QUALITY CONTROL PLAN
FOR THE
PAINESVILLE FUSRAP SITE
PAINESVILLE, OHIO

FINAL

Prepared for:

US Army Corps of Engineers®

U. S. ARMY ENGINEER DISTRICT, BUFFALO
Buffalo, New York
Contract No. DACW49-03-D-0003; Delivery Order 0002

Prepared by:

CABRERA SERVICES, INC.
Boston, Massachusetts

January 31, 2005

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Contract No. DACW49-03-D-0003 / Delivery Order 0002

QUALITY CONTROL PLAN APPROVALS

By their specific signature, the undersigned certify that they reviewed and provided comments on this Quality Control Plan for use during activities at the Painesville FUSRAP Site, Painesville, Ohio.

APPROVED BY:

[redacted]

31 Jan 05
Date

1 Feb 05
Date

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INTRODUCTION

Cabrera Services Inc. (CABRERA) has been contracted by the U.S. Army Engineer District, Buffalo under Contract No. DACW49-03-D-0003 (hereafter referred to as the "Contract") (USACE, 2004), to provide Environmental Sampling and Testing (EST) services for the Painesville FUSRAP Site (hereafter referred to as the "Site") in Painesville, Ohio. This Quality Control Plan (QCP) has been prepared to address project requirements for pre-remediation and final status radiological surveys, sample collection, and radiological analysis of Site surface and subsurface soils to be performed on areas that were used as part of the Diamond Magnesium Company's (DMC) magnesium production facility in Painesville, Ohio. This site has been identified as a Formerly Utilized Sites Remedial Action Program (FUSRAP) site.

This QCP describes CABRERA's management plan for execution of the project and includes functional responsibilities, levels of authority, lines of communications, and related management activities for control of project activities affecting the quality of the services it provides. This plan outlines the corporate QA management component governing the implementation of project-specific quality assurance/quality control procedures as provided in the Painesville project Quality Assurance Project Plan. This QCP has been prepared in accordance with the requirements of the Contract and guidance contained in USACE Engineering Regulation ER 1110-1-12, *Quality Management* (USACE, 1993) and Unified Facilities Guidance Specifications UFGS–01451A, *Contractor Quality Control* (USACE, 2003).

CABRERA's project activities that will be addressed by this QCP are summarized as follows:

- Perform a visual Site inspection and prepare an inspection report,
- Prepare a Quality Assurance Project Plan (QAPP),
- Prepare a Site Safety and Health Plan (SSHP),
- Prepare a Field Sampling Plan (FSP),
- Perform pre-remediation and final status survey field activities consisting of gamma walkover surveys and collection and radiological analysis of soil samples from the Site, and
- Data evaluation and the preparation of Final Reports.

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ABBREVIATIONS AND ACRONYMS

CAR	Corrective Action Request
CHP	Certified Health Physicist
DMC	Diamond Magnesium Company
DQCR	Daily Quality Control Report
EHO	CABRERA East Hartford Office
FSP	Field Sampling Plan
FUSRAP	Formerly Utilized Sites Remedial Action Program
HTRW	Hazardous, Toxic, and Radioactive Waste
ITR	Independent Technical Review
ODEP	Ohio Department of Environmental Protection
PG	Professional Geologist
PM	Project Manager
POC	Point of Contact
QA	Quality Assurance
QAC	Quality Assurance Coordinator
QAPP	Quality Assurance Project Plan
QC	Quality Control
QCM	Quality Control Manager
QCP	Quality Control Plan
RESRAD®	Argonne National Laboratory *Residual Radioactivity* computer modeling code
RG	Registered Geologist
RSP	Radiation Safety Program
SRSM	Site Radiation Safety Manager
SSHO	Site Safety and Health Officer
SSHP/RPP	Site Safety and Health Plan/Radiation Protection Plan
TBD	To Be Determined
USACE	U.S. Army Corps of Engineers
USACE–Buffalo	U.S. Army Engineer District, Buffalo

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1.0 MANAGEMENT PHILOSOPHY

CABRERA provides formal written designs that encompass the basis, concepts, methods, assumptions, numerical calculations, plans, testing, and reports for specific work activities required by clients or encountered in-house. It should be recognized that these designs represent our "product" that we supply to the industry and thus should reflect the highest professional standards in their preparation. This applies both to the adequacy of the solutions presented and to the quality of the documentation. It is CABRERA's policy that this product is delivered on schedule, within budget, and in compliance with contract requirements.

As a relatively new engineering firm, CABRERA actively seeks and solicits advice from well-established and respected Architect-Engineer firms. One example is our mentor-protégé relationship with Jacobs Engineering, where one of the first actions has been to have Jacobs perform a review of CABRERA's Quality Control policies and procedures.

2.0 MANAGEMENT APPROACH

2.1 GENERAL

CABRERA is headquartered in East Hartford, Connecticut and has regional offices located throughout the United States. CABRERA is principally engaged in providing radiological consulting and construction services in site assessments and characterization, decontamination and decommissioning, site remediation and closure, program development and implementation, and project management.

The President of CABRERA is responsible for all services offered by the company. Responsibilities for the various projects and technical and administrative support functions are assigned to the Vice President of Operations, who, in turn, exercises his responsibilities through regional field offices. The responsibility for the Painesville FUSRAP Site Project has been assigned to CABRERA 's Boston, Massachusetts regional office.

The Boston office shall perform or manage the aspects of the project for which it has been assigned responsibility. This shall include project/task management, interfacing with the Buffalo U.S. Army Engineer District, planning and scheduling, cost control, training, safety, administration, design, procurement, fabrication, testing and inspection, delivery and subsequent maintenance, as needed for efficient business management and as required by the Contract.

Each individual performing project-related activities shall be responsible for achieving and maintaining quality by performing assigned duties in accordance with specified requirements. CABRERA management and supervisory personnel shall ensure that requirements are clear, that resources are adequate and that sufficient direction is provided to enable subordinates to achieve quality results. Persons or organizations that are not directly responsible for performing the work shall verify achievement of quality.

Although responsibilities for the performance of certain tasks are assigned in the quality program to individuals holding specific positions, such tasks may be delegated for execution. The

individual holding the designated position shall remain responsible for ensuring that delegated tasks are properly performed.

2.2 PROJECT QUALITY

Project quality will be ensured by means of review and oversight by Cabrera Corporate Quality Assurance personnel. CABRERA has named a Quality Assurance Coordinator (QAC) who reports to the Vice President of Operations. Her primary responsibility is to ensure adherence and compliance to the Corporate Quality Assurance Program. Authority for Stop Work is derived from the Vice President of Operations and given to the QAC. The QAC will work closely with the Vice President of Operations to coordinate the implementation of the Corporate QA/QC program and will serve as the Lead Auditor for project activities.

CABRERA Quality Assurance personnel shall have the necessary authority, access to work areas and organizational freedom to:

- Identify quality problems;
- Stop work if non-conformance issues are identified;
- Initiate, recommend or provide solutions to quality problems through designated channels;
- Verify implementation of solutions; and
- Assure that further processing, delivery, installation or use is halted or controlled until proper disposition of a nonconformance, deficiency, or unsatisfactory condition has occurred.

CABRERA QA personnel shall not be responsible for cost or schedule and shall not allow undue consideration of such to influence decisions affecting quality.

2.3 PROJECT MANAGEMENT

For the accomplishment of the Painesville FUSRAP Project, a Project Manager has been assigned by regional management to assume responsibility for all aspects of the job and to manage the efforts of personnel working on the project, whether they report directly or via functional group management. The Project Manager coordinates the assigning of CABRERA project personnel with the CABRERA Program Manager and Vice President of Operations depending upon the nature and complexity of the work and the qualifications and skills of the individual. Personnel assigned to the Painesville FUSRAP project may be drawn from any of the regional offices.

2.4 DOCUMENT CONTROL

2.4.1 General

Documents, including revisions and changes thereto, which affect the manner in which activities affecting quality are performed shall be prepared, reviewed for adequacy and approved for release by authorized personnel. They shall be distributed to and used at locations where the

prescribed activity is performed as prescribed in this QCP or in a quality control procedure applicable to the document type. Revisions shall be subject to the same controls as the original document. All documents submitted to the USACE by Cabrera on the Painesville FUSRAP project will be noted on a Document Submittal Log with unique three-digit submittal numbers (e.g. -001, -002). An example of the Document Submittal Log is provided in Appendix E.

Minor changes which do not alter the intent of a document may be made in lieu of issuance of a revision to the document when permitted by the procedure which governs preparation and approval of the document type. The procedure shall, for minor changes, identify the person(s) authorized to make such change(s), and the method of documenting the change(s) and for assuring that necessary persons are informed of the change(s).

The organization which originates a document shall be responsible for soliciting review by affected parties, resolution and incorporation of comments, obtaining required approvals, and specifying and controlling the distribution of the released document.

Documents shall be uniquely identified and the revision level shall be clearly indicated. Unless an effective date later than the release date has been established in order to allow time for indoctrination, documents shall be considered to be effective upon final approval.

Individual copies of documents or manuals containing collections of documents, designated herein as Controlled documents, or which have been designated as such by the document originator, shall be subject to the following requirements:

- The Controlled status shall be indicated on the title or cover page of the document and a unique copy number shall be assigned to each copy. A list of holders by copy number shall be maintained to enable maintenance of each copy up to date.
- A system shall be utilized to distribute controlled documents. This shall provide instructions for replacement and disposition of superseded information and acknowledgment of receipt.
- If acknowledgment from personnel within CABRERA is not received within the time specified in the transmittal memorandum, a follow-up memorandum shall be issued. If acknowledgment is not received within twenty (20) working days of the follow-up memorandum, appropriate action(s), including notification of succeeding higher levels of management as necessary, shall be taken to retrieve the document or to obtain a signed acknowledgment or certification that the document has been lost or destroyed.
- Personnel outside of CABRERA from whom acknowledgment receipts have not been returned within thirty (30) working days of the originally established due date, shall be notified in writing that the document status is no longer considered controlled and that further revisions will not be forwarded.
- Copies of documents which are not controlled shall be marked to indicate the uncontrolled status or stored where they are not accessible for use. Uncontrolled copies may be provided to persons or organizations external to CABRERA for information purposes. Uncontrolled copies are current only at the time of issue, and are not required to be maintained up to date.

2.4.2 Quality Assurance Documents

The CABRERA quality assurance program is comprised of the systems contained in the Corporate Quality Assurance Manual, which shall be distributed as a controlled document. Quality personnel are responsible for the preparation, revision, approval and distribution of the entire manual. The Corporate QAC shall ensure that an annual review of each manual section is performed and necessary revisions to affected sections shall be prepared within six months of the review.

2.4.3 Product/Process Control Documents

Equipment or project specifications, instructions or procedures shall be prepared and approved. Release or transmittal of such documents shall be by documented correspondence. Project personnel shall be responsible for preparation, control and release of drawings in accordance with instructions provided by the Project Manager. The Project Manager shall be responsible for obtaining necessary reviews, design verifications and approvals in accordance with this QCP. The approval/release status of the drawing shall be indicated thereon, and the Project Manager shall maintain a record of all drawings and revisions which indicates the current drawing status. Graphics groups shall be responsible for maintaining the quality record copies of drawings.

