

DOCKET 96-0280-SPF

UNNAMED PLATING
STATE SUPERFUND SITE

ADMINISTRATIVE ORDER

Texas Natural Resource Conservation Commission

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TEXAS NATURAL RESOURCE CONSERVATION COMMISSION



DOCKET NUMBER 96-0280-SPF

IN THE MATTER OF §
THE SITE KNOWN AS §
UNNAMED PLATING § BEFORE THE
STATE SUPERFUND SITE § TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION

AN ADMINISTRATIVE ORDER

I. INTRODUCTION

On FEB 28 1996, the Executive Director alleged the existence of a release of hazardous substances that poses an imminent and substantial endangerment to the public health and safety or the environment pursuant to the Texas Solid Waste Disposal Act, TEX. HEALTH AND SAFETY CODE ANN. Chapter 361 (the "Act"), and requested appropriate relief, including but not limited to issuance of a Commission order to require persons responsible for solid waste to conduct remedial activities which include Interim Remedial Measures (IRM), Remedial Design (RD), Remedial Action (RA) and Operations and Maintenance (O&M), as authorized by §361.188 of the Act.

After proper notice, the Texas Natural Resource Conservation Commission (TNRCC) makes the following Findings of Fact and Conclusions of Law:

II. FINDINGS OF FACT

A. The following potentially responsible parties did not agree to this Administrative Order:

Mr. Leonard Barrick, Barrick Enterprises, and Domecello Liquidating Trust owned the property that comprises the Site from July 18, 1983 through at least January 22, 1988, the date the Site was listed on the State Registry of Hazardous Waste Facilities.

- B. The following potentially responsible parties agreed to this Administrative Order as De Minimis Responsible Parties:

None.

- C. The following potentially responsible parties agreed to this Administrative Order as Performing Respondent(s) but do not admit liability except for the purpose of enforcing this Administrative Order:

AmeriGas, Inc. (corporate successor by merger to Schwartz-Edmonds Corporation)
Handy & Harman
Phelps Dodge Refining Corporation
Southwire Company

- D. The Unnamed Plating State Superfund Site is described as:

Lots 4, 5, 6, 7, and 8, Block 4, EASTSIDE INDUSTRIAL DISTRICT, UNIT ONE, an Addition to the City of El Paso, El Paso County, Texas, municipally known and numbered as 6816-6824 Industrial Avenue, El Paso, Texas.

The metes and bounds description of the property is provided as Exhibit C to this Administrative Order.

The area of the site is approximately two acres. The west half (approximate) of the site is covered by asphalt and contains a warehouse building with a concrete foundation. Most of the west half of the site is fenced with an eight foot chain link fence topped with barbed wire. A small water retention structure is located at the southern part of this area. The east half (approximate) of the site is bare ground. This half of the site is fenced with a six foot chain link fence.

- E. The Site consists of the area(s) listed in item D above. In addition, the Site includes any areas outside the Site property boundary where hazardous substances came to be located as a result, either directly or indirectly, of releases of hazardous substances from the Site portion used for ranking.
- F. The Site was proposed for listing in the Texas Register on October 16, 1987 (12 Tex.Reg. 3858). The site was listed on January 22, 1988 (13 Tex.Reg. 427).
- G. When ranked, the Site had a State Superfund Hazard Ranking System score of 10.8 as specified in 30 TAC §335.343.

- H. Three surface impoundments and a fourth area of the site were used as evaporation ponds at the site. The facility received materials containing hazardous substances from off-site suppliers for processing. The evaporation ponds were used in a secondary metals recovery operation. Specific hazardous substances pursuant to §361.003(14) of the Act were determined to be present on site during the Remedial Investigation, including antimony, arsenic, cadmium, chromium, cyanide, lead, and nickel. Elevated levels of zinc and copper are also present on site. The chemicals were co-mingled.
- I. During the Remedial Investigation, a release was confirmed in the soil by the presence of numerous hazardous substances found in surface and subsurface samples. A release was also confirmed in surface water runoff by the presence of numerous hazardous substances in water samples.
- J. Hazardous substances are present in surface and subsurface soils. Potential pathways or routes of exposure include dermal contact, ingestion and inhalation of contaminated soils.
- K. The following hazardous substances have been documented in soils and/or surface water runoff: antimony, arsenic, cadmium, chromium, copper, cyanide, lead, nickel, and zinc. These hazardous substances are toxic and/or carcinogenic and likely to threaten the public health and safety and the environment if remedial action is not undertaken.
- L. The hazardous substances at the site are not capable of being managed separately under the remedial action plan.
- M. On January 22, 1988, the Commission provided a written notice to the PRPs of the proposed listing of the Site on the State Registry.
- N. On September 1, 1995, the Commission provided, to each party identified in Items A, B and C of Section II, FINDINGS OF FACT, of this Administrative Order, written notice of the proposed remedial action of the Site and of the opportunity to conduct Remedial Activities.
- O. Under Section 361.187(f) of the Act, all PRPs have been notified and provided an opportunity to comment on the proposed remedial action. TNRCC has received no comments from the PRPs.
- P. No Actions have been voluntarily undertaken by the Responsible Parties.

- Q. The Proposed Remedial Action Document (PRAD) is attached to this Administrative Order as Exhibit A and is made a part of this Administrative Order.
- R. The remedy proposed in Exhibit A, capping the site with a geomembrane and reinforced concrete cover, is selected as the remedy to be implemented in accordance with this Administrative Order.

III.

CONCLUSIONS OF LAW AND DETERMINATIONS

- A. The potentially responsible parties listed in Item A and B of Section II, FINDINGS OF FACT, of this Administrative Order are Responsible Parties.
- B. The substances found at the Site are hazardous substances as defined in §361.003(14) of the Act.
- C. Hazardous substances were deposited, stored, disposed of, or placed or otherwise came to be located at the Site.
- D. The Site is a "facility" as defined in §361.181 (c) of the Act.
- E. 30 TAC §335.342 defines "imminent and substantial endangerment" as follows: A danger is imminent if, given the entire circumstances surrounding each case, exposure of persons or the environment to hazardous substances is more likely than not to occur in the absence of preventive action. A danger is substantial if, given the current state of scientific knowledge, the harm to public health and safety or the environment which would result from exposure could cause adverse environmental or health effects.
- F. The past migration of hazardous substances at the Site is a "release" as defined in §361.003(31) of the Act.
- G. Hazardous substances have been released from the facility into the soil and surface water.
- H. There is an actual or threatened release of hazardous substances from the facility that poses an imminent and substantial endangerment to the public health and safety or the environment.
- I. The release of hazardous substances has not been proven to be divisible pursuant to §361.276 of the Act.

- J. The actions required by this Administrative Order are reasonable and necessary to protect the public health and safety, and the environment.
- K. Funds from the Federal Government are unavailable for the Remedial Activities.

IV. DEFINITIONS

"Exhibit A" Proposed Remedial Action Document by TNRCC (PRAD)

"Exhibit B" Agreeing Respondents Consent Form

"Exhibit C" Property Description

"Exhibit D" Remedial Activities Scope of Work

"Agreeing Respondents" The potentially responsible parties listed in Item B and C of Section II, FINDINGS OF FACT, of this Administrative Order.

"Contractor" The company or companies retained to undertake and complete the Remedial Action.

"De Minimis Responsible Parties" The Responsible Parties listed in Item B of Section II, FINDINGS OF FACT, of this Administrative Order.

"Demobilization" The phase of the Remedial Action in which equipment used for remedial action is dismantled and removed from the Site.

"Executive Director" (ED) The Executive Director of the Texas Natural Resource Conservation Commission or a designee.

"Interim Remedial Measures" The phase of the Remedial Activities in which environmental controls are implemented through site grading and runoff control measures.

"Operations and Maintenance" The phase of the Remedial Action in which surficial inspections, surveys, sampling, maintenance, repair (including replacement, if warranted), and other similar activities are undertaken to ensure that the remedy continues to perform as designed.

"Oversight" The TNRCC's inspection of Remedial Activities and verification of adequacy of performance of activities and reports of the Performing Respondent(s) as required under the terms of this Administrative Order and which shall be consistent with the Chapter 361 of the Act.

"Parties" The persons listed in Item A, B and C of Section II, FINDINGS OF FACT, of this Administrative Order and the TNRCC.

"Performing Respondent(s)" The potentially responsible parties listed in Item A or C of Section II, FINDINGS OF FACT, of this Administrative Order which comply with the terms of this Administrative Order.

"Project Manager" The individual designated by the "Executive Director" to oversee implementation of this Administrative Order on behalf of TNRCC and to coordinate communications with the Performing Respondent(s).

"Remedial Action" The phase of the Remedial Activities in which the remedy is undertaken through the selected remedy of construction of a composite cap using a geomembrane and reinforced concrete in accordance with the PRAD of this Administrative Order for the Site. The areal extent for the remedial action is not limited to the physical property boundary. It includes all suitable areas in proximity to the contamination necessary for implementation of the remedial action.

"Remedial Activities" The implementation of the Interim Remedial Measures, Remedial Design, Remedial Action and Operations and Maintenance, in accordance with this Administrative Order, of the remedy selected by TNRCC for the Site.

"Remedial Design" The phase of the Remedial Activities in which engineering plans and technical specifications are developed for implementation of the Remedial Action.

"Respondent(s)" The potentially responsible parties listed in Item A and C of Section II, FINDINGS OF FACT, of this Administrative Order.

"Remedial Activities Scope of Work" (RASOW) The scope of work provided as Exhibit D of this Administrative Order.

"Site Representative" As to TNRCC, those persons confirmed by the TNRCC Project Manager as authorized to conduct oversight activities pursuant to this Administrative Order; and as to Performing Respondent(s), those contractors and subcontractors hired in connection with the Remedial Action.

"Submittal of Deliverables" Delivery of four (4) complete copies of all approved work plans and reports described herein to the TNRCC Central Office in Austin.

"Supervising Contractor" The individual, company or companies retained in the role of project management, Remedial Designer, Remedial Action Contractor, and Remedial Action Quality Assurance Official on behalf of the Performing Respondent(s) to undertake

and complete the Remedial Activities. The supervising contractor cannot assume both the role of the Remedial Action Contractor and the Remedial Action Quality Assurance Official.

