CABRERA SERVICES
RADIOLOGICAL · ENGINEERING · REMEDIATION

P-3

April 15, 2014

Licensing Assistance Team
Division of Nuclear Materials Safety
U.S. Nuclear Regulatory Commission, Region I
2100 Renaissance Boulevard, Suite 100
King of Prussia, PA 19406-2713

03035316

Re: Additional information: RSO Change for Cabrera Services, Inc. (Lic. No. 06-30556-01)

Dear Sir or Madam:

Cabrera Services, Inc. (Cabrera) has provided written notification for a license amendment change request to the named license Radiation Safety Officer (RSO) utilizing NRC Form 313 (February 25, 2014). Recent changes in management have resulted in needed changes to the Radiation Safety Committee (RSC) membership. This additional information is provided with respect to these changes to the RSC.

The Radiation Safety Committee is described in and is part of the Cabrera Radiation Safety Program. The Radiation Safety Program, in turn, was submitted to the NRC as part of the original NRC license submittal made by Cabrera. A copy of the revised Radiation Safety Program, Revision 2, is attached to this submittal. The attached information will supersede and replace any previous commitments on the RSC. For you convenience a second highlighted copy showing the changes has also been provided.

If you should have any questions regarding this additional information please contact Henry W. Siegrist at 860-569-0095 or Michael Winters at 352-610-2150

Sincerely,

Henry W. Siegrist

Henry W. Siegrist, P.E., CHP
RSO
attachment

582992

CABRERA SERVICES
RADIOLOGICAL · ENGINEERING · REMEDIATION

Radiation Safety Program

Revision 2

Prepared By: Henry Siegrist
Henry Siegrist CHP, P.E., Radiation Safety Officer
Date: 4/15/2014

Approved By:
Alan Solow, CEO
Date: 4/15/14

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1.0 PURPOSE

Cabrera Services, Inc. (CABRERA) is engaged in radiological activities that require the documentation and implementation of a Radiation Safety Program (RSP) compliant with radiation protection regulations. The elements of the CABRERA Radiation Protection Program are set forth by this RSP and the appropriate guidelines to which CABRERA must implement for the scope of activities requested. This RSP defines the CABRERA approach to health physics and includes the applicable provisions of 10 CFR 19, 10 CFR 20, 10 CFR 61, 10 CFR 835 and DOE Order 5400.5. The RSP is presented in a program level document from which specific project health physics procedures are to be developed and implemented.

The purpose of this document is to define program requirements and radiation protection standards in support of CABRERA operations. In addition, this document is to fulfill the requirement of a documented Program for sites or projects where CABRERA is required to implement such a Program. Examples include work under a CABRERA Nuclear Regulatory Commission (NRC) Service license at a customer's facility or a Department of Energy (DOE) D&D project where CABRERA would be required to implement a Program rather than participate in the existing site Program. Through monitoring and ALARA practices, CABRERA intends to use this Program to ensure the health and safety of employees and workers, their protection from ionizing radiation, and the prevention of the release of radioactive contaminants that could adversely affect the environment.

Portions of the Program will be implemented during CABRERA's performance of site surveys, remediation activities, decontamination activities, waste characterization, waste packaging and shipment.

2.0 PHILOSOPHY

CABRERA's philosophy is to control the possession, receipt, use, transfer, and disposal of radioactive materials at a customers facility in such a manner that the total dose to any individual does not exceed standards for protection against radiation prescribed in the regulations set forth by the NRC, DOE, Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), state regulatory agencies and licenses or permits issued to CABRERA or our customers by NRC, EPA or state regulatory agencies. In addition to maintaining radiation exposure within regulatory standards, CABRERA is committed to maintaining radiation exposure As Low As is Reasonably Achievable (ALARA) through the use of engineering controls, employee training and administrative procedures. These exposure controls must be maintained for the sum of doses received by all exposed individuals as well as each individual. All personnel are responsible for making recommendations that would further reduce personnel radiation exposures.

3.0 POLICY(S)

3.1 ALARA

It is the policy of CABRERA to maintain exposures to workers, members of the public and environment As Low As is Reasonably Achievable (ALARA), taking into account the state of technology and the economics of improvements in relation to benefits. CABRERA has established a comprehensive ALARA program designed to comply with applicable regulations, including 10 CFR 20 and 10 CFR 835.

Responsibilities – The president of the company is responsible for ensuring that a meaningful ALARA program is developed and implemented. To meet this responsibility, the President assigns responsibility for assuring that ALARA is given proper consideration in project planning and in operations to the Corporate Health Physicist.

The Corporate Health Physicist is responsible for ensuring that ALARA considerations are included in the design of project plans.

Project Managers are responsible to ensure that radiological operations and activities are pre-planned and conducted to allow for the effective implementation of dose reduction, contamination reduction and control measures to achieve specific ALARA goals and objective for the facility/site.

Employees of CABRERA involved in radiological work are responsible for maintaining their exposure ALARA, keeping track of their radiation exposure status and obeying posted, written and oral radiological control instructions and procedures.

CABRERA Health Physicists are responsible for assisting Project Managers, the RSO, and the CHP in the development and implementation of the CABRERA radiation safety program, which shall include the operational ALARA program. The Health Physicists are also responsible for assisting with ALARA input to system and facility/site designs, which involve potential exposure of personnel to radiation or radioactive materials.

The key to the success of an ALARA program depends upon the understanding and cooperation of each individual performing radiation-related activities. Each individual is responsible for maintaining his/her own exposure as low as is reasonably achievable and to assure that his/her actions do not adversely affect the exposures of other individuals.

Supervisors are responsible for planning and coordinating work to ensure that their personnel comply with all established procedures, instructions, and policies for health physics and reducing exposure.

Goals – The ALARA program shall be incorporated into the radiation safety program so that ALARA becomes an integral part of all aspects of the day-to-day operations involving radiation exposure and radioactive materials. The overall goal of the ALARA program is to maintain the annual internal and external radiation dose to each individual and the annual collective dose to personnel ALARA.

3.2 Respiratory Protection Policy

It is CABRERA's policy to maintain personnel exposure to known or suspected airborne radioactive and/or hazardous material as low as is reasonably achievable (ALARA) with regulatory guidance.

The respiratory protection program is an integral part of the Health and Safety program. The primary objective of the respiratory protection program is to limit, to the extent practicable, the inhalation of airborne radioactive materials and/or hazardous material. Under normal circumstances, this objective shall be achieved by the application of practicable engineering controls such as process, containment, and ventilation equipment. When such controls cannot be applied or are not feasible, respirators may be used.

The management of CABRERA does not consider protection of workers from airborne radioactive materials through the use of respirators to be routine. For this reason their use, except for emergencies, shall only be authorized pursuant to an approved radiation work permit. The use of respirators as a backup system for practicable engineering controls is an acceptable practice for routine operations provided an approved radiation work permit covers their use.

Any individual who may be required to use respiratory protection must have medical clearance for such use and have received required training in the proper use, maintenance, and care of respirators.

Nonroutine operations are those that occur infrequently at irregular intervals and for this reason the application of engineering controls may be impracticable. The protection of workers from airborne radioactive material and/or hazardous materials by the use of respirators during nonroutine operations is acceptable to the management of CABRERA provided that such use is authorized pursuant to an approved radiation work permit.

