

**PROPOSED REMEDIAL
ACTION DOCUMENT**



**AMERICAN ZINC
PROPOSED STATE SUPERFUND SITE
*DUMAS, MOORE COUNTY, TEXAS***

October 11, 2007

***PREPARED BY: OTU EKPO-OTU, PROJECT MANAGER
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
SUPERFUND CLEANUP SECTION
REMEDATION DIVISION***

TABLE OF CONTENTS

I.	INTRODUCTION.....	Page 4
II.	PURPOSE.....	Page 4
III.	LEGAL AUTHORITY.....	Page 5
IV.	SITE HISTORY.....	Page 6
V.	SUMMARY OF REPORTS.....	Page 7
VI.	EVALUATION OF REMEDIAL ACTION ALTERNATIVES.....	Page 9
VII.	THE PROPOSED REMEDIAL ACTION.....	Page 11
VIII.	COMMUNITY PARTICIPATION IN THE SUPERFUND PROCESS.....	Page 13
IX.	REMAINING STEPS IN THE SUPERFUND PROCESS.....	Page 14
X.	GLOSSARY.....	Page 15

**AMERICAN ZINC PROPOSED STATE SUPERFUND SITE
DUMAS, MOORE COUNTY, TEXAS
PROPOSED REMEDIAL ACTION DOCUMENT**

I. INTRODUCTION

The American Zinc Proposed State Superfund Site (Site) is located on F.M. 119 north of Dumas, in Moore County, Texas. A smelting facility was formerly located at the Site. In addition to the smelting facility (source property), the Site also consists of all contaminated property outside the boundaries of the source property (non-source property) impacted by the source property. Past activities at the Site contaminated the soil with Arsenic, Lead, Cadmium, Zinc and other Chemicals of Concern (COCs).

The Texas Commission on Environmental Quality (TCEQ) is responsible for implementing the laws of the state of Texas relating to the conservation of natural resources and the protection of public health and safety and the environment. The TCEQ addresses certain sites that may constitute an imminent and substantial endangerment to public health and safety or the environment through the State Superfund program.

II. PURPOSE

This *Proposed Remedial Action Document (PRAD)* presents the proposed *Remedial Action* (also known as the remedy) for the Site, which is designed to address the contamination and provide protection of public health and safety and the environment. Words appearing in italics in this document are defined in Section X, of this *PRAD*.

- A. The purpose of this document is:
1. To describe the actions taken by the TCEQ and the participating *Potentially Responsible Parties (PRPs)* to investigate the contamination, including any mitigating actions;
 2. To describe the proposed *Remedial Action* and solicit public review and comment on that proposed *Remedial Action*; and
 3. To provide information on how the public can comment on the proposed *Remedial Action*.
- B. This *PRAD* summarizes information that can be found in greater detail in various studies and reports located in the TCEQ Site files. Relevant documents are identified and summarized in Section V "Summary of Reports" of the *PRAD*.

The TCEQ encourages the public to review these documents to gain a better understanding of the Site, the State Superfund process, the actions taken by the TCEQ and the participating *PRPs*, and the actions proposed by the TCEQ to address the threats presented by the Site.

Copies of the documents summarized in this *PRAD*, as well as other relevant information, can be viewed either at the local repository or in Austin at the following address:

Killgore Memorial Library:
124 South Bliss Avenue,
Dumas Texas, 78113,
(806) 935-4941

TCEQ Records Management Center
Building E, 1st Floor
12100 Park 35 Circle
Austin, Texas 78753
(512) 239-2930

III. LEGAL AUTHORITY

The investigation of the nature and extent of contamination at the Site and the selection of the proposed *Remedial Action* is in accordance with Chapter 361 of the Texas Health and Safety Code, the *Solid Waste Disposal Act*; Chapter 335 of Title 30 of the Texas Administrative Code, Subchapter K: Hazardous Substance Facilities Assessment and Remediation; and the *Texas Risk Reduction Program (TRRP)* rules found in Chapter 350 of Title 30 of the Texas Administrative Code.

