Quality Assurance/Quality Control Plan

ASARCO – Encycle Facility
Asbestos Abatement, Waste Removal, and Demolition

December 17, 2010
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Project Manager

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Project Director

Quality Assurance/Quality Control Plan

ASARCO - Encycle Facility  
Asbestos Abatement, Waste Removal, and Demolition

Prepared for:  
ASARCO – Encycle Facility  
Asbestos Abatement, Waste Removal, and Demolition Project  
Corpus Christi, Texas

Project: ENC001

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Date: December 17, 2010
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1.0 Introduction

This Quality Assurance/Quality Control (QA/QC) Plan has been developed for asbestos abatement, hazardous waste removal, and demolition activities to be conducted at the ASARCO – Encycle Facility located at 5500 Up River Road in Corpus Christi, Texas (Site). Energy Renewal Partners, LLC (Energy Renewal) has been selected to perform the waste removal and demolition activities as appointed by the Chapter 7 Trustee (Trustee). The task items encompass a portion of the ongoing closure and reclamation of the Site.

The purpose of this QA/QC Plan is to provide guidance and measures to be employed to ensure that the project is completed in a safe manner that is consistent with project goals. Given the scope and complexity of this project, it is important that Site authority and practices are clearly defined and that the practices and quality control methods are implemented consistently. This QA/QC Plan is intended to identify Site controls/authority, general procedures such as document/data control, and activity-specific controls and verification procedures.

1.1 QA/QC Plan Structure

The QA/QC Plan is organized into the following Sections:

- Introduction;
- Project Organization and Authority;
- Site Background;
- Project Scope and Process Description;
- Project Quality Assurance and Quality Control;
- Documentation and Recordkeeping;
- Review and Evaluation, and;
- Reporting.
2.0 Project Organization and Authority

The roles and responsibilities of primary project Organizations and key personnel are presented below.

Project Organizations:

Chapter 7 Trustee:

The Trustee was appointed by the federal bankruptcy court to oversee the Encycle estate, finances, and general affairs.

Arcadis:

Arcadis, along with Armando Avalos Realty, are the Trustees designated field representatives. Arcadis’s role will consist of sampling and waste classification of various waste materials as encountered during the course of the project; verifying that the hazardous waste management units listed on Tables A-2 and A-3 of Exhibit A of the Contract between Energy Renewal and the Trustee are properly decontaminated in accordance with the specifications provided in Exhibit A; collecting verification rinse water samples from the hazardous waste management units for laboratory analyses; providing the results of the verification rinse water samples to Energy Renewal; preparing the hazardous waste management unit closure reports for submittal to the Trustee and TCEQ; collection of perimeter air samples for metals analyses; and correspondence with the Trustee on project related issues.

Texas Commission on Environmental Quality (TCEQ):

TCEQ is responsible for oversight of the regulatory aspects and performance of the project. They will review project plans and performance, in particular focusing on waste disposal and perimeter monitoring and sampling activities.

Energy Renewal Partners:

Energy Renewal is responsible for the execution of the demolition activities, including those described in the project specifications given in Exhibit A of the Contract between Energy Renewal and the Trustee (specifications), and to ensure that contractors and subcontractors conduct work according to plan.

Overall management of the project will be conducted by Energy Renewal in addition to maintaining formal communication with the Trustee.

Ecology Specialized Industrial Services (SIS):

SIS is retained as the primary specialized demolition contractor that will be responsible for providing personnel and equipment required to perform the project scope. SIS, in partnership with Energy Renewal, will be required to conduct work activities to meet project goals and schedule.
Camacho Recycling:

Camacho is retained as the primary ACM abatement contractor. They will also be providing transportation services for waste material including non-friable and Class II demolition debris as well as transportation of salvageable materials.

Turnstone:

Turnstone will act as the licensed asbestos abatement consultant with responsibility to provide air monitoring and substance testing services. Turnstone will develop the asbestos abatement project design including evaluation and selection of appropriate asbestos abatement methods, project layout, and the review of environmental controls, abatement procedures and personal protection equipment to be employed at any time during the asbestos abatement activity, from the start through the completion dates of the project.

