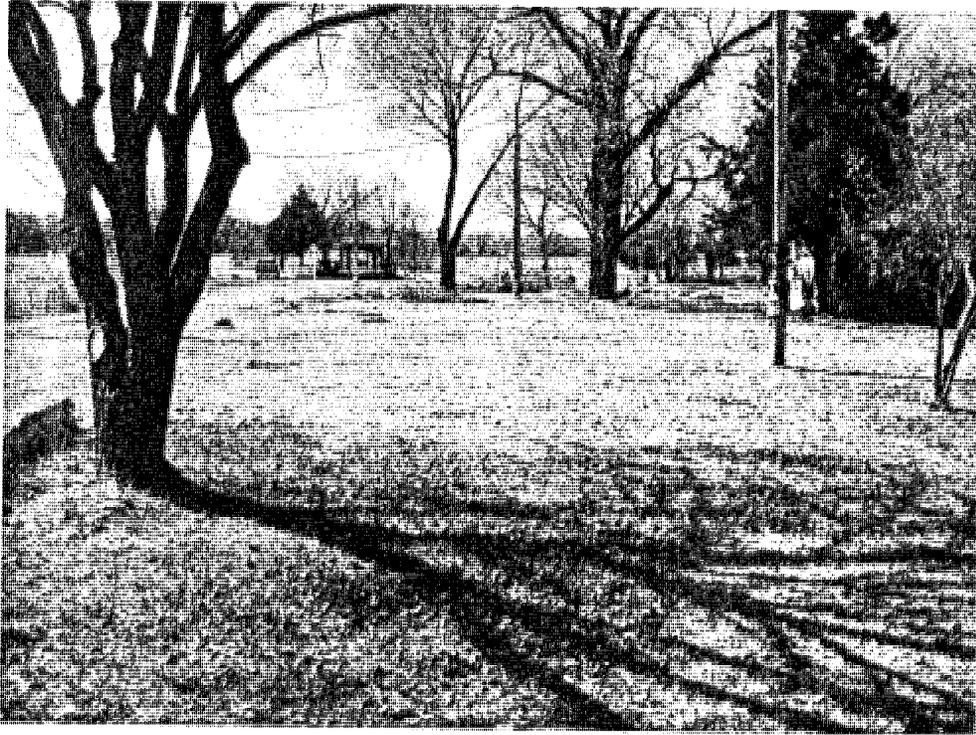




**Draft ~~Final~~ Removal Action Work Plan
Shadow Lake Park Property – Collinsville, Oklahoma**



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Submitted to:

Oklahoma Department of Environmental Quality
Land Protection Division
707 North Robinson
Oklahoma City, Oklahoma 73101-1677

~~May 22~~ July 17, 2006

Prepared for:

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Phoenix, Arizona 85020

**DRAFT FINAL REMOVAL ACTION WORK PLAN
SHADOW LAKE PARK PROPERTY – COLLINSVILLE, OKLAHOMA**

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**DRAFT-FINAL REMOVAL ACTION WORK PLAN
SHADOW LAKE PARK PROPERTY – COLLINSVILLE, OKLAHOMA**

1.0 INTRODUCTION

This Removal Action Work Plan (RAWP) describes soil removal/remediation work to be completed by Cyprus Amax Minerals Company (Cyprus) and Shadow Lake Park, LLC (Shadow Lake) at Shadow Lake's residential trailer park property (Trailer Park). The Trailer Park is part of the historic Collinsville Smelter Site (CSS) located approximately 0.5 miles south of the City of Collinsville in Tulsa County, Oklahoma. The Trailer Park is accessed off of East 136th Street North, the northern Boundary of the Trailer Park. Figure 1 provides a Site location map. The purpose of this RAWP is to outline procedures and requirements to meet the performance objectives and removal action levels specified by the Oklahoma Department of Environmental Quality (DEQ) in their April 18, 2006 correspondence to *Cyprus*. The RAWP will be implemented under the direction of DEQ.