V. ORDER

Therefore the TNRCC orders:

- A. The Site shall be listed on the State Registry of Superfund sites.
- B. The De Minimis Responsible Parties, if any, shall pay the amount set out within the De Minimis Consent Form within 30 days after this Administrative Order is issued. The payment shall be mailed to the address listed in the item I, Section XVIII, STIPULATED PENALTIES, of this Administrative Order.
- C. The responsible parties listed in Item A of Section II, FINDINGS OF FACT, of this Administrative Order who are not Performing Respondents, shall reimburse the Hazardous Waste Disposal Fee Fund for all costs of the IRM, RD, RA, O&M, and TNRCC oversight of these activities. Reimbursement(s) shall be made within sixty (60) days after receipt of a Demand Letter from the TNRCC stating the amount owed. If the parties listed in Item A of Section II, FINDINGS OF FACT, cooperate in the performance of the activities required by this Administrative Order, they shall be treated as Performing Respondents.
- D. This Administrative Order shall apply to and be binding upon De Minimis Responsible Parties and Respondent(s), its (their) directors, officers, employees, agents, successors, and assigns. Respondent(s) are jointly and severally responsible for carrying out all activities required by this Administrative Order. No change in the ownership or corporate status, and no acquisition of Respondent(s) shall alter the responsibilities under this Administrative Order. The TNRCC acknowledges that the Respondents have separate agreements among themselves which call, in part, for AmeriGas to be the principal party performing the work required by this Administrative Order.
- E. Respondent(s) shall provide a copy of this Administrative Order to any prospective owners or successors before property rights, stock, or assets are transferred. Respondent(s) shall provide a copy of this Administrative Order to all contractors, sub-contractors, laboratories, and consultants retained to perform any work under this Administrative Order, within five days after the effective date of this Administrative Order or on the date such services are retained, whichever date occurs later. Notwithstanding the terms of any contract, Respondent(s) is (are)

responsible for compliance with this Administrative Order and for ensuring that its (their) contractors and agents comply with this Administrative Order.

- F. The obligations and restrictions set forth in this Administrative Order or developed pursuant to this Administrative Order shall run with the land and shall be binding upon any and all persons who acquire any interest in any real property comprising all or any part of the Site. Within five (5) days after the effective date of this Administrative Order, each party that owns property at the Site shall record a copy or copies of this Administrative Order in the appropriate office where land ownership and transfer records are filed or recorded, and shall ensure that the recording of this Administrative Order is indexed to the titles of each and every property at the Site so as to provide notice to third parties of the issuance and terms of this Administrative Order with respect to those properties. Such parties shall, within fifteen (15) days after the effective date of this Administrative Order, send notice of such recording and indexing to TNRCC.
- G. Any change in use of listed facility shall be pursuant to §361.190 of the Act. Not later than 90 days before any transfer of any property interest in any property included within the Site, the transferor and the transferee shall submit the transfer documents to TNRCC.
- H. All aspects of the work to be performed by Respondent(s) pursuant to this Administrative Order shall be under the direction and supervision of a qualified Supervising Contractor. Within ten (10) days after the Chief Clerk mails this Administrative Order, Respondent(s) shall notify TNRCC in writing of the names, title, qualifications, license and permit of any Supervising Contractor proposed to be used in carrying out work under this Administrative Order. It is the responsibility of Respondent(s) to demonstrate the proposed Supervising Contractor has any necessary license to do business in the State of Texas and necessary permits to perform work under this Administrative Order. If at any time Respondent(s) proposes to use a different Supervising Contractor for work at the Site, Respondent(s) shall notify TNRCC before the new Supervising Contractor performs any work under this Administrative Order.
- I. The terms of this Administrative Order may be amended by agreement of the non-defaulting Performing Respondent(s) and the De Minimis Responsible Parties upon approval by the Commission.
- J. Community Relations Plan: The Respondent(s) shall provide all the necessary information and assistance for TNRCC's Community Relation personnel to implement the TNRCC's Community Relations Plan.

- K. The Remedial Activities to be performed under this order are described in the Remedial Activities Scope of Work (RASOW), which is provided as Attachment D to this Administrative Order, and is incorporated into this Administrative Order and shall be an enforceable part of this Administrative Order. The RASOW provides a general scope of site activities and a schedule for their completion. The RASOW is not intended to strictly limit the scope of activities at the Site; additional tasks or items may be required in order to implement the selected remedy. The RASOW Site remedial activities shall be undertaken in the following phases:

Interim Remedial Measures;
Remedial Design;
Remedial Action ; and
Operations and Maintenance.

1. The Interim Remedial Measures Plan (consisting of the IRM Plan Design, IRM Construction Quality Assurance Plan, Quality Assurance Project Plan, Health and Safety Plan, Off-Site Removal Plan, and Schedule), the Remedial Design (consisting of the Final Remedial Design, Construction Quality Assurance Plan, Remedial Design Quality Assurance Project Plan, Health and Safety Plan, Operation & Maintenance Plan, and RA Schedule) and the Remediation Report are, upon TNRCC approval (or review, in the case of the Health and Safety Plans), incorporated into this Administrative Order as requirements of this Administrative Order and shall be an enforceable part of this Administrative Order.
2. Disapproval by TNRCC of the final submittal of documents outlined in Exhibit D, Remedial Activities Scope of Work, is subject to Section XVIII, STIPULATED PENALTIES, of this Administrative Order.
3. Quality assurance project plans shall, where applicable, be prepared in accordance with current EPA guidance, "Data Quality Objectives Process For Superfund, Interim Final Guidance" Sept 1993, (EPA 540-R-93-071); and "Interim Draft EPA Requirements for Quality Assurance Project Plans," May 1994, (EPA QA/R-5). The QAPP shall include a description of the mechanism used to verify that the remedy process is operating within the limits specified in the PRAD and a schedule for submittal of QAPP reports. The QAPP shall describe the approach to quality assurance during remedial action at the Site and shall specify a quality assurance official (QA Official), independent of the remedial action contractor, to conduct a quality assurance program during the remedial action phase of the project. The Respondent(s) and their Site Representatives shall comply with the

approved QAPP. In order to provide quality assurance and maintain quality control regarding all samples collected pursuant to this Administrative Order, the Respondent(s) shall:

- a. Ensure that all contracts with laboratories utilized by the Respondent(s) for analysis of samples taken pursuant to this Administrative Order provide for access to the laboratories by TNRCC personnel and TNRCC authorized representatives to assure the accuracy of laboratory results related to the Site.
 - b. Ensure that laboratories utilized by the Respondent(s) for analysis of samples taken pursuant to this Administrative Order perform all analyses using methods approved by the TNRCC.
 - c. Ensure that all laboratories utilized by the Respondent(s) for analysis of samples taken pursuant to this Administrative Order are accepted by TNRCC. A laboratory may be deemed unacceptable for any of the following reasons:
 - (1) Repeated or numerous deficiencies found in the laboratory quality assurance program during TNRCC or EPA laboratory inspections.
 - (2) Failure to participate in the EPA quality control check sample programs for trace metals, volatile organics, and pesticide/PCB parameters at a frequency of at least twice in the past 2 years.
 - (3) Poor performance in the EPA quality control check sample programs. This is defined as receiving more than 20 percent of the performance evaluation results as "not acceptable."
4. Preparation and submittal of Health and Safety Plans is a requirement of this Administrative Order. The TNRCC will review the Health and Safety Plans, however, TNRCC will not approve Health and Safety Plans. Approval of the IRM Plan and the RD will specifically exclude the Health and Safety Plans. TNRCC approval of the Health and Safety Plans is not required prior to conducting work on the Site.

5. Remedial Action

- a. Before mobilization, Respondent(s) shall notify TNRCC in writing of the names, title, qualifications, license and permit (if applicable) of the Remedial Action Contractor(s) proposed to be used in carrying out work under this Administrative Order. It is the responsibility of Respondent(s) to demonstrate that the proposed Remedial Action Contractor(s) is/are licensed to do business in the State of Texas and has the necessary permits to perform any work under this Administrative Order. If at any time Respondent(s) proposes to change the Remedial Action Contractor, Respondent(s) shall notify TNRCC 30 days prior to the change.
- b. Not later than ten (10) days after the remedy has attained all applicable performance standards specified in the PRAD, Respondent(s) shall notify TNRCC in writing that the remedy has attained all applicable performance standards specified in the PRAD. Respondent(s) shall also provide the schedule for demobilization.
- c. After approval of the final Remediation Report, TNRCC will issue a Certification of Completion of the Remedial Action Phase.

6. Failure Analysis Report

- a. At any time that repairs are required during the Operations and Maintenance phase of the Administrative Order, the Respondents shall prepare a Failure Analysis Report (FAR). At a minimum, the FAR shall describe the cause of the failure and the repair methods used. In addition, the FAR shall assess whether the failure caused or increased the potential for a release of hazardous substances. If warranted, environmental sampling shall be conducted to assess any potential release. The FAR shall be submitted to the TNRCC within 30 days of the repair.
- b. TNRCC will notify Respondents of its approval/disapproval with comments to identify problems and potential deficiencies.
- c. Within 30 days of receipt of any disapproval under item (b) above, the Respondents shall resubmit the FAR with a summary note. The summary note shall clearly indicate how this document has satisfactorily addressed each comment and identify any other

changes made to the FAR. If additional time is required for preparation of the revised FAR (for additional field work or other activities), the TNRCC and Respondents may agree on an alternative schedule.

d. TNRCC will notify Respondents of its approval/disapproval of the FAR. Disapproval by TNRCC is subject to Section XVIII, STIPULATED PENALTIES, of this Administrative Order.

7. Respondent(s) shall, prior to any off-Site shipment of hazardous substances from the Site to a waste management facility, provide written notification to TNRCC's Designated Project Manager of such shipment of hazardous substances.

a. The notification shall be in writing, and shall include the following information: (a) the name and location of the facility to which the hazardous substances are to be shipped; (b) the type and quantity of the hazardous substances to be shipped; (c) the expected schedule for the shipment of the hazardous substances; and (d) the method of transportation. Respondent(s) shall notify TNRCC of major changes in the shipment plan, such as a decision to ship the hazardous substances to another facility.

b. Respondent(s) shall select receiving facilities meeting the following criteria: (a) there is no current enforcement order imposed on the receiving facility by the regulated authorities; and (b) the receiving facility is permitted to accept the Site specified hazardous substances by the regulated authorities. Respondent(s) shall provide all relevant information for the off-Site shipments as soon as practicable after the award of the contract and before the hazardous-substances are actually shipped.

L. Within 60 days of TNRCC's approval of the Final Remedial Design, Respondents shall provide financial assurance in an amount sufficient to fund the operation and maintenance phase of the Administrative Order. The operation and maintenance phase of the Administrative Order includes but is not limited to inspection, maintenance, repair, and replacement of the cap. This financial assurance may be in the form of a fully funded trust, letter of credit, surety bond, closure insurance, or other asset as approved by the TNRCC. The amount of financial assurance and the specific instrument are subject to TNRCC approval. Such approval shall not be unreasonably withheld.

