



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-4005

June 27, 2005

MEMORANDUM TO: Michael T. Lesar, Chief  
Rules and Directives Branch  
Division of Administrative Services  
Office of Administration

FROM: Jack E. Whitten, Chief  
Nuclear Materials Licensing Branch  
Division of Nuclear Materials Safety  
Region IV

SUBJECT: PUBLICATION OF ENVIRONMENTAL ASSESSMENT AND  
FINDING OF NO SIGNIFICANT IMPACT IN THE FEDERAL  
REGISTER

Attached please find one signed original, four copies, and an electronic version on a 3.5-inch diskette of the subject *Federal Register Notice* for transmittal to the Office of the Federal Register for publication.

ADM/DAS/RDB has been given owner's rights to the Notice in ADAMS MLXXXXXXXXX. Publicly available NRC documents referenced in the Notice have been finalized in ADAMS and profiled for public release. ADAMS accession numbers for all such documents are provided in the text under **Further Information**. The **Further Information** section also tells the public how to obtain the following documents which are referenced in the Notice but are not available electronically in ADAMS: (1) ProTechnics Division of Core Laboratories Texas Bureau of Radiation Control License No. L03835, Amendment No. 37, expiration date August 31, 2005, (2) ProTechnics Division of Core Laboratories Louisiana Department of Environmental Quality License No. LA-6678-L01, Amendment No. 17, expiration date October 31, 2004, and (3) ProTechnics Division of Core Laboratories New Mexico Radiation Control Bureau License No. WL264-26, expiration date February 28, 2007.

Contact: Judith Walker, Region IV, DNMS  
817-860-8299

Mail Control No.: 469935  
Docket No.: 030-30429  
License No.: 42-26928-01

Attachments: 1. One original and four copies  
2. One 3.5-inch diskette (electronic version)

Mr. Michael T. Lesar

-2-

bcc (via ADAMS e-mail distribution)  
SATreby, OGC  
LDWert  
CLCain  
JEWhitten  
JLWalker  
RIV Materials Docket Files (5<sup>th</sup> Floor)

SISP Review Completed: : Yes  No  Initials: JLW3

ADAMS: : Yes  No  Initials: JLW3

: Publicly Available  Non-Publicly Available  Sensitive  Non-Sensitive

DOCUMENT NAME: s:\dnms!\nmlb\jlw3\Core Labs FRN EA FONSI.wpd

RIV:DNMS:NMLB	OGC NLO		C:NMLB
JLWalker	SATreby		JEWhitten
<i>/RA/</i>	<i>/RA JLW for via email</i>		<i>/RA/</i>
06/23/05	06/17/05		06/27/05

OFFICIAL RECORD COPY

T=Telephone

E=E-mail

F=Fax

**U.S. NUCLEAR REGULATORY COMMISSION**

**[DOCKET NO. 030-30429]**

**Notice of Availability of Environmental Assessment and Finding of No Significant Impact  
for License Amendment for Core Laboratories, Houston, Texas**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Notice of Availability.

**FOR FURTHER INFORMATION CONTACT:** Jack E. Whitten, Branch Chief, Nuclear Materials Licensing Branch, Division of Nuclear Materials Safety, Region RIV, U.S. Nuclear Regulatory Commission, 611 Ryan Plaza Drive, Suite 400, Arlington, TX 76011.

Telephone: 817-860-8197; fax number 817-860-8263; email: jew1@nrc.gov.

**SUPPLEMENTARY INFORMATION:**

**I. Introduction**

The U.S. Nuclear Regulatory Commission (NRC) is considering the issuance of a license amendment to Material License No. 42-26928-01 issued to Core Laboratories, Inc., (dba ProTechnics) to authorize the utilization of cesium-137 in quantities in excess of limits listed in 10 CFR 30.71 for well logging activities at temporary job sites where NRC maintains jurisdiction. The NRC has prepared an Environmental Assessment (EA) in support of this action in accordance with the requirements of 10 CFR Part 51. Based on the EA, the NRC has determined that a Finding of No Significant Impact (FONSI) is appropriate. The amendment will be issued following the publication of this Notice.

## II. Environmental Assessment

### *Background*

Core Laboratories, Inc., (Core Laboratories) is a well logging licensee based in Houston, Texas, and conducts tracer operations using radioactive materials in oil and natural gas fields worldwide. Core Laboratories is licensed by both the NRC and Agreement States (Louisiana, New Mexico, and Texas) to conduct well logging operations.

By letter dated July 14, 1997, Core Laboratories requested that NRC grant an amendment to allow the use of radioactive collar markers containing activities of byproduct material exceeding the limits listed in 10 CFR 30.71. An EA was written and based on the EA, the NRC concluded that a finding of no significant impact (FONSI) was appropriate. The EA and the FONSI were published in the *67 Federal Register (FR) 5320*, February 5, 2002. On March 9, 2002, Core Laboratories was granted an amendment authorizing an exemption to 10 CFR 30.71. This amendment authorized Core Laboratories to use pipe collar markers containing iridium-192, scandium-46, antimony-124, cobalt-60, and cesium-137 with activities up to 50 micro curies ( $\mu\text{Ci}$ ).