1.1 Background

Between 1911 and 1918, the Bartlesville Zinc Company (BZC) owned and operated a zinc smelter on approximately 220 acres, which includes the Trailer Park area. In 1987 the site was reclaimed in conjunction with the reclamation of a nearby coal mine conducted by the Oklahoma Conservation Commission. No structures related to the former smelter site remain standing. The Oklahoma Conservation Commission consolidated smelter waste material on the property where the Trailer Park is located.

Site soil sampling was performed by Cyprus in March 2006 to determine the lateral and vertical (i.e., up to 18-inches as required by DEQ) extent of impacted materials at the Trailer Park. Table 1 provides the 'Laboratory Analytical Results – March 2006 Soil Sampling Event' and Figure 2 provides the 'Composite Areas Location Map' identifying the soil sample analytical results and sampling locations, respectively.

1.2 Report Organization

The United States Environmental Protection Agency (EPA) sets forth general guidelines for remedial design and remedial action work plans in the document *EPA Oversight of Remedial Designs and Remedial Actions Performed by PRPs* (U.S. EPA 1990). Per this EPA guidance, this RAWP includes the following elements: formation of the construction team, a removal action (RA) implementation schedule, method to implement construction control, and requirements for project close out. Additional management plans typical of the RA process are provided as appendices to this RAWP including: the Site Health and Safety Plan (SHSP, Appendix A), the Air Monitoring Plan (AMP, Appendix B); and Construction Specifications and Drawings (Appendix C). This RAWP is organized according to the following sections summary.

- Section 1: Introduction – provides RAWP background and organization.

- Section 2: Project Description – provides site description and summarizes the objectives of the RA.
- Section 3: Project Team Organization – presents the project construction team, including roles and responsibilities.
- Section 4: Construction Administration – provides a schedule for completion of the RA process and the methodology for implementation of construction control.
- Section 5: Project (Construction) Close-Out – presents the requirements for completing the construction phase of the RA.

2.0 PROJECT DESCRIPTION

This section of the RAWP provides a description of the site and the removal action goals and objectives.

2.1 Site Description

The Trailer Park is an operating residential property that currently has 128 occupied trailers, one vacant trailer, one trailer used as an office by Shadow Lake, and ~~three one-vacant-trailers to be removed from the property that are currently~~ dispersed on the 5.12 acres Trailer Park property. A dilapidated historic structure and a maintenance building also exist on the property. The site is bounded by East 136th Street North, open agricultural fields to the east and south and a drainage ditch to the west. The site topography facilitates site-wide drainage through the center out the south end of the property into the adjacent agricultural fields. The site is serviced by public water, electric, gas and telephone providers; however, sewer is facilitated by buried septic systems with lateral drainage lines.

2.2 Description of Removal Action

DEQ's April 18 2006 correspondence detailed the removal action requirements to be completed for the Trailer Park. These requirements include: remediation of all impacted materials above 500 parts-per-million (ppm) lead and visually distinct smelter waste materials to be placed underneath a 18 inch clean soil cover; and implementation of a House Dust Abatement (HDA) program for the trailers at the site. *With implementation of institutional controls and deed restrictions on the property*, DEQ will recognize this removal action as a final action for impacted soils to be implemented for the Trailer Park.

2.3 Removal Action Objectives and Goals

The remedial action objectives are chemical specific and medium specific objectives for protecting human health and the environment. DEQ set the RAO for the Trailer Park to place all impacted soils with lead levels above 500 ppm and visually distinct smelter waste materials below an 18 inch soil cover as sufficient to protect residents in the Trailer Park.

3.0 PROJECT TEAM ORGANIZATION

The following sections specify key project personnel and their responsibilities in completion of the RAWP. Figure 1 provides an Organization Chart detailing the project organization and lines of communication.

3.1 Permitting Agency - DEQ

The DEQ is the lead agency *under the Consent Order* for permitting and regulatory management for completion of the RAWP. Mr. George Thomas will serve as the DEQ Project Manager (PM). The primary responsibilities for the DEQ PM are as follows:

- Review and approve the project documents and subsequent revisions; and
- Ensure implementation of project documents.