Emergency conditions are unplanned events characterized by the need for rapid and aggressive actions to prevent or mitigate the effects of rapidly deteriorating conditions. The use of respirators during such is often a reasonable substitute for engineering controls that must be assumed to be nonfunctional or ineffective. The use of respirators in emergency conditions

is acceptable.

The use of a respirator subjects the wearer to added stress and some discomfort. For this reason, no specific limits have been placed on time duration that a respirator may be worn. It is the policy of CABRERA that a person wearing a respirator may leave the area at any time to seek relief. This may be for reasons of equipment malfunction, physical or psychological distress, procedural or communication failure, significant deterioration of operating conditions, or any other condition that might require such relief.

3.3 Training Policy

CABRERA has a strong commitment to training. CABRERA believes that properly trained individuals are a large part of ALARA. Thus, CABRERA is committed to ensure that individuals receive training that, at a minimum, is commensurate with NUREG -1556, 10 CFR 19 and 20, federal and state regulations.

4.0 IMPLEMENTATION OF POLICY

Corporate policies will be implemented by the Radiation Safety Committee (RSC) and the Radiation Safety Officer (RSO). The RSC will be composed of members extracted from various company-wide areas that would use, manage the use of, or train personnel in the use of sources of ionizing radiation. The implementation of recommendations or decisions by the RSC is the responsibility of the RSO who will ensure implementation by Radiation Safety Staff members.

5.0 INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM

5.1 Executive Management

The Chief Executive Officer (CEO) of CABRERA will act as the executive manager. Under this role, the CEO, will be responsible for oversight of the RSP and have the ultimate responsibility for the license and the activities associated with the license. Due to the various structures of different organizations, the executive manager may need to delegate certain responsibilities to other managers for the day-to-day oversight of the program.

The executive manager will be involved in selecting the chairperson and members of the RSC and the RSO. The executive manager will define the role, duties, and responsibilities of each RSC member and the RSO.

5.2 Radiation Safety Committee

The Radiation Safety Committee (RSC) reports directly to the CEO of CABRERA as shown in Figure 1. Figure 2 is an example of the membership of the RSC. The membership individuals may change to accommodate organizational and personnel changes. The RSC works with executive management and the RSO in implementing the RSP, and will be involved in establishing policies and procedures for managing the RSP. The RSC has the approval of the executive management and the authority and flexibility necessary to effectively fulfill its role in managing the RSP. The RSC is responsible for the following duties.

5.2.1 Meet as often as necessary to conduct business, but not less than quarterly.

5.2.2 Conduct periodic audits and inspections, reviews of the RSP, and along with the RSO and staff, review records, reports from the RSO, results of NRC inspections and written safety procedures. Observe audits and/or inspections performed by the RSO and Staff to ensure adequacy of the management control systems. An independent auditor may conduct these reviews; at the same time it does not relieve the RSC of the responsibilities to ensure that the reviews are conducted in accordance with applicable regulations. Examples of a review include, but are not limited to, the following:

- Personnel radiation dosimetry data
- Results of required radiation surveys
- Any significant incidents, including spills
- Contamination controls
- Results of the annual audit of the radiation safety program
- Programs for maintaining dose ALARA and providing any necessary recommendations to ensure dose is ALARA.
- Project documents, such as the Specific Work Plan, Health and Safety Plan and QA Plan.
- Review and approval of permitted program and procedural changes by at least two members of the RSC prior to implementation.
- Review of operating procedures to ensure compliance with this program, pertinent federal regulations, license, and customer requirements.

Figure 1

Cabrera Services, Inc.
Radiation Safety Committee (RSC)

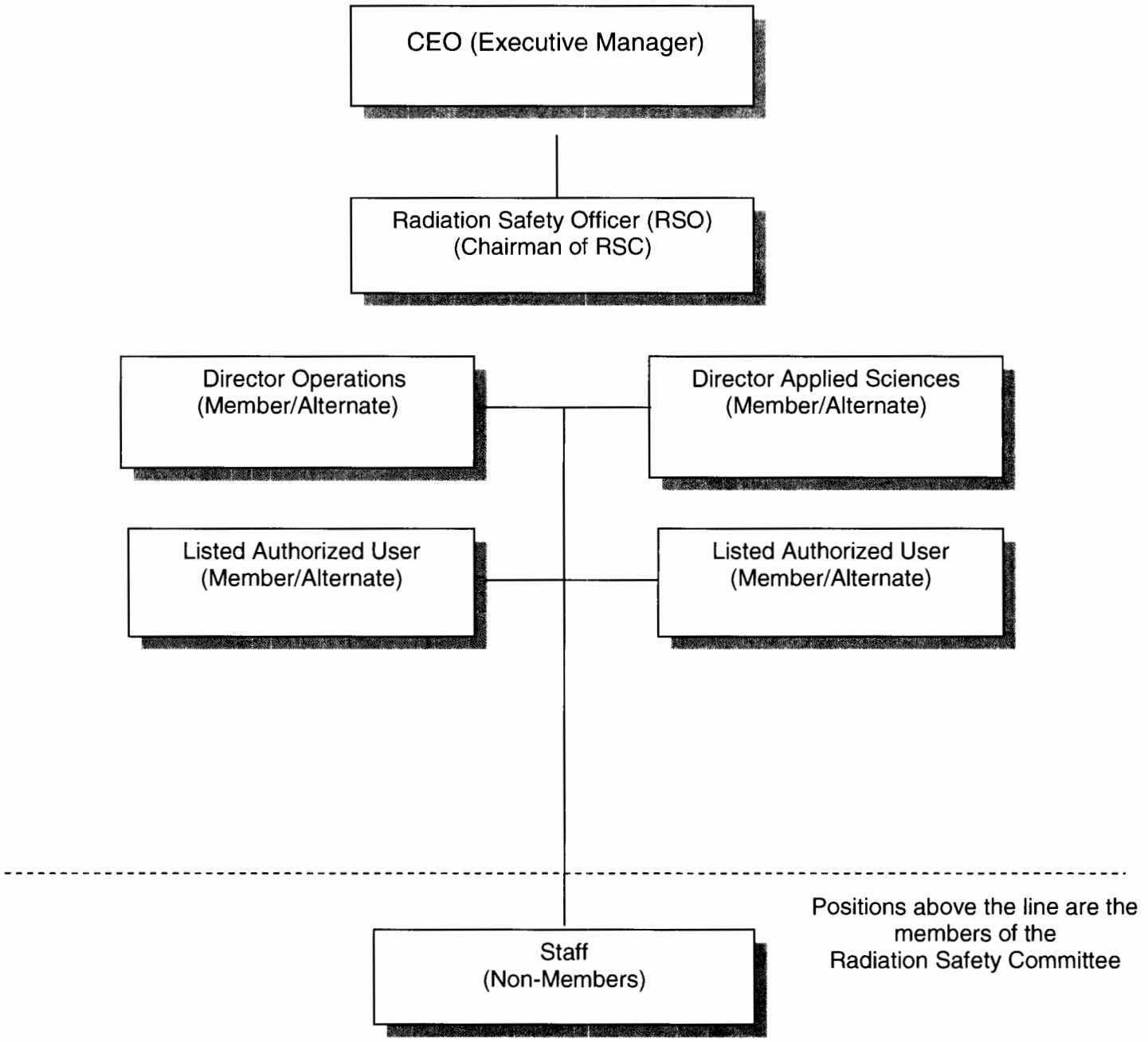

Figure 2

EXAMPLE OF
MEMBERS OF THE RADIATION SAFETY COMMITTEE

ALAN SOLOW, CEO	Executive Manager
Michael S. Winters, CHP RSO	Member/RSC Chairman/RSO
Robert Flowers, Director Operations	Member/Alternate Executive Manager
Christopher Wright, Director Applied Sciences	Member/Alternate Executive Manager
Nicholas Berliner, listed Authorized User	Member/Alternate RSC Chairman
Michael Plonski, listed Authorized User	Member/Alternate RSC Chairman

5.2.3 Ensure that operations comply with the provisions of this program and all other pertinent federal and state regulations.