While the Subchapter K rules are specific to the Superfund process, the *TRRP* rules are a comprehensive program for addressing environmental contamination and apply to many different types of remedial action administered by the TCEQ. The *TRRP* rules establish procedures for determining the concentration of contaminants to which a person or other environmental receptor can be exposed without unacceptable risk of harm. These acceptable concentration levels are called *Protective Concentration Levels (PCLs)*.

A three-tiered approach may be used under the *TRRP* rules to calculate the *PCLs* for a site. The tiers represent increasing levels of evaluation where site-specific information is factored into the process. For example, Tier 1 uses conservative, generic models that do not account for site-specific factors while Tier 3 allows for more detailed and complex evaluations so that *PCLs* are appropriate for specific site conditions. The *PCLs* for this Site were developed under Tier 1.

Critical to the analysis under all three of the tiers is the land use classification for the Site. Under the *TRRP* rules, the land can be classified as either residential or commercial/industrial. Remediation to residential standards assumes that the Site may be occupied by children and therefore is applicable not only to strictly residential land but also to playgrounds, schools, daycare centers, and other similar land uses. Remediation to commercial/industrial standards assumes that the Site will not be regularly occupied by children and is protective of persons who may occupy the Site as workers. Sites remediated to commercial/industrial standards cannot be used for residential-type activities unless further controls are implemented to make the Site safe for that use. After discussion at a public meeting in August of 1999, the TCEQ determined that a commercial/industrial land use was appropriate for the Site.

The *TRRP* rules allow risks posed by the presence of contamination above a *PCL* to be managed by any combination of the following: 1) removal or decontamination of contaminated media; 2) physical controls such as containment cells and caps which limit exposure to the contaminated media; or 3) *Institutional Controls (ICs)*, such as restrictive covenants or deed notices to inform the future owners and the public of contamination on the property in an effort to limit exposure to the contaminated media. These remedies under the *TRRP* rules are divided into two main

categories: Remedy Standard A and Remedy Standard B. To meet Remedy Standard A requirements, the contaminated media must be removed and/or decontaminated such that physical controls and, in most cases, ICs are not necessary to protect human and ecological receptors from unprotective levels of contamination based on the designated land use. To meet the requirements of Remedy Standard B, however, physical controls and ICs may be relied on to eliminate exposure to unprotective levels of contamination. These standards are described in detail in Title 30 of the Texas Administrative Code, sections. 350.32 and 350.33, respectively. The proposed remedy at the Site meets the criteria established for Remedy Standard B.

IV. SITE HISTORY

This Site history summary is taken from the "Hazard Ranking System Assessment, American Zinc Company Site" prepared by the Texas Water Commission (TWC) (1993). The Site was operated as a Zinc smelter from the late 1930's until late 1960's or early 1970's, generating heavy metal waste typical to that process. The Site was originally developed by the Illinois Zinc Company, and then sold to the Peru Mining Company, a Delaware corporation in September 1939. In March 1943, the Peru Mining Company transferred the Site to the American Zinc Company of Illinois. This conveyance was subject to a lease agreement dated July 31, 1942, between the Peru Mining Company and the Defense Plant Corporation. The Defense Plant Corporation was created to aid the government of the United States in its national defense program. During World War II and for the major part of its lifetime, the smelting plant was a source of Zinc for the United States defense program. The abandoned smelting plant has been decommissioned since 1957. The United States of America and Reconstruction Finance Corporation conveyed its leasehold interest for the Site to the American Zinc, Lead and Smelting Company in a bill of sale dated November 5, 1958. This conveyance included everything acquired and constructed by the Defense Plant Corporation under the 1942 lease agreement. On November 29, 1958, the American Zinc, Lead and Smelting Company conveyed all said property from the November 5, 1958 bill of sale to the American Zinc Company of Illinois. After the plant was decommissioned in the early 1970s, the American Zinc Company sold the site to W.R. Pendleton and Clark A. Pendleton through public auction on December 14, 1971. On May 2, 1985, Extraction Systems of America purchased part of the Site through a deed of trust. All improvements, scrap materials and residue located on the part of the Site sold were included as part of this Deed of trust. On December 8, 1988, Extraction Systems of America, Inc., and Extraction Systems of America Enterprises, Ltd., conveyed that portion of the Site back to W.R. Pendleton and Wife, Mozelle Pendleton, in lieu of foreclosure.