Contact information for DEQ is as follows:

DEQ	Primary Point of Contact
Oklahoma Department of Environmental Quality Land Protection Division 707 N. Robinson Oklahoma City, OK 73102	George Thomas phone: (405) 702-5126 email: George.Thomas@deq.state.ok.us

3.2 Responsible Party - Cyprus

Cyprus will have primary responsibility to prepare and execute project plans, investigations, and reports for the RAWP activities. Cyprus' PM will serve as a direct liaison between the DEQ and EMC² project team and coordinate all activities to implement the RAWP. Cyprus' PM will provide guidance, direction, and support to the project team and will be ultimately responsible to DEQ for all project-related activities. Cyprus' PM will be the primary point of contact between EMC², the DEQ PM, *Shadow Lake*, and the RA General Contractor (Contractor), and all contracted services (e.g., laboratories, labor, etc.). Responsibility for coordination with contracted services may be delegated by Cyprus' PM to a project team member such as the Project Engineer of Record (EOR), Field Site Manager (FSM), or other qualified individual.

Contact information for the Cyprus' PM is as follows:

CYPRUS PM	Primary Point of Contact
Cyprus' Representative EMC ² 7220 N. 16 th Street, Suite E Phoenix, AZ 85020	Joe Flynn phone: (602) 331-3859 email: jflynn@emc-squared.net

3.3 Project Engineer of Record/Quality Control Manager

The Project EOR will work directly with Cyprus' PM to coordinate all RAWP activities. The Cyprus EOR will be the primary point of contact between Cyprus' PM, contracted services (e.g., laboratories, labor, etc.) and the FSM. EOR responsibilities include implementing adequate internal controls and review procedures to eliminate conflicts, errors, and omissions, and verifying technical accuracy during performance of the RAWP. The EOR will also serve as the project quality control (QC) /quality assurance (QA) oversight manager to ensure compliance with this RAWP.

Contact information for the Cyprus EOR is as follows:

CYPRUS EOR	Primary Point of Contact
EMC ² 7220 N. 16 th Street, Suite E Phoenix, AZ 85020	Travis LaBlanc, P.E. phone: (602) 331-3859 email: tlablanc@emc-squared.net

3.4 Health and Safety Manager

The Health and Safety Manager (HSM) will provide professional support by reviewing all health and safety programs as they apply to this project. The HSM will approve all job safety analyses and all modifications as they affect the health and safety of field personnel. The HSM is responsible for providing professional health and safety support and oversight management to the FSM. The HSM will review and provide support in all concerns regarding the health and safety of field personnel assigned to this project.

Contact information for the Cyprus HSM is as follows:

CYPRUS HSM	Primary Point of Contact
Folsom & Associates 705 East 1st Street Tulsa, OK 74120	Jim Folsom, CIH phone: (918) 583-4000 email: jfolsom@emc-squared.net

3.5 Field Site Manager

The FSM is responsible for coordinating all field activities. The FSM reports directly to the Cyprus EOR. The FSM will have QA responsibility for field activities and for continued daily adherence to the quality standards set forth in this RAWP. The FSM is also responsible for advising the HSM and EOR on matters concerning the health and safety of employees or the public.

Contact information for the Cyprus FSM is as follows:

CYPRUS FSM	Primary Point of Contact
EMC ² 7220 N. 16 th Street, Suite E Phoenix, AZ 85020	Scott Bohman phone: (602) 331-3859 email: sbohman@emc-squared.net

3.6 General Contractor – *Compass Environmental, Inc.*

Cyprus has selected Compass Environmental, Inc. (Compass) as the Trailer Park RA Contractor. ~~Cyprus will select one or more contractors to perform the activities associated with the RA.~~ The General Contractor (Contractor) will be responsible for implementing and completing all construction requirements in accordance with the Construction Specifications and Drawings. The Contractor will be responsible for providing all labor, equipment and materials required to implement the RA including construction QC inspection and testing programs to assure that the RA is implemented according to the Construction Specifications and Drawings.