Documents issued for use at a customer site shall be controlled by the group responsible for work at the site to assure that obsolete documents are removed from use. Control shall provide for the application of required signatures and maintenance of necessary record copies of documents utilized to control such activities.

2.5 QUALITY ASSURANCE RECORDS

2.5.1 Quality Records

Quality related documents which are required to be retained, are identified by cognizant personnel based upon requirements contained in approved procedures. Nonpermanent and lifetime quality records shall be maintained in appropriate files under the control of the appropriate group. Each department shall retain in process records for which they are responsible. These records shall be controlled by assigned personnel. Revisions and supplements to quality records are subject to the same controls as the original records. Prior revisions shall be retained.

2.5.2 Supplier Quality Records

Adequacy of suppliers' written procedures for the handling, storage, retention and submittal of records shall be evaluated as necessary prior to contract award and may be monitored for compliance by means of audits or source surveillance.

Quality Records required by the contract for review, approval, retention and transmittal to the customer shall be listed in the procurement documents and compiled into a final Records Package by Quality Control Manager or their designee.

2.5.3 Record Retention

Quality Records may be originals, legible copies, microfilm, magnetic disks, optical disks, or other electronic media as appropriate, and shall be identifiable by subject, date, originator and data recorder/author.

Storage, preservation and safekeeping of Quality Records shall be in accordance with approved procedures and should detail the following:

- Description of the storage facility i.e., single or dual storage;
- The indexing system to be utilized;
- The system for verifying that the records received are legible and otherwise acceptable;
- The system for verifying that the records are those designated;
- Rules governing access to and control of the storage facility;
- The system for maintaining control of and accountability for records removed from the storage facility;
- The system for filing supplemental information and disposing of superseded records, and
- Responsibility for distribution and receipt control.

Nonpermanent Quality Records shall be maintained by CABRERA and/or suppliers for the retention period specified. Lifetime Quality Records shall be maintained by CABRERA unless transferred to the customer for retention. Documentation of Quality Record transfers and an inventory list of Quality Records retained shall be maintained by the designated Records Control personnel.

2.5.4 Record Correction

Records may be corrected by personnel from the responsible group. Record corrections shall be noted by lining out incorrect information and adding new information as required. All changes shall be annotated with the date and initials of the person making the correction. Artificial methods of correction (e.g., correction tape or "white-out") are prohibited.

2.5.5 Record Disposition

Lifetime and Nonpermanent records retained by CABRERA or its suppliers shall not be disposed of prior to the required retention period or until transferred to the customer or the operational status of the item(s) permits. Customers shall be notified prior to disposal of Lifetime records that apply to their contracts.

2.6 CONTROL OF NONCONFORMING ITEMS

2.6.1 General

When problems are identified with respect to drawings, procedures, purchase documents, or contract documents, Quality Control personnel or the Project Manager will document the problem and perform a review.

If the problem is determined to affect project requirements, the Project Manager shall approve any disposition, and include a technical justification for its decision. The project review control measures utilized shall be consistent with those applied to the original project design. Problems of this type shall also require a Total Quality review and approval and when Customer Contracts require, a Customer review and approval.

2.7 CORRECTIVE ACTION

2.7.1 General

Conditions adverse to quality shall be identified promptly and corrected as soon as practical. Conditions adverse to quality may be identified as a result of:

- Field problems/discrepancies,
- Supplier reported nonconformances/deviations,
- Surveillances/inspections/audits,
- Project design changes,
- Project design procedure deficiencies, or
- Independent consultants.

The cause(s) of the condition shall be investigated and appropriate corrective action taken to prevent a recurrence. The adverse condition, cause(s) and corrective action taken shall be documented and reported to appropriate levels of Cabrera management.

2.7.2 Internal Corrective Action

The organization responsible for an identified adverse condition shall recommend and implement corrective action to prevent a recurrence. For those cases considered "significant conditions adverse to quality", the appropriate organization shall undertake their own corrective action program and document it via a formal Corrective Action Request (CAR).

Any group involved with project related activities may issue CARs to any other group that fails to initiate their own corrective action program. Suggested corrective action may also be included in the request. The organization responsible for taking action shall submit a written reply within the time span specified in the CAR. The response to the CAR shall include the cause of the condition, the immediate corrective action taken and the corrective action to be implemented

(with target completion date(s)) to resolve the adverse condition and preclude recurrence. Copies of such CAR's and responses shall be sent to the Corporate QAC.

The QA organization desires and "encourages" project management to undertake corrective actions. If project management does not believe that a situation meets the standards for "significant conditions adverse to quality", but QA personnel do, then the QA organization has the authority and responsibility to issue a CAR.

All CARs shall be recorded in a tracking system. Response dates, proposed corrective actions and completion dates shall also be entered. The tracking system is the means by which management is kept aware of the status of CARs. This may preclude the need to elevate CARs to higher management when completion dates are missed.

The response to the corrective action shall be evaluated by the group originating the request to verify effectiveness of the implementation. If the implementation is unsatisfactory, a follow-up request for corrective action shall be submitted with a copy to the management level needed to resolve the problem.

All Customer Concerns shall be recorded with response and completion dates.

2.7.3 Supplier Corrective Action

Procurement documents may require suppliers to establish and maintain a Corrective Action program which provides for the identification of quality problems and timely implementation and verification of corrective action.

Audits, inspections and surveillances of supplier activities will be performed by representatives of CABRERA to monitor the operation of the supplier's Corrective Action Program.

A corrective action document shall be issued when conditions require that the supplier take suitable corrective action measures. The corrective action shall describe the nonconforming conditions and shall request that corrective action be completed or a schedule for implementation be submitted to CABRERA within thirty (30) days of the request.

The supplier's response shall be evaluated to determine if it is satisfactory. If not, a follow-up CAR shall be directed to higher management of the supplier. Failure to satisfactorily respond to a CAR may result in removal of the supplier from the Approved Suppliers List.

Follow-up audits, inspections and/or surveillances shall be performed as required to verify that accepted corrective action has been satisfactorily implemented by the supplier.

3.0 MANAGEMENT STRUCTURE

Under the direction of USACE, CABRERA is responsible for implementation of work assignments related to radiological surveys, sampling, and analyses for the Painesville Site. CABRERA's primary responsibilities include the following: technical plan development; sample collection;

data processing, interpretation, presentation, and reporting; and adherence to the QA procedures and QC measures associated with the activities. The following descriptions of project responsibilities for the functional roles presented below refer to positions contained within Cabrera's organizational structure. Specific detailed organizational charts, including individual names, titles, and contact telephone numbers, will be presented in the site-specific FSP and cross-referenced to the functional roles described in this subsection. The contractor QC team is fundamental to the success of the project. The goal of the QC team is to provide a mechanism for the ongoing control and quality of the survey, sampling, and analysis activities at the Site. The professionals identified in this section will ensure that the specified quality is achieved for each aspect of the work. The project-specific organization chart is provided as Figure 3-1.

3.1 VICE PRESIDENT

Dr. [redacted], Ph.D., CHP is the corporate officer responsible for the quality of Cabrera's work products. For the Painesville FUSRAP project, he will be responsible for assuring the project team implements the policies and procedures required under the USACE contract, and assures that all corrective action is taken if performance is not acceptable to USACE. He will work closely with the Corporate QAC, and Project Manager to ensure established protocols and procedures are implemented.

3.2 PROJECT MANAGER

The Project Manager for this effort will be [redacted], CHP. He is responsible for evaluating the appropriateness and adequacy of the technical services provided for the project, and for developing the technical approaches and level of effort required to address each task. He is also responsible for the day-to-day conduct of work, including integration of input from supporting disciplines, USACE, and subcontractors. He will work closely with the Field Site Manager during implementation of the field program. Specific responsibilities of this role include:

- Initiating project activities;
- Directing project planning activities;
- Ensuring that qualified technical personnel are assigned to various tasks, including subcontractors;
- Identifying and fulfilling equipment and other resource requirements;
- Monitoring project activities to ensure compliance with established scopes, schedules, and budgets;
- Ensuring overall technical quality and consistency of all project activities and deliverables; and
- Serving as the Contractor Primary Point of Contact (POC) with USACE.

The CABRERA Program Manager and Project Manager have overall responsibility for ensuring that all activities are performed in accordance with USACE and State of Ohio requirements, and according to the policies outlined in this QCP.

3.3 QUALITY ASSURANCE COORDINATOR

The QAC, [redacted], P.G., is responsible for planning, implementing, and tracking quality assurance activities and maintaining communication with QC and analytical task staff members. The QAC will work with the Program Manager, Project Manager, and Data Management Coordinator to assure that established QC procedures are implemented. She, or a designee, may conduct periodic site and project audits as part of this process. She may conduct periodic audits of on-site procedures, including safety procedures. The QAC's duties include QC task staffing and ensuring that quality control data evaluation, data validation, and reporting procedures are followed. The ultimate goal of these activities is to produce data that satisfy the project objectives.

3.4 DATA MANAGEMENT COORDINATOR

The Data Management Coordinator, Mr. Roy Racino, is responsible for management of project tasks associated with laboratory analysis. The responsibilities of the Data Management Coordinator include interfacing with the analytical laboratory client services coordinators, coordinating the resolution of laboratory problems, and reviewing analytical results. He will also be responsible for reviewing data deliverables from the laboratories and managing the project database. He reports to the Project Manager and will work closely with the Field Site Manager and for resolution of concerns during data collection.

3.5 PROJECT HEALTH PHYSICIST

The Project Health Physicist is responsible for all radiological field activities and has authority to direct such activities, to stop and restart work if necessary, and to take appropriate actions, as required, to address radiological emergency situations. He will work directly with the Field Site Manager, the Site Radiation Safety Manager, and in concert with the Corporate Radiation Safety Officer to ensure that the CABRERA Radiation Safety Program (RSP) and Quality Assurance Project Plan (QAPP) are properly implemented and followed. [redacted] will serve as CABRERA's Project Health Physicist.

3.6 PROJECT CONTROLS MANAGER

The Project Controls Manager, [redacted], is responsible for assisting the Project Manager with tracking of all major project variables – cost, time, scope, and quality of deliverables with the objective of meeting all project goals. Specific responsibilities may include writing status reports; updating lists of action items, risks, problems, and/or issues; updating the project schedule to reflect actual progress; and auditing review reports of the activities and work products under development.

3.7 SITE SAFETY AND HEALTH OFFICER (SSHO)/SITE RADIATION SAFETY MANAGER (SRSM)

The Site Safety and Health Officer (SSHO) and the Site Radiation Safety Manager (SRSM), TBD, report directly to the Project Manager and are responsible for ensuring the Site Safety and

Health Plan (SSHP) is followed and for ensuring site personnel are appropriately trained in its provisions. They both have authority to issue stop work orders on site tasks (s)he believes may be unsafe. When so stopped, work shall not recommence until the Corporate Health and Safety Manager, Corporate Radiation Safety Officer, and Project Manager approve the restart.