Numerous slag piles have been deposited in, around, and across the intermittent South Palo Duro Creek (Creek). The slag material was apparently also used throughout the Site as road base. In November 1987, the Texas Water Commission collected samples from various locations around the Site, including the Creek. Analysis showed significant contamination from Lead and Cadmium.

V. SUMMARY OF REPORTS

A. HAZARD RANKING SYSTEM REPORT

The *Hazard Ranking System (HRS)* is a numerically-based screening system that uses information from initial, limited investigations to assess whether a site qualifies for the State or Federal Superfund program. Sites scoring 28.5 or greater may qualify for the Federal Superfund program, while sites scoring 5 or greater may qualify for the State Superfund program. The *HRS* scoring for the Site was prepared by the TCEQ in March of 1993 and is presented in the report entitled Hazardous Ranking Package. This Site earned a score of 15.21 which qualified the Site for proposal to the State Registry of Superfund Sites on October 15, 1993 and acceptance into the State Superfund program.

B. REMEDIAL INVESTIGATION REPORT

The Remedial Investigation Report dated January 1998 and The *Remedial Investigation (RI)* Addendum Report dated March 1999 includes documentation of the results of the data gathering activities at the source property area, and the adjacent non-source property surface soils and Creek bed sediments. The RI is focused on evaluating COCs, defined by the TCEQ to be Arsenic, Cadmium, Chromium, Lead, Silver, and Zinc, as they occur in potential source areas (welded slag piles, and retort rubble piles) and as they may occur in potential pathways of migration. On November 19, 1987, the TWC (predecessor of TCEQ) District 1 office collected a Creek sediment sample, soil sample, and a solid waste composite sample from various locations around the Site. These samples were analyzed for leachable Resource Conservation and Recovery Act (RCRA) metals and for total Copper and Zinc. Analytical results indicated the presence of Lead and Cadmium in the leachate. Total concentrations of Zinc and Copper from these samples were found to range from 32,500 parts per million (ppm) to 46,950 ppm and 4,567 ppm to 8,200 ppm, respectively.

Groundwater samples from two of the existing three production wells on the Site and a Creek sediment sample were collected. The sediment and one groundwater sample indicated the presence of Cadmium and Lead. The groundwater samples were grab samples from a depth of 235 feet and the wells were not purged prior to sampling. During the Phase 1 investigation, groundwater samples from two production wells at the Site were also collected. Analytical results for groundwater samples collected from the two production wells through two rounds of sampling indicated that COCs were not present in the groundwater samples at concentrations above their residential *PCLs*.

During the *RI* field activities, soil samples from the subsurface at the slag and the retort rubble areas were collected and analyzed for COCs in order to evaluate the potential for COCs to migrate to groundwater. Samples from each of the areas were collected at the following intervals: 4 to 6 feet below native ground surface (bngs), 9 to 11 feet bngs, and

15 to 17 feet bngs. Soils (sediments) from the bed of the Creek were collected and analyzed for the COCs.

The *RI* also evaluated the potential non-source migration of COCs by collecting soil samples from upwind and downwind directions and analyzing them for COCs. A water well search identified 113 wells within a 3 mile radius of the Site.

The *RI* concluded that COCs at the Site include the welded piles of slag and piles of retort rubble. There are 19 piles of welded slag (about 143,629 cubic yards) on Site and 14 piles (64,853 cubic yards) of retort rubble. The slag materials are solids and mostly welded, therefore COCs in the slag are generally not mobile in the environment. The particulate portion of the slag material that is dispersed across the Site had concentrations of Arsenic above its *PCL*. Arsenic was the only COC in both the slag and retort rubble that exceeded its residential *PCL*. Arsenic and Lead were the only COCs in the slag as well as in subsurface soils below the slag and retort rubbles with concentrations exceeding its *PCLs*. All the observed concentrations of Arsenic and Lead in the 9 to 11 feet interval were below the levels observed in upwind or off-site surface soils. Cadmium was detected in one subsurface soil location at concentrations that exceeded the residential *PCLs*. Lead was also present in one sediment sample at concentrations above the *PCLs*.