On February 23, 2004, Core Laboratories requested an amendment to increase the activity of radioactive markers containing cesium-137 from the 50  $\mu\text{Ci}$ , previously approved, with activities up to 100  $\mu\text{Ci}$ . This 100  $\mu\text{Ci}$  activity exceeds the quantities of byproduct material listed for use as pipe collar markers in oil and gas wells in 10 CFR 39.47, 10 CFR 30.71, and the activities authorized in the March 9, 2002, license amendment to Core Laboratories' byproduct material license. The NRC has reviewed the licensee's amendment request and has developed this EA to assess the environmental consequences of this licensing action using the

guidance provided in NUREG-1748, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs.

*Proposed Action*

The proposed action is to amend the license and modify the previous exemption by approving the licensee's request to use radioactive markers containing 100  $\mu\text{Ci}$  cesium-137 for use as pipe collar markers in oil and gas wells. This proposed activity exceeds the limits of radioactive markers authorized in 10 CFR 39.47 and 10 CFR 30.71.

The radioactive markers Core Laboratories requested authorization to use in well logging activities are either installed directly in the pipe collars or are placed on the pipe collar threads and secured between the pipe casing joints and are not easily removed. Once installed in a well bore, the pipe casing and collars are cemented into place.

By letter dated July 14, 1997, Core Laboratories in its correspondence to NRC, describes the procedures it will have in place involving the customer or well owner/operator. These procedures state, in part, that the customer or well owner/operator must contact Core Laboratories in the event the radioactive pipe collar markers must be removed. Core Laboratories will be available on site to secure and take possession of the collar markers upon their return to the surface. Additionally, Core Laboratories will provide the customer or well owner/operator a copy of Attachment XII-1 (Core Laboratories' Radioactive Collar Marker Utilization Log) as a written record of the requirement to notify Core Laboratories if markers returned to the surface before a specified date.

### *The Need for the Proposed Action*

The proposed action is necessary so that Core Laboratories can efficiently carry out its business of well logging in the oil and gas industry. The need for an increase in activity for cesium-137 is due to the heavier density of the materials being used in the well logging application. The higher activity radioactive markers will allow, when logging certain oil and gas wells, for more accurate pipe collar location measurements for longer periods of time. Radioactive markers with lower activities may result in Core Laboratories having to depend on less accurate pipe collar location measurements when logging oil and gas wells, thereby providing less accurate information to the well owner/operator.

### *Environmental Impacts of the Proposed Action*

Core laboratories provided calculations in its November 14, 1997, and February 27, 2004, letters that demonstrated that the 100 millirem in a year or 2 millirem in any one hour limits to a member of the public would not be exceeded at any time while using the pipe collar markers with increased 50 to 100  $\mu\text{Ci}$  activities.

There will be no significant environmental impact realized from the proposed action, due to no material being released into the environment and all of the material being wholly contained within the pipe collars. Additionally, the pipe collar markers will be recovered by Core Laboratories should the casing containing the collars be removed from the well bores.

If the collar markers are returned to the surface prior to having decayed to exempt quantity levels specified on Core Laboratories customer agreement, the customer is required to contact Core Laboratories to take possession of the markers. These markers are then removed from the equipment, placed into a lead shield, and then placed into a U.S. Department of Transportation 7A transport container for shipment back to Core Laboratories.

Upon return to the storage facility, the markers are placed into waste storage to await decay or shipment to an authorized recipient for disposal when quantities of waste justifies such a shipment.

#### *Environmental Impacts of the Alternatives to the Proposed Action*

The only alternative to the proposed action of increasing the activity of radioactive markers containing cesium-137 from 50  $\mu\text{Ci}$  to 100  $\mu\text{Ci}$  is to take no action. The no-action alternative would be to allow the licensee to maintain radioactive marker activities currently authorized in Core Laboratories' NRC license. Again, there will be no significant environmental impact realized from the proposed action or the alternative to the proposed action, due to no material being released into the environment and all of the material being wholly contained within the pipe collars.

On March 9, 2002, Core Laboratories was granted an amendment authorizing an exemption to 10 CFR 30.71 to use pipe collar markers containing iridium-192, scandium-46, antimony-124, cobalt-60, and cesium-137 with activities up to 50  $\mu\text{Ci}$ . An EA was published in the 67 *FR* 55320, February 5, 2002, and based on the EA the NRC concluded that environmental impacts that would be created by the proposed action would not have a significant effect on the quality of the environment and did not warrant the preparation of an Environmental Impact Statement (EIS). Accordingly, it was determined that a FONSI was appropriate.

