



**CABRERA SERVICES**  
RADIOLOGICAL • ENGINEERING • REMEDIATION

May 17, 2011

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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 03

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 03 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 03 at the temporary job site. This license or reciprocity is currently in use at other sites (CA, NY, MD, HI and NM). No activity exceeding license limitations will be conducted. 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 Henry W. Siegrist at CABRERA (860) 569-0095.

Sincerely,

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

attachment

575164  
NMSS/RGN1 MATERIALS-002

**ATTACHMENT  
RADIOLOGICAL REMEDIATION  
SHALLOW LAND DISPOSAL AREA (SLDA)  
PARKS TOWNSHIP, PENNSYLVANIA**

Cabrera Services, Inc. (CABRERA) is performing radiological remediation of the Shallow Land Disposal Area (SLDA) located in Parks Township, Armstrong County, Pennsylvania. This remediation is being completed under the USACE's Formerly Utilized Sites Remedial Action Program (FUSRAP) which was established to identify, investigate, and clean up or control sites previously used by the Atomic Energy Commission (AEC) and its predecessor, the Manhattan Engineer District (MED). The work entails soil sample analysis associated with remediation activities at the Site. A gamma spectroscopy system using a non-exempt radioactive source will be utilized to calibrate sample analysis equipment used at the Site. This information is being transmitted to you as required by condition 18A of the CABRERA Materials License.

**BACKGROUND**

Between 1961 and 1970, uranium-contaminated wastes were buried at the SLDA, located near Leechburg, Pennsylvania, from a uranium processing facility located in Apollo, Pennsylvania. The major emphasis of this fuel processing facility, operated by the Nuclear Materials and Equipment Corporation (NUMEC), was the conversion of uranium hexafluoride into uranium compounds and subsequent fabrication into nuclear fuel components. Radioactive and non-radioactive wastes from the (Apollo) Nuclear Fuel Fabrication Plant were placed into ten disposal trenches at the SLDA

**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 03, at the SLDA Site in Parks Township, PA. As required by condition 18A of the CABRERA Materials License, the following information is provided:

The primary radiological contaminants of concern (RCOC) in soil and buried waste include Americium-241 (Am-241), Plutonium-239 (Pu-239), Plutonium-241 (Pu-241), Radium-228 (Ra-228), Thorium-232 (Th-232), Uranium-234 (U-234), Uranium-235 (U-235), and Uranium-238 (U-238). Uranium isotopes are present in various enrichments, ranging from depleted uranium (DU) to high enriched uranium (uranium enriched to 20 percent or greater in the isotope U-235).

The trenches will be excavated in approximate one-foot lifts following removal of the upper three feet of soil cover material. In-situ radiological characterization will be performed prior to excavating each lift. This data be used to plan excavation and management of waste ensuring safe management of materials exhibiting elevated dose rates, to provide for SNM accountability during on-site management of excavated materials, and to ensure criticality control.

In situ radiological characterization of each lift will consist of an initial gamma walkover survey (GWS) with 100% coverage that will be conducted in each area. Radionuclide concentrations will be quantified using in situ gamma spectroscopy in areas exhibiting elevated gamma activity. In-situ measurements will be performed using a high purity germanium detector mounted on a platform positioning the detector in a downward orientation above the ground surface.

Liquid, solid and other media samples, such as smears for removable radioactivity, may be screened in an on-site laboratory. The primary purpose of on-site laboratory analysis is to assist in guiding remediation, determine initial segregation requirements for removal of trench waste, verification of water treatment process adequacy for removal of radionuclides, and initial determination of trench remediation completion.

On-site laboratory analysis activities will include:

- Preparation of samples for analysis such as weighing and packaging samples in appropriate analysis containers; placing a known volume of liquid in an appropriate analysis container; or depositing known aliquots of samples on appropriate analysis media, such as measurement of liquid volume, depositing this liquid volume in a planchet and drying the liquid sample in preparation for gross alpha analysis.
- Analysis of liquid and solid samples via gamma spectroscopy.
- Analysis of liquid samples for determination of gross alpha radioactivity.
- Analysis of smear samples for gross alpha radioactivity.
- Analysis of smear samples via gamma spectroscopy for determining the presence of gamma emitting nuclides and radionuclide abundance fractions.

Cabrera will utilize two licensed radioactive 1.0 microcurie (1.0  $\mu\text{Ci}$ ) Am-241 calibration sources. The sources are Eckert & Ziegler Isotope Products 25.4mm OD Type D Disk. Exempt sources will also be used for calibration purposes including Cs-137, Tc-99, Th-230, and Eu-152. An additional 9.0 nCi Am-241 and an exempt 14.0 nCi Cl-36 source will be used to calibrate and provided daily QC for iCAM Alpha/Beta air monitors.

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 air sample filters, etc). Cabrera will not take possession of any radioactive materials derived from the Site.

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 non-exempt sources will be received on or about June 1, 2011. Work within this scope of remediation and FSS activity is expected to be completed prior to December 15, 2011.

Key project personnel and supporting information is available from:

Mr. Daniel Williams – Cabrera Field Lead  
Cabrera Services, Inc.  
1105 Mary Street  
Vandergrift, PA 15690  
Mobile: (314) 600-8129

Mr. Bryan Ott – Sr. HP  
Cabrera Services, Inc.  
1105 Mary Street

Vandergrift, PA 15690  
Mobile: (208) 403-4648

Mr. John Eberlin – CABRERA Project Manager  
Cabrera Services, Inc.  
12747 Olive Boulevard  
St. Louis, MO 63141  
Tele (314) 576-8700

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. 03.

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

5/17/2011, and to inform you that the initial processing which includes an administrative review has been performed.

**Notification (06-30556-01)**  
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** 575164.  
When calling to inquire about this action, please refer to this control number.  
You may call us on (610) 337-5398, or 337-5260.