5.2.4 Establish a radiation control program for those projects involving radioactive materials and implement development of procedural guidance for the program and the projects. The RSC is authorized to make program changes and changes to procedures specifically identified in the license application, without prior NRC approval, so long as:

- The proposed revision is documented, reviewed, and approved by the RSC.
- The revised program is in accordance with regulatory requirement, will not change license conditions, and will not decrease the effectiveness of the Radiation Safety Program.
- The staff is trained in the revised procedures prior to implementation.
- The audit program evaluates the effectiveness of the change and its implementation.

The RSC may authorize changes in the following without notifying the NRC.

- Programs and procedures referenced in the license
- Changes indicated by NRC rule changes
- Training for individuals working in or frequenting restricted areas
- The audit program
- Radiation monitoring instruments
- Material receipt and accountability
- Occupational dose
- Safe use of radionuclides and emergency procedures
- Surveys
- Changes in contractors for bioassay or waste disposal or for servicing, calibrating, and processing personnel dosimeters

(providing the new dosimetry contractor is National Voluntary Laboratory Accreditation Program (NVLAP) approved),

- Changes in contractors for other outsourcing services (labs, project personnel, equipment rental, etc.) and,
- Changes in a piece of referenced equipment providing the replacement is equivalent or better or the need has been altered.

5.2.5 Ensure that employees working with radioactive materials have received the required training in operating procedures, rules, and special precautions prior to being occupationally exposed to radiation.

5.2.6 Evaluate CABRERA's overall efforts for maintaining doses ALARA on an annual basis that will include the efforts of the RSO, authorized users, and workers as well as those of management.

5.2.7 Provide final approval of Authorized Users of radioactive materials on the license.

5.2.8 Inform the president of CABRERA on program status and radiation safety objectives, the quality of the RSP in meeting our customer needs, maintaining dose to personnel and members of the public ALARA, and assuring protection of the environment.

5.2.9 Evaluate new users and new uses of byproduct material.

5.3 RSC Membership and Qualifications

5.3.1 The Committee is composed of members from the following activities or areas of responsibility:

- Executive Management
- Health Physics
- Health and Safety
- Operations
- Training
- Instrumentation

5.3.2 The membership of the RSC may be changed as required to meet programmatic needs. The designated representative of each of

these areas is valid from the date of appointment by the CABRERA CEO.

5.3.3 RSC members must have a college level degree and two (2) years of experience at a senior level in the area that they represent, or five (5) years of experience at a senior or management level in the area that they represent. Membership of individuals listed on the NRC license and appointed by the CEO is also provided for. Members must be familiar with CABRERA RSP and procedures, applicable Federal and State regulations and our license requirements.

5.3.4 A quorum of the RSC is authorized to act on the behalf of the committee or for the approval of necessary actions between regular meetings of the Committee. A quorum shall consist of the executive manager (or his/her alternate), the RSO (or his/her alternate), and at least one (1) other committee member or a minimum of 50% of the RSC members. A single individual may fulfilled alternate status for only one individual at a time to meet quorum status.

5.3.5 The RSC is required to keep minutes of all quarterly meetings, and any ancillary actions of the committee that affect or are affected by the RSP. At a minimum, the minutes will include the date of the meeting, the members present and absent to demonstrate a quorum was present, a summary of the discussions, recommendations and the results of votes.

6.0 SPECIFIC QUALIFICATIONS AND RESPONSIBILITIES FOR MEMBERS

6.1 Qualifications

6.1.1 Radiation Safety Officer (RSO) / Chairman – must have a B. S. or higher degree in Health Physics or a related field and at least (5) years of practical health physics experience, of which at least two (2) years must be in a similar position and/or equivalent training, unless certified by the American Board of Health Physics.

6.1.1.1 In the absence of the RSO, a Certified Health Physicist (CHP) or NRC License listed Authorized User serves in that capacity. These personnel may assume the duties of the RSO but the responsibility for decisions of the RSO remain with license designated RSO.

6.1.1.2 Minimum qualifications for an RSO duly authorized representative shall be similar to the qualifications required to hold the office. The designee should have the required degree and at least five (5) years of practical experience of

which at least two (2) years must be in a similar position and/or in equivalent training, or at least eight (8) years of practical radiation safety experience, of which at least three (3) years must be in a similar position and/or in equivalent training.

6.1.2 Operations Management – must have a college degree in Health Physics, science, or engineering, and at least five (5) years of practical experience, of which at least one (1) year must be in field operations experience. Those without a degree may substitute at least eight (8) years of practical management experience of which at least three (3) years must be in radiation safety experience.

6.1.3 Corporate Health and Safety Manager – Must have a B.S. or higher degree in Occupational Safety, Industrial Hygiene, Environmental Health, or related field and at least five (5) years practical occupational health and safety experience. Certification by the Board of Certified Safety Professionals (BCSP) and/or the American Board of Industrial Hygiene (ABIH) is required.

6.1.4 Radiation Staff (Health Physics Technician) must have a two year college degree in Health Physics or a related science, or engineering, and at least three (3) years of practical experience or a high school degree, and at least six (6) years of practical experience of which at least two (2) years must be in a similar position and/or equivalent training.

6.1.5 Waste Broker must have at least three (3) years of brokering as a significant activity with a minimum of twenty varying shipments. The shipments could include all or some of the following: A shipment to a qualified disposal facility (i.e., Barnwell, Hanford, Envirocare), an LSA shipment to a qualified disposal facility, a RAM nos shipment to a qualified disposal facility, an excepted package shipment, a hazardous waste shipment, a Federal Express shipment, and a shipment to a processing facility.

6.2 Responsibility

Note: The RSO, duly authorized representative, Operations Management, and Health Physics Technician have the authority to stop any work or activity that in their opinion could pose a hazard to the health and safety of the employees or general public. Only the RSO or duly authorized representative has the authority to re-start the work.

6.2.1 The RSO is responsible for supporting management, and the RSC, on radiological issues at a minimum, relating to any CABRERA project,

the license, state and federal regulations. The RSO reports functionally to the Director of Applied Sciences.