Key Project Personnel:

Chapter 7 Trustee, Mike Boudloche – Oversees affairs of the estate, manages project financials, and recommends general path forward for the site on behalf of the Federal Bankruptcy Court.

Project Director, Trisha Elizondo – Oversees overall project activities and financial management. Acts as liaison with the Trustees as needed. The Project Director ensures that the provisions of the Site-specific HASP are enforced for the duration of the project and the necessary resources and materials are committed to the project.

Arcadis – Arcadis’s role will consist of sampling and waste classification of various waste materials as encountered during the course of the project; verifying that the hazardous waste management units listed on Tables A-2 and A-3 of Exhibit A of the Contract between Energy Renewal and the Trustee are properly decontaminated in accordance with the specifications provided in Exhibit A; collecting verification rinse water samples from the hazardous waste management units for laboratory analyses; providing the results of the verification rinse water samples to Energy Renewal; preparing the hazardous waste management unit closure reports for submittal to the Trustee and TCEQ; collection of perimeter air samples for metals analyses; and correspondence with the Trustee on project related issues.

Project Manager (on-site), Robert Resuriz – Manages project logistics, coordinates directly with the project waste manager, superintendent, and QA/QC officer on weekly activities and project schedule. Reviews project plans, submittals, and procurement activities. Coordinates with subcontractors and vendors and acts as primary liaison. The Project Manager will also enforce provisions in the Site-specific HASP.
Regulatory/Waste Manager, Mike Lindstrom – Coordinates with subcontractors and vendors. Generates requests for information on technical issues and works to present possible solutions. Regulatory/Waste Manager will be responsible for implementation of waste management protocols and will establish, implement, and monitor the quality assurance program. Works closely with Project Manager and supervisors to plan, schedule, and implement waste management and handling related activities.

Site QA/QC Officer, TBD – Individual will be under the direct supervision of the Waste Manager. The QA/QC Officer will be responsible for daily waste tracking and direct communication with transport vehicles. Daily communication with the Project Manager will allow the individual to ensure that all waste data and tracking is performed as required. The QA/QC Officer will also be responsible for ensuring that quality assurance protocols are followed and to perform several of the quality control checks that are required.

Site Safety Officer (on-site), Ed Ramirez (SIS) – Serves as the general Site competent person responsible for accident prevention in accordance with 29 CFR 1926.20 and other applicable safety regulations as specified in Exhibit A of the Contract between Energy Renewal and the Trustee. The competent person is responsible for, and authorized to act to ensure that personnel are not working under conditions that are unsanitary, hazardous, or dangerous to their health or safety. The competent person’s accident prevention responsibilities include:

1. Frequent and regular inspections of the jobsite;
2. Enforcement of the Site-specific HASP;
3. Inspections of materials on Site;
4. Review of demolition plans, and;
5. Inspection of equipment on Site.

Demolition Operations Manager, Craig Illuasky (SIS) – Responsible for instructing crews associated with specialized operations including stack demolition and salvage operation. The Demolition Operations Manager monitors demolition progress, completion of daily activities, coordinates and plans with the Project Manager, and reports any change of conditions. The Demolition Operations Manager will also direct subcontractor activities and enforce provisions in the Site specific HASP.

ACM/Demolition Manager (on-site), Isaac Camacho (Camacho) – Responsible for instructing crews on daily tasks, monitoring demolition progress, completion of daily activities, coordination and planning with the Project Manager, and reporting change of conditions. Demolition Manager will also direct subcontractor activities and enforce provisions in the Site specific HASP.

Asbestos Abatement Consultant, Steve Strong (Turnstone) – Responsible for implementation of personal air monitoring, perimeter air monitoring and post-abatement clearance monitoring, sample collection, substance testing, and developing the asbestos abatement project design.
3.0 Site Background
The Encycle Facility is located at 5500 Up River Road in Corpus Christi, Texas (Site). The facility is a large hydrometallurgical complex, originally operated by the American Smelting and Refining Company (ASARCO). ASARCO operated the facility as a zinc smelter from 1942 through 1985. Encycle Texas Inc (Encycle) subsequently operated the facility as a metals recycling unit until operations ceased in 2003. The Site is adjacent to the south side of the Corpus Christi Ship Channel, and in close proximity to Nueces Bay which is an important coastal bend estuary within the Corpus Christi Bay system. To the south of the Site is the Dona Park residential neighborhood while industrial refining plants and a commercial grain elevator flank the Site to the east and west, respectively.