3.8 FIELD SITE MANAGER

The Field Site Manager, TBD, reports directly to the Project Manager and is responsible for management of project tasks associated with surveys, sampling, and analysis. The responsibilities of the Field Site Manager include ensuring that the field team has all the materials needed for field sampling and calibration, and reviewing analytical results. The Field Site Manager serves as the task leader for the field investigative activities for the sampling and analysis program. (S)he will be responsible for specific field operations, such as surface soil sampling, subsurface soil sampling by Geoprobe, instrumentation calibration, field measurements, field QA/QC, and recordkeeping. (S)he is also responsible for ensuring that field health and safety practices are in compliance with the Site Safety and Health Plan. (S)he is responsible for the overall direction of field investigations for the sampling and analysis program. This includes oversight of field staff and subcontractors and ensuring that procedures for field activities are executed in the proper manner, activities are properly documented, the prescribed scope of work is completed, and communication protocols are performed.

3.9 FIELD TEAM

The field team members are responsible for performing field activities as stipulated in the site-specific Field Sampling Plan (FSP). They will document compliance with plans and procedures by recording activities and observations in the field. Specific field team structures will be presented in the FSP.

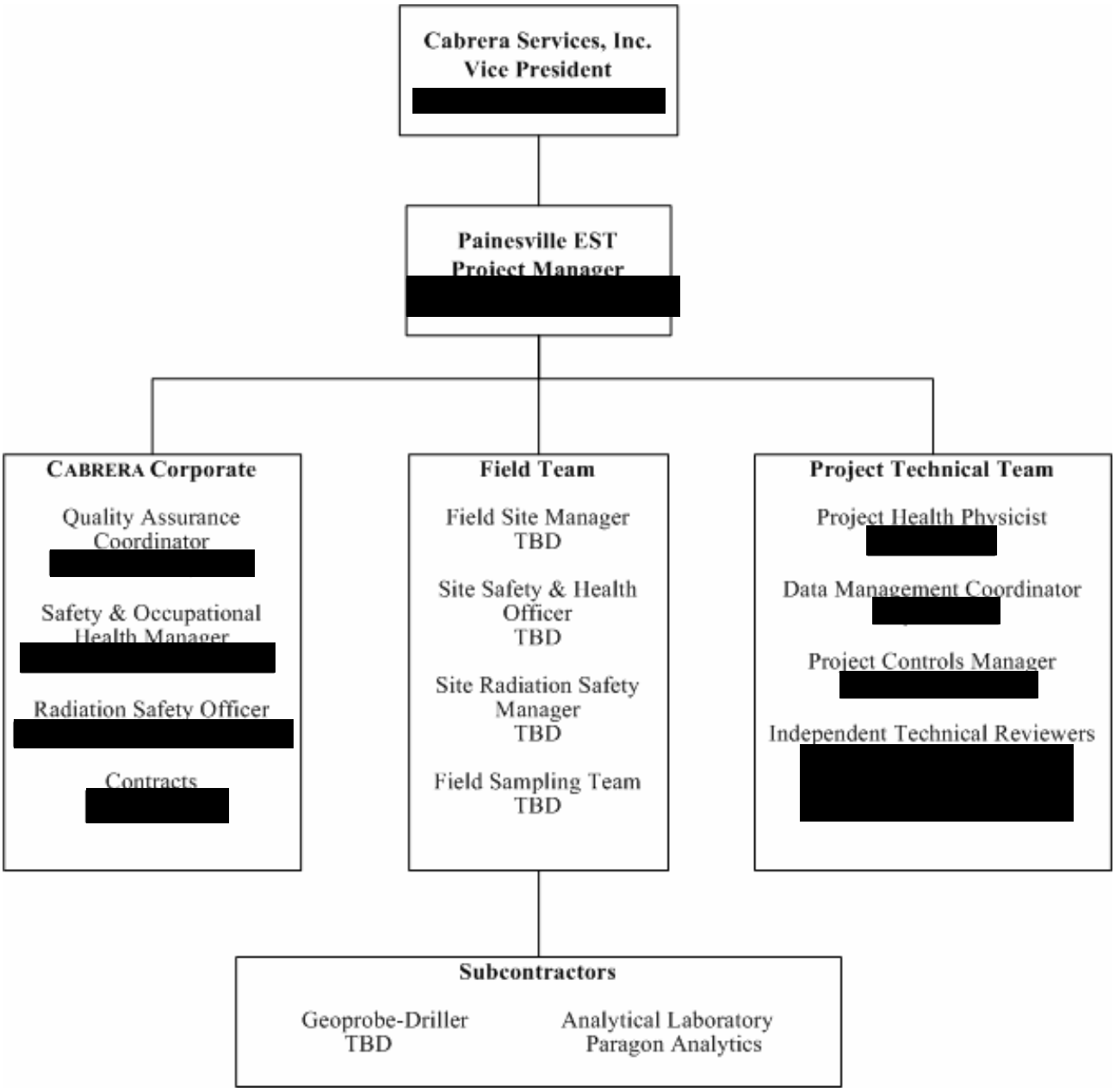

Figure 3-1. CABRERA QA/QC Organizational Chart for the Painesville Project

4.0 DESIGN TOOLS

Some or all of the following tools will be utilized in the execution of this project:

- Microsoft Word® for producing documents and correspondence,
- Microsoft Excel® for data tabulations, data presentation, and cost tracking,
- Microsoft Access® for databases and administrative documents,
- Primavera P3 for producing project schedules and tracking progress,
- Deltek Interactive Project Reporting® for project cost tracking,
- Adobe Acrobat® for document formatting,
- Computer Aided Drafting Design and/or Geographical Information Systems for producing graphical information,
- Global Positioning System for sampling location identification,
- Argonne National Laboratory RESRAD® computer modeling codes for radiological environmental pathway assessments.

5.0 SCHEDULING

A Painesville FUSRAP Site project schedule is presented in Appendix A to this QCP. This schedule presents CABRERA activities within the scope of work specified in the contract and in accordance with the requirements of Section 5.0 of the contract. These activities consist of the preparation and submittal of project plans and schedules, field survey and sampling, and data analysis and report. A project start date of November 1, 2004 is applied in accordance with instructions from USACE and per the USACE project schedule.

6.0 COST CONTROL

The Painesville FUSRAP Site project is being performed on a Firm-Fixed Price basis. It is the responsibility of the Cabrera Project Manager to monitor project activities to ensure compliance with established scopes, schedules, and budgets. This includes utilizing CABRERA corporate systems, such as Deltek Interactive Project Reporting®, throughout the period of performance of the Contract to closely monitor project costs and accruals. The Project Manager will maintain close communication and coordination with Cabrera corporate accounting and contracts personnel and the Cabrera Program Manager/Managing Principal.

The CABRERA Program Manager will conduct periodic project status reviews to identify cost control issues, along with other aspects of project performance. Any change in scope resulting in a cost change will be communicated to the USACE Project Manager before the additional costs are incurred. Such work will not be initiated without written authorization from USACE – Buffalo.

Each month, during the period of performance of the Contract, CABRERA will submit project accrual information to the Buffalo U.S. Army Engineer District. An example of a monthly

accrual submitted to the USACE-Buffalo PM is provided in Appendix F. The format and information contained in this submittal will be in accordance with the requirements of Scope of Work Section 4.2.2.

7.0 COMMUNICATIONS

CABRERA will maintain direct, concise, and daily contact/coordination with the USACE concerning field operations and scheduling field activities. The primary POCs for all communications regarding the Painesville FUSRAP Site project will be [redacted] (USACE Project Engineer) and [redacted] (CABRERA PM). The CABRERA PM, or designee, will participate in a weekly project meeting throughout the period of performance of the Contract. Participation may be by phone when field activities are not scheduled.

CABRERA will submit to the designated USACE representative a Daily Quality Control (DQCR) Report and a Daily Health and Safety Report for each day that field activities are conducted on the Site. The DQCR will identify the current activities, any unanticipated delays or occurrences, communications with other USACE contractors or regulators, and any needed corrective actions.

In the event of an emergency, CABRERA will promptly notify the USACE Health and Safety Officer [redacted]) and the USACE Field Representative (TBD).

CABRERA will be responsible for maintaining adequate records to support information provided to the USACE regarding the Painesville FUSRAP Site Project. These records will be forwarded to the USACE, if requested.

The CABRERA Contracts Manager, [redacted], will be the CABRERA individual authorized to communicate with USACE contracts personnel regarding implementation of modifications to project work and the Contract.

8.0 INDEPENDENT TECHNICAL REVIEW

An Independent Technical Review (ITR) will be performed on all documents identified in Appendix C of the Contract for CABRERA's scope of work for the Painesville FUSRAP Site project. These are the Sampling Report, Technical Data Packages, and the first Drafts of the SSHP, the QAPP, and the FSP. The ITR will be performed in accordance with the Cabrera ITR Plan presented in Appendix B of this QCP.

9.0 REFERENCES

(USACE, 2004) U.S. Army Corps of Engineers; *Solicitation, Offer and Award*; Contract No. DACW49-03-D-00003, Delivery Order #0002; September 28, 2004.

(USACE, 2003) U.S. Army Corps of Engineers; *Contractor Quality Control*; UFGS-01451A; January 2003

(USACE, 1993) U.S. Army Corps of Engineers; *Quality Management*; ER1110-1-12; 1993

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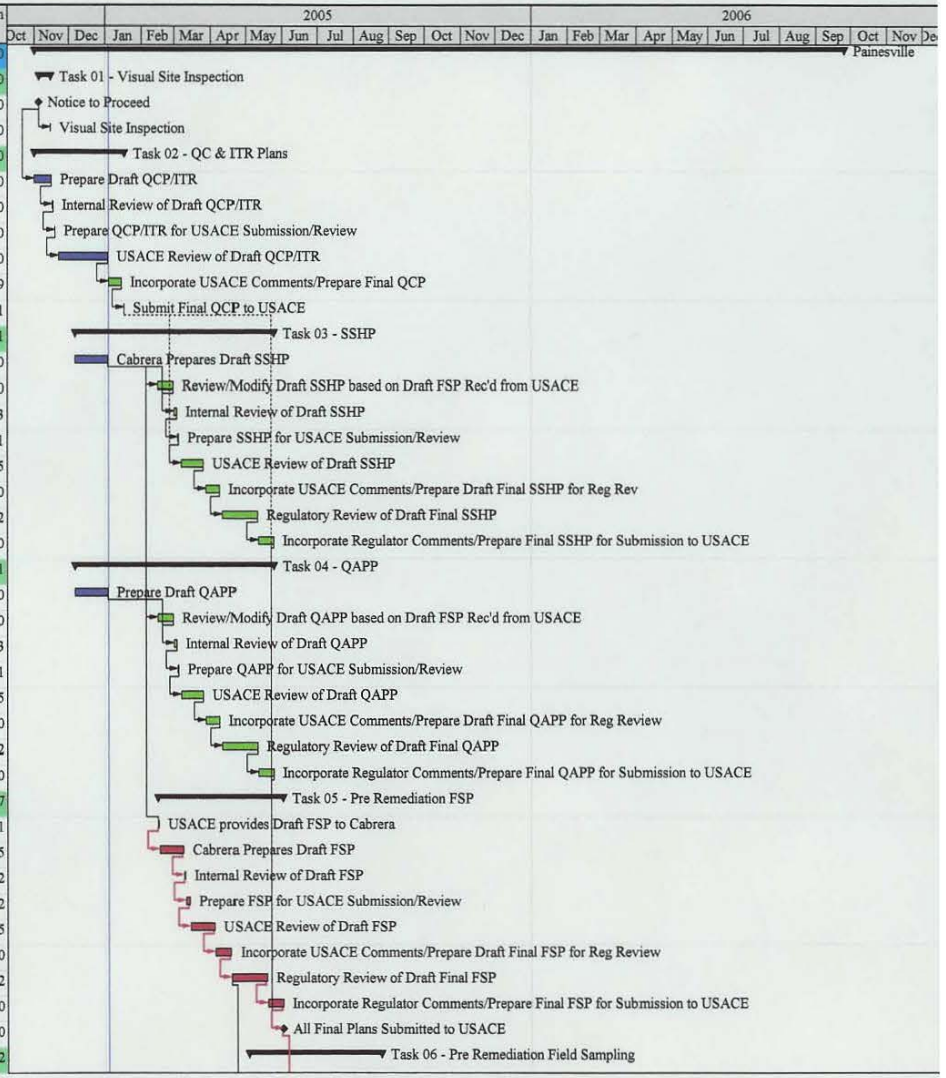
APPENDIX A