Concentrations of Chromium, Silver, and Zinc within samples collected from all locations were below their respective *PCLs*. The *RI* results indicate that Cadmium, Zinc and Arsenic were detected in ambient air. Arsenic was detected in one location upwind, while Zinc and Cadmium were detected downwind of the Site. Groundwater is not impacted by COCs.

Source property surface soils in the non-industrial portion of the Site (southeast, southwest, and northwest quadrants) generally have concentrations of Arsenic above the *PCLs*, and generally have higher concentrations of Arsenic than do non-source property soils.

Source property subsurface soils at 4 to 6 feet bngs beneath both the retort rubble piles and the slag piles have concentrations of all COCs except Arsenic below their respective *PCLs*. Arsenic is below its *PCL* at 15 to 17 feet bngs.

C. FEASIBILITY STUDY

The Preliminary Description of Remedial Alternatives, *Feasibility Study (FS)*, presents a summary of the specific threats identified at the Site and an evaluation of potential remedial alternatives to address those threats. Those alternatives and that evaluation are summarized in the following section of this *PRAD*.

VI. EVALUATION OF REMEDIAL ACTION ALTERNATIVES

In accordance with Title 30 of the Texas Administrative Code Section 335.348(l), and the requirements of Section 361.193 of the *Solid Waste Disposal Act*, the TCEQ selects the *Remedial Action* for a site by determining which remedial alternative is “the lowest cost alternative which is technologically feasible and reliable, effectively mitigates and minimizes damage to the environment, and provides adequate protection of the public health and safety and the environment.”

The following remedial alternatives were evaluated in comparison to the selection criteria described above and in terms of achieving the risk reduction standards established in the *TRRP* rules:

A. No Remedial Action

Under this alternative the source property and non-source property portions of the Site would remain the same as they are currently. Other than what may already be in place, *Institutional Controls (ICs)* are not included under this alternative. This alternative does not include annual monitoring of the land use of the source and non-source property areas at the Site to ensure that human receptors are not at risk as a result of unlikely future development.

B. Physical and Institutional Controls for Source and Non-source Property

Physical control will include installing a fence with signs on both source and non-source properties in order to limit access to and contact with soils that are not protective of human health and the environment.

ICs will include filing of either a Restrictive Covenant or Deed Notice on source and non-source properties to notify the property owners and the public that the levels of the COCs present at the Site are not protective of human health and the environment. The *ICs* will address the physical control, and will include a provision limiting the land use of the source property area to industrial/commercial use only. This alternative includes an annual site investigation to ensure the land use remains commercial/industrial and the physical control remains in place, undisturbed.

C. Consolidation, Capping and Institutional Controls for Source Property and Institutional Controls for Non-source Property Areas of the Site

1. Source Property Remediation

Under this alternative, source property soil with metal concentrations that is not protective of commercial and industrial practices would be excavated and consolidated on the southeastern portion of the source property area. The consolidated area would then be capped with approximately 12 inches of soil borrowed from the western one third portion of the source property area, where the soil metal concentration is below the *PCLs*. The use of a Cap as a technology for limiting access to soils where COCs are above *PCLs* is based on the fact that vertical migration of COCs to groundwater has not been documented and is not expected. Metals have been demonstrated to not leach in the soil column and groundwater is more than 250 feet below the ground surface at the Site. The capped area would be graded and vegetated to prevent erosion. A Restrictive Covenant or Deed Notice would be placed on the consolidated area to notify the public and property owner(s) that the area should not be disturbed and that the property may only be used for commercial and industrial purposes.