3.1 Project Scope and Work Process Description
General
The project requires asbestos abatement, waste removal, and demolition of numerous buildings and associated aboveground piping and ancillary equipment. As identified in the contract documents and drawings, the Site is comprised of 52 above grade buildings, a 315-foot smoke stack, a water tower, approximately 11 metal silos, cooling towers, numerous aboveground storage tanks, and additional ancillary piping, conduit and equipment.

Asbestos Abatement
The asbestos abatement activities will include the removal, transport, and disposal of asbestos containing material (ACM) in the buildings and structures to be demolished. This work item also includes development of an asbestos abatement project design and preparation of the Texas Department of State Health Services Asbestos Notification Form.

A survey of ACM material in the facility buildings was previously performed by Arcadis. Given the survey results and on-Site evaluation, the Asbestos Abatement Project Design was developed. The asbestos abatement subcontractor (Turnstone) is responsible for performing the abatement activities and maintaining compliance with the asbestos abatement project design, project specifications, work plan, and applicable federal, state, and local regulations.

Priority and phasing of the work during the course of the project will be directed by Energy Renewal in coordination with Turnstone, the Trustee, and other subcontractors. Phasing will account for overall progress as well as maintaining work locations independent from active demolition areas, to the extent feasible.
Due to the nature of ACM, compliance with plans and regulations is of the utmost importance. Any personnel who observe conditions or activities that may affect worker health or the environment should bring the issue to the immediate attention of the Project Manager or available supervisor.

**Hazardous Waste Removal and Unit Decontamination**

This work task will include decontamination of waste management units which have not been closed by the Texas Commission on Environmental Quality (TCEQ). Decontamination procedures include existing waste removal, triple rinse of the units and cleanup of residual surficial impacts. The Project Team will manage, transport, and dispose of recovered waste in accordance with the appropriate waste classification as well as collect, remove, transport, and dispose of characteristic hazardous waste present within the buildings and structures to be demolished. Prior to off-site disposal, the building construction debris, equipment, and components will be separated from the residual hazardous waste.

Following the removal and decontamination activities, verification that each of the units has been decontaminated will be assessed by Arcadis. These results will be communicated to the project manager and documented before demolition/disposal of the unit.

The wastes that will be handled in conjunction with this activity are potentially hazardous to human health and the environment. Any worker who notices conditions that might affect workers or the environment has the authority to stop work as necessary. If conditions are not immediately dangerous, then the worker has the responsibility to notify the Project Manager or immediate supervisor.

**Building and Structure Demolition**

The Project Team will demolish buildings and structures as well as ancillary components as described in the Scope of Work excluding fire water system piping and exterior pad-mounted transformers. The limits of demolition are defined as at grade level concrete and the exterior of most of the walls and bases of pits and sumps. Construction debris, with the exception of recyclable materials, will be disposed of at an authorized commercial landfill as Class II Industrial waste.

Phasing of the demolition will be guided by the Energy Renewal project manager and in consideration of project schedule and relation to other on-going Site activities.
4.0 Project Quality Assurance and Quality Controls

This section includes quality assurance and quality controls implemented at the Site. Quality assurance items are primarily procedures/processes that are implemented to ensure successful completion of the project. Quality control items are used to evaluate the implemented project procedures/protocols and identify deviations.

Quality Assurance

Specific project components require strict management methods in order to ensure a successful outcome. These aspects of the job are established below, but may be augmented as necessary during the performance of the project.

Waste Tracking and Documentation

Due to the varied waste streams and large quantities of waste that will be generated during demolition, clear, concise, accurate, and up-to-date waste tracking is critical to job success. The following measures will be employed to track all Site waste streams.