PROJECT SCHEDULE

CABRERA SERVICES
RADIOLOGICAL · ENVIRONMENTAL · REMEDIATION

Task ID	Task Description	Scheduled Start	Scheduled Finish	Duration
Painesville		01-Nov-04 A	25-Sep-06	450
Task 01 - Visual Site Inspection		05-Nov-04 A	15-Nov-04 A	0
A0001	Notice to Proceed	05-Nov-04 A		0
A0100	Visual Site Inspection	15-Nov-04 A	15-Nov-04 A	0
Task 02 - QC & ITR Plans		01-Nov-04 A	17-Jan-05	10
A0210	Prepare Draft QCP/ITR	01-Nov-04 A	16-Nov-04 A	0
A0220	Internal Review of Draft QCP/ITR	17-Nov-04 A	18-Nov-04 A	0
A0230	Prepare QCP/ITR for USACE Submission/Review	19-Nov-04 A	19-Nov-04 A	0
A0240	USACE Review of Draft QCP/ITR	22-Nov-04 A	03-Jan-05 A	0
A0250	Incorporate USACE Comments/Prepare Final QCP	04-Jan-05	14-Jan-05	9
A0260	Submit Final QCP to USACE	17-Jan-05	17-Jan-05*	1
Task 03 - SSHP		06-Dec-04 A	24-May-05	71
A0310	Cabrera Prepares Draft SSHP	06-Dec-04 A	03-Jan-05 A	0
A0315	Review/Modify Draft SSHP based on Draft FSP Rec'd from USACE	15-Feb-05	28-Feb-05	10
A0320	Internal Review of Draft SSHP	01-Mar-05	03-Mar-05	3
A0330	Prepare SSHP for USACE Submission/Review	04-Mar-05	04-Mar-05	1
A0340	USACE Review of Draft SSHP	07-Mar-05	25-Mar-05	15
A0350	Incorporate USACE Comments/Prepare Draft Final SSHP for Reg Rev	28-Mar-05	08-Apr-05	10
A0360	Regulatory Review of Draft Final SSHP	11-Apr-05	10-May-05	22
A0370	Incorporate Regulator Comments/Prepare Final SSHP for Submission to USACE	11-May-05	24-May-05	10
Task 04 - QAPP		06-Dec-04 A	24-May-05	71
A0410	Prepare Draft QAPP	06-Dec-04 A	03-Jan-05 A	0
A0415	Review/Modify Draft QAPP based on Draft FSP Rec'd from USACE	15-Feb-05	28-Feb-05	10
A0420	Internal Review of Draft QAPP	01-Mar-05	03-Mar-05	3
A0430	Prepare QAPP for USACE Submission/Review	04-Mar-05	04-Mar-05	1
A0440	USACE Review of Draft QAPP	07-Mar-05	25-Mar-05	15
A0450	Incorporate USACE Comments/Prepare Draft Final QAPP for Reg Review	28-Mar-05	08-Apr-05	10
A0460	Regulatory Review of Draft Final QAPP	11-Apr-05	10-May-05	22
A0470	Incorporate Regulator Comments/Prepare Final QAPP for Submission to USACE	11-May-05	24-May-05	10
Task 05 - Pre Remediation FSP		15-Feb-05	01-Jun-05	77
A0505	USACE provides Draft FSP to Cabrera	15-Feb-05*	15-Feb-05	1
A0510	Cabrera Prepares Draft FSP	16-Feb-05	08-Mar-05	15
A0520	Internal Review of Draft FSP	09-Mar-05	10-Mar-05	2
A0530	Prepare FSP for USACE Submission/Review	11-Mar-05	14-Mar-05	2
A0540	USACE Review of Draft FSP	15-Mar-05	04-Apr-05	15
A0550	Incorporate USACE Comments/Prepare Draft Final FSP for Reg Review	05-Apr-05	18-Apr-05	10
A0560	Regulatory Review of Draft Final FSP	19-Apr-05	18-May-05	22
A0570	Incorporate Regulator Comments/Prepare Final FSP for Submission to USACE	19-May-05	01-Jun-05	10
A0599	All Final Plans Submitted to USACE		01-Jun-05	0
Task 06 - Pre Remediation Field Sampling		03-May-05	24-Aug-05	82



Run Date: 05-Jan-05

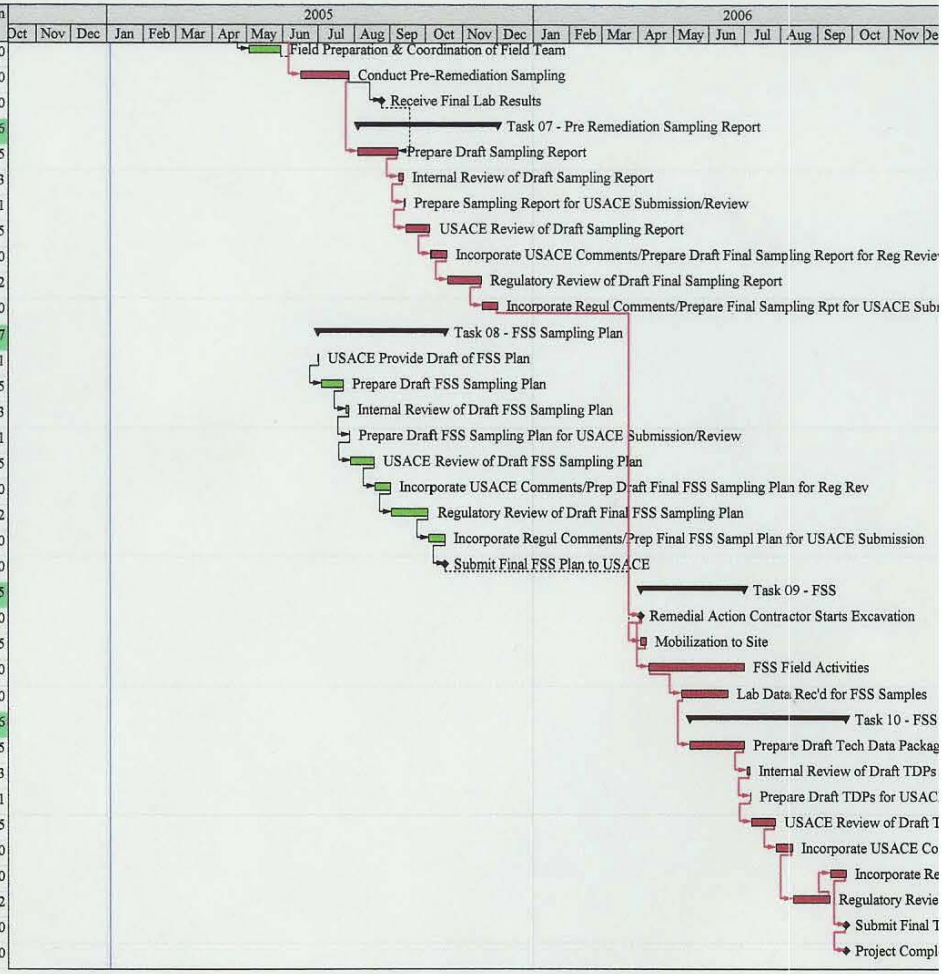
Data Date: 04-Jan-05

Painesville

Target Schedule - QCP Addendum

Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

Task ID	Task Description	Scheduled Start	Scheduled Finish	Duration
A0605	Field Preparation & Coordination of Field Team	03-May-05	30-May-05	20
A0610	Conduct Pre-Remediation Sampling	16-Jun-05	27-Jul-05	30
A0615	Receive Final Lab Results		24-Aug-05	0
Task 07 - Pre Remediation Sampling Report		04-Aug-05	01-Dec-05	86
A0710	Prepare Draft Sampling Report	04-Aug-05	07-Sep-05	25
A0720	Internal Review of Draft Sampling Report	08-Sep-05	12-Sep-05	3
A0730	Prepare Sampling Report for USACE Submission/Review	13-Sep-05	13-Sep-05	1
A0740	USACE Review of Draft Sampling Report	14-Sep-05	04-Oct-05	15
A0750	Incorporate USACE Comments/Prepare Draft Final Sampling Report for Reg Revi...	05-Oct-05	18-Oct-05	10
A0760	Regulatory Review of Draft Final Sampling Report	19-Oct-05	17-Nov-05	22
A0770	Incorporate Regul Comments/Prepare Final Sampling Rpt for USACE Submission	18-Nov-05	01-Dec-05	10
Task 08 - FSS Sampling Plan		01-Jul-05	17-Oct-05	77
A0805	USACE Provide Draft of FSS Plan	01-Jul-05*	01-Jul-05	1
A0810	Prepare Draft FSS Sampling Plan	04-Jul-05	22-Jul-05	15
A0820	Internal Review of Draft FSS Sampling Plan	25-Jul-05	27-Jul-05	3
A0830	Prepare Draft FSS Sampling Plan for USACE Submission/Review	28-Jul-05	28-Jul-05	1
A0840	USACE Review of Draft FSS Sampling Plan	29-Jul-05	18-Aug-05	15
A0850	Incorporate USACE Comments/Prep Draft Final FSS Sampling Plan for Reg Rev	19-Aug-05	01-Sep-05	10
A0860	Regulatory Review of Draft Final FSS Sampling Plan	02-Sep-05	03-Oct-05	22
A0870	Incorporate Regul Comments/Prep Final FSS Sampl Plan for USACE Submission	04-Oct-05	17-Oct-05	10
A0880	Submit Final FSS Plan to USACE		17-Oct-05	0
Task 09 - FSS		03-Apr-06	30-Jun-06	65
A0905	Remedial Action Contractor Starts Excavation	03-Apr-06		0
A0910	Mobilization to Site	03-Apr-06	07-Apr-06	5
A0920	FSS Field Activities	10-Apr-06	30-Jun-06	60
A0925	Lab Data Rec'd for FSS Samples	08-May-06	16-Jun-06	30
Task 10 - FSS Report		15-May-06	25-Sep-06	96
A1000	Prepare Draft Tech Data Packages (TDPs)	15-May-06	30-Jun-06	35
A1010	Internal Review of Draft TDPs	03-Jul-06	05-Jul-06	3
A1020	Prepare Draft TDPs for USACE Submission/Review	06-Jul-06	06-Jul-06	1
A1030	USACE Review of Draft TDPs	07-Jul-06	27-Jul-06	15
A1040	Incorporate USACE Comments/Prepare Draft Final TDPs for Reg Review	28-Jul-06	10-Aug-06	10
A1050	Incorporate Regulator Comments/Prepare Final TDPs for Submission to USACE	12-Sep-06	25-Sep-06	10
A1060	Regulatory Review of Draft Final TDPs	11-Aug-06	11-Sep-06	22
A1070	Submit Final TDPs to USACE		25-Sep-06	0
A9999	Project Completion		25-Sep-06	0



Run Date: 05-Jan-05

Data Date: 04-Jan-05

Painesville

Target Schedule - QCP Addendum

Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

APPENDIX B

INDEPENDENT TECHNICAL REVIEW (ITR) PROCEDURE

1.0 PURPOSE

1.1 The purpose of this procedure is to establish guidance and requirements for performing an Independent Technical Review (ITR) of the preparation and revision of Cabrera Services, Inc. (CABRERA) designs for the Painesville FUSRAP Site project for the U.S. Army Engineer District, Buffalo (USACE-Buffalo).