Contact information for the Contractor is as follows:

COMPASS	Primary Point of Contact
<i>Compass Environmental, Inc. 954 West Washington Chicago, IL 60607</i>	<i>Thad Penuel phone: (770) 879-4142 email: tpenuel@compassenvironmental.com</i>

4.0 CONSTRUCTION

4.1 General Construction Items

The RA activities conducted shall conform to all applicable state, federal, and local laws, regulations, and other standards. Applicable laws, regulations, and standards include, but are not limited to, the Department of Transportation, the Occupational Safety and Health Administration (OSHA), Uniform Building Code, and DEQ standards. The Contractor shall maintain current

licenses and certifications necessary, by all applicable laws and regulations, to complete all RA activities. The Contractor shall comply with any and all permit requirements.

4.1.1 Construction Schedule

The RA construction activities are scheduled to begin July 10, 2006. A preliminary construction schedule is provided as Figure 2. The Contractor is responsible for review of the preliminary schedule for verification of proposed construction schedules and will issue a final construction schedule to be approved by Cyprus for submittal to DEQ prior to mobilization.

4.1.2 Site Health and Safety Plan

A RA SHSP has been developed to address the health and safety aspects for all RA field activities related to construction. The RA SHSP is provided in Appendix A and defines staff organization, responsibilities, authorization and qualifications as pertains to implementing health and safety protocols during the RA. Specific issues addressed in the SHSP include the following:

- All field personnel will have completed the 40-hour Occupational Safety and Health Administration (OSHA) HAZWOPER training;
- Construction and general site safety procedures (e.g., for excavation and backfill);
- Measures for dust control (e.g., water sprays to suppress dust);
- Work area access restrictions (e.g., temporary fencing for access control and exclusion support and contamination reduction zone delineation);
- Traffic controls;
- Medical surveillance requirements (e.g., baseline and exit physicals for workers);
- Training requirements (e.g., occupations safety for supervision and general site workers);
- Respiratory protection requirements (e.g., respirator training and “fit testing”);
- Equipment maintenance requirements (e.g., for all heavy equipment operated); and
- Procedures for determining appropriate worker personal protective equipment (PPE) requirements.

The Contractor shall certify the training and medical monitoring of the field personnel to be used during implementation of the RA activities in writing prior to beginning work and shall provide copies of current OSHA 40-hour or 8-hour update training certification for these personnel prior to commencement of the work. The Contractor will be responsible for providing the necessary safety equipment for their employees. RA operations will be in Modified Level D PPE (e.g., hard hat, gloves, steel toe boot, safety glasses and Tyvek suits).

4.1.3 Air Monitoring Plan

The RA AMP details the qualification requirements of air monitoring personnel, air sampling requirements and equipment, criteria for work stoppages and procedures for QA/QC, data analysis, data validation and reporting. The RA AMP is provided in Appendix B. The air monitoring procedures are based on the same protocols as were maintained during the Blackwell Zinc Site Removal Action and modified for construction duration and updated OSHA action levels. The initial RA sampling frequencies or constituents sampled may be decreased after review and approval by HSM. The RA air sampling will consist of three specific monitoring systems:

- Real-time air monitoring to determine dust control requirements;
- Flow compensating personal air sampling pumps and filters used to monitor on-site workers; and
- PM-10 and Total Suspended Particulate monitoring of ambient air.

4.1.4 Compliance With Laws, Regulations and Standards

The work conducted shall conform to all applicable state, federal, and local laws, regulations and other standards. Applicable laws, regulations, and standards include, but are not limited to, the Department of Transportation standards, OSHA standards for Hazardous Waste Operations and Emergency Response and the Uniform Building Code. The Contractor shall maintain current licenses and certifications necessary, by all applicable laws and regulations, to complete all removal action activities.

4.1.5 Permits

Applicable permits will be obtained by the Cyprus or Shadow Lake prior to conducting any RA activities.

4.1.6 Construction Quality Assurance/Quality Control

Construction QC will be performed by the Contractor and QA will be performed by Cyprus to assure that the RA activities are completed in accordance with the design as outlined in the Construction Specifications and Drawings.

