



# CABRERA SERVICES

RADIOLOGICAL • ENGINEERING • REMEDIATION

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November 2, 2011

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: **03035316**  
Activities at Temporary Job Site Utilizing U.S. NRC Radioactive Material  
License #06-30556-01 Amendment 03

Temporary Location: Gateway National Recreation Area, Great Kills Park, Staten Island,  
New York

Cabrera Services Inc. (CABRERA) is providing this written notification of its intent to utilize CABRERA Material License #06-30556-01 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 03 at the temporary job site. This license or reciprocity is currently in use at 4 other sites (CT, HI, NY, PA). 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 (voice) or (860) 569-0277 (fax).

Sincerely,

*Henry W. Siegrist*

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

**576315**  
NMSS/RGN1 MATERIALS-002

**ATTACHMENT  
GATEWAY NATIONAL RECREATION AREA  
GREAT KILLS PARK  
STATEN ISLAND, NY  
(November 2011)**

Cabrera Services, Inc. (CABRERA) is scheduled to provide radiological and chemical characterization and survey data as part of a CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) action at Great Kills Park, Staten Island, NY. The site has been identified as having natural uranium ore not indigenous to the area and small radium sources. CABRERA will provide characterization and survey data to help determine the nature and extent of radioactive contamination at the site under a contract to the U.S. Army Corps of Engineers (USACE). The USACE is providing engineering and management services to the National Park Service (NPS) in support of this CERCLA action.

Uranium and small sources of radium have been found in the park over the last few years. Survey, characterization, and immediate remediation of radium "hot spots" (small quantities of radium present as radium needles and tubes) will be provided. Work performed, including remediation of any radium sources/residuals found, will be performed under the controls set forth by the USACE and the Cabrera NRC license. Radiologically-contaminated sources, debris, and soil will be initially staged onsite in locked connex-type containers and ultimately removed from the site and transported to an approved off-site disposal facility.

This information is being transmitted to you as required by condition 18A of the Cabrera Materials License.

**BACKGROUND**

Areas of elevated radioactivity and dose outliers (referred to as "hotspots") associated with the site were identified during New York City fly overs. These were performed as part of routine general radiological mapping of areas in and around the New York City metropolitan area.

Several surveys have occurred since the initial flyovers with one of the more recent ones resulting in the recovery of 2 radium needles or tubes with millicurie levels of activity. The recovery of these apparent medical devices and some contaminated soils around the devices resulted in the closure of portions of the Great Kills Park. The site is located at Great Kills Park located on the southern shore of Staten Island, NY. The Great Kills Park is unit of the Gateway National Recreation Area of National Park Service, U.S. Department of the Interior.

**WORK DETAILS**

Cabrera has prepared this notification to the NRC as required by condition 18A of the Cabrera Materials License, the following information is provided:

The radionuclide contaminants of concern potentially present in soil and debris originating from the site is natural uranium bearing ore and small quantities of radium and progeny. Radium found during a 2009 interim response action included a radium needle with an estimated activity

of 10 mCi. It is expected that additional radioactive contamination found will also be in the form of radium needles, radium and radium progeny-contaminated soils, and natural uranium ore mixed with soils and debris.

Site survey and characterization is scheduled to include grubbing and removal of trees up to a permitted size followed by 100 percent gamma drive over and walk over surveys. An area of approximately 255 acres is expected to be surveyed. The gamma drive over survey is expected to be performed with high sensitivity 4 liter NaI scintillation crystals. In certain cases terrain and site conditions may require the gamma survey to be accomplished using personnel walk over surveys and scintillation detectors (3" x 3" NaI and Fidler NaI). Both types of instrumentation are expected to be able to detect radium needles to a depth of several feet below ground surface (bgs). Global Positioning System (GPS), will be utilized for all radiological survey data to insure high quality positional information with respect to the surveys. Uranium ore, due to the lower inherent activity concentrations and gamma energies will present less opportunity for detection.

Onsite hand-held gamma spectroscopy systems will be utilized to ensure isotopic identification of immediately removed materials and to aid in identification of areas containing bulk natural uranium in soil in excess of routine and expected levels of natural uranium at this location. Any removed radium associated artifacts (needles, tubes, debris) will be placed in shielded containers and maintained in locked connex-type containers and controlled to limit dose to the public. Radium contaminated soils will also be transferred and maintained in metal containers. Both radium artifacts and radium contaminated soils will ultimately be removed from the site and transported to an approved off-site disposal facility.

Daily QC of radiation detection instrumentation will be with NRC exempt sources. These sources will be controlled under the CABRERA NRC Materials License. Sources will be shipped or hand delivered to the Site directly to a CABRERA Employee. Source controls will be implemented onsite in accordance with CABRERA NRC License conditions. In addition, CABRERA Radiation Safety Procedure "Use and Control of Radioactive Check Sources", OP-009, will be utilized to ensure proper source storage and control.

Site remediation activities are expected to produce up to 1-2 dozen 55-gallon containers of radium contaminated soils. In addition, Investigation Derived Wastes (IDW) will be produced during the work evolution. This includes onsite samples, small amounts of contaminated PPE and equipment (gloves, smears, used containers, air filters, etc.). This IDW will be handled in accordance with federal and state regulations. Total IDW is expected to be less than the equivalent of 2 55-gallon drums. Cabrera will not take permanent possession of any radioactive materials derived from the Site in excess of our license limits.

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 sampling activities to ensure the absence of radioactive contamination. These values are consistent with NRC Regulatory Guide 1.86.

Work within the current scope of remediation activity including mobilization and demobilization is expected to commence on or about November 28, 2011 with a completion of March 31, 2012. Ship out of radioactive materials staged on site has not yet been determined.

Key project personnel and supporting information:

Mr. Carl Young, P.G. – CABRERA Project Manager  
Cabrera Services, Inc.  
1106 N. Charles St., Suite 300  
Baltimore, MD 21201  
Office (410) 982-0725  
Cell (410) 456-3415

Ms. Kathleen Cuzzolino – Environmental Protection Specialist  
Department of Interior  
National Park Service  
Gateway National Recreation Area  
210 New York Ave.  
System Island, NY 10305  
Office (718) 354-4609

Mr. Henry Siegrist, P.E., CHP – CABRERA RSO  
Cabrera Services, Inc.  
473 Silver Lane  
East Hartford, CT 06118  
Office (860) 569-0095  
Cell (860) 416-0196

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.

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

11/21/2011, 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** 576315.  
When calling to inquire about this action, please refer to this control number.  
You may call us on (610) 337-5398, or 337-5260.