VI.

FAILURE TO ATTAIN PERFORMANCE STANDARDS OR FINDINGS OF SIGNIFICANT DIFFERENCE

If the Remedial Activities taken by the Respondent(s) fail to achieve the performance standards set forth in this Administrative Order, or if the Respondent(s) find that conditions at the Site differ from those anticipated by this Administrative Order and thereby significantly change the scope, performance, or cost as set forth below of the Remedial Activities anticipated by the Feasibility Study, then the following actions shall be taken:

- A. Within 10 days of Respondent initially determining that a probable failure or significant difference as described in this article exists, Respondent shall notify TNRCC of that determination with a description of the basis of that initial determination;
- B. Not later than 60 days after the initial determination of such failure or finding of significant difference, the Respondent(s) shall submit to TNRCC for approval a Failure Evaluation Report;
- C. The Failure Evaluation Report shall include a discussion of the data related to the failure or finding of significant difference, conclusions concerning all data obtained during the evaluation, the cause of the failure or significant difference, if known, and, if appropriate, a recommendation for additional study regarding the failure or significant difference. In cases where the Respondent(s) make a claim of significant difference, the Failure Report shall present data consistent with the data quality objectives established for the Remedial Activities to substantiate the significant difference. Respondents shall not construe that the mere finding of contaminants in quantities or extents greater than those contemplated by this Administrative Order are the basis for a finding of significant difference in the conditions at the Site. Only when variations in the quantities or extents of contamination are so significant as to render continued application of the selected remedy set forth in this Administrative Order unreasonably costly compared to alternative appropriate remedies shall they be considered as a basis for application of this article;
- D. After receipt of the Failure Evaluation Report, TNRCC will notify Performing Respondent(s) of its approval/disapproval with identification of deficiencies. If TNRCC determines that the basis of the finding of significant difference meets the criteria set forth in item C above, no stipulated penalties shall be imposed for missed deadlines after notice of Respondent's initial determination; except for failure to submit documents pursuant to this article. If TNRCC determines that the basis of a finding of significant difference does not meet the criteria set forth in

- item C above, TNRCC shall direct that Remedial Activities continue and that Respondent(s) pay stipulated penalties for any missed deadlines;
- E. Unless TNRCC directs continuation of response activities, within 30 days of receipt of TNRCC's comments, the Respondent(s) shall resubmit the Failure Evaluation Report with a summary note. The summary note shall clearly indicate how this document has addressed each deficiency comment of TNRCC and any other changes made to this document;
 - F. After receipt of the resubmittal of the Failure Evaluation Report, TNRCC will notify Performing Respondent(s) of its approval/disapproval with identification of deficiencies;
 - G. Not later than 90 days after a determination by TNRCC that failure to achieve the Performance Standards set forth in this Administrative Order was caused by a problem with the Remedial Action, the Respondent(s) shall submit to TNRCC for approval a written report evaluating alternatives and may submit a proposal for such additional response actions as may be necessary to achieve appropriate objectives;
 - H. After receipt of the report described in item G above, TNRCC will notify the Performing Respondent(s) of its approval/disapproval with comments and identification of deficiencies;
 - I. Within 60 days of receipt of TNRCC's comments, the Respondent(s) shall resubmit the report described in item H above with a summary note. The summary note shall clearly indicate how this document has addressed each deficiency comment of TNRCC and any other changes made to this document;
 - J. After receipt the resubmittal under item I above, TNRCC will notify Performing Respondent(s) of its approval/disapproval with identification of deficiencies;
 - K. Before selecting any further Remedial Action, TNRCC will comply with the public participation requirement pursuant to §361.187 of the Act;
 - L. TNRCC will notify Respondent(s) of its selection of further Remedial Action;
 - M. TNRCC and Performing Respondents agree to negotiate in good faith to amend this Administrative Order to include further Remedial Action.

VII.

DESIGNATED PROJECT MANAGER/FACILITY COORDINATOR

- A. All communications, whether written or oral, from Respondent(s) to TNRCC shall be directed to TNRCC's Designated Project Manager or Alternate Designated Project Manager.
- B. Not later than the effective date of this Administrative Order, TNRCC will designate a Project Manager to oversee implementation of this Administrative Order and to coordinate communication between TNRCC and the Respondent(s).
- C. Respondent(s) shall, within 10 calendar days of the effective date of this Administrative Order, appoint a Facility Coordinator who shall be responsible for oversight of the implementation of the activities required in this Administrative Order. Respondent(s) shall notify the TNRCC Project Manager at that time as to the Coordinator's identity, address, phone number and/or pager number at which he/she may be contacted at anytime in case of emergency. Respondent(s) shall notify the ED seven (7) calendar days prior to any change of Facility Coordinator. The Facility Coordinator shall also be responsible for notifying the TNRCC at least seven (7) calendar days prior to the start date of any field activities associated with the IRM, RD, RA, and O&M.
- D. The TNRCC Project Manager shall have the authority to ensure that the Remedial Action is performed in accordance with all applicable statutes, regulations and this Administrative Order. The TNRCC Project Manager has the authority to require a cessation of the performance of any part or all of the Remedial Action or any other activity at the Site that;
 - 1. in his or her opinion, may present or contribute to an imminent and substantial endangerment to public health, welfare, or the environment because of an actual or threatened release of hazardous substances from the Site; or
 - 2. in his or her opinion, the remedial action is not in conformance with any approved work plan or design; or
 - 3. if he/she becomes aware of a violation of any Design, Plan, Work Plan, Health & Safety Plan, or QAPP. Within 24 hours after the TNRCC Project Manager issues an oral order to halt work, if time permits, the TNRCC Project Manager will provide a brief explanation of the basis for such order. As soon as possible, but in no event more than 14 days after the initial order to halt work, a written explanation of the basis for such order to halt work will be provided to the Facility Coordinator. Work can

be resumed only after the basis for the cessation has been corrected, and instructions to proceed have been provided by the TNRCC Project Manager. All additional costs (except costs for TNRCC oversight) associated with the cessation of work will be incurred by the Respondent(s).

- E. During the IRM, RD, RA and Demobilization Phases, meetings shall be held at least monthly between the Project Manager and Facility Coordinator regarding the progress and details of the Phase and to review and resolve any discrepancies in data as they deem appropriate under the circumstances. At least seven (7) days prior to each meeting, the Respondent(s) shall deliver to the TNRCC Project Manager an agenda for the meeting and any documents to be discussed. By agreement, such meetings may occur via conference call.
- F. TNRCC and the Respondent(s) may change their respective Project Manager or Facility Coordinator. When possible, the other Party shall be informed in writing of the name, address, and telephone number of the new Designated Project Manager or Facility Coordinator at least seven (7) days prior to the change.
- G. The TNRCC Project Manager may assign other Representatives, including other TNRCC employees or contractors, to serve as a Site Representative for oversight of performance of daily operations during the Remedial Action. The TNRCC Project Manager may delegate on a temporary basis his or her responsibilities and shall notify Respondent(s)' Facility Coordinator orally or in writing of such delegation.

VIII. ENDANGERMENT AND EMERGENCY RESPONSE

- A. In the event of any action or occurrence during the performance of the Remedial Activities which causes or threatens a release of a hazardous substance or which may present an immediate threat to public health or welfare or the environment, Respondent(s) shall immediately take all appropriate action to prevent, abate, or minimize such release or endangerment, and shall immediately notify TNRCC's Project Manager, or, if the Project Manager is unavailable, TNRCC's Alternate Designated Project Manager. The Respondent(s) shall also notify the TNRCC Emergency Response Unit, Region 6 (El Paso). Respondent(s) shall take such action in accordance with all applicable provisions of the Health and Safety Plan developed under this Administrative Order. If Respondent(s) fails to take appropriate response action as required by this Section, and TNRCC takes such action instead, Respondent(s) shall reimburse TNRCC all costs of the response action. Payment of such costs of response shall be made in the manner described in Item I, Section XVIII, ORDER, of this Administrative Order.

- B. Nothing in the preceding paragraph shall be deemed to limit any authority of the State of Texas to take, direct, or order all appropriate action to protect human health and the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances on, at, or from the Site.

IX. SUBMITTAL REQUIRING TNRCC'S APPROVAL

- A. After review of any plan, report or other item which is required to be Submitted for approval pursuant to this Administrative Order, TNRCC will either:
1. approve the submittal; or
 2. disapprove the submittal, notifying Performing Respondent(s) of deficiencies.
- B. Upon approval of a submittal by TNRCC, Respondent(s) shall proceed to implement all actions required by the submittal according to the schedule approved by TNRCC.
- C. Upon receipt of a notice of disapproval, Respondent(s) shall, within the time frame as specified in this Administrative Order, correct the deficiencies and resubmit the plan, report, or other item for approval.

X. SUBMITTAL OF DOCUMENTS, SAMPLING, AND ANALYSIS

- A. Subject to the confidentiality provisions set forth in item C below, any analytical or design data generated or obtained by the Respondent(s) that are related to the Site shall be provided to TNRCC within twenty (20) days of receipt of any request by TNRCC for such data.
- B. Subject to the confidentiality provisions set forth in item C below, all data, factual information, and documents submitted by the Respondent(s) to TNRCC pursuant to this Administrative Order shall be available to the public.
- C. Respondent(s) may assert a claim of business confidentiality pursuant to Texas Open Records Act, as to any process, method, technique, or any description thereof that the Respondent(s) claim constitutes proprietary or trade secret information developed by the Respondent(s) or developed by the Contractor or the Contractor's subcontractors. Respondent(s) shall not assert a claim of confidentiality regarding any hydrogeological or chemical data, or any data submitted in support of the Remedial Activities. If no claim accompanies the

information when it is submitted to TNRCC, it may be made available to the public by TNRCC or the state without further notice to the Respondent(s).

- D. Respondent(s) shall maintain for the period during which this Administrative Order is in effect, an index of documents that Respondent(s) claims contain privileged information or confidential business information. The index shall contain, for each document, the date, author, addressee, and subject of the document. Respondent(s) shall submit a copy of the index to TNRCC within ten (10) days of receipt of the request from TNRCC.
- E. TNRCC employees or its Site Representatives may take splits or duplicates of any samples obtained by the Respondent(s) or their Site Representatives at the Site during the implementation of the Remedial Action and shall provide the analytical results to the Performing Respondent(s) within thirty (30) days of receipt. The Respondent(s) shall provide assistance necessary for TNRCC to take splits' or duplicates' samples.
- F. The Respondent(s) shall notify TNRCC at least seven (7) days before any sampling is conducted in accordance with approved work plan and all samples shall be handled in accordance with the approved QAPP.
- G. The Respondent(s) shall submit all data, factual information, report, schedule and other documents required by this Administrative Order in hard copy format and to the extent feasible, in specific computer software format as determined by the TNRCC Project Manager.