#### *Agencies and Persons Consulted*

Since the proposed action occurs downhole in the well bore and results in a permanent installation, the NRC has concluded that there is no potential to affect threatened or endangered species or historic resources. Therefore, no further consultation is required under Section 7 of the Endangered Species Act. Likewise, NRC staff has determined that the

proposed action is not the type of activity that has potential to cause effects on historic properties. Therefore, no further consultation is required under Section 106 of the National Historic Preservation Act.

The NRC staff provided letters to the Environmental Protection Agency (EPA) and Agreement States of Louisiana, Texas, and New Mexico for their review and comments, in accordance with NUREG-1748, Section 3.3. The Agreement States that were contacted provided no comments. By letter dated March 3, 2005, the EPA responded and recommended that the NRC, as a condition of approving the license amendment, have Core Laboratories provide notice to the Federal or State natural resource agency of which wells have the radioactive collar installed. The NRC staff took this comment into consideration and determined that Core Laboratories already provides notification to agreement states via reciprocity before performing well logging activities in the respective agreement states.

#### *Conclusion*

Based in its review, the NRC staff has concluded that there are no significant environmental impacts associated with the proposed action and the preparation of an EIS is not warranted. The staff has determined that the proposed action, approval of the license amendment request to increase the activity of radioactive markers containing cesium-137 from the 50  $\mu\text{Ci}$ , to 100  $\mu\text{Ci}$ , is the appropriate alternative for selection.

### **III. Finding of No Significant Impact**

The NRC staff has concluded that the proposed action complies with 10 CFR Part 20. Exposure to a member of the public would be less than the limits specified in 10 CFR 20.1302. The licensee provided calculations that demonstrated that the 100 millirem in a year or 2 millirem in any one hour could not be exceeded when normal restricted boundaries were established. The NRC staff prepared this EA in support of the proposed action to amend the license. On the basis of this EA, the NRC has concluded that there are no significant environmental impacts and the license amendment does not warrant the preparation of an EIS. Accordingly, it has been determined that a FONSI is appropriate.

### **IV. Further Information**

Documents related to this action, including the application for amendment and supporting documentation, are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. From this site, you can access the NRC's Agency wide Document Access and Management System (ADAMS), which provides text and image files of NRC's public documents. The ADAMS accession numbers for the documents related to this notice are listed below. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC's Public Document Room (PDR) Reference staff at 1-800-397-4209, 301-415-4737, or by email to [pdrr@nrc.gov](mailto:pdrr@nrc.gov).

These documents may also be viewed electronically on the public computers located at the NRC's PDR, O 1 F21, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852. The PDR reproduction contractor will copy documents for a fee.

1. NRC, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs," NUREG-1748, August 2003. (ML032540811).
2. NRC, "Consolidated NMSS Decommissioning Guidance," NUREG-1757, Volume 1, September 2003 (ML032530410).
3. ProTechnics Division of Core Laboratories Texas Bureau of Radiation Control License No. L03835, Amendment No. 37, expiration date August 31, 2005 (ML051510390).
4. ProTechnics Division of Core Laboratories Louisiana Department of Environmental Quality License No. LA-6678-L01, Amendment No. 17, expiration date October 31, 2004 (ML051510385).
5. ProTechnics Division of Core Laboratories New Mexico Radiation Control Bureau License No. WL264-26, expiration date February 28, 2007 (ML051510393).
6. ProTechnics Division of Core Laboratories Letter to NRC, February 23, 2004 (ML040580736).
7. ProTechnics Division of Core Laboratories Letter to NRC, July 14, 1997 (ML003724357).
8. ProTechnics Division of Core Laboratories Letter to NRC, November 14, 1997 (ML003724675).
9. ProTechnics Division of Core Laboratories Letter to NRC, February 4, 1998 (ML003724694).
10. ProTechnics Division of Core Laboratories Letter to NRC, January 20, 1998 (ML003724684).
11. ProTechnics Division of Core Laboratories Letter to NRC, February 27, 2004 (ML040580735).
12. Federal Register Volume 67, Number 24, pages 5320-5321.

13. NRC letter to Roger Mulder, State of Texas, January 7, 2005 (ML 050130550).
14. NRC letter to Derrith Watchman-Moore, State of New Mexico, January 7, 2005 (ML 050130548).
15. NRC letter to Michael Henry, State of Louisiana, January 7, 2005 (ML 050130549).
16. NRC letter to Robert Smith, EPA, January 7, 2005 (ML 050130547).
17. NRC letter to Bruce Kobelski, EPA, January 7, 2005 (ML 050130545).
18. EPA letter to Mark Satorius, NRC, March 3, 2005 (ML050690294).

Dated at Arlington, Texas this 27<sup>th</sup> day of June 2005

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

---

Jack E. Whitten, Chief  
Nuclear Materials Licensing Branch  
Division of Nuclear Materials Safety  
Region IV