6.2.2 The RSO is qualified in the field of health physics and heads the RSP. The RSO performs or supervises others to ensure that the duties specified are performed in a timely manner. Individual personnel may be assigned and made available to the RSO for technical support and auditing purposes. The RSO reports to the Director of Applied Sciences and has unrestricted access to the CABRERA CEO on all matters pertaining to radiological health and safety of CABRERA personnel. The RSO is assisted by the Radiation Safety Staff to administer the RSP as set forth in this program. The RSO performs audits of all areas of use and individuals who are authorized to use radioactive material to ensure work is done in accordance with the license, regulations, and user permit conditions. Specific duties and responsibilities of the RSO at a minimum, include:

- Responsible for oversight of the day-to-day health physics program established by the radiation safety committee.
- Monitoring and surveys of all areas in which radioactive material is used.
- Packaging, labeling, surveys, etc., of all radioactive shipments.
- Determine, review, and approve appropriate radiation detection instrumentation to utilize in the field based upon knowledge of the processes and radionuclides and /or field characterization of the radionuclides involved and the radiations and the abundances emitted by these radionuclides
- Personnel monitoring program including determining the need for and evaluating bioassays, monitoring personnel exposure records, and developing corrective actions for those exposures approaching maximum permissible limits.
- Training program
- Waste disposal program
- Inventory and leak tests of sealed sources
- Decontamination
- Investigating any incidents and responding to any emergencies

- Maintaining all required records
- Communications with senior management and the RSC regarding program implementation and compliance status.
- Be available to provide advice and assistance to the RSC and management on radiological safety matters whenever necessary.
- Review and make recommendations to the RSC regarding the list of qualified users of radioactive materials in support of the license.
- Report to the RSC, at periods not to exceed one year, on all findings and recommendations to reduce exposure to personnel.
- Serve as the CABRERA liaison to the U.S. Nuclear Regulatory Commission on license inspection matters.

6.2.3 The Directors report to the CABRERA CEO on matters other than those specific to health physics. The Directors should have at least three (3) years of experience in managing the various aspects of projects. At least one (1) year must be field experience in the area(s) specific to the planned evolution, i.e., of radiological remediation, soil movement, and/or characterization. The Directors have the following duties and responsibilities:

- Ensure that all radioactive materials are handled in accordance with the provisions of this program, the radioactive materials license and pertinent state and federal regulations.
- Provide technical advice and assistance to CABRERA management and personnel on all matters pertaining to project operations, specific work plan execution, project field personnel as those related to needs, qualifications and abilities.
- Assist by providing support to the RSO for training and orientations programs, for occupationally exposed individuals, for handling and processing of radioactive materials, and other personnel as required.
- Stop any job or activity that in his opinion could pose a hazard to the health and safety of employees and the general public. Conduct a complete review of the noncompliance and obtain RSC approval prior to allowing the job or activity to continue.

6.2.4 The Corporate Health and Safety Manager is responsible for ensuring Cabrera Services, Inc. meets its commitment to provide a safe work environment for its employees, contractors, visitors, and the general public at all locations where it engages in business activities as well as advising management on all matters relating to compliance with federal, state, and local Occupational Safety and Health regulatory requirements.

6.2.5 Radiation Safety Staff

The Radiation Safety Staff are responsible for implementing sound radiological principles on projects as directed by the RSO or duly authorized representative. Projects will be managed following license, federal, and state requirements. The RSO and the Radiation Safety Staff have the following duties and responsibilities:

- Implement and maintain an effective RSP that complies with the most recent provisions and conditions of this program, operating procedures, the radioactive materials license and applicable federal and state regulations.

- Provide necessary information on all aspects of health physics to personnel at all levels of responsibility pursuant to 10 CFR 19.12 and 10 CFR 20.

- Maintain surveillance of overall activities involving radioactive material, including monitoring and surveys of all areas in which radioactive material is used or stored.

- Maintain a current ionizing radiation source inventory under CABRERA control and a record of their location to ensure that sources are secure against loss or unauthorized use.

- Performance or arrangement of leak test evaluations on all sealed sources and calibration of radiation detection survey instruments.

- Develop, coordinate, and participate in orientation and training programs for potential occupationally exposed individuals at periodic intervals (refresher training), and other personnel as required by changes in procedures, equipment regulations etc.

- Maintain current, all applicable required license amendments, and apply for amendments and renewals in a timely manner as approved by the RSC.

- Distribute and process personnel radiation monitoring equipment, determine the need for and evaluate bioassays, monitor records for trends and unexpected exposures, notify individuals and their supervisors of radiation exposures approaching maximum permissible amounts, and recommend appropriate remedial action as necessary.

- Formulate, revise, and maintain procedures for and in support of, the RSP.

- Stop any job or activity that in their opinion could pose a hazard to the health and safety of employees or the general public. Conduct a complete review of the noncompliance and obtain RSC approval prior to allowing the job or activity to continue.

6.2.6 Waste Broker

The Waste Broker reports to the Vice President of Operations. The Waste Broker consults as necessary with the RSO or Vice President of Operations on Heath Physics matters and has the following duties and responsibilities:

- Package and ship radioactive materials in accordance with all provisions of this program, the radioactive materials license, and pertinent state and federal regulations.

- Provide technical advice and assistance to CABRERA management and personnel on all matters pertaining to packaging, marking, labeling, shipping and transportation of radioactive materials.

- Assist the RSO in training orientation programs, for occupationally exposed individuals, for handling and transportation of radioactive materials and other personnel as required.

6.2.7 Radiation Workers

Employees of CABRERA who are assigned to work activities involving radioactive material have the following responsibilities, in accordance with 10 CFR 19 and this program.

- Obey posted, verbal and written health physics procedures.

- Wear dosimetry devices as instructed by procedure and when required by other specific instruction of this program, project health physics, etc.

- Promptly report any lost or damaged devices to their supervisor and/or the RSO or duly authorized representative.

- Promptly report to their supervisor or RSO any incident, personnel injury, suspected overexposure, contamination, internal deposition, and any suspicious or questionable occurrence involving radioactive material.

- Be thoroughly familiar with equipment, procedures and requirements for the use of any special devices, prior to using or working with any source or device that produces ionizing radiation.

- Avoid any unnecessary exposure by use of the concept of time, distance and shielding when working in the presence of radiation sources to maintain their exposure As Low As is Reasonably Achievable (ALARA).

7.0 TRAINING

7.1 Before beginning work with or in the vicinity of licensed material, all general employees, radiation workers, and Health Physics Technician (HPT) assigned to the project who are likely to receive an occupational dose in excess of 100 mrem in a year shall receive radiation safety training. The training will be commensurate with their assigned duties and specific to the licensee's RSP. The purpose of the training is to ensure personnel that receive occupational exposure are adequately trained in radiation safety to perform assigned work and to maintain exposure ALARA. Each individual shall also receive periodic refresher training. Retraining shall be performed whenever there is a change in duties or the work environment and at a frequency sufficient to ensure that all staff is adequately trained.

7.2 The CABRERA training program provides a commitment to initial training, retraining, and continuing education. The type and amount of instruction will be based on regulatory requirements (10 CFR 19.12(a) and 19.12(b)), past documented experience, and will be commensurate with potential radiological health protection problems in the areas in which the employees are expected to work. Performance based training modules and continuing education are considered important aspects of this training program. The training may take any form which may include utilizing video tapes or interactive on line or off line computer programs.