2. Non-source Property Remediation

ICs for non-source property areas of the Site include filing of either a Restrictive Covenant or Deed Notice on non-source properties to notify the property owners and the public that the levels of the COCs are not protective of human health and the environment. The *ICs* will address the physical control, and will include a provision limiting the land use of the non-source property area to industrial/commercial use only.

D. Consolidation, Capping and Institutional Controls for Source Property and a Restrictive Covenant or Soil Treatment of Non-source Property Soil Exceeding Residential Protective Concentration Levels

1. Source Property Remediation

This alternative would remediate source property areas the same as under Alternative C.

2. Non-source Property Remediation

As in Alternative C, *ICs*, specifically a Restrictive Covenant, would be filed on non-source property areas having surface soils with metal concentrations exceeding residential *PCLs*, unless a land owner objects to this restriction. Under this alternative, if a land owner does not agree to have a Restrictive Covenant placed on his land, then the non-source areas where surface soil concentrations exceed residential *PCLs* would be deep tilled and treated with soil amendment to the total depth of impacted soil in order to reduce and stabilize the metals. After treatment, the treated area will be resampled to confirm that the metals in soil are protective of residents and the environment. Should confirmation sampling indicate that soil from any treated area still contains metals at levels unprotective of residents and the environment, then that soil will be excavated, and the excavated area backfilled with clean (with concentrations less than the residential *PCLs*) soils. The excavated soils will be transported to the source property, deposited in the on-site consolidation area, capped, and backfilled. The surface of

the backfilled area would be contoured to match the surrounding land and seeded.

E. Consolidation, Capping, Institutional Controls for Source Property and a Restrictive Covenant or Soil Excavation and Replacement of Non-source-Property Soil Exceeding Residential Protective Concentrations

1. Source Property Remediation

This alternative consists of capping and placing Institutional Controls, such as a Restrictive Covenant or a Deed Notice, similar to Alternative C and D above with the exception that the foot print of the capped area could be larger under this alternative because of the additional volume of soil potentially excavated from non-source areas and transported on to the source property for use as capping material.

2. Non-source Property Remediation

This alternative is similar to Alternative D above with the exception that if the property owners do not agree to the placement of a Restrictive Covenant on their land, soil from non-source property areas with metal concentrations exceeding the residential PCLs would be excavated and replaced with clean fill rather than treated. If the non-source property landowners do not agree to place a Restrictive Covenant on their land, then surface soil with metal concentrations exceeding the residential *PCLs* would be excavated and replaced with clean fill borrowed from the western margin of the site. The excavated material would be transported to source property areas, consolidated, and capped. After soil replacement, the remediated areas would be contoured and seeded. The depression from the source property borrow area would be graded using soil from surrounding unaffected area and seeded.

VII. THE PROPOSED REMEDIAL ACTION

The TCEQ proposes Consolidation, Capping, Institutional Controls for Source Property and a Restrictive Covenant or Soil Treatment of Non-source Property Soil Exceeding Residential Protective Concentration Levels as the proposed *Remedial Action* for the Site. The proposed *Remedial Action* is described in detail in Part VI. D of the PRAD.

REMEDIAL OPTION	DESCRIPTION	ESTIMATED COST	COMMENTS
A	No Remedial Action	\$24,525	Maintenance
B	Physical and Institutional Controls for source property and non-source properties	\$189,965	Fencing off impacted soil. Institutional Controls, followed by annual Site Inspection to ensure Land Use remains Industrial/commercial
C	Consolidation, capping, Institutional Controls for source property, Institutional Controls for non-source properties	\$467,855	Institutional Controls, soil sampling to verify delineation, and remedial construction
D	Consolidation, capping, Institutional Controls for source property, and Restrictive Covenant or soil treatment of non-source property soil exceeding residential PCLs	\$778,170	Institutional Controls, soil sampling to verify delineation, remediation construction (soil treatment), and soil sampling to verify remediation
E	Consolidation, Capping Institutional Controls for source property and Restrictive Covenant or soil excavation and replacement of non-source property soil exceeding residential PCLs	\$1,777,645	Institutional Controls, Soil sampling to verify delineation, remediation construction (excavation) and soil sampling to verify remediation