4.1.7 Construction Specifications and Drawings

Construction Specifications and Drawings are provided in Appendix C, and shall be used to guide the Contractor. The Contractor will perform all work in accordance to the Construction Specifications and the Drawings. The Specifications outline detail project requirements and construction procedures for the following items:

- General Project Requirements;
- Mobilization/Demobilization;
- Site Preparation;
- Impacted Soil Removal, Regrading and Consolidation;
- Cover Soil Placement; and
- Revegetation

The Construction Drawings developed include the following:

- Sheet 1: Title Sheet/Drawing Index;
- Sheet 2: Existing Conditions;
- ~~Sheet 3: Existing Tree Locations;~~
- ~~Sheet 3: Future Trailer Park Layout;~~
- ~~Sheet 4: Future Trailer Park Layout;~~
- ~~Sheet 4: Regrading Plan Final Surface Contours;~~
- ~~Sheet 5: Overview of Remediation Areas and Regrading Plan Final Surface Contours~~ *Cut/Fill Areas;*
- ~~Sheet~~ *Sheets 6: Overview of Remediation Areas and 7: Regrading Plan Cut/Fill Areas; Cross-Sections; and*
- *Sheets 7 and Sheet-8: Regrading Plan Cross-Sections; and*

- *Sheet 9: Details*

4.2 Impacted Material Removal

The RA for the Trailer Park includes removal/consolidation ~~or~~ *and* covering in-place soils with lead concentrations over 500 ppm with a clean 18-inch soil cover. The following sections describe the removal action activities to be performed.

4.2.1 Lot Preparation

Prior to initiation of soil excavation activities, the Contractor will provide final notification to Cyprus and make arrangements to locate utilities. Final notification as to the start of remediation on the Trailer Park will be given to the property owners by Shadow Lake at least one week in advance of the Contractor mobilizing equipment and personnel to the Trailer Park.

Utility Location

The Contractor will arrange with the local utility companies to locate electrical, water, gas, cable and telephone lines. Shadow Lake will be responsible to identify septic locations in advance of mobilization. A record will be maintained by the Contractor identifying the date of utility location and the utility company providing location services. The type and location of all subsurface obstacles will be marked on the ground surface by the utility company and on a site plan to be issued to field crews prior to Trailer Park RA. The Contractor will hand dig at several points along the utility lines location to expose the located utility and verify consistency in the utility's depth prior to use of heavy equipment to excavate around a utility.

Removal of Obstruction and Protection of Structures

Prior to the start of remediation at the Trailer Park, miscellaneous landscaping articles (i.e., brick walkways) and other items (i.e., fences, wood piles, etc.) that will obstruct the RA will be removed or relocated. Smaller items will be removed or relocated by the property owners and existing trash and debris will be removed by Shadow Lake. In addition, structures to be protected (i.e., houses, sheds, etc.) are identified on the Drawings.

Best Management Practices

The Contractor will be responsible for placing silt fencing, hay ~~bais~~ *bales* and/or other best management practices will be placed at all downgradient locations as necessary to prevent impacted materials in open excavations from leaving the Trailer Park property.

Clearing and Grubbing

The Contractor will be responsible for removing several large and small trees that are identified on the Drawings, as well as performing all clearing and grubbing necessary to implement the RAWP.

Temporary Fencing

To control access into construction areas, temporary 4-foot-high orange plastic safety fencing will be installed around each active construction area. The temporary fencing will be placed prior to the onset of excavation operations and will be maintained as an exclusion zone until backfill operations are completed.

4.2.2 Impacted Material Excavation

Excavation of impacted material will be performed by a combination of heavy equipment and hand labor. Hand labor will be used to locate pre-marked utility lines to allow heavy equipment to work safely around utility lines. Hand labor will also be used to remove impacted materials adjacent to buildings, sidewalks, around trees, shrubs and other permanent features, and in limited access areas to avoid damaging permanent features with heavy equipment. No heavy equipment will be used around the base of any trees to remain in place such that the tree base and root systems are disturbed.