7.2.1 In accordance with 10 CFR 19.12, all radiation workers will receive general and site-specific instruction prior to beginning work with licensed materials. The elements of this training will include but are not limited to:

- Applicable regulations and license conditions.
- Area locations where radioactive material is used and/or stored.
- Potential hazards associated with radioactive material.
- Appropriate health physics procedures.
- Individual 's obligation to report unsafe conditions to the RSO or applicable authorities.
- Appropriate response to emergencies and unsafe conditions.
- Locations of pertinent procedures, regulations, licenses and other material required by regulations.

- Radiation Work Permit (RWP).

7.2.2 In addition to basic classroom instruction, performance-based (on-the-job) training specific to the individual's duties may be conducted. This helps to ensure safe handling of radioactive materials in accordance with ALARA principles.

7.2.3 Since different radiation hazards will be encountered on different types of projects, site specific programs and/or job specific programs will be developed to instruct each different group with appropriate information in accordance with 10 CFR 19. This information may be incorporated into other training programs or may be presented separately. Specialized training, such as, emergency procedures OSHA, etc. are examples of training programs that would be presented as a separate training subject.

7.3 Prior to performing radiological work, each radiation worker shall, successfully complete radiation safety training. The student attaining a minimum score of 80% on a written exam, demonstrates successful completion of this training that includes as a minimum, the following topics.

- Types and sources of ionizing radiation contributing to personnel exposure,
- Biological effects and risks associated with exposure to ionizing radiation,
- Radiation exposure limits and control levels,
- Specifics for using time, distance and shielding to maintain individual exposures ALARA,
- Specific personnel dosimetry requirements,
- Operating, maintenance, handling and accountability procedures for radioactive sources,
- Facility or site survey requirements and procedures,
- Responsibilities of individuals,
- Emergency procedures and,
- Specific hands-on survey instrument requirements for frisking.

7.4 Initial training will be a minimum of four hours and conducted by the RSO or a designated representative. Completion of the training course includes

successfully completing a minimum 20 question exam with a passing grade of 80%. An alternative to attending the four hour class is passing a 50 question challenge exam with a minimum grade of 80%. This alternative is designed for an individual with prior experience, similar qualification at another facility, or formal training in radiological controls or health physics.

7.5 Once an individual has successfully completed the course, they are classified as a Radiological Worker for a period of one (1) year. This re-qualification period will be tracked through the personnel and training matrix documentation that will be maintained by either or both the radiation safety office and the Corporate Safety office. The worker will be retrained or may take a challenge exam not later than 90 days from the expiration of their certificate.

7.6 Radiation Worker refresher training will be provided sooner than annually, if deemed necessary by the Radiation Safety Staff.

7.7 The instructor must have a college level degree and two (2) years of experience in training, or five (5) years of experience in training of radiological issues. The instructor must be familiar with CABRERA RSP and procedures, applicable Federal and State regulations and Cabrera's license requirements.

7.8 To ensure the training program is successful in ensuring workers understand the concerns of working with or around radioactive material, the RSO or independent consultant will conduct an annual assessment of the program. The assessment will be documented and any recommended changes will be approved by the RSC.

7.9 Records of training will be maintained for a minimum of three (3) years. Training records will include, but are not limited to:

- A list of topics presented.
- Names of instructors and students, including a manner of positive identification.
- Date(s) of training.
- A written assessment or test for each student that documents satisfactory completion of training.

8.0 RADIATION PROTECTION STANDARDS

Every effort will be made to maintain personnel radiation exposures below the indicated radiation protection standards as set forth in this section and consistent

with the ALARA principle. The occupational exposure standards prescribed in this section apply to exposures received by an individual assigned duties involving exposure to radiation and to radioactive materials. Radiation exposures received from background radiation and medical exposures are not included in the radiation exposure limits specified in this section.

8.1 Contamination Standards

Radioactive material will be controlled in such as manner that the surface contamination does not exceed the levels specified in Regulatory Guide 1.86, Termination of Operating Licenses for Nuclear Reactors, and in the USNRC, Division of Industrial and Medical Nuclear Safety, August 1987 guideline document, Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material, and as set forth in Table I. Each of these sources cites the same levels.

The contamination levels in Table I represent the maximum allowable levels. Every effort should be made to maintain contamination levels below these levels by implementing contamination control levels lower than the levels indicated. Contamination control levels for customer facilities where CABRERA works may, in fact, be lower than the levels indicated in the table. In those cases and in all cases of lower contamination levels, the more stringent contamination control levels will be used to maintain compliance with customer requirements.

Table I Contamination Limits

RADIONUCLIDE	ALLOWABLE SURFACE CONTAMINATION (DPM/100 CM^2)	
	REMOVABLE	FIXED + REMOVABLE
Transuranics, Ra-226, Ra-228, Th-230, Th-228, Pa-231, Ac-227, I-125, I-129	20	100
Th-Natural, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133	200	1000
U-Natural, U-235, U-238, and associated Decay products	1000 α	5000 α
Beta-Gamma emitters (radionuclides with decay modes other than alpha emission or spontaneous fission) except Sr-90 and others noted above.	1000 β–γ	5000 β–γ

8.2 Airborne Radioactivity Standards

The amount of radioactive materials taken into a workers body will be limited to less than 10% of the Annual Level on Intake (ALI) as specified in Table I, Columns 1 and 2, of Appendix B of 10 CFR Part 20, providing the total effective dose to the individual is maintained ALARA.

9.0 VISITORS

Exposure to radiation will be controlled by administrative procedures, employee training and engineering controls. Only through the mutual cooperation and commitment of all employees can CABRERA meet its goal of maintaining personnel exposures As Low As is Reasonably Achievable (ALARA).

Casual visitors will always be escorted in any restricted area (see section 15). Casual visitors may not perform work nor supervise personnel performing work.

Routine visitors who may receive occupational dose will be escorted during their entry into any controlled area. Training information commensurate with the hazard or risk involved will be provided and documented for retention in the visitor file. An attachment documenting the entry will be provided to the visitor upon completion of the entry/visit.

Escorted visitors will not be allowed to enter any high radiation area, contaminated or airborne radioactivity areas. Permission to deviate from this must be obtained on a case-by-case basis, in writing, from the RSO. The visitor may be requested or required to become a CABRERA radiation worker. Some level of formal training will be required in all cases.

10.0 AUDITS AND INSPECTIONS

Audits and inspections shall be performed on a routine basis to evaluate the effectiveness of the RSP, and the level of compliance with applicable regulations, standard operating procedures, and license conditions. At a minimum, an audit of the RSP, based on an approved written plan, shall be performed annually. A qualified individual having no direct responsibility for the operation being audited shall be used to perform the annual audit in order to ensure unbiased and competent results. The annual audit for radiological safety shall be performed by an individual with at least two years experience in applied health physics. Items requiring corrective action shall be documented in a report distributed to the RSO and RSC. Follow-up actions will be documented.

Inspections can be performed by Radiation Staff members and will follow an approved written plan. Items requiring corrective action shall be documented in a report distributed to the RSO and members of the RSC. Follow-up actions will also be documented and distributed to members of the RSC. The RSC will review and evaluate the findings and corrective actions of the most recent inspections. The RSC may initiate corrective actions at that time.