XI. NOTICES AND SUBMITTAL

All notices and submittals required to be given under this Administrative Order shall be in writing unless otherwise expressly authorized. Documents, including reports, approvals, and other correspondence, shall be submitted pursuant to this Administrative Order to the following addressees or to such other addressees as the Parties hereafter may designate in writing:

As to the Texas Natural Resource Conservation Commission

For mail:

Texas Natural Resource Conservation Commission
Pollution Cleanup Division
Superfund Engineering Section (MC 144)
P. O. Box 13087
Austin, TX 78711-3087
Attention: Mr. Ashby McMullan
Project Manager/Unnamed Plating Site

For overnight express mail or delivery service:

Texas Natural Resource Conservation Commission
Pollution Cleanup Division
Superfund Engineering Section (MC 144)
12100 Park 35 Circle
Austin, TX 78753
Attention: Mr. Ashby McMullan
Project Manager/Unnamed Plating Site

As to the Performing Respondent(s):

Mr. Thomas M. Jackal
Associate Counsel
AmeriGas, Inc.
460 N. Gulph Road
King of Prussia, Pennsylvania 19406

Mr. John Brasino
Environmental Partners, Inc.
10940 NE 33rd Place
Suite 110
Bellevue, Washington 98004

Mr. Mark J. White
Baker & Botts, L.L.P.
1600 San Jacinto Center
98 San Jacinto Boulevard
Austin, Texas 78701-4039

XII. PERIODIC REVIEW

- A. All information required to be submitted under the provisions of this Administrative Order shall be directed to the attention of the TNRCC Project Manager, Superfund Engineering Section of the Pollution Cleanup Division.
- B. In addition to the deliverables set forth in this Administrative Order, Respondent(s) shall provide progress reports to TNRCC for all actions and activities undertaken pursuant to this Administrative Order. Respondent(s)' obligation to submit progress reports continues until TNRCC gives Performing Respondent(s) written notice that Respondent(s) has (have) demonstrated, to TNRCC's satisfaction, that all of the terms of this Administrative Order, including any additional tasks which TNRCC has determined to be necessary, have been completed.
- C. IRM, RD AND RA PROGRESS REPORTS
 - 1. Commencing on the 10th day of the month following the month when this Administrative Order becomes effective, the Respondent(s) shall submit written monthly progress reports to TNRCC. These progress reports shall describe the actions taken pursuant to this Administrative Order, including a general description of activities and progress during the reporting period, activities projected to be commenced or completed during the next reporting period, and any problems that have been encountered or are anticipated by the Respondent(s) in commencing or completing the Remedial Action. Progress reports shall include all data received during the reporting period and up-to-date progress schedule. Progress reports shall identify any violations of this Administrative Order and calculate the stipulated penalty the Respondent(s) is required to pay under Section XVIII, STIPULATED PENALTIES, of this Administrative Order. The monthly progress report shall be terminated when the first Post Closure Progress Report is submitted.
 - 2. If a progress report submitted by the Respondent(s) is deficient, TNRCC will notify the Performing Respondent(s) within ten (10) work days of receipt of such progress report by TNRCC. The notice will include a description of the deficiencies.
 - 3. Within ten (10) days of receipt by the Performing Respondent(s) of a notice of deficiency of a progress report, the Respondent(s) shall make the necessary changes and resubmit the progress report to TNRCC.

D. POST CLOSURE PROGRESS REPORTS

1. Commencing on the 31st day of the January following the year in which TNRCC issues the Certification of Completion of Remedial Action Phase, the Respondent(s) shall submit written annual progress reports to TNRCC. These progress reports shall include a general description of activities and progress during the reporting period, activities projected to be commenced or completed during the next reporting period, and any problems that have been encountered or are anticipated by the Respondent(s) in commencing the post closure Operation & Maintenance. Progress reports shall include all data received during the reporting period. Progress reports shall identify any violations of this Administrative Order and calculate the stipulated penalty the Respondent(s) is required to pay under Section XVIII, STIPULATED PENALTIES, of this Administrative Order. The yearly progress report shall be terminated when the Site meets the conditions specified in Section XIII, TERMINATION OF POST CLOSURE, of this Administrative Order.
2. If a progress report submitted by the Respondent(s) is deficient, TNRCC will notify the Performing Respondent(s) within ten (10) work days of receipt of such progress report by TNRCC. The notice shall include a description of the deficiencies.
3. Within ten (10) days of receipt by the Performing Respondent(s) of a notice of deficiency of a progress report, the Respondent(s) shall make the necessary changes and resubmit the progress report to TNRCC.

XIII. TERMINATION OF POST CLOSURE

The Post Closure Operation and Maintenance shall continue as long as hazardous substances remain at the Site.

XIV. RECORDS

- A. Each Respondent shall preserve and retain one set of all records and documents now in its possession or control or in the possession or control of its accountants or contractors that relate in any manner to its potential liability under §361.271 of the Act, with respect to the Site.
- B. Until completion of the Remedial Action and satisfaction of this Administrative Order, the Respondent(s) shall preserve, and shall instruct their contractors and subcontractors, and anyone else acting on their behalf at the Site to preserve (in the

form of originals or copies, or in the alternative, microfiche of all originals), all records, documents, and information of whatever kind, nature, or description required to be generated hereunder and relating to the performance of the Remedial Action at the Site. TNRCC will contact the designated Facility Coordinator to determine the location and to obtain copies of the documents required by this paragraph. Upon the completion of the Remedial Action, copies of all such records, documents, and information as TNRCC will request shall be delivered to the TNRCC Project Manager or his or her representatives.

C. Any Respondent(s) refusing to provide copies of a document based upon a claim of privilege shall identify the document and explain the basis for the claim.

D. All records and documents in any Respondent's possession at any time prior to termination of this Administrative Order, that relate in any way to the Site shall be preserved for a minimum of 10 years after TNRCC certification of completion of all requirements under this Administrative Order. Respondent(s) shall acquire and retain copies of all documents that relate to the Site and are in the possession of its employees, agents, accountants, contractors, or attorneys. After this 10 year period, Respondents shall notify TNRCC at least 90 days before the documents are scheduled to be destroyed. If TNRCC requests that the documents be saved, Respondents shall, at no cost to TNRCC, give TNRCC the documents or copies of the documents.

E. Upon request by TNRCC, Respondent(s) shall submit to TNRCC all documents related to the remedy for possible inclusion in the administrative record in accordance with 30 TAC § 335.345.

XV. ACCESS

A. If the Site, or the off-Site area that is to be used for access, or other property subject to or affected by the remedial activities, or other property where documents required to be prepared or maintained by this Administrative Order are located; is owned in whole or in part by parties other than those bound by this Administrative Order, Respondent(s) will obtain, or use its best efforts to obtain, Site access agreements from the present owner(s) within ninety (90) days of the effective date of this Administrative Order. Such agreements shall provide access for TNRCC, its contractors and oversight officials, the state or local authorities and its contractors as approved by TNRCC, and Respondent(s) or Respondent(s)' authorized representatives and contractors, and such agreements shall specify that Respondent(s) is not TNRCC's representative with respect to liability associated with Site activities. Copies of such agreements shall be provided to TNRCC before Respondent initiates field activities. Respondent(s)' best efforts shall

include providing reasonable compensation to any off-Site property owner. If access agreements are not obtained within the time referenced above, Respondent(s) shall immediately notify TNRCC of its failure to obtain access. The TNRCC will, pursuant to its statutory authority, make appropriate efforts to obtain such access upon reasonable terms to Respondent(s). Any revisions to the submittal deadlines necessitated by the inability of Respondent(s) to obtain such access shall be considered a reasonable grounds for extending the deadline affected thereby pursuant to Section XVII, EXTENSIONS OF DEADLINES, of this Administrative Order.

- B. At all times, TNRCC and its authorized representatives and contractors shall have the authority to enter and freely move about all property at the Site and off-Site areas subject to or affected by the clean up or where documents required to be prepared or maintained by this Administrative Order are located, for the purposes of inspecting conditions, activities, the results of activities, records, operating logs, and contracts related to the Site or Respondent(s) and its representatives or contractor pursuant to this Administrative Order; reviewing the progress of the Respondent(s) in carrying out the terms of this Administrative Order; conducting tests as TNRCC or its authorized representatives or contractors deem necessary; using a camera, sound recording device or other documentary type equipment; verifying the data submitted to TNRCC by Respondent(s); and performing any necessary remedial action not being performed by the Respondent(s) or not being satisfactorily performed by Respondent(s). Respondent(s) shall allow TNRCC and its authorized representatives to inspect and copy all records, files, photographs, documents, sampling and monitoring data, and other writings related to work undertaken in carrying out this Administrative Order. Nothing herein shall be interpreted as limiting or affecting TNRCC's right of entry or inspection authority under State or Federal law. All parties with access to the Site shall comply with Site health and safety plans.

XVI. DELAY IN PERFORMANCE

Respondent(s) shall notify TNRCC of any delay or anticipated delay in achieving compliance with any requirement of this Administrative Order. Such notification shall be made by telephone to TNRCC's Designated Project Manager or Alternate Designated Project Manager within 48 hours after Respondent(s) first knew or should have known that an event might cause a delay. Within seven (7) calendar days after notifying TNRCC by telephone, Respondent(s) shall provide written notification fully describing the nature of the delay, the reasons the delay is beyond the control of Respondent(s), and a schedule for implementing the measures that will be taken to mitigate the effect of the delay. Respondent(s) shall adopt all reasonable measures to avoid or minimize any such delay.

Increased costs or expenses associated with implementation of the activities called for in this document shall not be considered circumstances beyond the control of Respondent(s).

XVII. EXTENSION OF DEADLINES

Notwithstanding anything to the contrary contained in this Administrative Order, if any Respondent fails to comply with the terms and conditions of this Administrative Order (the "Defaulting Respondent(s)"), the non-defaulting Performing Respondent(s) shall bear no costs for any resulting fines, penalties, or TNRCC oversight of the Remedial Activities. Defaulting Respondent(s) and those parties identified in Item A of Section II, FINDINGS OF FACT, of this Administrative Order may be assessed up to the full costs for TNRCC oversight of the IRM, RD, RA, O&M or other similar study. If actions required by this Administrative Order are delayed or are not timely completed because of acts or omissions of Defaulting Respondent(s), the non-defaulting Respondent(s) may request a time extension of up to thirty (30) calendar days for the next upcoming deadline. Thereafter, it is the responsibility of the non-defaulting Respondent(s) to adhere to all remaining deadlines in this Administrative Order.