Dust Control

Dust control will be achieved through standard construction practices. The Contractor will provide equipment (*e.g., water truck*) and labor to apply water to the Trailer Park, as appropriate, to minimize dust levels. Dust controls will be implemented, as needed, in all work areas. Water for dust control and other construction requirements will be provided by the Contractor. Care will be taken during dust control operations to minimize puddling and saturation of soil.

Predetermined Depth of Removal

For all areas with impacted materials over 500 ppm lead that will not be filled and/or covered with a clean 18-inch soil cover, the depth of excavation will be 18 inches. In addition, the contractor will excavate and consolidate any visually distinct smelter waste materials. *All areas with visually distinct smelter waste materials will be removed to a maximum depth of 18 inches. The Trailer Park's internal access roads remediation area will either be excavated and backfilled or covered with six inches of clean gravel placed over a geotextile. Unpaved roadways will be excavated to six inches and backfilled with clean gravel placed over a geotextile.*

Geotextile Visual Marker

A geotextile fabric will be placed on the bottom of all roadways prior to backfilling/covering with gravel to serve as a visual barrier identifying impacted materials below the geotextile in future excavations.

Excavation Procedures

RA operations will be staged such that excavation proceeds from the back (southern most point) of the property through to the front entrance (northern most point) of the property in a manner that keeps impacted areas and clean areas separated.

The bulk of soil excavation will be performed using standard heavy construction equipment (i.e., backhoes, bobcats, loaders, small dozers, etc.) to remove soil in open areas. Access areas from which heavy equipment will load excavated soils into dump trucks will be identified by the Contractor. Equipment maintenance will be performed following the manufacturer's recommended maintenance specification. Hand labor will be used whenever use of heavy equipment may damage permanent features (i.e., building, trees, etc.). When working close to permanent features, a laborer will work along with the operator as a spotter. Hand signals for equipment operators and spotters will be developed and used to control excavation and minimize damage to permanent features.

The Contractor will determine the maximum number of pieces of heavy equipment that can safely operate on the Trailer Park at any one time.

Equipment Decontamination Procedures

After completion of excavation activities, heavy equipment and tools used in the remediation process will be decontaminated onsite *within an impacted material area in accordance with the SHSP prior to leaving any impacted soil remediation areas and/or the Consolidation Area. All* ~~and all materials will decontamination soil materials will be placed below the clean soil cover. Decontamination will involve the use a steam pressure washer to decontaminate dry brushing of equipment, buckets, tires and other areas with visible soils. —Water use for decontamination purposes will be avoided whenever possible. —Dry decontamination waste will be collected by cleaning equipment over plastic drop cloths and/or by sweeping from paved surfaces. —Collected dry decontamination wastes will be placed with the soil removed from the removal areas. —Loose rags and other disposable decontamination and PPE equipment will be properly disposed of separately from the impacted material removed from the removal areas.~~

4.2.3 Impacted Material Disposal

Impacted materials removed within the western portion of the Trailer Park will be consolidated within an area located in the south eastern portion of the Trailer Park as shown on the Drawings.

4.2.4 Lot Restoration

Upon completion of all excavation activities, the excavation areas will be backfilled with acceptable clean soil material. In addition, all consolidation areas will be covered with 18-inches of acceptable clean soil material. Specification for approving a clean material borrow source, compaction and grading, and revegetation and return of the property to preconstruction conditions are presented below.

Clean Backfill/Capping Material Sampling Requirements

Backfill/capping activities at the Trailer Park will involve the placement of clean soil in the areas of excavation and on top of the consolidation area. Each borrow area source will be sampled and analyzed for priority pollutants in accordance with DEQ RA limits before use and periodically during the RA activities. The sample results will be submitted to DEQ. If any borrow area screening sample fails DEQ criteria, the borrow source will be re-sampled and reanalyzed. If the borrow area soil fail the first test and retesting shows that the borrow soil is clean, a third test for confirmation will be done to verify the results. If any subsequent retest fails to meet DEQ criteria, the borrow source will be rejected as a source for clean soil backfill material.