11.0 RADIATION MONITORING INSTRUMENTS

Instruments used for radiation detection and measurement shall have a standard operating procedure written and approved by the RSO or duly authorized representative. Such procedures shall contain instructions on the proper use of the instrument, as well as calibration instructions for those instruments, which are calibrated by a NRC licensed contract company. Radiation detection instruments are calibrated annually and after each repair that would affect the accuracy of the instrument.

Only personnel trained in their use and in accordance with CABRERA procedures will use radiation detection instruments. Instrumentation is calibrated on a twelve (12) month schedule and after each repair that would affect the accuracy of the instrument by the manufacturer or a certified calibration laboratory. A calibration sticker shall be attached to the instrument to allow the operator to verify the instrument is within current calibration prior to use. If an instrument is found to have a past due calibration, the instrument SHALL NOT be used and SHALL BE tagged with an "OUT OF CALIBRATION" sticker or equivalent tag.

All health physics instruments shall be visually inspected, battery checked, and source checked prior to use.

12.0 MATERIAL RECEIPT AND ACCOUNTABILITY

The RSO shall approve or place all orders for radioactive material and ensure that the requested material, quantities, manufacturer, and model are authorized by the license and that the possession limits are not exceeded.

During normal working hours, carriers shall be instructed to deliver radioactive packages directly to the Radiation Safety Office or designated receiving area.

During off-hours, designated-trained personnel shall by instructed by the RSO to accept delivery of radioactive packages in accordance with this procedure. Upon receipt of the package, the RSO shall be notified.

13.0 OCCUPATIONAL DOSE

The RSP shall be implemented to control exposure through approved standard operating procedures. The procedures shall reference and provide instructions to ensure compliance with the applicable federal regulatory documents such as 10 CFR 19 & 20, and ensure that no occupational exposure limits set forth in 10 CFR 20 and the NRC license are exceeded. Radioactive materials and sources of radiation will be controlled in such a manner that radiation exposures to workers do not exceed limits specified in 10 CFR 20, Subpart C.

Radiation monitoring (external and/or internal) shall be conducted continuously when it is likely that any individual will exceed 10 percent of the annual limit. Occupationally exposed workers who have received radiation exposure prior to employment with CABRERA are required to provide their radiation exposure history records or names and addresses of previous employers and locations where they have received exposures. Copies of this letter will be sent to the individual, and maintained in the individual's personnel exposure file by CABRERA.

13.1 Personnel Monitoring

Personnel likely to receive in one year from radiation sources external to the body, a dose in excess of 10% of the applicable limits will be monitored by personnel dosimetry. The personnel dosimetry devices will indicate the amount of ionizing radiation to which the wearer was exposed. The personnel dosimeter will normally be worn on the upper front torso. Personnel are responsible to wear dosimetry as directed by the RSO. If a personnel dosimeter is lost, misplaced, or indicates an off-scale reading,

the employee is required to notify their supervisor, health physics and/or the RSO immediately.

13.2 Embryo/Fetus

All reasonable efforts will be made to keep ionizing radiation exposure to the unborn child to the lowest practical level, as prescribed in 10 CFR 20.1208. Once a female employee determines that she is pregnant, she is encouraged to notify CABRERA in writing of her pregnancy. CABRERA will then institute radiation control measures that will limit radiation exposure to the unborn fetus to less than 500 mrem for the term of the pregnancy and below 50 mrem per month in any month after declaration.

13.3 Minors

No individual under the age of 18 years will be assigned radiation worker duties.

14.0 PUBLIC DOSE

Members of the general public are not permitted in CABRERA work areas where radioactive materials are located and/or handled. If an individual requires entry into a CABRERA work area for inspection or audit purposes, they will be required to provide the necessary information regarding their personal radiation worker training status. Appropriate supplemental training and dosimetry will be provided commensurate with the hazards involved in the work area and activity. Radiation exposures to the general public will be maintained below the following limits as prescribed in 10 CFR 20.1301.

- The dose in any unrestricted area will be maintained below 2 mrem in any one hour period.
- The maximum exposed individual's total effective dose equivalent (TEDE) from occupancy in all unrestricted areas will not exceed 100 mrem per calendar year.

In certain cases the provisions of EPA environmental radiation standards as listed in 40 CFR part 190 or OSHA 29 CFR 1910.1096, "Ionizing Radiation" may also apply.

15.0 SAFE USE OF RADIONUCLIDES

CABRERA shall develop and implement procedures that will be used to ensure the security and safe use of all licensed material from the time it arrives until it

is used, transferred, and/or disposed.

When any licensed materials are in use, they must be under constant control so that the radiation worker can prevent others from becoming contaminated by or exposed to the material, or prevent persons from removing the material from the area.

15.1 Licensed Material

CABRERA's work with licensed materials will be performed within the requirements specified in a Radioactive Materials License issued by the NRC or an agreement state.

15.2 Exempt Materials

CABRERA may and does possess exempt quantities of radioactive materials in the form of check sources that are used to check instrument operation. Radioactive sources (that are exempt from licensing) are kept in a shielded source storage locker located within the CABRERA Radiation Safety Office located in East Hartford, Connecticut. When these sources are used for field assignments, they are transferred by the RSO or authorized representative out of the storage locker to the individual user who is then responsible for their positive control. Upon completion of the field assignment, the sources are then returned to the storage locker and logged in by the RSO or duly authorized representative. These sources may be inventoried in their field locations, as required.

15.3 Receiving and Opening Packages

In accordance with 10 CFR 20.1906, packages containing radioactive materials will be surveyed for radioactive contamination and radiation levels. The survey will be performed within three (3) hours after receiving the transported package during normal working hours, or not longer than three (3) working hours from the beginning of the next scheduled working day after receipt, if delivered after work hours.

15.4 Contaminated Areas and Materials

All licensed materials at customer facilities shall be stored in secured areas when not in use or under surveillance by personnel to prevent unauthorized removal or access. Contaminated Areas that exceed the contamination limits in Table I shall be secured to prevent unauthorized or inadvertent entry or removal of contamination.

15.5 Posting of Radiation Areas

Any area accessible to personnel in which there exists ionizing radiation at dose-rate levels such that an individual could receive a deep dose equivalent in excess of 5 mrem in 1 hour at 30 centimeters from the radiation source or from any surface that the radiation penetrates shall be posted. Sufficient indicators (such as barrier rope or ribbon) shall be used to identify the boundary of the radiation area. At a minimum, the posting shall have a sign with the following:

CAUTION RADIATION AREA

An exemption to this requirement is permitted in areas or rooms containing radioactive materials for periods of less than 8 hours, if each of the following conditions is met.

- The materials are constantly attended during these periods by an individual who takes the precautions necessary to prevent exposure to radiation or radioactive materials in excess of the limits specified above and stated in 10 CFR Part 20.

- The area or room is subject to the licensee's control. For example, the area around a truck loading radioactive waste does not require posting if the above conditions are met.

