandonment Date:** TBD (as of 8/20/07, licensee still progressing with the abandonment)

**NRC Person Approving Abandonment & Date/Time of Approval:** HQ initially, then Richard Leonardi, 08/14/2007 @ 9:40 A.M. CDT

**Sources Abandoned:** SEE ATTACHED

**Description of Event:** SEE ATTACHED

## Source No. 1

Cs-137 @ 1.5 Curie

SN: UNKNOWN

## Source No. 2

NONE

Licensee has made 11 attempts to recover the single 1.5 Ci Cs-137 sealed well logging source, but failed to recover. Licensee was able to recover the americium-241 logging source. Devon proposed abandonment plan to RIV early 8/14/07, but after review, RIV contacted licensee to express concern relative to thickness of steel rings and plates used for the deflection device. Licensee called back later that morning and indicated that Devon committed to increasing the thickness of the steel rings and plates to 1/2 inches in lieu of the 1/4 inches initially proposed. Based on this commitment, Richard Leonardi did approve the revised abandonment plan on August 14, 2007 at about 11:30 a.m. CDT.

Licensee had Devon run gamma log in well to confirm that the source was toward the bottom of the well instead lodged in the wellbore wall further up the wellbore. Devon did establish that the source is less than 15 feet from the bottom of the hole at total depth of 10,776 feet.

Licensee will use 300 feet of cement on top of the sealed source with the placement of the steel plates and the three floating steel rings on top of the float shoe.

**Applicable NRC Regulation:** 10 CFR 39.77(c)

LER Assigned To:

**SUNSI Evaluation:** Publicly Available/Nonsensitive

CC:  
Sue Trifiletti  
Applicable SAO

*C:\SourceAbandonmentFORM.wpd*

**From:** Joseph Holonich  
**To:** Harris, Tim; Jankovich, John  
**Date:** 08/14/2007 9:21:32 AM  
**Subject:** Fwd: Logbook Entry: 08/14/07

Tim,

We will be getting a source-abandonment plan shortly from the licensee. Rich Leonardi in Region IV will be coordinating the lead. The licensee is sending a copy of the plan to him and me. I will forward to you once I get it.

Joe

>>> Headquarters Operations Officer 1 08/14/2007 10:11 AM >>>

Ops Officer: PETE SNYDER  
Entry Date: 08/14/07 - 09:30  
Entry Type: WELL LOGGING  
Notify Date - Time: -  
Event Date - Time: - ()  
Site:  
Emergency Class:

-----  
Precision Instruments (Lic. No. 42-26891-01) wanted to abandon a well logging source in Sweetwater, Wyoming. Notified R4DO (Gaddy), and FSME EO (J. Holinich). Richard Leonardi of Region 4 also participated in a conference call on the NRC bridge.

The AmBe portion of the logging instrument was retrieved but the 1.5 Ci. Cs-137 source was to be abandoned. Mr. Perry agreed to email the details of the abandonment plan to Mr. Leonardi and Mr. Holonich so that the abandonment plan could be reviewed. Mr Holonich said he would have someone contact Mr. Leonardi. Mr. Leonardi agreed to follow-up with the licensee about permission to abandon the source.

Headquarters Operations Officer  
U.S. Nuclear Regulatory Commission  
Phone: (301) 816-5100  
Fax: (301) 816-5151  
E-mail: [HOO1@nrc.gov](mailto:HOO1@nrc.gov)  
Secure E-mail: [hoo1@nrc.sgov.gov](mailto:hoo1@nrc.sgov.gov)

**CC:** Leonardi, Richard; Lewis, Robert

**From:** Headquarters Operations Officer 1  
**To:** hoo1  
**Date:** 08/14/2007 9:11:44 AM  
**Subject:** Logbook Entry: 08/14/07

Ops Officer : PETE SNYDER  
Entry Date : 08/14/07 - 09:30  
Entry Type : WELL LOGGING  
Notify Date - Time : -  
Event Date - Time : - ()  
Site :  
Emergency Class :

---

Precision Instruments (Lic. No. 42-26891-01) wanted to abandon a well logging source in Sweetwater, Wyoming. Notified R4DO (Gaddy), and FSME EO (J. Holonich). Richard Leonardi of Region 4 also participated in a conference call on the NRC bridge.

The AmBe portion of the logging instrument was retrieved but the 1.5 Ci. Cs-137 source was to be abandoned. Mr. Perry agreed to email the details of the abandonment plan to Mr. Leonardi and Mr. Holonich so that the abandonment plan could be reviewed. Mr Holonich said he would have someone contact Mr. Leonardi. Mr. Leonardi agreed to follow-up with the licensee about permission to abandon the source.

Headquarters Operations Officer  
U.S. Nuclear Regulatory Commission  
Phone: (301) 816-5100  
Fax: (301) 816-5151  
E-mail: HOO1@nrc.gov  
Secure E-mail: hoo1@nrc.sgov.gov

**CC:** Gaddy, Vincent; Holonich, Joseph; Leonardi, Richard

**From:** "Perry, Sean" <Sean.PERRY@weatherford.com>  
**To:** <ral@nrc.gov>  
**Date:** 08/14/2007 9:40:48 AM  
**Subject:** Precision Energy Services, Inc -- Devon Energy Well -- Red Lakes 9-6-18-94

Richard,

The well bore fluids were constantly monitored during fishing operations and there was \*no\* evidence of any damage to the sources resulting in radioactive contamination.

During 11 attempts to retrieve the logging tools containing sources, most of the tools and one Am-241 Be source was recovered. The remaining 2Ci Cs-137 source has been deemed irretrievable. Devon Energy and Precision Energy Services, Inc. request permission to abandon this remaining source.

Devon's proposed abandonment procedures are as follows:

- \* Well depth: 10,776
- \* Depth of Source: 10,775

Devon Energy Plans to cement the Cs-137 source in place using red dyed cement, up to a depth on 300 ft above the source. The deflection device they plan to use consists of two ¼" steel plates spaced apart and welded with a 3 ½" diameter pipe followed by three free floating plates that will be placed above the cement plug. I have attached a diagram of the proposed deflection device.

They do not plan to abandon the well but plan to produce an active zone which is approx 400' from the bottom of the well.

I somewhat understand the concept behind this particular deflection device but question the thickness of the steel plates. Call me if you have questions.

Please let me know if you received this e-mail.

Thanks,

Christopher "Sean" Perry  
US Radiation & Explosives Safety Officer  
Precision Energy Services, Inc.  
A Weatherford Company  
500 Winscott Road  
Fort Worth, TX 76126

Direct Line: +1 817.249.7013

Cell: +1 817.980.7106

Fax: +1 817.409.1722

E-mail: sean.perry@weatherford.com <mailto:sean.perry@weatherford.com>

**CONFIDENTIAL & PRIVILEGED COMMUNICATION**

The information contained in this message is privileged, confidential, and protected from disclosure. This message is intended for the individual or entity addressed herein. If you are not the intended recipient, please do not read, copy, use or disclose this communication to others. Also please notify the sender by replying to this message, and then delete it from your system. The sender totally disclaims, and will not accept, any responsibility or liability for the unauthorized use, or the consequences of any unauthorized use, of this communication or message.

**CC:** <jjh1@nrc.gov>