Respondent(s) may seek and the Executive Director (ED) may grant an extension of any deadline contained in this Administrative Order or in any plan or report submitted pursuant to this Administrative Order. The request for a deadline extension shall be submitted no later than seven (7) calendar days prior to the deadline date and shall substantiate good cause by the Respondent(s). The determination of what constitutes good cause and the length of the deadline extension shall be at the sole discretion of the ED.

XVIII. STIPULATED PENALTIES

Subject to Section XX, FORCE MAJEURE, and the conditions set out in Section XXI, DISPUTE RESOLUTION, of this Administrative Order, noncompliance with this Administrative Order shall result in stipulated penalties in accordance with Chapter §361.198(b) of the Act. The Respondent(s) shall pay stipulated penalties as set forth below.

A. Penalties Related to Timeliness of Submittals

1. For failure to;

- a. meet the deadlines set forth in Item K of Section V, ORDER and Exhibit D, Remedial Activities Scope of Work, of this Administrative Order;

- b. submit timely reports set forth in Section XII, PERIODIC REVIEW, of this Administrative Order;
- c. submit data in a timely fashion or provide timely notice of sampling under Section X, SUBMITTAL OF DOCUMENTS, SAMPLING, AND ANALYSIS, of this Administrative Order; or
- d. resubmit a document as set forth in Section IX, SUBMITTAL REQUIRING TNRCC'S APPROVAL, of this Administrative Order,

the Respondent(s) shall pay stipulated penalties in the following amounts for each day during which the delay continues:

<u>Period of Delay</u>	<u>Amount/Day</u>
1st through 5th day	\$ 250.00
6th through 30th day	\$ 500.00
31st day and beyond	\$2,000.00

- 2. By submitting required documents and reports in advance of any deadline applicable under this Administrative Order, the Respondent(s) shall obtain credits against deadlines for submitting subsequently due documents in the same group. A maximum of ten (10) days may be accrued for credit in each group, and a maximum of ten (10) days may be applied against any one deadline. The groups are as follows:
 - a. documents required under Item K of Section V, ORDER and Exhibit D, Remedial Activities Scope of Work, of this Administrative Order;
 - b. reports under Section XII, PERIODIC REVIEW, of this Administrative Order;
 - c. data submittals under Section X, SUBMITTAL OF DOCUMENTS, SAMPLING, AND ANALYSIS, of this Administrative Order;

B. Penalties Related to Project Milestones

1. For failure to:

- a. complete Interim Remedial Measures Plan Design according to the schedule approved under Task 1C, Exhibit D, Remedial Activities Scope of Work, of this Administrative Order;
- b. initiate Interim Remedial Measures Implementation on Site in accordance with the schedule approved under Task 1C, Exhibit D, Remedial Activities Scope of Work, of this Administrative Order;
- c. complete Remedial Design according to the schedule approved under Task 2E, Exhibit D, Remedial Activities Scope of Work, of this Administrative Order;
- d. initiate Remedial Action on Site in accordance with the schedule approved under Task 2E, Exhibit D, Remedial Activities Scope of Work, of this Administrative Order;
- e. initiate the Operation and Maintenance Plan in accordance with the schedule approved under Task 2E, Exhibit D, Remedial Activities Scope of Work, of this Administrative Order;

the Respondent(s) shall pay stipulated penalties in the following amounts for each day during which the delay continues:

<u>Period of Delay</u>	<u>Amount/Day</u>
1st through 5th day	\$ 250.00
6th through 30th day	\$ 500.00
31st day and beyond	\$3,000.00

2. By achieving the project milestones identified in subparagraph 1 in advance of applicable deadlines, the Respondent(s) shall obtain credits against subsequent milestones. A maximum of twenty (20) days may be accrued for credit at any one time, and a maximum of ten (10) days may be applied against any one deadline.

- C. For disobeying an order to halt work under Section VII, DESIGNATED PROJECT MANAGER/FACILITY COORDINATOR, of this Administrative Order, the Respondent(s) shall pay stipulated penalties of \$10,000 per day.

- D. For failure to use due diligence to obtain Site access in accordance with Section XV, ACCESS, of this Administrative Order, the Respondent(s) shall pay a stipulated penalty of \$1,000 per day.
- E. For denying access provided for in Section XV, ACCESS, of this Administrative Order, the Respondent(s) shall pay stipulated penalties of \$10,000 per day.
- F. For failure to provide records in accordance with Texas Administrative Code Section §335.345, any Respondent(s) shall pay a stipulated penalty of \$3,000 per day.
- G. With the exception of individual violations referred to in item F above, all penalties referred to herein represent collective, not individual obligations of the Respondent(s).
- H. Stipulated penalties under this Section shall be submitted within sixty (60) days after receipt of a demand letter that stipulated penalties have accrued and have not been waived, or of dispute resolution pursuant to this Administrative Order, whichever comes later. Penalties shall accrue from the date of noncompliance.
- I. Stipulated penalties shall be paid to "The Hazardous and Solid Waste Remediation Fee Fund (Fund 550) of the State of Texas", and payment shall be mailed to:
- Chief Fiscal Officer (MC 180)
Texas Natural Resource Conservation Commission
Re: Unnamed Plating State Superfund Site Administrative Order
P.O. Box 13088
Austin, Texas 78711-3088.
- J. The above stipulated penalty requirements shall expire upon satisfactory completion of the terms of this Administrative Order, including full payment of any stipulated penalties incurred prior to that date.
- K. A single act or omission shall not be the basis for more than one type of stipulated penalty, however a single act or omission may result in more than one (1) day of stipulated penalties.
- L. Subject to Dispute Resolution, TNRCC has the sole discretion to reduce or waive stipulated penalties.

XIX. COMPLIANCE WITH APPLICABLE LAWS

- A. All actions by Respondent(s) pursuant to this Administrative Order shall be performed in accordance with the requirements of all applicable or relevant and appropriate laws, as required by the Texas Solid Waste Disposal Act, Texas Health and Safety Code, the Texas Hazardous Substances Spill Prevention and Control Act, and Texas Water Code. This Administrative Order is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.
- B. All materials removed from the Site shall be disposed of or treated at a facility approved by TNRCC's Designated Project Manager and in accordance with all other applicable or relevant and appropriate Federal, state, and local requirements.

XX. FORCE MAJEURE

- A. If the Respondent(s) fail to comply with any of the technical requirements in the Administrative Order within the schedules set out herein and that failure is reasonably caused (in whole or in part) by events beyond the reasonable control of Respondent(s), that failure shall not be construed as a violation of this Administrative Order. The burden of establishing that an event is beyond their reasonable control lies with the Respondent(s). The Respondent(s) seeking relief shall notify the TNRCC in writing within seven (7) days of the time of commencement and within seven (7) days of the ending of any such occurrence.
- B. Force Majeure shall not include increased costs or expenses of any of the work to be performed under this Administrative Order, nor the financial inability of any of the Respondent(s) to perform such work.
- C. Such notice shall describe in detail the cause of the delay, the anticipated duration of the delay, the measures taken and to be taken by Respondent(s), their contractors, or consultants, to prevent or minimize the delay, and the timetable by which these measures have been, are being, and will be implemented. This revised timetable shall be implemented upon its approval by the TNRCC. Failure to notify TNRCC within the seven (7) day period in writing in accordance with this section shall constitute a waiver of the claim of Force Majeure.
- D. If the TNRCC and the Respondent(s) cannot agree that the reason for the delay was a "Force Majeure" event or cannot agree upon the amount of additional time necessary to complete the affected Phases, then the dispute shall be resolved by reference to Section XXI, DISPUTE RESOLUTION, of this Administrative Order.

Respondent(s) shall have the burden of demonstrating that a "Force Majeure" is warranted under the circumstances.

XXI. DISPUTE RESOLUTION

- A. The Respondent(s) and the TNRCC shall attempt to resolve any disputed issues on an informal basis. Respondent(s) shall commence informal negotiations by notifying the TNRCC that Dispute Resolution is being invoked. Except as provided in item D of this section, informal negotiations shall not extend beyond thirty (30) days from the date TNRCC receives notification unless the Parties agree otherwise in writing.
- B. If the Parties cannot resolve any dispute arising under this Administrative Order, the interpretation of the matter in dispute advanced by TNRCC shall be considered binding unless Respondent(s) invoke the dispute resolution provisions of this Section.
- C. If the dispute is not resolved through informal negotiations, either party may make a written request for a hearing before the State Office of Administrative Hearings, Natural Resources Division. The request shall describe the nature of the dispute and include a proposal for its resolution. A copy of the request shall be provided to the other party and the Public Interest Counsel on the same day the request is made. Filing a request to resolve a dispute shall not by itself postpone the deadlines for Respondent(s) to meet their obligations under this Administrative Order or stay the accrual of stipulated penalties for the disputed issue. However, the obligation to submit stipulated penalties to the TNRCC shall be stayed pending resolution of the dispute.
- D. In any dispute arising out of an TNRCC determination to perform a portion or all of the Remedial Activities under Section V, ORDER, of this Administrative Order, the Respondent(s) shall have five (5) days from receipt of TNRCC's notice of intent and basis of determination to commence informal negotiations by notifying the TNRCC that Dispute Resolution is being invoked. Informal negotiations shall not extend beyond fifteen (15) days from the date TNRCC receives notification unless the Parties agree otherwise in writing.
- E. Unless otherwise specifically set forth herein, the fact that Dispute Resolution is not specifically set forth in the individual Sections of this Administrative Order is not intended to and shall not bar Performing Respondent(s) from invoking this Section as to any disputed issue arising under this Administrative Order, including any dispute concerning the exercise of discretion by TNRCC under the terms of this Administrative Order.