15.6 High Radiation Areas

Any radiation area accessible to personnel in which there exists ionizing radiation at such levels that an individual may receive in excess of 100 mrem in 1 hour at 30 centimeters from the radiation source or from any surface that the radiation penetrates shall be locked or continuously guarded and posted. At a minimum, the posting shall have a sign with the following:

CAUTION, HIGH RADIATION AREA
or
DANGER, HIGH RADIATION AREA

15.7 Very High Radiation Areas

Any area accessible to personnel in which there exists ionizing radiation at such levels that an individual could receive in excess of 500 Rad in 1 hour at 1 meter from the radiation source or from any surface that the radiation penetrates shall be locked or continuously guarded when open and posted. At a minimum, the posting shall have a sign with the following:

GRAVE DANGER
VERY HIGH RADIATION AREA

15.8 Airborne Radioactivity Area

Any room, enclosure, or area in which airborne radioactive material exist in concentrations in excess of the derived air concentrations (DAC's) specified in Table I, Column 3 of Appendix B, Title 10 Part 20 of the Code of Federal Regulations, or concentrations such that an individual present in the area without respiratory protective equipment could exceed, during the hours the individual is present in a week, an intake of 0.6 present of the annual limit on intake (ALI), i.e., 12 DAC-hours, shall be posted. At a minimum, the posting shall have a sign with the following:

CAUTION - AIRBORNE RADIOACTIVITY AREA
or
DANGER, AIRBORNE RADIOACTIVITY AREA

15.9 Radioactive Materials Area

Any room, or area in which there is used or stored an amount of licensed material exceeding 10 times the quantity of such material specified in Appendix C, Title 10 Part 20 of the Code of Federal Regulations shall be posted. At a minimum, the posting shall have a sign with the following:

CAUTION, RADIOACTIVE MATERIALS AREA
or
DANGER, RADIOACTIVE MATERIALS AREA

15.10 Labeling Containers

A container that contains licensed material shall have a durable clearly visible label bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL." The label shall also contain the following information that will allow individuals working with or around the containers to implement precautions to avoid or minimize exposures:

- Radionuclide present.
- An estimate of the quantity of radioactivity and date of estimate.
- Radiation levels.
- Types of material and if appropriate, mass enrichment.

Containers are exempt from the above labeling requirements if the following conditions are met:

- Containers holding licensed material in quantities less than the quantities listed in Appendix C, Title 10 Part 20 of the Code of Federal Regulations,

- Containers holding licensed material in concentrations less than those specified in Table 3 of Appendix B to Title 10 Part 20 of the Code of Federal Regulations,

- Containers are attended by an individual who takes the necessary precautions to prevent the exposure of others in excess of 10CFR20 limits

- Containers when they are in transport and packaged and labeled in accordance with the regulations of the Department of Transportation.

- Containers that are accessible only to individuals authorized to handle, use, or work in their vicinity provided the containers are in locations identified to individuals by a readily available written record (containers in storage vaults, hot cells, etc.)

16.0 EMERGENCY PROCEDURES

It is the policy of CABRERA to provide whatever response is necessary in order to protect the health of our workers and all others at or in the immediate area of the CABRERA work site. It is important for all CABRERA employees to recognize that response to emergency situations must be prompt and accurate in order to maximize our efficiency to deal with potential insults to the working population or members of the general public.

CABRERA shall develop and implement as required procedures that incorporates large sections of the NUREG-1556, Volume 11, Appendix R "Emergencies Procedure."

CABRERA will notify the NRC and the licensee for whom the work is being performed if any of the conditions listed in 10 CFR 20, Subpart M exist.

17.0 SURVEYS

Survey is defined in NUREG 1556, Volume 11 as an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation. CABRERA will develop and implement procedure(s) to perform surveys in a manner that meets compliance with 10 CFR 20. At a minimum, the procedures shall address the requirements of this program in the area of contamination control, release of materials for facility which CABRERA is working at, radiation work permits, surveys, personnel access, frisking, posting, and personnel protective equipment.

At a minimum, radiation staff members shall perform the following frequency for surveys performed at facilities were CABRERA is performing work under the CABRERA's NRC license:

- Radiation surveys of areas not posted as radiation areas will be required monthly;

- Contamination surveys of areas not posted as contamination areas will be required monthly;

- Contamination survey of areas posted as contaminated will be performed weekly or daily when work is preformed.

- Radiation surveys of areas posted as radiation areas will be performed weekly or daily when work is preformed.

- Air samples shall be taken weekly or as required by the RWP.

- Additional surveys will be performed for work related activities and in support of RWPs as required by responsible radiation staff members, work plans, and/or operating procedures.

Many different types of surveys may need to be performed due to the particular use of licensed materials. Some of the more important are:

- Surveys for radioactive contamination that could be present on surfaces of floors, walls, furniture, and equipment.

- Measurements of radioactive material concentrations in air for areas where radioactive materials are handled or processed in unsealed form and where operations could expose workers to the inhalation of radioactive material or where licensed material is or could be released to unrestricted areas.

- Measurements of radioactive material concentrations in water that is released to the environment or to the sanitary sewer.

- Bioassays to determine the kinds, quantities or concentration, and in some cases, the location of radioactive material in the human body.

- Surveys of external radiation exposure levels in both restricted and unrestricted areas.

17.1 Radiation Surveys

Radiation surveys are performed to determine radiation conditions in the work area and provide personnel awareness to implement the CABRERA

ALARA commitment. Radiation surveys also identify radiation conditions that require special posting as required by regulations to alert personnel of elevated radiation levels in a particular work area. Worker exposures can be estimated and controlled by understanding specific exposure levels and working time.

Radiation surveys are also used to determine the levels of radioactive material on surfaces when characterizing sites and facilities. These surveys determine if residual activity is below "unrestricted" release criteria or identifies specific areas that must be decontaminated to meet the release criteria.

17.2 Contamination Surveys

Contamination surveys are used to determine the levels of fixed and removable radioactive materials on surfaces and equipment. The survey technique uses disc smears (swipes) on surfaces to determine the amount of radioactivity that may be removed from the surface. The smears are then counted using a sample counter to determine the alpha and beta activities that were removed in the test. The fixed plus removable contamination is determined by direct measurement on surfaces. If the fixed and removable contamination is below the limits specified in Table I, the area or equipment can be further evaluated for release or disposal as "uncontaminated."

Contamination surveys also identify areas or items that must be placed under control to prevent the dispersion or release of radioactive materials. Once identified, the area or materials are confined using roped off areas and entry controlled to isolate the contamination until the levels are reduced by decontamination techniques below the "unrestricted" release criteria.

17.3 Air Sampling

Periodic air samples are taken as required verifying that air concentrations routinely remain below 10% of the Derived Air Concentration (DAC), to maintain the Committed Effective Dose Equivalent (CEDE) ALARA. Air samples are taken using personal lapel (or equivalent) air samplers or grab samplers that provide measurement of concentrations in the workers breathing zone. If the air concentration exceeds 10% of DAC values, the RSO should be notified so appropriate corrective actions can be taken and exposures received by workers evaluated and included in their personal exposure file.

17.4 Bioassay

In the event of an emergency where an individual may become contaminated and radioactive material was taken into the body through skin

absorption or other means, or is suspected of having ingested or inhaled radioactive material, an estimate of the amount of material taken into the body may be required.