- Waste streams will be generated and (typically) sorted, stacked, and/or piled within the designated staging areas to create distinct areas of like materials for loading and transportation, as directed in the specifications and project work plan. Staging areas, to the extent possible, will not be located in close proximity to the southern end of the site, near Up River Road.
- The Regulatory/Waste Manager will be updated on a daily basis regarding waste streams on Site. The Regulatory/Waste Manager will initiate tracking of each new waste stream, which will allow for efficient preparation of profiles/manifests. Once specific wastes are cleared for disposal, the Regulatory/Waste Manager will coordinate with the Project Manager to arrange transportation.
- Management personnel will frequently monitor waste accumulation and schedule accordingly for transportation to off load waste to appropriate disposal facilities. Anticipated truck quantities and load types will be communicated to the field office each morning or the previous evening to allow preparation of paperwork and notification of the appropriate waste facilities.
- Site managers will also frequently monitor commodity wastes to help monitor for potential material loss through theft.
- Trucks arriving at the Site will be required to check in to the field office where they will be directed (as detailed in the Communications Plan). Driver information will include receiving a brief Site orientation (if necessary), directions on where/what to load, and a 1’ x 1’ square sign that will allow office personnel to track the driver, truck, and contents while on Site. If necessary, the driver will also be given directions to the disposal facility.
Following loading, each truck will return the square sign, at which time the field office personnel will confirm the truck contents, estimated volume, ensure the trucker has appropriate disposal paperwork, and note the time.

- Notes will be collected to ensure that all pertinent waste information is maintained.
- Methods to ensure that all weigh tickets and signed manifests/transport documents are received by the field office will be established following further coordination with the waste facilities.
- Waste disposal tracking data will be updated daily.

Pre-Demolition Review

There are a large number of diverse structures on Site that are in varied condition and contain many potential hazards. It is therefore necessary to establish methods required to ensure that work activities do not proceed until proper review and coordination has been performed. The following methods should be used by all contractors:

- When preparing to begin work in a new area, contact the Project Manager to confirm the next priority work item. (Note: this review should also be performed following any change in Site conditions);
- Identify the work area and review specific hazards from the engineering survey and/or Site characterization;
- Communicate the hazards to all personnel performing the work;
- Discuss necessary hazard mitigation measures (e.g.; avoid unsafe walkways, lighting, temporary structural supports);
- Discuss the full scope of the activities to be performed at that location, and;
- Review the schedule for completion, especially if the work precedes another phase of the project demolition.

Daily Job Activity Log

The Project Manager will maintain a log of Site activities performed each day. At a minimum, the daily log should include the following:

- Site activities performed and contractors on Site;
- Working hours and weather;
- All QC items performed;
- Document delays, standby, and weather stand down, and;
- General Site observations and deviations from normal conditions.
Daily logs will be compiled on a weekly basis and utilized to prepare a weekly update of Site activities and progress. In addition, the QA/QC Officer will maintain an individual daily log to record QC activities and observations.

**Periodic Project Review**

Periodic project reviews are required to provide a format for discussion of ongoing schedules, priority assessment, project impediments, successful or unsuccessful work processes, and suggestions for improvement. Review meetings will be held as listed below:

- Primary management personnel – Weekly
- Contractor-specific management teams and workers – Twice Monthly

**Quality Controls**

Individual controls will be implemented to ensure that project components are being carried out in a safe, efficient manner and in compliance with project specifications. Each item below describes the activity required, the primary personnel in charge of the activities, recording/documentation requirements, and required frequency of evaluation. The various quality control items have been separated according to the following groups:

- Asbestos Abatement Quality Control
- Hazardous Waste Removal Quality Control
- Demolition Quality Control
- Health and Safety Quality Control
- Plan Compliance Quality Control