XXII. COVENANT NOT TO SUE

- A. Except as expressly provided herein, the TNRCC hereby covenants not to sue, not to take any administrative action against, and not to execute judgment against Performing Respondent(s) and De Minimis Responsible Parties for any and all civil or administrative obligations or liability, including future liability, to the TNRCC for any causes of action arising under subchapter F, G, H, I, J, K and L of Chapter 361 of The TEXAS HEALTH AND SAFETY CODE and subsequently enacted statutory provisions authorizing equivalent causes of action for claims arising from or related to releases or threatened releases of hazardous substances at or from the Site, as well as 30 TAC, Subchapter S. Further, the TNRCC expressly covenants not to sue Performing Respondent(s) and De Minimis Responsible Parties for costs incurred by the TNRCC at the Site. With respect to future liability, this covenant not to sue shall take effect upon TNRCC issuance of the notice as specified in Section XXXI, TERMINATION AND SATISFACTION, of this Administrative Order under this Order. This covenant shall not apply to conditions set out in items C and D below.
- B. The Performing Respondent(s) hereby covenant not to sue the TNRCC, including any and all departments, agencies, officers, administrators, State contractors and representatives thereof, for any claim, counter-claim, or cross-claim known to Performing Respondent(s) at the effective date of this Administrative Order asserted, or that could have been asserted at the effective date of this Administrative Order, arising out of or relating to the Site.
- C. The provisions of Paragraphs 1 and 2 of this Section shall not apply to the following claims:
1. Claims based on a failure by the Performing Respondent(s) to fulfill the requirements of this Order.
 2. Claims for costs incurred by the State of Texas as a result of the failure of the Performing Respondent(s) to fulfill the requirements of Section V, ORDER, of this Administrative Order.
 3. Claims based on criminal liability.
 4. Claims based on liability for hazardous substances removed from the Site pursuant to this Administrative Order by any Party.
 5. Claims for damages to natural resources as defined by CERCLA.

D. Notwithstanding any other provisions of this Order, the State of Texas reserves the right to seek modification of this Order or to institute a new action to seek additional removal or remedial measures at the Site through an action to compel the Performing Respondent(s) to perform removal or remedial work or to institute an action to compel the Performing Respondent(s) to reimburse the State of Texas for response costs if:

1. For proceedings prior to TNRCC issuance of the notice as specified in Section XXXI, TERMINATION AND SATISFACTION, of this Administrative Order.

a. Conditions at the Site (including the release or threat of release of hazardous substances), previously unknown to the State of Texas are discovered after the entry of this Order; or

b. Information is received, after the date of the entry of this Order;

and these previously unknown conditions or this information indicates that the Remedial Activities are not protective of human health and the environment.

2. For proceedings subsequent to TNRCC issuance of the notice as specified in Section XXXI, TERMINATION AND SATISFACTION, of this Administrative Order.

a. Conditions at the Site previously unknown to the State of Texas are discovered after TNRCC issuance of the notice as specified in Section XXXI, TERMINATION AND SATISFACTION, of this Administrative Order; or

b. Information is received after TNRCC issuance of the notice as specified in Section XXXI, TERMINATION AND SATISFACTION, of this Administrative Order;

and these previously unknown conditions or this information indicates that the Remedial Activities are not protective of human health and the environment.

E. For the purposes of this Section, conditions or information known to the TNRCC shall include but not be limited to those matters contained in or referred to in Exhibit A, Proposed Remedial Action Document.

XXIII. LIABILITY

The State of Texas, by issuance of this Administrative Order, shall assume no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondent(s), or its (their) directors, officers, employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Administrative Order. Neither TNRCC nor the State of Texas may be deemed to be a party to any contract entered into by Respondent(s) or its (their) directors, officers, employees, agents, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Administrative Order. Nothing herein is intended to modify any liability of the State of Texas for willful or negligent acts of representatives of the State of Texas.

XXIV. SEVERABILITY

The provisions of this Administrative Order are intended to be severable and are deemed severable and, should any provision of this Administrative Order be rendered unenforceable by a court of competent jurisdiction or other appropriate authority, the remaining provisions shall remain valid and enforceable.

XXV. RESERVATION OF RIGHTS/RETENTION OF CLAIMS

Nothing in this Administrative Order shall constitute or be construed as a covenant not to sue with respect to, or a release from any claim, cause of action, or demand in law or equity against any person, firm, partnership, or corporation not a party to this Administrative Order.

XXVI. SECTION HEADINGS

The section headings set forth in this Administrative Order and its Table of Contents are included for convenience of reference only and shall be disregarded in the construction and interpretation of any of the provisions of this Administrative Order.

XXVII. CONTINUING AUTHORITY

In regard to Respondent(s) listed in Item A of Section II, FINDINGS OF FACT, of this Administrative Order only, the TNRCC specifically retains authority over such respondent(s) to this action for the duration of this Administrative Order for the purposes of issuing such further orders or directions as may be necessary or appropriate to construe,

implement, modify, enforce, terminate, or reinstate the terms of this Administrative Order or for any further relief as the interest of State of Texas may require.

XXVIII. ENFORCEMENT AND RESERVATIONS

- A. Except as expressly provided in Section XXII, COVENANT NOT TO SUE, nothing herein shall preclude TNRCC from taking any additional enforcement actions, including issuing additional orders as TNRCC may deem necessary, or, from requiring, Respondent(s) to perform additional activities in the future. However, the TNRCC shall not seek additional penalties for matters subject to stipulated penalties.
- B. Except as expressly provided in Section XXII, COVENANT NOT TO SUE, nothing in this Administrative Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, subsidiary or corporation for any liability it may have arising out of or relating in any way to the Site.

XXIX. EFFECTIVE DATE AND COMPUTATION OF TIME

- A. Except as noted otherwise, all time periods referred to in this Administrative Order or attachments hereto are calendar days. Deadlines falling on a weekend or a State holiday shall be extended until the next business day.
- B. The terms "submit" and "provide" as used herein shall refer to the date on which the item in question is to be received by the appropriate Party. Submittals received by TNRCC on the deadline date shall be deemed timely.
- C. The effective date of this Administrative Order is the "issued date" provided on the Chairman of the TNRCC's signature page of this Administrative Order.

XXX. OPPORTUNITY TO CONFERENCE

- A. Respondent(s) may, within ten (10) days after the date this Administrative Order is issued, request a conference with Pollution Cleanup Division staff, to discuss this Administrative Order. The request must be submitted in writing to the designated TNRCC Project Manager and the conference shall occur at the TNRCC Austin Headquarters.
- B. The purpose and scope of the conference shall be limited to issues involving the implementation of the response actions required by this Administrative Order.

XXXI. TERMINATION AND SATISFACTION

Except as provided in this paragraph, the provisions of this Administrative Order shall be deemed to be satisfied in regard to Performing Respondent(s) when TNRCC notifies Performing Respondent(s) in writing that Performing Respondent(s) has demonstrated, to TNRCC's satisfaction, that all terms of this Administrative Order, including any additional tasks which TNRCC has determined to be necessary, have been completed. This notice shall not, however, terminate Respondent(s) obligation to comply with record preservation under this Administrative Order. Nor shall this notice be effective to terminate the obligations of those potentially responsible parties listed in Item A of Section II, **FINDINGS OF FACT**, of this Administrative Order.

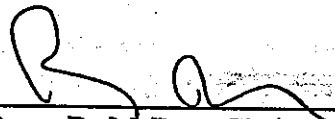
XXXII. CONSTRUCTION OF RULES

Unless otherwise expressly provided for in this Order, the past, present, and future tense shall each include the other. Additionally, the masculine, feminine, and neuter gender shall each include the other, and the singular and plural number shall each include the other.

The Chief Clerk shall send a copy of this Administrative Order to all parties.

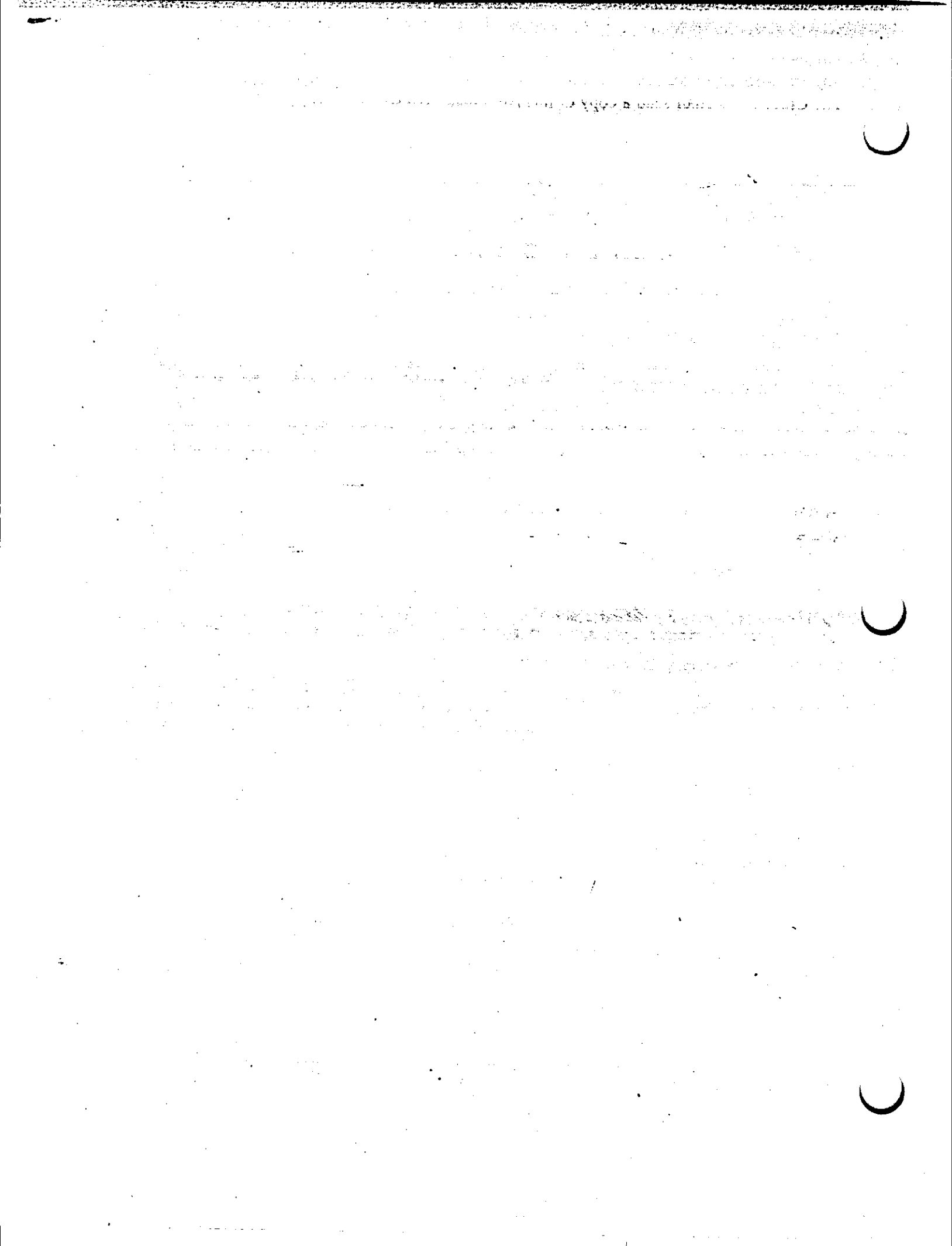
Issued date: MAR 17 1996

Texas Natural Resource Conservation Commission


Barry R. McBee, Chairman

Attest
(SEAL)


Gloria A. Vasquez, Chief Clerk



UNNAMED PLATING
STATE SUPERFUND SITE
ADMINISTRATIVE ORDER

EXHIBIT A

PROPOSED REMEDIAL ACTION DOCUMENT

STATE OF CALIFORNIA

DEPARTMENT OF REVENUE

OFFICE OF THE ASSISTANT ATTORNEY GENERAL

San Francisco, California

Dear Sir:

Reference is made to your letter of the 10th instant, in which you request that the State of California be added to the list of states included in the California State Taxation Act of 1939.