2.0 SCOPE AND OBJECTIVES

2.1 This procedure applies to all formal designs performed by CABRERA to fulfill contractual obligations to the USACE-Buffalo.

2.2 The purpose of the ITR is to insure that the basis, methods, assumptions and numerical designs (i.e., arithmetic, dimensions, figures, etc.) for a design are correct and valid for the specific problem being addressed.

2.3 The ITR is not intended to formally address spelling, grammar, format, or language in a design.

2.4 The primary objectives of the ITR are to ensure that:

- The engineering concepts are valid,
- The recommended plan is feasible and will be safe and functional,
- A reasonable cost estimate has been developed,
- That the engineering analysis is correct,
- That it complies with policy requirements, and
- It complies with accepted USACE, CABRERA, and/or Industry engineering criteria or practices.

3.0 DEFINITIONS AND ACRONYMS

Design: Design encompasses the basis, concepts, methods, assumptions, numerical calculations, and plans for specific work activities.

ITR: Independent Technical Review: the process of verifying that a design is correct and valid for the scope of work being addressed.

Verification: The act of reviewing, inspecting, testing, checking, auditing, or otherwise determining and documenting whether items, processes, services, or documents conform to specified requirements. With respect to computer code development, verification is the process of evaluating the products of a software development phase to provide assurance that they meet the requirements defined for them by the previous phase. As applied to completed computer codes, verification means to demonstrate the capability of the code to produce valid results for test problems encompassing the range of permitted usage defined by the code's documentation.

4.0 GENERAL INFORMATION

CABRERA provides formal written designs that encompass the basis, concepts, methods, assumptions, numerical calculations, and plans for specific work activities required by clients or encountered in-house. It should be recognized that these designs represent our "product" that we supply to the industry and thus should reflect the highest professional standards in their preparation. This applies both to the adequacy of the solutions presented (have we solved the problem sufficiently and in a manner that is technically defensible?) and to the quality of the documentation (is it publication grade?). Recognize that a design should be a complete, stand-alone entity that contains all of the information required to fully reconstruct it at a later date.

CABRERA management shall designate the preparer(s) and the individual responsible for an ITR before a design is begun to avoid any conflict of interest during development. Persons directly involved with the preparation of a design may not serve as independent technical reviewers for that same design.

ITR is performed by a single staff member on completed designs only. ITR of a partially completed design is not allowed, and all ITR shall be completed before a design is returned to the preparer for comment resolution. An informal examination of a partially completed design is allowed to provide for spotting errors in assumptions or methods early on, but this shall not be used as a labor saving action to reduce the effort required for full ITR once the design is completed. ITR shall be performed by an individual who is familiar with the problem being solved, and the methods employed in doing so, but who is not an active member of the preparation team.

5.0 RESPONSIBILITIES OF THE INDEPENDENT TECHNICAL REVIEWER

5.1 Independent Technical Reviewer

5.2 The responsibilities of the independent technical reviewer are to:

- read and become familiar with this procedure before reviewing a design.
- review designs in accordance with this procedure.
- provide verbal and/or written debriefing to the preparer concerning all comments.
- complete and sign the Review Method Sheet and Certification of Completion of Independent Technical Review Form.

5.3 The independent technical reviewer does not have the authority to enforce technical review comments. The authority for final comment resolution rests with the design chain of command.

6.0 PROCEDURE

6.1 Independent Technical Review (ITR) of an Original Design

6.1.1 As soon as is practical following the receipt of a design for review, the independent technical reviewer shall:

- verify that statements are clear and precise
- rework numerical problems to insure that no "calculator type" errors occurred (this includes spreadsheet cell formulas)
- verify that any physical systems modeled were accurately specified
- verify that all assumptions are clearly documented and are valid for the problem being considered
- verify that computer code inputs are correct and valid and that input data matches what was calculated
- verify that results from computer code runs contain no unanticipated or unusual results that would be indicative of a run-time error or a problem with the input data
- verify that code runs are adequately converged
- verify the validity of calculated results by estimations made based on first principles
- verify that the design contains all of the information necessary for complete reconstruction at a later date
- verify listings and completeness of any accompanying electronic files

6.1.2 Upon full completion of the ITR, hold a meeting with the preparer to discuss comments and agreeable resolutions.

NOTE: If agreed upon with CABRERA management, the technical reviewer can recommend that an external peer review be accomplished for designs whose methods or results are not straightforward.

6.1.3 Prepare a written debriefing for specific comments if requested by the preparer.

6.1.4 Upon submission of the revisions, insure that all comments have been resolved in an acceptable manner. Comments do not necessarily have to be complied with, but each comment must be resolved. When the designer disagrees with a comment, the best means of resolution is a discussion between the designer and reviewer. If this does not result in an agreeable resolution, the issue should be elevated through the designer's chain of command.

NOTE: This step may not be necessary in the case of editorial or other minor revisions.

6.1.5 Complete and sign the Independent Technical Review Checklist and the appropriate portion of the Certification of Completion of Independent Technical Review Form.

6.1.6 Return the design to the preparer.

6.2 Independent Technical Review (ITR) of a Revised Design

6.2.1 Upon receipt of a revised design from the preparer, the technical reviewer shall first ascertain the scope of the revisions (major or minor).

6.2.2 If only minor edits (those that do not affect results or conclusions) have been made, then technical review should consist of a read through of the design to insure that the changes made were appropriate and that no more are necessary. The technical reviewer shall confirm that editorial changes to conclusions are supported by the design results.

6.2.3 If major changes have been made, then a full ITR as described in step 6.1 is required.

6.2.4 Upon full completion of the ITR, hold a meeting with the preparer to discuss any comments and agreeable resolutions.

6.2.5 Prepare a written debriefing for specific comments if requested by the preparer.

6.2.6 Upon submission of the revised design, insure that comments have been resolved in an acceptable manner, in accordance with step 6.1.4.

NOTE: This step may not be necessary in the case of editorial or other minor revisions.

6.2.7 Complete and sign the Independent Technical Review Checklist and the appropriate portion of the Certification of Completion of ITR Form.

6.2.8 Return the design to the preparer.

7.0 ACCEPTANCE CRITERIA

7.1 Independent Technical Review Checklist is complete with initials, signature, and date.

7.2 Certification and Completion of Independent Technical Review Form is completed with signatures and dates.

ATTACHMENTS:

Independent Technical Review Checklist

Certification and Completion of Independent Technical Review

Independent Technical Review Checklist

The undersigned has reviewed the (*type of study, plan, report*) for the Painesville FUSRAP Site project in Painesville, Ohio in accordance with the following review guidelines:

Init.	1. General
	Is the proposed solution safe, functional, constructible, economical, and reasonable?
	Does the design follow appropriate (USACE, CABRERA, Industry) engineering criteria?
	Are appropriate analysis methods used?
	Are the basic design assumptions valid?
	Are the calculations and results essentially correct?
	For the specific project phase, is the engineering content sufficiently complete and does it provide an adequate baseline cost estimate?
	Is the documentation adequate?
	2. Hand Prepared Designs
	Detailed review of the original designs.
	Review by an alternate, simplified, or approximate method of design.
	Review of a representative sample of repetitive designs.
	Review of the design against a similar design previously performed.
	Other:
	3. Revisions
	Editorial changes only
	Elimination of unapproved input data without altering calculated results.
	Other:
	4. Computer Aided Design
	Review of code input only, since the computer program has sufficient history of use at CABRERA in similar designs.
	Determine that the computer program(s) has been validated and documented, is suitable to the problem being analyzed, and that the design contains all necessary information for reconstruction at a later date.
	Determine that the input data as specified for program execution is consistent with the design input, correctly defines the problem for the computer algorithm and is sufficiently accurate to produce results within any numerical limitations of the program.
	Review to verify that the results obtained from the program are correct and within stated assumptions and limitations of the program and are consistent with the input.
	Review validation documentation for temporary changes to listed, or developmental, or unique single application programs, to assure that the methods used adequately validate the program for the intended application.
	Review arithmetic necessary to prepare code input data.
	Other:
	5. Other

Reviewer:_____ Date:_____

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COMPLETION OF INDEPENDENT TECHNICAL REVIEW

Cabrera Services, Inc. (CABRERA) has completed the (*type of study, plan, report*) for the Painesville FUSRAP Site project in Painesville, Ohio. Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project, as defined in the Quality Control Plan. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of assumptions; methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the customers needs consistent with existing USACE policy.

_____ _____
(signature) CABRERA Design Preparer Date

_____ _____
(signature) CABRERA Project Manager Date

_____ _____
(signature) CABRERA Independent Technical Reviewer Date

CERTIFICATION OF INDEPENDENT TECHNICAL REVIEW

Listed below are significant concerns and the explanation of the resolutions (attach additional explanations or detail on separate sheets, if necessary):

Item	Concern/Explanation

As noted above, all concerns resulting from independent technical review of the specified design for the Painesville FUSRAP Site project have been considered.

_____ _____
(signature) CABRERA Project Manager Date

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APPENDIX C

PROJECT TEAM RESUMES

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[redacted]

Sr. Radiological Engineer

Name of Firm

Cabrera Services, Inc.

Education

Bachelor of Nuclear Engineering, Georgia Institute of Technology, Atlanta, GA, 1994.

Experience Summary

[redacted] has 12 years of experience as a radiological engineer and project manager specializing in environmental, decommissioning and nuclear power applications. He has extensive experience in development, regulatory interface, and execution of site investigation and remediation projects at various CERCLA, FUSRAP, and NRC-licensed sites. [redacted]. [redacted] also has extensive experience in planning and execution of MARSSIM characterization and Final Status Surveys using a wide variety of detection platforms.