**Asbestos Abatement Quality Control**

<table>
<thead>
<tr>
<th>Control Type</th>
<th>Description</th>
<th>Performance Frequency</th>
<th>Personnel in Charge</th>
<th>Documentation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos Abatement Review</td>
<td>Review active abatement activities – Evaluate compliance with Asbestos Abatement Project Design. Note Deviations.</td>
<td>Once Weekly/As Needed</td>
<td>Turnstone</td>
<td>Log inspection with Field Office</td>
</tr>
<tr>
<td>Review Abatement Work Procedures</td>
<td>Verify abatement activities are being conducted in accordance with the ACM Project Design.</td>
<td>Weekly</td>
<td>Turnstone</td>
<td>Log inspection with Field Office</td>
</tr>
<tr>
<td>Review ACM condition</td>
<td>Verify, type, condition, and locations of ACMs present</td>
<td>Per structure</td>
<td>Turnstone</td>
<td>Log inspection with Field Office</td>
</tr>
<tr>
<td>Review ACM Containerization</td>
<td>Verification of leak-tight containers being used for containerization of friable waste materials generated as a result of the ACM abatement activities.</td>
<td>Weekly</td>
<td>ERP/ QC Officer</td>
<td>Document Inspection in Daily Log</td>
</tr>
</tbody>
</table>
### Quality Assurance/Quality Control Plan

#### ASARCO-Encycle Facility Demolition

<table>
<thead>
<tr>
<th>Review ACM Storage</th>
<th>Verify staging area(s) are constructed appropriate to shelter asbestos-containing waste from the elements.</th>
<th>Weekly</th>
<th>ERP/QC Officer</th>
<th>Document Inspection in Daily Log</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review ACM air monitoring procedures.</td>
<td>Verify personal air monitoring, perimeter air monitoring and post-abatement clearance monitoring are being conducted in accordance with the ACM Abatement Project design.</td>
<td>Weekly</td>
<td>ERP/SSO-PM</td>
<td>Document Inspection in Daily Log</td>
</tr>
<tr>
<td>Review ACM shipment procedures</td>
<td>Verify shipments of asbestos waste are being properly manifested with the appropriate Encycle Notice of Registration (NOR) waste code number</td>
<td>Weekly</td>
<td>ERP/Waste Manger-PM</td>
<td>Document Inspection in Daily Log</td>
</tr>
</tbody>
</table>

#### Hazardous Waste Removal Quality Control

<table>
<thead>
<tr>
<th>Control Type</th>
<th>Description</th>
<th>Performance Frequency</th>
<th>Personnel in Charge</th>
<th>Documentation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Storage Areas</td>
<td>Evaluate compliance with BMPs, nightly shut-down, condition of vessels, signs, placards, barricades, etc.</td>
<td>Once Daily/As Needed</td>
<td>ERP/PM – QC Officer</td>
<td>Document Inspection in Daily Log</td>
</tr>
</tbody>
</table>

#### Demolition Quality Control

<table>
<thead>
<tr>
<th>Control Type</th>
<th>Description</th>
<th>Performance Frequency</th>
<th>Personnel in Charge</th>
<th>Documentation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demolition Fence/Tarp Assessment</td>
<td>Note condition, height, conformance with project specifications. Note deviations and make corrections as necessary.</td>
<td>Weekly/As needed</td>
<td>ERP/SIS/Camacho – QC Officer</td>
<td>Document Inspection in Daily Log</td>
</tr>
<tr>
<td>Waste Truck TAT/Route Evaluation</td>
<td>Follow and/or track the turn around time for trucks hauling waste to each disposal facility. Assess route, compliance with traffic laws and permits, reconcile with billing and other drivers.</td>
<td>Flexible based on load density/Once Monthly</td>
<td>ERP/SIS/Camacho – QC Officer</td>
<td>Document Inspection in Daily Log</td>
</tr>
</tbody>
</table>

#### Health and Safety Quality Control

<table>
<thead>
<tr>
<th>Control Type</th>
<th>Description</th>
<th>Performance Frequency</th>
<th>Personnel in Charge</th>
<th>Documentation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity Watch</td>
<td>General – Select a specific area/activity</td>
<td>Three events</td>
<td>ERP/PM – SSO</td>
<td>Document</td>
</tr>
</tbody>
</table>
Plan Compliance Quality Control