AMERICAN ZINC REMEDY ALTERNATIVE SUMMARY

REMEDY ALTERNATIVE # D

MEDIA: SURFACE SOIL

COC NAME	ACTION LEVEL (Critical PCL)	REMEDIAL ACTION OBJECTIVES
Zinc	On- property is below action level. 9,900 parts per million (ppm) for non-source property.	Protective of soil ingestion, inhalation and dermal contact.
Arsenic	200 ppm, on-property. 24 ppm non-source property.	Protective of soil ingestion, inhalation and dermal contact.
Cadmium	850 ppm, on-property. 52 ppm, non-source property.	Protective of soil ingestion, inhalation, and dermal contact.
Lead	1,600 ppm on property. 500 ppm non-source property.	Protective of soil ingestion, inhalation and dermal contact.

Subsurface Soils: The concentration of the COCs in subsurface soils on property was below industrial and residential *PCLs*. Therefore, subsurface soil was not considered a potentially affected medium.

Groundwater: Through both sampling production wells and analyzing subsurface soils beneath the retort rubble and slag piles, it was shown that groundwater was not impacted by COCs.

Sediment: South Palo Duro Creek (Creek) is dry majority of the time. Due to the Creek's extremely intermittent nature, the Creek source and non-source property does not represent aquatic habitat. Therefore the sediment samples taken from the Creek bed were evaluated as surface soil samples.

Surface Water: The Creek is ephemeral in nature and only flows following significant precipitation, which is infrequent in this part of Texas. Ecological risk calculations indicated that concentrations of the COCs in surface water do not pose a potential risk to livestock drinking water from the Creek. Therefore, Surface water was not considered a potentially affected medium.

VIII. COMMUNITY PARTICIPATION IN THE SUPERFUND PROCESS

The public is invited to comment on the proposed *Remedial Action* for the Site. Those wanting to make oral comments may do so at the public meeting scheduled for December 13, 2007. The public meeting is legislative in nature and is not a contested case hearing under Chapter 2001 of the Texas Government Code. The public comment period begins November 9, 2007 and ends on December 13, 2007 at the close of the public meeting. During this time period, the public may

comment on the proposed *Remedial Action* or give additional information regarding the Site or the identification of *PRPs*. Written comments concerning the proposed *Remedial Action* must be received by the close of the public meeting on December 13, 2007. Comments should be submitted to:

Otu Ekpo-Otu, Project Manager
Environmental Cleanup Section (MC 143)
Remediation Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087
Facsimile: (512) 239-1212

The TCEQ will respond to all comments received during the public comment period in the *Responsiveness Summary*. The *Responsiveness Summary* will be made available to the public upon request and a copy will be placed in the Site files.

IX. REMAINING STEPS IN THE SUPERFUND PROCESS

After the end of the public comment period described above, and after considering all comments received relating to the proposed *Remedial Action*, the TCEQ will select the *Remedial Action* to implement at the Site. Any *PRPs* are then allowed a period of sixty (60) days to make an offer to fund or perform the selected remedy. If any *PRPs* make an offer, they will be allowed an additional sixty (60) days to negotiate the terms of an order to fund or perform the selected remedy. Whether or not *PRPs* come forward to fund or perform the remedy, the TCEQ will issue a final administrative order as provided by Section 361.188 of the *Solid Waste Disposal Act* (188 Order). At that time, the Site will no longer be considered a "Proposed" State Superfund Site but will then be "listed" on the State Registry of Superfund Sites. The State Registry is a list of sites that pose an imminent and substantial endangerment to public health and safety or the environment. Following issuance of the 188 Order, either the *PRPs* or the TCEQ will complete the detailed design of the selected remedy and cause that remedy to be implemented in its entirety. At any time in this process, the TCEQ may determine that a *minor change*, *significant change*, or *fundamental change* should be made to the *Remedial Action*. If a *minor change* is implemented, the TCEQ will document the change in the Site files without the necessity for another public meeting. If a *significant change* is made, a notice describing the changes will be posted in the Texas Register and in a newspaper of general circulation in the county where the Site is located. If a *fundamental change* is considered, another public comment period and meeting will be held to discuss that fundamentally changed proposed remedy. Upon completion of the *Remedial Action*, the TCEQ may propose to delete the Site from the State Registry of Superfund Sites. A public meeting will be held before the Site is deleted from the State Registry.