Years of Experience – 12

Active Registrations

- American Board of Health Physics Comprehensive Certification, 2003

Relevant Experience

Sr. Radiological Engineer / Health Physicist

- Designed and implemented MARSSIM Final Status Surveys for medical & research isotopes in support of NRC license termination of several buildings at Walter Reed Army Medical Center.
- Site Radiation Safety Manager for Remedial Investigation of former MED activities at the DuPont Chambers Works FUSRAP Site.
- Prepared Conceptual Final Status Survey Cost Estimate for the Brookhaven Graphite Research Reactor (BGRR). Estimates were developed for four potential BGRR decommissioning end-state scenarios.
- Project Manager and Technical Lead for Remediation of Mixed Waste Burial Site at the USDA's National Animal Disease Center in Ames, IA. Successfully remediated 130 yd^3 of mixed waste for treatment and disposal and performed Final Status Survey of soils in accordance with MARSSIM.
- Prepared Engineering Evaluation and Cost Analysis (EE/CA) to evaluate remediation options for mixed waste burials at USDA's National Animal Disease Center; including radiological environmental risk assessments using RESRAD computer code.
- Project Engineer for scoping survey at a released but potentially contaminated former location of a nuclear fuels fabrication and testing facility. Survey designed as MARSSIM Class 3 and included gamma walkover scans, "geoprobe" soil sampling, and *in-situ* gamma spectroscopy using the ISOCS® system.
- Member of characterization team at the High Flux Beam Reactor at Brookhaven National Laboratory. Responsible for compiling comprehensive characterization report of historical radiological and hazardous conditions at the HFBR in preparation for long-range decommissioning activities.
- Co-authored Radiological Historical Site Assessment for the Former Frankford Arsenal in Philadelphia, PA.
- Engineering Consultant to Entergy Indian Point 3 Nuclear Power Plant (formerly New York Power Authority). Major projects included:
  - Design basis studies to evaluate new capital equipment needs, Cost/benefit analysis of project proposals, Development and review of engineering calculations, and Serving as technical advisor during equipment installation and acceptance testing.
  - System Engineer for digital radiation monitoring system. Extensive experience with Sorrento RMS systems, including system operability analysis, maintenance coordination, "Maintenance Rule" performance monitoring and reporting, development and review of system procedures, and interaction with regulators.

- Development and review of 10CFR50.59 Engineering Safety Evaluations.
- Performance of independent assessments for Radiation Protection Program, including Internal/External dosimetry, corrective action, and HP instrumentation areas.
- Refueling outage radiological engineering support, including internal and skin dose calculations, ALARA, and emergent work problem solving.
- Performed engineering calculation that evaluated the ability of IPM-7 personnel contamination monitors and NNC Gamma 40/60 portal monitors to detect internally deposited contaminants.
- Developed method for using a dose rate instrument as a backup primary-to-secondary leak detection mechanism for PWR's. Method was commended by INPO as a novel approach.

- Lead engineer on development of a novel, cost-effective real-time radioactive effluent monitoring system at a RCRA site at the Oak Ridge National Laboratory. System designed to monitor Am-241, Cs-137, and Sr-90 concurrently.
- Project Engineer for large area gamma background study at Sacramento Municipal Utility District's Rancho Seco Power Plant. Survey performed to verify areas surrounding the plant industrial area (~500 acres) were indistinguishable from background in accordance with NRC rulemaking for partial site releases.
- Member of characterization teams for radiological surveys performed at Idaho National Engineering and Environmental Laboratory (INEEL), Connecticut Yankee Haddam Neck Power Plant, the DOE Y-12 and K-25 Sites, and the EPA's dosing building in Montgomery, Alabama.

Reactor Operations Trainee

- Participant in formal nuclear reactor operations training program designed to prepare candidates for US NRC Reactor Operator licensing examination for the 5-MW heavy water cooled Georgia Tech Research Reactor. Training activities included performance of pre-critical checklists; reactivity manipulations under SRO supervision; and use/maintenance of reactor systems.
- Performed neutron surveys of operating reactor at high power level (3MW) for purpose of mapping bio-shield neutron leakage into surrounding containment building.

Radiological Technician – Cooperative Student Position

- Performed TLD irradiations in accordance with NVLAP and DOELAP accreditation programs for third-party crosscheck verification programs.
- Responsible for calibration, repair, and characterization testing for all types of portable survey instruments in accordance with all applicable ANSI, ISO and DOE standards.

Special Training

- 40-hour OSHA Hazardous Waste and Emergency Response Standard (29 CFR 1910.120), 2000.
- 8-hour OSHA Hazardous Waste and Emergency Response Refresher (29 CFR 1910.120), 2002.
- 8-hour OSHA Hazardous Waste and Emergency Response Supervisor (29 CFR 1910.120), 2002.
- DOE Radworker-I and -II (expired)

Association Memberships

- American Nuclear Society
- Health Physics Society, Plenary Member
- Greater New York Chapter Health Physics Society
- Society of American Military Engineers

[redacted] P. G.

Senior Project Manager/Principal Scientist

Name of Firm

Cabrera Services, Inc.

Education

Graduate Program/Geology, 1982-1987, Indiana University, Bloomington, Indiana
B.A., Geology and English, Augustana College, Rock Island, Illinois, 1982

Experience Summary

[redacted] is a project manager with 15 years of site investigation and field program experience. She is currently conducting site investigations in Maryland, New Mexico, Massachusetts, New Jersey, and Connecticut. She has served as Project Manager or Technical Lead for a variety of environmental assessments, especially within the federal CERCLA and RCRA programs and various State equivalent programs. She has managed projects ranging from $5000 to $1,500,000 and is experienced in managing multiple projects concurrently. [redacted] provides management oversight of professional and technician staff performing radiological surveys in support of operational and decommissioning activities.

[redacted] has been directly involved in over 250 site assessments and due diligence surveys in accordance with CERCLA and ASTM Phase I and Phase II standards in 25 states throughout New England, the Mid-Atlantic, the Southeast, and the Midwest. Her technical project responsibilities encompass field data acquisition, research, risk communication, and both written and oral presentation of results to regulators, the public, legal counsel or insurers, and individual clients for real estate site assessments and hydrogeologic investigations. Specific projects have included urban brownfields, landfills, commercial/retail properties, confirmed industrial disposal sites, sewage treatment package plants, petroleum refineries, railroad yards, and utility sites. [redacted] also serves as a technical reviewer for all types of project deliverables.

[redacted] field experience includes soil, groundwater, surface water, soil vapor, and source material sampling, monitoring well design and installations, piezometer installations, stream flow measurements, aquifer testing, and tank removal procedures. She has experience evaluating fate and transport of contaminants including dissolved and separate phase volatile organic compounds (petroleum and chlorinated solvents); PCBs; pesticides; explosives; pole treatment or coal tar compounds; metals, including mercury, chromium, arsenic, and lead in all media.

Years of Experience – 15

Registration

- Professional Geologist - Wyoming 1992, No. 2013

Relevant Experience

DuPont Chambers FUSRAP Site, Deepwater, New Jersey: Project Manager for CERCLA RI/FS evaluation of radiological contaminants at active chemical manufacturing site on the Delaware River. Tasks include gamma walkover survey, screening of soil and concrete samples in on-site gamma spectroscopy lab, and preparation of human health and ecological risk assessments of radiological contamninants. Chemical contaminants of concern include tetraethyl lead and organic solvents.

Former Naval Research Facility, Hingham, Massachusetts: As Senior Project Scientist, responsible for preparation and implementation of a multi-phase CERCLA site inspection at a former industrial site slated for redevelopment. Tasks to date have included site characterization, risk assessment and limited remedial activities (tank removals and soil excavation and disposal. [redacted] has also supported risk communication activities, including presentations at public meetings, and preparation of articles for public newsletters, brochures, and other general interest media.

Contaminants of concern at the site include VOCs, petroleum hydrocarbons, PCBs, and metals. Investigation tasks have included soil vapor and geophysical surveys, sampling and analysis of soil, groundwater, surface water, and sediment, and an extensive background research effort. Responsible for supervising the field team including engineering personnel, drilling contractors, and land survey contractors. Designed and oversaw an innovative removal action project that combined real time field analysis for PCBs and petroleum hydrocarbons and soil removal, resulting in significant cost savings to the client. Because this is a high profile site, there is significant regulatory involvement.

Confidential Client, Baltimore, MD: Project Manager and Technical Lead for a former industrial property being administered through Maryland's Voluntary Cleanup Program (CERCLA style). Tasks to date have included supplemental field investigation to address data gaps in the Phase I investigation, extensive discussion and negotiation with MDE representatives, preparation of a Phase II/VCP application addendum, development of remedial cost estimates to secure insurance, and preparation of a Response Action Plan. The site has a long history of industrial use, and as a consequence, contaminants of concern include chlorinated solvents, separate phase and dissolved petroleum constituents, and chromium, mercury, and lead. Successfully prepared a risk-based decision document that showed no unacceptable risk to future users through use of engineering design (Vapor barriers incorporated into slab design)

CPC Manufacturing, Cumberland, Rhode Island: Served as Field Operations Leader and Site Safety Officer for a remedial investigation at a Superfund site. Responsibilities included preparing a Work Plan/Quality Assurance Plan subject to EPA review and approval and implementing and overseeing a multi-faceted, supplementary field investigation of a mixed solvent (PCE, TCE, TCA) contamination site that included soil vapor sampling, soil boring and well installation, sampling of soil, groundwater, and surface water/sediment, and aquifer characterization.

Confidential Client, South Carolina: Technical Lead for Modified Clean Closure of a Solid Waste Management Unit under RCRA at an industrial hazardous materials storage yard. Contaminants of concern were chlorinated solvents in groundwater and metals in soil. Responsible for completing soil and groundwater sampling and analysis, data management and review for analytical results collected over a five-year period, reviewing human health and ecological risk characterizations, and providing technical support and recommendations to client and extensive negotiations with regulators. Suggested a modified technical approach that allowed the closure to continue on schedule despite administrative complications.

Confidential Railroad Client, Chicago, Illinois: As Research Task Leader and Project Hydrogeologist, was responsible for conducting background research and site walkover evaluations on 20 individual railroad yards throughout the Mississippi Valley for a large railroad corporation. Reviewed corporate records on system-wide processes and facilities, environmental and engineering files for each of the yards, evaluated the local hydrogeologic setting for each yard, and visited each yard to observe actual environmental conditions,

Confidential Client, Salem, Massachusetts: As Project Scientist, [redacted] was responsible for design and implementation of a multi-phase CERCLA investigation at a chemical manufacturing site. Primary contaminant of concern was hexavalent chromium in soil and groundwater. Responsible for health and safety monitoring of all on-site personnel during field investigation and preparation of report documenting nature and extent of contamination for use in negotiating cleanup program with MADEP.

Former Textile Mill, Easthampton, Massachusetts: As Project Hydrogeologist, was responsible for evaluating existing data for the Site and designing a Phase II Comprehensive Site Assessment. Contaminants of concern at this location were volatile organic compounds, including light petroleum components (BTEX) and chlorinated solvents (PCE/TCE/DCE). The site is located in a long-time industrial use area with a complex hydrogeologic setting (varved glacial lake sediments). Conducted a multi-phased field investigation including soil, soil vapor, and groundwater sampling and field screening for VOCs of multi-media samples. The field investigation was designed to identify the source(s) of the VOCs, the vertical and horizontal extent of contaminants in soils and groundwater, and to characterize the hydrogeologic setting of the site in relation to the local water supply aquifer.