<table>
<thead>
<tr>
<th>Control Type</th>
<th>Description</th>
<th>Performance Frequency</th>
<th>Personnel in Charge</th>
<th>Documentation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan Compliance</td>
<td><strong>SWPPP</strong> - Verify that SWPPP inspections being performed, conduct independent review of protective structures, discuss with PM.</td>
<td>Once Monthly</td>
<td>ERP/ QC officer</td>
<td>Log deviations – Notify PM Immediately</td>
</tr>
<tr>
<td></td>
<td><strong>HASP</strong> – Maintain awareness of Site activities with respect to health and safety protocols. Note deviations to personnel and/or supervisors. Note areas where improvement is required.</td>
<td>Ongoing</td>
<td>ERP/SSO – QC Officer</td>
<td>Log deviations and actions taken</td>
</tr>
<tr>
<td><strong>Demolition Engineering Plan</strong></td>
<td>– Review personnel compliance with restrictions for individual buildings. Evaluate condition of signage, barriers, knowledge of personnel on buildings undergoing active demolition. Note deviations and make corrections as needed.</td>
<td>Once Weekly</td>
<td>ERP/SSO – QC Officer</td>
<td>Log deviation and actions taken</td>
</tr>
<tr>
<td><strong>Dust Control</strong></td>
<td>– Evaluate effectiveness of dust control measures. Evaluate aesthetics from road. Note deviations</td>
<td>Weekly/As Needed</td>
<td>ERP/All contractors generating dust. QC Officer</td>
<td>Log deviations – Notify PM Immediately</td>
</tr>
<tr>
<td><strong>Noise Monitoring</strong></td>
<td>– Review monitoring</td>
<td>Twice</td>
<td>ERP/QC Officer</td>
<td>Document</td>
</tr>
<tr>
<td>Task</td>
<td>Frequency</td>
<td>Responsible Authority</td>
<td>Inspection Location</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>--------------------</td>
<td>-------------------------------------------</td>
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<td></td>
</tr>
<tr>
<td>Logs and frequency of data collection.</td>
<td>Monthly/As Needed</td>
<td>Inspection in Daily Log</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluate levels from the road.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensure proper document control.</td>
<td></td>
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</tr>
<tr>
<td>Wind/Air Monitoring – Review monitoring logs and frequency of data collection. Observe old log to verify that work restrictions are enforced. Ensure proper document control.</td>
<td>Weekly, ERP/QC Officer</td>
<td>Document Inspection in Daily Log</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic Control Plan – Observe traffic patterns, ingress/egress documentation, vehicle speed, parking areas. Note deviations.</td>
<td>Once Weekly, ERP/QC Officer</td>
<td>Document Inspection in Daily Log</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QA/QC Plan – Review completion of the quality control items, notes, frequency, and records.</td>
<td>Once Monthly/As Needed, ERP/ PM – QC Officer</td>
<td>Document Inspection in Daily Log</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPE – Observe personnel use of PPE. Notify worker of minor deviations (i.e.; ear plugs). Record serious and/or consistent deviations.</td>
<td>Ongoing, ERP/ SSO – QC Officer</td>
<td>Document Inspection in Daily Log</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communications Plan – Evaluate implementation of communications procedures.</td>
<td>Once Monthly, ERP/QC Officer</td>
<td>Document Inspection in Daily Log</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory QA – Review sample preparation, chains of custody, lab TAT, and information delivery. Review lab certifications.</td>
<td>Once Monthly, ERP/QC Officer</td>
<td>Document Inspection in Daily Log</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.0 Documentation and Recordkeeping

This section provides documentation and recordkeeping procedures will be implemented at the Site. Well organized and consistent methods of maintaining project information will be critical for project success.

The items presented below include Site procedures for control, management, and organization of documents.

**Document Control**

Energy Renewal is responsible for documentation and recordkeeping of project information. Project information will be primarily maintained on Site with the goal of allowing ready access and review by project staff and personnel. Additional measures will be employed by Energy Renewal to ensure that documents are protected against loss. Energy Renewal will focus on the following document control objectives during the project:

- Ensure that contractors/subcontractors provide all forms, documents, permits, monitoring results, etc. to the field office in a timely fashion.
- Maintain hardcopy and electronic files on Site and organize the files according to a set filing structure.
- Create electronic versions of all forms and documents related to Site activities using an on Site scanner and saving in pdf format.
- Maintain a complete backup of the electronic file system:
  - The files will be copied to an additional off Site storage where the new and former backup copies are stored.
- Provide access to all project plans, procedures, and Right-to-Know area.