X. GLOSSARY

Feasibility Study (FS) - A description, screening, and analysis of the potential *Remedial Action* alternatives for a site.

Fundamental change - A change to the *Remedial Action* which uses a different approach to achieve the remedial action goals, or one that uses the same approach but results in a remedial action that is less protective than the originally proposed remedial action.

Hazard Ranking System (HRS) - The scoring system used by the TCEQ to evaluate a site for the state or federal Superfund program. The scoring system was developed by the U.S. Environmental Protection Agency (EPA) as described in 40 Code of Federal Regulations Part 300, Appendix A.

Institutional Controls (ICs) - A legal instrument placed in the property records in the form of a deed notice, restrictive covenant, or other form established in the TRRP rules which indicates the limitations on or conditions governing the use of the property which ensures protection of human health and the environment.

Minor change - A change to the *Remedial Action* which does not significantly affect the scope, performance, or cost of the originally proposed *Remedial Action*.

Potentially Responsible Parties (PRPs) - Persons or entities that the TCEQ considers potentially responsible for the contamination of the site pursuant to Section 361.271 of the Texas Health and Safety Code.

Proposed Remedial Action Document (PRAD) - The document which describes the TCEQ's proposed *Remedial Action*.

Protective Concentration Levels (PCLs) - The concentration of COCs which can remain within the source medium and not result in levels which exceed the applicable human health risk-based exposure limit or ecological protective concentration level at the point of exposure for that exposure pathway.

Remedial Action - An action, including remedial design and post-closure care, consistent with a remedy taken instead of or in addition to a removal action in the event of a release or threatened release of hazardous substances into the environment to prevent or minimize the release of a hazardous substance so that the hazardous substance does not cause an imminent and substantial endangerment to present or future public health and safety or the environment.

Remedial Investigation (RI) - An investigative study which may include removals, and/or a feasibility study, in addition to the development of protective concentration levels, designed to adequately determine the nature and extent of release or threatened release of hazardous substances and, as appropriate, its impact on air, soils, groundwater and surface water, both within and beyond the boundaries of the facility.

Responsiveness Summary - A document in which the TCEQ summarizes its response to all comments received on the PRAD during the public comment period.

Response Action - Any activity taken to comply with the *Texas Risk Reduction Program* rules to remove, decontaminate and/or control (i.e., physical controls and *ICs*) COCs in excess of critical *PCLs* in environmental media, including actions taken in response to releases to environmental media from a waste management unit before, during, or after closure.

Significant change - A change to the *Remedial Action* which materially affects the scope, performance, or cost of the *Remedial Action* but which uses the same approach and results in a *Remedial Action* at least as protective as the originally proposed *Remedial Action*.

Solid Waste Disposal Act - Chapter 361 of the Texas Health and Safety Code. The purpose of the *Solid Waste Disposal Act* is to safeguard the health, welfare, and physical property of the people and to protect the environment by controlling the management of solid waste, including any hazardous waste that is generated. Subchapter F of Chapter 361 relates to the State Superfund Process. The Texas Health and Safety Code is available online at:
<http://www.capitol.state.tx.us/statutes/statutes.html>.

Texas Risk Reduction Program (TRRP) - A program of the TCEQ that provides a consistent remedial process directed toward protection of human health and the environment balanced with the economic welfare of the citizens of the state. The rules for this program are located in Chapter 350 of Title 30 of the Texas Administrative Code. The Texas Administrative Code is available online at: <http://www.sos.state.tx.us/tac/>.