Confidential Client, Anne Arundel County, Maryland: Provided independent technical review and interpretation of investigation and monitoring results to a citizen's advisory group for a large landfill closure project.

Field Manager for CERCLA Remedial Investigation, New York: As the Field Coordinator and health and safety monitor for all onsite personnel, conducted groundwater, surface water, sediment, source material, and soil gas sampling at a manufacturing facility with chlorinated solvent contamination in soil, groundwater, and surface water. Designed and conducted a hydrogeologic investigation of the surface water/groundwater relationship at the site, located adjacent to a designated trout stream. Also responsible for preparing Work Plans, and Remedial Investigation report.

Special Training

Site Characterization and Remediation of Dense, Immiscible Phase Liquid Contaminants in Porous and Fractured Media, University of Waterloo Short Course
Environmental Assessments in Real Estate Transactions
Train the Trainer Seminar, D. Darling and Associates
OSHA 40-Hour Health and Safety Training for Hazardous Waste Site Operations
OSHA 8-Hour Supervisory Training for Hazardous Waste Site Operations
DOT Hazardous Materials General Awareness And Function Training
ISO 9000 Documentation Training
Radiological Worker I
First Aid/CPR/Bloodborne Pathogen

Publications

1997. "Data for Risk Assessment: Management or Mismanagement." Poster presentation at Annual Society of Risk Management Meeting, Washington, D.C., December (with Bauman, K. and Cozzie, J.)
1994. "The 1,000-Mile-Long Site: Managing and Evaluating Environmental Liabilities for the Railroad Industry." Presented at the New England Environmental Expo, Boston, MA. April (with Cool, E.G.).
1987. Laboratory procedure and computer program for the analysis of grain size of unconsolidated sediments: Indiana Geological Survey Industrial Minerals Report 89, 30 p (with Thompson, T., Johnson, J.).

Association Memberships

- National Groundwater Association
- Society of American Military Engineers

Areas of Expertise

- Environmental Remediation
- Radiochemistry
- Design of in-situ radiological monitoring systems
- Quality management
- Regulatory Assessment

Education

Ph.D. – Nuclear Chemistry
University of Pittsburgh, 1977

B.S. - Chemistry
University of Pittsburgh, 1971

Professional History

Cabrera Services, Inc.
Program Manager
2004 – Present

Fluor Fernald
Program Technical Expert
1998-2003

TetraTech NUS
Executive Scientist
1982-1998

Battelle Columbus Laboratories
Principal Research Scientist
1978-1982

Representative Experience

[redacted] has extensive experience managing and implementing environmental and nuclear technology projects. He has successfully managed multi-disciplinary project teams, often handling complex and controversial issues. His experience has been diverse, including: environmental remediation; development of in-situ environmental-contamination monitoring systems; decontamination and decommissioning; management of radioactive-materials license terminations; radioactive, hazardous, and mixed waste characterization; environmental regulatory evaluations; quality management; radiochemistry; design and management of multidisciplinary environment safety and health (ES&H) assessment programs; and conceptual studies of the nuclear fuel cycle. He is knowledgeable of Department of Energy directives, federal environmental regulations, and Nuclear Regulatory Commission regulations. He is experienced in process improvement techniques, having successfully applied them to internal and external projects.

[redacted] was a Program Technical Expert at the Fernald Closure Project where he was the scientific lead for the development of an in-situ radiological-contamination monitoring system for environmental media. He designed and managed activities to characterize the system, determine operating parameters, and define evaluation criteria. He obtained approval from state and federal regulatory agencies for its use in support of remediation. He managed investigations of radiochemistry data quality and special process improvement initiatives related to radiochemical data development, handling, and interpretation. He provided senior radiological technical support to environmental remediation projects, including interpretation of radiological data, environmental risk assessments, and development of guidelines for the use of radiological data in remediation documentation.

[redacted] managed DOE-Headquarters ES&H Tiger Team Assessments, , Environmental Audits, Environmental Surveys, and Progress Assessments of several DOE facilities, including the Rocky Flats Plant. In this role, he provided technical direction and guidance to team of multi-disciplinary technical specialists. He was responsible for team building, budget and schedule management, development of final report, and coordination with DOE personnel. At the Rocky Flats Plant he was also responsible for the evaluation of environmental radiation protection and radiochemistry programs.

[redacted]
5091 Mount Ellen Court
St. Charles, MO 63304
Phone: 636-248-5983

EDUCATION AND TRAINING

M.S., Civil/Environmental Engineering, Duke University, 1983
B.S.E., Civil/Environmental Engineering, Duke University, 1982
40-hour OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response Training (including 8-hr Supervisor and annual 8-hr Refresher)
24-hour Environmental Regulations Course
16-hour Hazardous Materials Management Course
8-hour Hazardous Materials DOT Compliance Course
4-hour Safety, Health, and Radiation Protection Course (including annual refresher)

REGISTRATION

Engineer-in-Training, North Carolina, 1982 (Reg. No. A-7292)
Construction Safety Trained Supervisor, Missouri, 2001

CAREER SUMMARY

Fifteen years of experience providing environmental engineering and project management services on a variety of government and commercial projects. Projects involve work related to CERCLA, RCRA, CAA, CWA, SDWA, State and local regulations, DOE Orders and procedures, and NRC decommissioning requirements. Experience in public and private sectors, encompassing remedial investigation and design, air pollution control strategy development and analysis, environmental and meteorological monitoring, regulatory analysis, and compliance demonstration.

WORK HISTORY

2002 – Present PROJECT MANAGER, Cabrera Services, Inc. – St. Charles, MO

For the U. S. Army Field Support Command (Rock Island, IL):

- Currently managing the delineation of 1,4-dioxane groundwater contamination at the U. S. Department of Agriculture facility in Ames, IA ($220k). Project involves the collection and lithological logging of soil boring samples; installation and sampling of temporary and permanent groundwater wells; and periodic groundwater monitoring.

- Currently managing the development of an Engineering Evaluation and Cost Analysis (EE/CA) for the removal of 30,000 cubic yards of spent bullet catcher sand at the Lake City Army Ammunition Plant (LCAAP), Independence, MO ($370k). Project includes the development and implementation of a treatability study to generate a physical inventory of potential unexploded ordnance (UXO) and develop design parameters for the stabilization of lead-contaminated soils.

- Managed a human health risk assessment for the LCAAP firing range ($480 k). Oversaw project staff and subcontractors on performance of a gamma walkover survey; collection and analysis of environmental samples; development of work plans, field reports, and chemical and radiological risk assessments; and shipment/disposal of investigation derived waste (IDW). Contaminants of potential concern included DU, explosives, metals, and UXO resulting from the test firing of munitions.

- Managed the sampling and analysis of sand piles containing spent bullet-catcher sand at LCAAP, Independence, MO ($500 k). Oversaw project staff and subcontractors on the performance of gamma walkover and x-ray fluorescence (XRF) surveys; collection and analysis of environmental samples;

development of field reports; and shipment/disposal of IDW. Contaminants of potential concern included DU, explosives, metals, and UXO resulting from the testing and demilitarization of small arms munitions.

For the U. S. Army Corps of Engineers (Baltimore District):

- Managed the development of an EE/CA for the removal of DU-contaminated soil and materials from the CSX railroad Vicinity Property adjacent to the Colonie FUSRAP Site, Colonie, NY ($90 k).

- Managed the development of a Technical Memorandum to assess radiological contamination on storm water and sanitary sewer piping and underground structures for the Colonie FUSRAP Site, Colonie, NY ($26 k).

1997 - 2002 ENVIRONMENTAL ENGINEER, Washington Group International - St. Charles, MO and Boise, ID

For the U. S. Department of Energy (DOE) Weldon Spring Site Remedial Action Project - St. Charles, MO:

- Provided technical leadership for in situ chemical oxidation of TCE-contaminated groundwater in a fractured bedrock aquifer. Oversaw specialty subcontracts for laboratory bench-scale tests ($60 k) and field pilot-scale test ($600 k). Developed design criteria and technical contract specifications. Coordinated budget and schedule planning. Designed and managed the bid evaluation / selection process. Assisted with development of site safety training for subcontractors. Reviewed, approved, and ensured implementation of subcontractor plans, procedures, and reports.

- Supervised the development and publication of the Annual Site Environmental Report, which documents compliance with applicable DOE Orders and EPA regulations (e.g., CERCLA, RCRA, CAA, CWA, NPDES). This report presents the results of the previous year's site-wide multi-media (i.e., air, groundwater, and surface water) environmental monitoring program.

- Supervised the sampling, analysis, and evaluation of airborne radionuclide and PM-10 concentrations. Performed corresponding dose assessments to calculate public radiological exposure. Prepared annual NESHAP compliance demonstration report.

- Operated and maintained onsite meteorological station. Collected and reviewed data, conducted semiannual performance audits, prepared and updated associated plans, procedures, and reports.

- Coordinated groundwater monitoring program for a network of more than 70 wells and springs. Prepared monitoring plans, reviewed analytical data, and developed data summary reports. Prepared Sampling and Analysis Plan to monitor aquifer impacts of in situ chemical oxidation treatment.

- Provided ES&H radiological field support during operation of the Chemical Stabilization and Solidification facility, which was used in the remediation of radioactive and chemically contaminated waste from site raffinate pits.

For the Alameda Corridor Transportation Authority - Los Angeles, CA:

- Developed a proposal to provide $30 M of environmental management services during construction of a 10-mile long consolidated freight railway system through downtown Los Angeles. Identified applicable air, water, and solid waste regulatory requirements. Coordinated the development of a comprehensive

strategy for characterizing, remediating, and disposing of hazardous waste and contaminated groundwater.

For the Rocky Mountain Arsenal Remediation Venture Office - Denver, CO:

- Prepared engineering design packages for remediation of weapons burn sites and burial pits. Conducted site investigations, developed sampling and analysis plan, reviewed analytical data, prepared site history reports, defined excavation boundaries, designed engineering drawings, and evaluated infrastructure interferences.

Client confidential - southern CA:

- Conducted due diligence investigation for potential purchaser of a 1,000-acre "brownfields" property previously used to manufacture explosives. After purchase, prepared the work plan for remedial investigation of an area of the site that was contaminated with DU.

1996 - 1997 AIR QUALITY CONSULTANT, Self-Employed - Meridian, ID

- For the Idaho Division of Environmental Quality, provided quality assurance for emission inventory calculations used in the Ada County PM-10 State Implementation Plan (SIP). Reviewed process descriptions and flow diagrams, and verified emission calculations for all PM-10 sources in Ada County.

1995 - 1996 AIR QUALITY CONSULTANT, Spidell and Associates - Boise, ID

- Provided air quality consulting services to clients in the rock crushing and wood products industries. Conducted site inspections, developed source test protocols, and prepared emission estimates and permit applications. Developed emission factors for wood products handling operations.

1985 - 1987 and 1988 - 1989 ENVIRONMENTAL ENGINEER, U. S. Environmental Protection Agency (EPA) Office Of Air Quality Planning And Standards - Research Triangle Park, NC

- Contributed to 1990 Clean Air Act Amendments by assisting with the development of a nationwide control strategy for attaining national ambient air quality standards (NAAQS) for ozone and carbon monoxide (CO). Evaluated costs and air quality benefits of various control scenarios for both stationary and mobile sources. Facilitated discussions among Federal, State, and local air pollution control officials to construct most effective strategy. Prepared and presented workshop guidance to Regional, State, and local air pollution control officials on the preparation of emission inventories.