**Document Organization**

Documents that are generated during the course of the project will be filed according to a consistent file structure. A draft file structure has been included in Appendix A in order to establish a preliminary basis to be used at the Site. It is typical for filing needs to change as the project develops, therefore this structure may be modified as required. All personnel who are responsible for filing information will be made aware of the file structure and will not create new files/folders without the knowledge of other personnel.
**Phone and Conversation Logs**

All personnel associated with the project will be required to maintain a record of important conversations. Some of the fundamental types of conversations that should be documented include, but are not limited to:

- Any meeting/conversation with a regulating entity;
- Any interaction with a member of the community or media;
- Disciplinary actions or warnings to personnel;
- Conversations regarding key schedule items with client, contractors, suppliers, etc., and;
- Any conversation regarding schedule of values, quantities, or billing items.

**On-line Data and Management**

With the burgeoning availability of on-line data storage and management capabilities, Energy Renewal will initiate some measure of on-line management protocol for the project. This will allow for more complete and efficient communication of project information to remote personnel. As a result, remote personnel will be able to provide greater support to on-site activities. The level and type of on-line management will be evaluated at the onset of the project.

**5.1 Review and Evaluation**

Review and evaluation of quality data/information is a fundamental component of overall quality management. Following collection of quality control data, it is the responsibility of the QA/QC Officer to review any information or observations, evaluate the effect on the project, and initiate any changes or necessary corrective measures. Some of the main review components include:

- Compile and review assessment information from QC activities;
- Evaluate deviations and (if necessary) prioritize the effect on project safety and/or success;
- Determine the appropriate required actions/corrective measures;
- Coordinate implementation of protocol changes;
- Documentation and distribution of any plan modifications, and;
- Perform verification of implemented protocols.
6.0 QA/QC Update

For the duration of Site activities, the QA/QC Officer will complete a monthly QA/QC update. This update will be reviewed by Energy Renewal and provided to the Trustee and contractors/subcontractors. The document will act as an assessment of ongoing activities and a tool for notification of protocol changes that have been implemented or proposed.

The following items will be included, at a minimum, into the QA/QC Update:

- Summary of QA/QC Activities and Results.
- Results of QC review, including:
  - Deviations
  - Positive observations
- Protocol/Procedure Changes that are:
  - Implemented
  - Proposed

This update will provide a method for tracking QA/QC success throughout the project as well as to help ensure completion of a safe and successful project.
APPENDIX A

Preliminary Project File System
ASARCO – Encycle Facility
PRELIMINARY PROJECT FILE SYSTEM

A) Budget and Tracking
- Cash Flow
- Internal Budget
- P and L
- Schedule of Values (SOV)
- Task Budget Tracking
- WIP Reports and Review

B) Calculations
- (as generated)

C) Contract
- Energy Renewal
- Contractors

D) Correspondence
- Correspondence – Client
- Correspondence – Regulatory
- Correspondence – Internal
- Correspondence – Subcontractor
- Correspondence – Vendor
- Correspondence – Community

E) Costs and Quantity
- Costs
- Disposal
- Drums

F) General
- Basemaps
- Blank Forms
- COC Info
- Drawings and Schematics
- Petty Cash
- Site Photographs
- To Do/Punch Lists

G) Health and Safety
- Forms
- (Documentation)

H) Invoicing

I) Personnel
- Miscellaneous

J) Progress Meetings, Reports

K) Project Documents
- RFP and Addendum
- Drawings
- Indemnity
- Permits and licenses
- Plans
- Specifications
- Energy Renewal Bid and Estimate

L) RFIs

M) Schedule
- Schedule
- Look Aheads

N) Sub and Vendor Files
- (separate folder for each vendor)
  - Subcontractor Agreements
  - Testing Results
  - Scope of Work
  - Invoices
  - Pos
  - Etc..

O) Submittals

P) Regulatory/Waste Documentation
- Profiles
- Manifests
- Waste Volume/Weight