Backfilling

Backfilling operations will occur immediately after excavation is completed. Sufficient clean fill material will be placed to return the site to pre-excavation conditions. Compaction will be achieved by using dozer/equipment compaction methods. Rough grading operations will be required to return the surface to approximate pre-excavation grades prior to revegetation. The slope of the rough-graded surface will promote drainage away from residences or from other structures on the property. Backfill lifts shall be maintained at a maximum 8-inch (loose) to be compacted prior to placement of the subsequent lift.

4.2.5 Revegetation

Unless otherwise specified on the Drawings to be removed, all existing trees will be maintained throughout completion of impacted material removal activities. Upon completion of rough-grading operations, the property will be revegetated through sodded using a shade tolerant sod. ~~Prior to revegetation, an appropriate fertilizer and application rate, as determined through amendment testing for Nitrogen-Phosphate-Potassium, shall be applied uniformly across the backfilled or capped surface.~~

5.0 HOUSE DUST ABATEMENT

All Residential house dust abatement will be done by individual house owners will be contacted by Shadow Lake to provide information regarding the house dust abatement program. Residential house dust abatement will be offered to residents to be performed on a voluntary basis. The Respondents will work with community outreach groups so that house dust abatement services are provided for citizens unable to perform the services for themselves. High Efficiency Particulate Air (HEPA) vacuums, along with clear instructional information, will be made available to residents. Shadow Lake will work with residents who desire to have this vacuuming performed to either have the resident perform the vacuuming or if not capable (e.g., if infirmed) facilitate the vacuuming for the infirmed. The program shall utilize one vacuum designated for use in residences only. A program will be set up by Cyprus and run through Shadow Lake's Trailer Park office, where the HEPA vacuums will be loaned out. Details of the program will provide for are as follows:

- *management of vacuum check-out/check-in procedures;*
- *cleaning of machines between each use;*
- *disposal of collected dust;*
- *replacement of vacuum bags; and*
- *maintenance of vacuums.*

Vacuum bags will be properly disposed of at an offsite solid waste disposal facility.

- *A HEPA vacuum will be available to the residents to use over a 24-hour period. Those residents who require aid for the transport of the HEPA vacuum to and from their residence, and/or for the operation of the vacuum, should contact Shadow Lake for assistance. Residents must return the HEPA vacuums within 24 hours;*
- *Verbal instructions will be provided to the resident on how to operate the vacuum. In addition, residents will be given written procedures identifying how to operate the vacuum as outlined on HEPA vacuum manufacturer's 'Instructions For Use' booklet included with each HEPA vacuum;*
- *HEPA vacuums will be inspected by Cyprus' representative before and after each use to insure that all HEPA vacuum equipment and accessories are included and in working order;*

- Personnel directly involved in maintaining and cleaning HEPA vacuums will be required to have HAZWOPER certification;
- The HEPA vacuums shall be cleaned and maintained as outlined on the 'Office Protocols for HEPA Vacuums' checklist; and
- HEPA vacuum collection bags will be changed after each use. The used collection bags will be temporarily disposed of in a sealed container for ultimate burial with impacted waste materials in the Consolidation Area.

6.0 INSTITUTIONAL CONTROLS

Institutional Controls (ICs) are non-engineered measures employed in remediation in support of technical actions, such as capping. Institutional controls will include deed notices and deed restrictions placed on the property by Shadow Lake in order to preserve the integrity of the soil cover system in the remediated areas of the Trailer Park. The protectiveness of this remedy relies upon the maintenance to ensure the integrity of the soil cover system. The ICs will be used as follows:

- To provide information to residences within the Trailer Park to make citizens aware of the risks associated with the RA and post RA activities, the need for post-removal action maintenance, management of risks from other sources, and excavation and soil-handling procedures.

The deed notice will: (1) inform potential grantees that hazardous materials were found and are otherwise presumed to exist on the Trailer Park; (2) run with the land in perpetuity; and (3) bind all subsequent occupants of the Trailer Park to maintain the Trailer Park in accordance with the post-cleanup provisions.