The California State Taxation Act of 1939, Chapter 1079, Statutes of California, 1939, is a public law which provides for the taxation of certain states and territories.

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TEXAS NATURAL RESOURCE CONSERVATION COMMISSION



UNNAMED PLATING STATE SUPERFUND SITE PROPOSED REMEDIAL ACTION DOCUMENT MAY 1995

SITE NAME AND LOCATION

Unnamed Plating
6816-6824 Industrial Avenue
El Paso, Texas

STATEMENT OF BASIS AND PURPOSE

This document presents the recommended cleanup method for subsurface soils which is designed to insure the protection of human health and the environment at the Unnamed Plating State Superfund Site. The remedial selection was made in accordance with the Texas Solid Waste Disposal Act, codified as: Texas Health and Safety Code, Chapter 361, and all applicable State and Federal environmental regulations.

The Texas Natural Resource Conservation Commission (TNRCC) is providing a description of the recommended remedy selection with reasons for the recommendation. The purpose of this document is to: 1) describe the other remedy alternatives considered in detail in the feasibility study report, 2) solicit public review and comment on the recommended alternative, and 3) provide information on how the public can be involved in the remedy selection process.

This Proposed Remedial Action Document summarizes information that can be found in greater detail in several documents located in the Unnamed Plating site files (see below). The results of sampling activities and an evaluation of site risk are presented in the remedial investigation report and the baseline risk assessment report. The evaluation of site remedy alternatives are presented in the feasibility study report.

The TNRCC encourages the public to review these documents in order to gain a more comprehensive understanding of the site, the State Superfund activities that have been conducted, and the various alternatives that have been developed and evaluated to address contamination at the site. The TNRCC also encourages the public to participate in the decision making process for the site. The Unnamed Plating site files are available at: TNRCC, Building D, Room 190, 12118 North IH-35, Austin, Texas 78753. Copies of the final remedial investigation report, baseline risk assessment report, and feasibility study report are available at: El Paso Library, Southwest Collection, 501 North Oregon, El Paso, Texas 79901.

UNNAMED PLATING STATE SUPERFUND SITE
PROPOSED REMEDIAL ACTION DOCUMENT
MAY 1995

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action as proposed, may present an imminent and substantial endangerment to public health, welfare, and/or the environment.

DESCRIPTION OF THE PROPOSED REMEDY

The proposed remedy selection will address the threat from the subsurface soils. This will be accomplished through capping the site with a geomembrane and reinforced concrete. The proposed remedy will be fully protective of human health and the environment by eliminating all means of physical contact. The remedy will provide reduction in mobility of contaminants by eliminating infiltration of precipitation and prevent wind-blown transport of any hazardous constituents. The major component of the selected remedy is as follows:

Capping the site with a cover consisting of a geomembrane and reinforced concrete. The site will be graded, leveled, and compacted to provide an even surface for the geomembrane. The cap will consist of four-inch thick concrete reinforced steel. Drainage structures will be incorporated into the cap to minimize erosion of the cap and also prevent run-on and run-off from the cap. A long-term operation and maintenance program will be designed to ensure that the cap is maintained in perpetuity. A deed restriction will be recorded to prevent alteration or removal of the cap.

I.. LOCATION AND DESCRIPTION

The Unnamed Plating site is located in El Paso, El Paso County, Texas, at 6816-6824 Industrial Avenue. The site covers approximately two acres in an industrial area in the southeast portion of the City of El Paso. The site slopes four to five feet from north to south. A 13,000 square foot steel frame building is located on the western half of the site and is surrounded by a paved asphalt surface. The remainder of the site is covered by dirt at the surface. There are three closed waste ponds partially exposed on the eastern half of the site. The ponds are thought to extend westward under the asphalt and potentially under a portion of the on-site building. A fourth pond may also be present in an area south of the building.

UNNAMED PLATING STATE SUPERFUND SITE
PROPOSED REMEDIAL ACTION DOCUMENT
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II. SITE HISTORY

The site was owned and operated by Schwartz-Edmonds Corporation as a spent nickel processing and metals recovery facility from 1971 through 1979. Three surface impoundments were used to dispose of an unknown volume of waste.

The site was acquired by J. Faulkner in 1983 and sold to Barrick Enterprises and Domicello Liquidating Trust in 1983. The warehouse located on the western portion of the site is currently leased for equipment storage purposes only. The eastern portion of the site is a vacant lot.

III. HIGHLIGHTS OF COMMUNITY PARTICIPATION

Local community involvement in the State Superfund process began on October 27, 1987, with a public meeting held in El Paso, Texas. The purpose of this meeting was to seek comments on the proposed listing of the Unnamed Plating site and to obtain any information related to the site.

The public is invited to comment on the proposed remedy selection alternative. The public comment period begins May 16, 1995, and ends July 11, 1995, at the close of the public meeting. During the public comment period, written comments may be submitted to :

Michael A. Bame, P.G.
Superfund Investigation Section
Pollution Cleanup Division
Texas Natural Resource Conservation Commission - MC143
P.O. Box 13087
Austin, Texas 78711-3087

Additionally, oral comments will be accepted at a public meeting scheduled for July 11, 1995, beginning at 7:00 p.m., at the City Council Chambers, City of El Paso, 2 Civic Center Plaza, El Paso, Texas. The TNRCC will respond to all comments received during the public comment period in a document called a *Responsiveness Summary*. The *Responsiveness Summary* will be made available to the public in the repositories listed on page 1.

IV.. SUMMARY OF SITE CHARACTERISTICS

Site characterization has been accomplished through a remedial investigation, the purpose of which has been to determine the nature and extent of site related contamination and define general site characteristics.

UNNAMED PLATING STATE SUPERFUND SITE
PROPOSED REMEDIAL ACTION DOCUMENT
MAY 1995

In El Paso County, the Hueco Bolson Aquifer is the principal source of fresh water in the El Paso area. Based on available data, the depth to the top of the aquifer at the site is approximately 200 feet. Groundwater usage in the vicinity of the site is for the most part from sands deeper than two hundred feet. The subsurface deposits include gravel, sand, silt and clay.

Waste at the Unnamed Plating site appears to be confined mainly to the areas associated with the waste ponds. The primary contamination at the site appears to be heavy metal enriched, crystallized liquid mixed with dirt within the former waste ponds. No organic contaminants of concern were found within the boundaries of the ponds. Within the boundaries of the ponds, the waste is apparently distributed throughout the ponds to a depth of ten feet. The waste below four feet generally is present as crystalline solid layers between layers of sand and gravel. The contaminants of concern in the soils are arsenic, cadmium, copper, nickel, and zinc.

Vertical or lateral migration of metal contamination through soils and into groundwater is unlikely due to the large unsaturated zone between contaminated soils and groundwater. The hydraulic conductivity of the clay layer at the site was found to be very low, inhibiting flow through the unsaturated zone. In addition, no shallow water zone was encountered at the site indicating very little or no groundwater recharge.

V. SUMMARY OF SITE RISKS

Risk Evaluation

The site risks have been evaluated through the preparation of a risk assessment. This is a specific procedure which uses facts and assumptions to estimate potential adverse effects on human health and the environment from exposure to the existing contamination at the site before any cleanup.

The populations on and near the site were characterized in order to assess the likelihood and extent of exposure to site contaminants. The current use of the land in the vicinity of the site is industrial, and future land use is likely to remain industrial. The on-site and off-site future industrial workers were identified as potential human receptor populations for the site. Each was evaluated for potential exposures to site contaminants.

UNNAMED PLATING STATE SUPERFUND SITE
PROPOSED REMEDIAL ACTION DOCUMENT
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The risk assessment determined that only direct exposure to soils via ingestion and inhalation of wind blown soils on-site were found to be potentially significant exposure pathways. Off-site exposures via inhalation were considered in the risk assessment and found to be insignificant. Removing the on-site inhalation and ingestion pathways will reduce human health risks to acceptable levels.

More detailed and specific information is available in the risk assessment report which is located in the repositories listed on page 1.

Cleanup Levels

The final step in the risk assessment process is determining the cleanup levels. The cleanup levels are the levels of chemicals which, if allowed to remain at the site, do not pose an unacceptable risk of adverse health effects.

The process of calculating the cleanup levels is found in the EPA guidance document, *Risk Assessment for Superfund: Volume I - Human Health Evaluation Manual (Part B, Development of Risk-based Preliminary Remediation Goals)*, EPA/540/R-92/003, Publication 9285.7-01B, December 1991. The cleanup levels have also been developed in accordance with Texas Administrative Code, §335.563, Subchapter S, Risk Reduction Rules. All applicable or relevant and appropriate {State and Federal} requirements (ARARs) have been addressed in the development of these cleanup levels.

The following are the cleanup goals for the primary chemicals of concern at the site:

<u>Constituent</u>	<u>Media</u>	<u>Cleanup Level</u>	<u>Units</u>
Arsenic	soil	0.9	mg/kg
Cadmium	soil	12	mg/kg
Copper	soil	73,500	mg/kg
Nickel	soil	87	mg/kg
Zinc	soil	399,000	mg/kg

UNNAMED PLATING STATE SUPERFUND SITE
PROPOSED REMEDIAL ACTION DOCUMENT
MAY 1995

VI. DESCRIPTION OF CLEANUP ALTERNATIVES

Alternatives

The alternatives for the remediation (cleanup) of affected soils at the site evaluated in the feasibility study included the following:

- Alternative 1: No Action
- Alternative 2: Capping
- Alternative 3: Stabilization
- Alternative 4: Soil Washing
- Alternative 5: Removal and Disposal

Alternative 1: No Action

Estimated Total Costs (1994 dollars): \$ 0.00

The Superfund program requires that a no action alternative be considered at every site as a basis of comparison when evaluating other alternatives. This alternative is based on no remedial activities; therefore, there are no technologies incorporated into this alternative.

