



**CABRERA SERVICES**  
RADIOLOGICAL • ENVIRONMENTAL • REMEDIATION

June 18, 2007

NM5B 3

2007 JUN 19 AM 10:46  
RECEIVED  
REGION 1

Regional Administrator  
U.S. Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
King of Prussia, PA 19406  
ATTN: Director, Division of Nuclear Materials Safety

RE: Activities at temporary job site utilizing U.S. NRC Radioactive Material  
License #06-30556-01 Amendment 01

03035316

Dear Sir or Madam:

Cabrera Services Inc. (CABRERA) is providing this written notification of its intent to utilize CABRERA Material License #06-30556-01 Amendment 01 at a temporary job site. The attached information is provided as required by license condition 18A.

We trust that this information is sufficient to grant our use of CABRERA material license # 06-30556-01 Amendment 01 at the temporary job site. This license is currently in use at 3 other sites (MD, NJ, OH). No activity exceeding license limitations will be exceeded. CABRERA will notify the Regional Administrator, U.S. Nuclear Regulatory Commission, within 30 days of termination of activities at this job site in keeping with license condition 18B.

If you should have any questions regarding this notification, please contact either Henry W. Siegrist or David J. Watters at CABRERA (860) 569-0095.

Sincerely,

Henry W. Siegrist, P.E., CHP  
Corporate Health Physicist

attachment

140673

NMSS/RGN1 MATERIALS-002

**ATTACHMENT**  
**GREAT LAKES NAVAL TRAINING CENTER**  
**GREAT LAKES, IL**  
**(July 2007)**

Cabrera Services, Inc. (CABRERA) is providing radiological remediation, sample analysis, and final status survey (FSS) at the Great Lakes Naval Training Center (Site) located in Great Lakes, Illinois. The work entails soil sample analysis associated with remediation and FSS activities at the Site. A gamma spectroscopy system using a non-exempt radioactive source will be utilized to calibrate sample analysis equipment used to provide the FSS for the Site. This information is being transmitted to you as required by condition 18A of the CABRERA Materials License.

**BACKGROUND**

The Site was formerly used by the Defense Logistics Agency as a storage area for strategic quantities of monazite sands containing thorium. Areas of potentially contaminated soil may be present in the survey units being remediated. The radiological contaminant of concern is natural thorium. The work evolution is associated with outside soils.

**RADIOLOGICAL WORK DETAILS**

CABRERA has prepared this notification to the NRC with respect to CABRERA'S intent to utilize the CABRERA Materials License, number 06-30556-01 Amendment 01, at the Great Lakes Naval Training Center, Great Lakes, Illinois temporary job site. As required by condition 18A of the CABRERA Materials License, the following information is provided:

Surface soils will be collected and analyzed during remediation and FSS activities on the Site. The remediated areas are expected to result in the generation of approximately 120 cubic yards in-situ contaminated soil.

Collected soil samples will be dried, ground, sieved, and placed into 1-liter marinelli containers for radiological analysis. The samples will be analyzed onsite utilizing portable gamma spectroscopy equipment. The gamma spectroscopy equipment will be calibrated using a sealed solid source geometry marinelli container maintained under CABRERA at the Site during the work evolution. Approximately 250 soil samples will be collected and analyzed onsite and up to 25 QA samples will be analyzed by an offsite laboratory licensed to perform this work.

Investigation derived wastes (IDW) will be handled in accordance with federal and state regulations. This includes onsite samples, small amounts of contaminated PPE and equipment (gloves, smears, used marinelli containers, etc.). Total IDW is expected to be several cubic feet in volume. Cabrera will not take possession of any radioactive materials derived from the Site.

A calibration source will be utilized during this work evolution. The calibration source to be controlled under CABRERA NRC Materials License (No. 06-30556-01) is an Isotope Products 1-L marinelli beaker, source number 1088-82-2. The source has an active volume of 1,000 ml and is contained in an epoxy matrix having a density of 1.5 g/cc.

The calibration source is a multinuclide gamma sealed source containing licensed material, Americium-241. Source 1088-82-2 has a total decayed activity (as of 7/2/07) of 0.80  $\mu$ Ci. No

other radioactive materials are requested for use by this notification. The isotopes and individual activities present in the marinelli source beaker is:

Source No. 1088-82-2

<sup>241</sup> Am	0.0889 μCi
<sup>109</sup> Cd	0.3338 μCi
<sup>57</sup> Co	0.0048 μCi
<sup>139</sup> Ce	0.0006 μCi
<sup>203</sup> Hg	0.0000 μCi
<sup>113</sup> Sn	0.0010 μCi
<sup>85</sup> Sr	0.0000 μCi
<sup>137</sup> Cs	0.1906 μCi
<sup>88</sup> Y	0.0014 μCi
<sup>60</sup> Co	0.1783 μCi

The marinelli source container will be shipped to the Site directly to a CABRERA Employee. Source controls and leak tests associated with the marinelli calibration source will be performed upon receipt and follow CABRERA NRC License conditions. In addition, CABRERA Radiation Safety Procedure "Use and Control of Radioactive Check Sources", OP-009, will be utilized to document the source receipt.

The radionuclide contaminant of concern potentially present in soil and samples from the Site is natural thorium and thorium progeny.

CABRERA NRC Materials License (No. 06-30556-01) requirements, including previously submitted procedures, will be adhered to with respect to the duration of this work evolution. Radiological surveys of affected work areas, and decontamination of equipment used for the work effort will be conducted after completion of remediation investigation activities to ensure the absence of radioactive contamination. These values are consistent with NRC Regulatory Guide 1.86.

The project marinelli source receipt date is on or about July 5, 2007. Work within this scope of remediation and FSS activity is expected to be completed prior to December 30, 2007. Non-radiological activities may commence onsite earlier than the date noted above.

Key project personnel and supporting information is available from:

Ms. Pat Haworth – Officer in Charge  
NAVSEADET RASO NWS  
PO Drawer 260  
Yorktown, VA 23691-0260  
Tele (757) 887-4692

Mr. Howard Hickey – Environmental Manger  
Naval Facilities Engineering command – Midwest (NAVFAC MW)  
201 Decatur Avenue  
Bldg 1A  
Great Lakes, IL 60088  
Tele (847) 815-6719

Mr. John Eberlin – CABRERA Project Manager  
Cabrera Services, Inc.  
633 Stablestone Drive  
Chesterfield, MO 63017  
Tele (314) 703-6784

Mr. Henry Siegrist, P.E., CHP – CABRERA Corporate Health Physicist  
Cabrera Services, Inc.  
473 Silver Lane  
East Hartford, CT 06118  
Tele (860) 569-0095 ext 18

Please contact Henry Siegrist (CABRERA) at (860) 569-0095 should you have any questions regarding this CABRERA notification of intent to utilize NRC Materials License, number 06-30556-01 Amendment No. 1.

This is to acknowledge the receipt of your letter/application dated

6/18/2007, and to inform you that the initial processing which includes an administrative review has been performed.

NOTIFICATION 06-30556-d  
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

Please provide to this office within 30 days of your receipt of this card

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A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned Mail Control Number 140673.  
When calling to inquire about this action, please refer to this control number.  
You may call us on (610) 337-5398, or 337-5260.

NRC FORM 532 (R1)  
(6-98)

Sincerely,  
Licensing Assistance Team Leader