The deed restriction will state that the Trailer Park owner declares that all of the Trailer Park is held and shall be held, conveyed or encumbered, leased, rented, used, occupied and improved subject to the following limitation and restrictions:

- The site soil cover system that exists on the Trailer Park is to be maintained in order to prevent direct contact with impacted materials that might otherwise pose a threat to human health;
- The following activities will be prohibited on any portion of the Trailer Park where the site soil cover system is required unless prior written approval has been obtained from the DEQ: (1) replacement with another barrier; (2) excavating, removal, trenching, grading or other earth movements of the land surface that may disturb the site cover system; (3) filling in capped or paved areas; and (4) plowing for agricultural cultivation.

A garden can be grown on the site soil cover system if the garden is built up with at least six additional inches of clean soil; and

- The Trailer Park owner will have the positive obligation to undertake activities to preserve the integrity of the above referenced site soil cover system. Such activities will include, but are not limited to, care for and preservation of any sod or grass cover placed on the Trailer Park to facilitate abatement and remediation.*

Before construction is completed, an ICs plan will be developed and approved by DEQ. Cyprus and Shadow Lake will work with DEQ to retroactively enter the Trailer Park RA into the State of Oklahoma's Brownfield's program and DEQ will file the property deed restriction as allowed under the Brownfield's Program.

7.0 CONSTRUCTION CLOSE-OUT

7.1 Pre-Final and Final Inspections

Upon completion of RA construction activities, pre-final and final inspections will be performed at the discretion of Cyprus, the DEQ and Shadow Lake representative or designees. This does not preclude that periodic inspections will occur at various times during the RA. These inspections will establish compliance with the activities outlined in this RAWP, including the final removal action plans and specifications, approved by DEQ.

Cyprus, DEQ and Shadow Lake RA managers or their designee will conduct the pre-final inspection at the completion of the RA construction. A checklist used to document the pre-final inspection will be developed for use during the inspection. Results of the pre-final inspection will be documented in a pre-final inspection report, which will contain the following elements:

- Names of all inspection participants;
- Specific elements that were inspected;
- Complete pre-final inspection checklist documenting the inspection;
- Corrective actions to be taken to correct any deficiencies; and
- Date of final inspection (if required).

The pre-final inspection report will be issued as a letter report to document the process and results of the pre-final inspection. If the pre-final inspection does not result in any significant open items that require corrective action, the inspection may be considered a final inspection and the results documented in the Construction Completion Report as described in the following section.

If necessary, a final inspection will be scheduled and conducted per the pre-final inspection report described above. The need for a final inspection will be determined with DEQ and Shadow Lake representative based on the results of the pre-final inspection, and will focus on closure verification of open items from the pre-final inspection. The final inspection will confirm and document that all deficiencies have been corrected. The final inspection will be documented in the Construction Completion Report.

7.2 Construction Completion Report

Upon completion of construction and commissioning of the RA, a Construction Completion Report will be prepared by EMC², providing a description of the RA, and documenting any modifications to the RA during construction (i.e., after final plans & specifications). The Construction Completion Report will include but not be limited to providing the following:

- Results of the final inspection, including a brief description of any deficiencies discovered during the final inspection and the resolution of those deficiencies, as necessary;
- A detailed description of all work conducted in accordance with the final plans and specifications, and certification by an Oklahoma-registered professional engineer (or engineers) that the work was completed in accordance with all approved plans and specifications;
- Explanation of any modifications to the final plans and specifications and why these modifications were necessary; and
- Final as-built drawings.

8.0 FIVE YEAR REVIEWS

A Five-Year Review of the remedy will be conducted because the Trailer Park remedy results in impacted materials remaining on site. The purpose of this Five-Year Review is to evaluate the effectiveness of the selected remedy in order to determine if the remedy remains protective of human health and the environment. Cyprus will submit this Five-Year Review Report for the entire CSS five years after commencement of the Trailer Park RA.

9.0 REFERENCES

EMC², 2006. Summary Report – March 2006 Soil Sampling Event. Prepared for Cyprus Amax Minerals Company. May.

USEPA, 1990. EPA Oversight of Remedial Designs and Remedial Actions performed by PRPs. February.