Bioassay is used to assess inhaled, ingested, or absorbed radioactive materials in order to determine internal and/or total dose to workers. The detection level for bioassay samples shall be 10% of the Annual Limit of Intake (ALI) or lower, if practical.

17.5 Leak Test

Sealed sources used for instrument calibration and response checks shall be inventoried and stored in a secure location. A leak check of inventoried sources will be performed and documented every six months. Leak testing is not required if:

- Sources contain only hydrogen-3 (tritium)
- Sources only contain byproduct material with a half-life of less than 30 days
- Sources contain only a radioactive gas
- Sources contain 100 microcuries or less of beta or gamma emitting material or 10 microcuries or less of alpha emitting material
- The sources are stored and not being used (they must be leak tested before use or transfer)

18.0 TRANSPORTATION

CABRERA shall develop and implement procedures that ensure compliance with NRC and Department of Transportation (DOT) regulations. CABRERA shall use only qualified Waste Brokers that meet the shipping requirements of the waste disposal facilities. The Waste Broker will report to the RSO on issues related to shipment of radioactive waste and/or materials.

19.0 WASTE MANAGEMENT

CABRERA shall develop and implement procedures that ensure compliance with NRC and EPA regulations. The procedures shall be developed for handling of waste, safe and secure storage, waste characterization, waste minimization, and disposal of radioactive waste.

19.1 Release into air and water

CABRERA employees shall not exceed release criteria for radioactive material into the air or water.

19.2 Disposal of Waste at Licensed Landfill

A licensee can dispose of licensed (radioactive) material by transferring the material to an authorized recipient, i.e., another licensee with a valid license to receive and store or receive and bury (provide final disposition) the material. In order to provide a disposal service in a land disposal facility licensed under 10 CFR Part 61, the authorized recipient must be specifically licensed to receive waste containing the specified or identified licensed material. The transfer of material between a licensee and an authorized receiver must be accompanied with a system of manifesting, a certification or characterization process and control/tracking system.

19.3 Disposal of Liquids in Sanitary Sewer

CABRERA employees shall not dispose of liquids containing radioactive or hazardous materials in a sanitary sewer.

19.4 Incineration of Waste

CABRERA employees shall not incinerate waste materials containing radioactive materials.

19.5 Disposal of Wastes From Contaminated Areas Following Surveys

Materials, items, and waste that have been decontaminated and thoroughly surveyed can be evaluated for disposal in a sanitary land fill If contamination levels are below those specified in Table 1. At certain customer facilities where more restrictive limits apply the most restrictive contamination limits will prevail. Items from contaminated areas that are known not to have been contaminated and exhibit no detectable activity above background, as measured with an instrument appropriate for the material may be released. If the waste consists of containers that have held radioactive materials any radioactive materials signs shall be removed or defaced clearly indicating that the container no longer contains radioactive material.

19.6 Operation of a Waste Compactor or Compaction Equipment

CABRERA employees shall not operate a waste compactor or compaction equipment unless performed under contract, at a client site. Any CABRERA personnel requested to operate this type of equipment

shall be trained and that training shall be documented prior to any operation.

CABRERA personnel must comply with all conditions of their license prior to beginning any equipment operations.

20.0 RECORDS, REPORTS AND NOTIFICATIONS

20.1 Personnel Records

A personnel file is maintained for each employee assigned work duties involving radioactive materials. The content of these files include:

- A record of radiation exposure received by the individual during previous employment is maintained by requesting personal exposure information from previous employers where the individual worked with radioactive materials.
- A record of personnel dosimeter measurements is recorded in the personnel file to provide a permanent record of radiation exposure received during the course of CABRERA work assignments.
- If a personal dosimeter is lost or damaged, an exposure investigation will be performed and an exposure will be assigned for the monitoring period. A report detailing the exposure estimate will be included in the personnel record.
- If the air concentration in the work area exceeds 10% of DAC values, air samples and bioassay samples will be used to estimate internal exposures received by the worker and included into their personal exposure file.
- If a worker finds contamination on their person above the limits specified in Table I, a report of the incident will be placed in the personnel file to determine exposure from the incident.

The personnel records will be maintained indefinitely and personnel may review their file or request copies of information within their files. The licensee for which work is performed will be provided individual exposure information as required by their license or applicable regulations.

20.2 Radiation and Contamination Records

Radiation and contamination survey records collected during site surveys, remediation/decontamination activities, and radiological characterization activities are stored in site-specific files at the East Hartford office.

Duplicate copies of the records are also supplied to the licensee where the work was performed.

20.3 Records of Waste Disposal

Radiation Survey Records, contamination survey records, shipping manifests, and certifications generated for a licensee's shipment of radioactive materials to a licensed disposal site shall be stored in specific shipment files in the East Hartford office. Duplicate copies of the records are supplied to the licensee for which the work was performed.

21.0 PROCEDURES

CABRERA procedures have been developed for all aspects of the radiation safety program through the use of federal regulatory guidance documents and other applicable guidance documents. These procedures will facilitate the control of radiation exposures, contamination and airborne radioactivity on all CABRERA projects and worksites. Attachment 1 provides a list of Cabrera Services radiation safety program procedures.

Administrative procedures define specific program functions and the methods to be used when carrying out each program function. All radiological CABRERA job functions will be governed by the rules and regulations set forth in the administrative procedures.

Operational procedures define precise methods used to perform specific radiological job functions properly and safely. These operational procedures are governed by the program functions set forth by the administrative procedures. The methods vary according to each particular procedure but remain consistent in their methodical approach to each objective.

Attachment 1
List of Procedures

AP-001	[Reserved]
AP-002	[Reserved]
AP-003	Radiological Conditions Awareness Report
AP-004	Radiological Compliance Audits
AP-005	ALARA
AP-006	Respiratory Protection Program
AP-007	Bioassay Program
AP-008	Dosimetry Program
AP-009	Radiation Worker Training
AP-010	Personnel Protective Equipment Used Within Radiological Controlled Areas
AP-011	Emergency Response
AP-012	Radiation Work Permits
AP-013	Packaging Radioactive Material
AP-014	Classifying Radioactive Waste
AP-015	[Reserved]
AP-016	Radioactive Material Tracking
OP-001	Radiological Surveys
OP-002	Radioactive Air Sampling and Analysis
OP-003	[Reserved]
OP-004	Unconditional Release of Material from Radiological Control Areas
OP-005	Volumetric and Material Sampling
OP-006	[Reserved]
OP-007	[Reserved]
OP-008	Chain-of-Custody
OP-009	Use and Control of Radioactive Sources
OP-010	[Reserved]
OP-011	Procurement and Receipt of Radioactive Material
OP-012	Opening Radioactive Material Containers
OP-013	[Reserved]
OP-014	Contamination Containment Devices
OP-015	Step-Off Pads
OP-016	Portable HEPA Systems and Vacuum Cleaners
OP-017	Empty Transport Vehicle Radiological Surveys
OP-018	Decontamination of Radioactivity from Equipment and Tools
OP-019	Radiological Posting
OP-020	Operation of Contamination Survey Meters
OP-021	Alpha-Beta Counting Instrumentation
OP-022	Operation of Ionization Chambers
OP-023	Operation of Micro-R Meters
OP-024	Direct Reading Dosimeters