1983 - 1985 ENVIRONMENTAL ENGINEER, Midwest Research Institute - Cary, NC

- For the U. S. Environmental Protection Agency, developed background information documents for sources of volatile organic compounds (VOCs), particulate matter, and hazardous air pollutants (HAPs) to be used in the development of NSPS and NESHAP regulations. Conducted industry surveys, identified potential point and fugitive emission sources, designed and coordinated source tests, and evaluated test results. Analyzed capital and operating costs and emission reduction benefits of various process, capture, and control alternatives.

CABRERA SERVICES, INC.

[redacted]

Project Manager /Senior Radiological Engineer

TITLE

PROJECT MANAGER / SENIOR RADIOLOGICAL ENGINEER

EXPERIENCE SUMMARY

[redacted] is a successful project leader with over **24 years** of experience with various radiological disciplines, with specific focus on **D&D** and the **NRC's License Termination Regulations.** He has experience with **commercial licensees** and **government** facilities and in direct interfaces with regulatory bodies such as the **NRC** and various **State DEP/DEC/DERs.** His experiences include **nuclear reactor operation**, **project management, radiological engineering**, **MARSSIM** survey design and implementation, and design and development of **radiation monitoring** and **reactor systems**. He has project experience in all phases of site **scoping, characterization,** and **final status surveys** using a variety of **radiation detection** platforms. His **waste management** experience includes the **profiling, manifesting, transportation, and disposal** of various classes of **radiological, mixed, and hazardous** waste. He has made presentations regarding **Dose Modeling** to demonstrate **Compliance with Decommissioning Criteria**. He is a member of the Health Physics Society.

RELEVANT EXPERIENCE

Project Manager

[redacted] project experience includes clients such as Source and Byproduct material licensees, and commercial, NRC SDMP, USACE, DOE, and FUDS sites. Types of facilities include reactors, slag disposal sites, radiochemical laboratories (hot labs), radiopharmaceutical research, military arsenals, fuel reprocessing, and watch manufacturers. Various radiological contaminants that he has experience with include mixed fission products, activation products, Natural thorium and uranium, depleted uranium, radiopharmaceutical tracers, and tritium on building and equipment surfaces, in soils, in surface waters, and in groundwater.

As the RSO of license for a NRC SDMP Source Material site with one million cubic feet of contaminated slag, [redacted] was responsible for all license surveillance and compliance activities, preparation and submittal of supporting plans and reports, and preparation of a decommissioning plan for NRC and Pennsylvania regulators.

[redacted] duties have included performing risk assessments, site dose modeling, and radiation shielding design using the latest versions of the USDOE RESRAD, NRC DandD, and MicroShield computer codes. He has facilitated reports addressing dose assessments, MARSSIM, technical issues, bases, and procedures. He has provided technical expertise in regulatory guidance for decommissioning with emphasis on the NRC's development, application, and codification of new license termination criteria.

[redacted] has developed radiological survey plans in support of site investigation and decommissioning activities. He has been responsible for the procurement and coordination of personnel, equipment, and services to perform field activities for all phases of the D&D process. These have included scoping, characterization, remediation, and final status surveys for radiological and hazardous contaminants.

[redacted] provided scheduling, direction, and coordination of an organization that included Operations, Health Physics, Waste Management, Health and Safety, Environmental Monitoring, Maintenance, Engineering, and subcontractors for a D&D project for a nuclear reactor and hot lab facility. He managed engineering and technical professionals providing solutions to problems, including procedures, technical processes, dosimetry, and instrumentation.

[redacted] has interfaced with NRC Headquarters and Regional personnel, State regulatory personnel, and licensees to resolve operational and decommissioning issues and to implement policies.

Project Engineer

[redacted] performed pre-task analyses and evaluations to determine a practical technical approach to D&D at a reactor and hot lab facility. This involved addressing all aspects of health and safety, logistics, engineering evaluations, and cost effectiveness. Based on the technical approach, he prepared all task-specific procedures and supporting documentation necessary to implement the activity. He collected information, specified and acquired standard and specialized equipment, and certified personnel in equipment operation. He provided direct oversight of all activities for license and procedural compliance and resolution of technical or logistical difficulties.

Waste Management

[redacted] waste management responsibilities have included field waste stream coordination and accountability, profiling, manifesting, transport, and disposal of several types of waste streams. These have included Class A, B, and C radioactive, mixed, and hazardous wastes to various licensed disposal facilities.

Nuclear Reactor Operations / Nuclear Instrumentation

[redacted] was a licensed Senior Reactor Operator for a 5MWth pool-type nuclear reactor. In this capacity, he supervised reactor operations staff for compliance with NRC and corporate operational procedures, regulations, and technical specifications. He was responsible for directing activities in response to emergency or non-routine events. He prepared or revised procedures applicable to the surveillance, monitoring, and operation of the reactor and associated systems.

[redacted] provided oversight for, and performed, reactor refueling and incore and external core production and experiment preparation and irradiations. He performed instrumentation setup and approach to criticality monitoring for the cask loadings of spent HEU fuel and quantities of HEU process recovery material for offsite shipment.

[redacted] performed surveillance, monitoring, testing, repair, modifications, and design for all reactor and hot lab electronic and electromechanical monitoring and control systems. He prepared and provided classroom instruction in reactor instrumentation for NRC licensing exam preparation and to fulfill reactor operations staff re-qualification requirements.

EDUCATION

B.A.; State University of New York

SPECIAL TRAINING AND PRESENTATIONS

- 40-hour OSHA HAZWOPER and HAZWOPER Supervisor certified (29 CFR 1910.120)
- PEP speaker, "Crafting a Defensible Dose Assessment", 2000 Annual HPS meeting, Denver, CO
- NRC License Termination Workshops 1999-2001, Rockville, MD
- RESRAD Computer Codes Workshop, Argonne National Lab, IL
- OSHA Competent Person Certifications for Excavation, Fall Protection, and Scaffolding
- NRC Reactor Operator and Senior Reactor Operator Licenses
- Theory of Operation, Applications, Maintenance, and Repair of the PCM-1B Personal Contam. Monitor, Sante Fe, NM

ASSOCIATION MEMBERSHIPS

- Health Physics Society

APPENDIX D

DAILY QUALITY CONTROL REPORT

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CABRERA SERVICES
RADIOLOGICAL ENVIRONMENTAL REMEDIATION

DAILY QUALITY CONTROL REPORT

Painesville FUSRAP Site – Project No. 04-3200.02

This field report shall be completed each day that field activities are performed at the Painesville Site. Attach an additional sheet of paper, if necessary, to adequately complete each required entry.

USACE PE/PM: _____ **Precipitation:** _____
DATE/Day: _____ **Wind:** _____
Temperature: _____

SUBCONTRACTORS ON SITE (Identify subcontractors onsite by company name): _____

WORK PERFORMED (Briefly describe project tasks that were performed. Reference appropriate logs if details necessary): _____

PROJECT SCHEDULE (Describe impact of day's work, if any, on overall project schedule):

PROBLEMS, NON-CONFORMANCES, CORRECTIVE ACTIONS, NOTIFICATIONS (Describe any hazards, injuries, regulatory or procedural issues, items of non-compliance, etc. Identify individuals contacted as a result of these items. Include name/title/organization/time contacted/and a summary of content of discussion):

SITE VISITORS, CONTACTS (Identify any non-project personnel that visited the site or made contact with project personnel. Include names/titles/organizations/time of contact/ and any other pertinent details of the conversation): _____

DQCR prepared by:

Print Name	Signature	Title	Date

APPENDIX E

DOCUMENT SUBMITTAL LOG

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CABRERA SERVICES
RADIOLOGICAL · ENVIRONMENTAL · REMEDIATION

Document Submittal Log

Project Name: Painesville FUSRAP Environmental Sampling & Testing
Project No.: 04-3200.02
Contract No.: DACW49-03-D-0003/0002

Client: USACE Buffalo District
Attn: Painesville FUSRAP Site Project Manager
[redacted]
1776 Niagara St.
Buffalo, NY 14207

Submittal No.	Document Title	Type	Submittal Date	Review Type (USACE/ Regulator/ FIO)	Submitted By
001	*Quality Control Plan - DRAFT*	*Document*	*11/19/04*	*USACE*	[redacted]
002					
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APPENDIX F

MONTHLY PROJECT ACCRUAL WORKSHEET

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Painesville FUSRAP Site November 2004 Accrual

Contract No. DACW49-03-D-0003: Delivery Order #002

Current Earnings & Cost Projections Painesville FUSRAP Site For Month Ending **November 2004**			
Month	Actual Billings	Projected Billings	Cumulative = Actuals + Projected
Oct-04	$ -	$ -	$ -
Nov-04	$ -	$ 19,478	$ 19,478
Dec-04	$ -	$ 47,247	$ 47,247
Jan-05	$ -	$ 23,623	$ 23,623
Feb-05	$ -	$ 23,623	$ 23,623
Mar-05	$ -	$ 72,063	$ 72,063
Apr-05	$ -	$ 168,148	$ 168,148
May-05	$ -	$ 96,085	$ 96,085
Jun-05	$ -	$ 72,063	$ 72,063
Jul-05	$ -	$ 78,926	$ 78,926
Aug-05	$ -	$ 13,725	$ 13,725
Sep-05	$ -	$ 18,629	$ 18,629
Oct-05	$ -	$ 11,767	$ 11,767
Nov-05	$ -	$ 153,986	$ 153,986
Dec-05	$ -	$ 153,986	$ 153,986
Jan-06	$ -	$ 153,986	$ 153,986
Feb-06	$ -	$ 46,441	$ 46,441
Mar-06	$ -	$ 46,441	$ 46,441
Apr-06	$ -	$ 42,418	$ 42,418
May-06	$ -	$ -	$ -
Total:	$ -	$ 1,242,637	**$ 1,242,637**

Last Month's Earnings & Cost Projections Painesville FUSRAP Site For Month Ending **October 2004**			
Month	Actual Billings	Projected Billings	Cumulative = Actuals + Projected
Oct-04	$ -	$ -	$ -
Nov-04	$ -	$ -	$ -
Dec-04	$ -	$ -	$ -
Jan-05	$ -	$ -	$ -
Feb-05	$ -	$ -	$ -
Mar-05	$ -	$ -	$ -
Apr-05	$ -	$ -	$ -
May-05	$ -	$ -	$ -
Jun-05	$ -	$ -	$ -
Jul-05	$ -	$ -	$ -
Aug-05	$ -	$ -	$ -
Sep-05	$ -	$ -	$ -
Oct-05	$ -	$ -	$ -
Nov-05	$ -	$ -	$ -
Dec-05	$ -	$ -	$ -
Jan-06	$ -	$ -	$ -
Feb-06	$ -	$ -	$ -
Mar-06	$ -	$ -	$ -
Apr-06	$ -	$ -	$ -
May-06	$ -	$ -	$ -
Total:	$ -	$ -	$ -