Alternative 2: Capping

Estimated Costs (1995 dollars): \$520,459

The Capping alternative consists of covering the site with a geomembrane and reinforced concrete. The site would be graded, leveled, and compacted to provide an even surface for the geomembrane. An ultraviolet resistant, reinforced polyethylene liner would be laid down on the graded site. The cap consist of four-inch thick reinforced concrete. Drainage structures would be incorporated into the cap to minimize erosion of the cap and also prevent run-on and run-off from the cap. The final elevation of the cap would be surveyed and benchmark located at the corners so that the boundaries of the cap would be identifiable through time. A long-term operation and maintenance program would be designed to ensure that the cap is maintained in perpetuity. A deed restriction would be recorded to prevent alteration or removal of the cap.

UNNAMED PLATING STATE SUPERFUND SITE
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Alternative 3: Stabilization

Estimated Costs (1995 dollars): \$5,017,117

This alternative consists of the stabilization of all soils above the preliminary remediation goals in the top ten feet at the site. Stabilization involves the use of silicate polymers to stabilize waste in-situ (in-place) to reduce the mobility of the contaminants. Silicate polymers are not susceptible to leaching problems associated with other stabilization agents such as fly ash or cement. Stabilization involves chemically immobilizing the contaminants in-place with an organic polymer which binds the fixed contaminants in a structural matrix of concrete.

Alternative 4: Soil Washing

Estimated Costs (1995 dollars): \$4,432,124

Soil washing is a demonstrated technology that may reduce the mobility and potentially, the volume of contaminants on-site. Soil washing is a physical/chemical separation technology. Contaminants are transferred to a wash fluid or concentrated to a fine fraction using a size separation technique. After soil washing, the contaminants are transferred to either water or a small fraction of the original soil matrix and some fraction of the original soil is returned to the excavation.

Soil washing will require considerable site preparation to stage processing equipment prior to implementation. Also prior to implementation, a treatability study and pilot scale test will be required to determine the effectiveness of the remedy under field conditions and to establish the final processing parameters.

Alternative 5: Removal and Disposal

Estimated Costs (1995 dollars): \$8,570,624

This alternative will remove all the soils above the preliminary remediation goals at the site. The site will be surveyed and sampled prior to removal. Soils that could be classified as hazardous waste will be sent to a hazardous waste landfill. Soils that are not hazardous will be disposed of at an appropriate landfill. Approximately 9000 cubic yards of the removed soils will be hazardous.

UNNAMED PLATING STATE SUPERFUND SITE
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MAY 1995

VII. SUMMARY OF COMPARATIVE ANALYSIS OF CLEANUP ALTERNATIVES

The State of Texas, in the TNRCC Risk Reduction Rules, requires that certain criteria are used to evaluate each cleanup alternative. These criteria include how well the alternative reduces long-term exposure to contamination, the extent to which cleanup goals are attained, and whether all applicable environmental regulations are met. The alternative is also judged on whether it reduces the volume, toxicity and mobility of site contaminants. The cost of the alternative and its ability to address local community concerns is reviewed, along with the potential for the cleanup alternative to cause any problems for the environment or local community. Lastly, alternatives are compared strictly on their technical worthiness.

The cleanup levels presented earlier were developed in accordance with Standard 3 of the TNRCC Risk Reduction Rules. Standard 3 of these rules requires that alternatives be permanent, or, if that is not practicable, they must achieve the highest degree of long-term effectiveness possible. Alternatives must also be cost-effective. This means that the best balance between long-term effectiveness and cost should be achieved. And, the alternative must be capable of achieving the cleanup levels.

Alternative 1: No Action

The TNRCC Risk Reduction Standard 3 requires that all wastes be removed, decontaminated, or controlled to meet risk-based concentration levels. No significant reduction in risk is achieved. This alternative does not meet these requirements and will not be protective of human health and safety and the environment.

Alternative 2: Capping

Overall protection of human health and the environment will be provided with the implementation of this alternative. It is a cost-effective and easily implemented alternative to reduce the mobility of the contaminants on-site. The long term-term effectiveness of capping is good if proper provisions are taken to ensure the long-term care is provided. Long-term provisions will include inspection and repair of the concrete cap annually and replacement of the cap or parts of the cap when needed.

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PROPOSED REMEDIAL ACTION DOCUMENT
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The capping alternative will provide no reduction in toxicity or volume of hazardous waste. Capping will provide reduction in mobility by eliminating infiltration of precipitation through the upper surface and prevention of wind-blown transport of any hazardous constituents.

The capping alternative is easy to implement. The technology is simple and reliable and can be installed quickly. Installation of a cap does not preclude productive use of the property. Some uses such as the location of a warehouse covering the property may actually enhance the protectiveness of a cap.

Alternative 3: Stabilization

Overall protection of human health and the environment will be provided with the implementation of this alternative. After stabilization, infiltration of precipitation and wind transport of dust will be eliminated.

The required long-term operation and maintenance for stabilization would be more rigorous than with Alternative 2 since a stabilized waste will be at the surface.

Stabilization will reduce the mobility of the contaminants by binding them in a silicate matrix and may reduce toxicity by reducing availability of contaminants. A large portion of the stabilization matrix is concrete which should provide structural stability and effect long-term remedy.

This alternative would be difficult to implement because the operation of the stabilization equipment requires a large amount of space and the entire surface of the site may require treatment. In addition, there will be an increase in volume in treated soils.

The productive use of the property may be possible after stabilization. The use will be complicated by the increase volume of soils on-site. The stabilized material will require protective covering for any use which might generate dust.

This remedy is not considered to be cost-effective.

UNNAMED PLATING STATE SUPERFUND SITE
PROPOSED REMEDIAL ACTION DOCUMENT
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Alternative 4: Soil Washing

Overall protection of human health and the environment will be provided with the implementation of this alternative. All contaminants will be treated or removed from the site.

During implementation of this remedy, there is a potential for community and worker exposure and environmental impacts for wind borne dust and potentially short duration and high intensity rain events.

The implementability of this alternative may be hampered by space limitations. The volume of soil that can be treated each day may be limited by space restrictions.

After implementation of this alternative, the potential for future beneficial use of the property is good. Because the contaminants are removed or reduced, there should be no restrictions to moderate disturbance of the clean fill for improvements or structures.

This remedy is not considered to be cost-effective.

Alternative 5: Removal and Disposal

Overall protection of human health and the environment will be provided with the implementation of this alternative because it completely removes the source of contamination and eliminates all exposure pathways.

Although there is no inherent reduction in the toxicity of the contaminants, removal and disposal will eliminate the potential for exposure at the site. The mobility and volume of contaminated material are reduced by removal.

During implementation of this alternative there is a potential for community and worker exposure and environmental impacts from wind borne dust and potentially short duration, high intensity rain events. This alternative is very easy to implement with available equipment and few highly trained personnel.

This remedy is not considered to be cost-effective.

UNNAMED PLATING STATE SUPERFUND SITE
PROPOSED REMEDIAL ACTION DOCUMENT
MAY 1995

VIII. SUMMARY OF PROPOSED REMEDIAL ACTION

Based on consideration of the requirements of Chapter 361, Solid Waste Disposal Act, and Subchapters K and S of the permanent rules of the TNRCC, the TNRCC is proposing that Alternative 2, capping, is the most appropriate remedial alternative for the Unnamed Plating State Superfund site.

The capping alternative will be fully protective of human health and the environment by eliminating all means of physical contact. This remedy will provide reduction in mobility of contaminants by eliminating infiltration of precipitation and prevent wind-blown transport of any hazardous constituents.

First main paragraph of text, starting with a faint opening word or phrase.

Second main paragraph of text, continuing the narrative or discussion.

Third main paragraph of text, possibly containing a sub-section or specific detail.

Fourth main paragraph of text, further developing the content.

Fifth main paragraph of text, showing a transition or new point.

Sixth main paragraph of text, continuing the flow of information.

Seventh main paragraph of text, possibly a concluding or summary statement.

Eighth main paragraph of text, the final block of visible text.

**UNNAMED PLATING
STATE SUPERFUND SITE
ADMINISTRATIVE ORDER**

EXHIBIT B

AGREEING RESPONDENTS CONSENT FORM

THE UNIVERSITY OF CHICAGO
DIVISION OF THE PHYSICAL SCIENCES
DEPARTMENT OF CHEMISTRY

PHYSICAL CHEMISTRY
PHYSICS 401

LECTURE NOTES
BY
PROFESSOR [Name]

DATE

EXHIBIT B

Agreeing Respondents Consent Form

This Administrative Order represents the complete and fully integrated agreement of the parties hereto. This Administrative Order is binding upon Agreeing Respondent(s) and their successors and assigns.

Agreeing Respondent(s) are jointly and severally liable for the requirements set out in this order.

Neither the Agreeing Respondent(s)' consent, nor anything in this document, shall constitute or be considered evidence of an admission by the Agreeing Respondent(s) or TNRCC of any findings of fact or conclusions of law set forth herein, except for purposes of enforcing this agreed Order. For any other purposes the Agreeing Respondent(s) and TNRCC reserve their rights to deny all of these matters. The Agreeing Respondent(s) does not waive its right to assert that other persons are responsible for any liabilities associated with the Site, to seek indemnity or contribution from such other persons, to assert that the release of any hazardous substances is divisible, or to assert any claim or defense which may be available to it under law. This Administrative Order shall not be construed as an admission of liability by the Agreeing Respondent(s) for remediation of the Site or as an agreement to perform a remedial activities except as otherwise specifically set forth herein.

Notwithstanding compliance with the terms and conditions of this Administrative Order, Respondents are hereby put on notice that further action at the Site may be necessary, including groundwater monitoring and assessment and Natural resources damage assessment in accordance with the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601, et. seq. (1980), as amended, or other applicable state or federal laws.

I, the undersigned, have read and understand the attached Administrative Order. I understand that it is an Administrative Order which does not constitute an admission by any Agreeing Respondent of the facts stated therein, but does constitute a waiver of the right to appeal. I am authorized to agree to the attached Administrative Order on behalf of the entity indicated below by my signature, and do hereby agree to the terms and conditions set forth herein.

Respondent(s) acknowledges and agrees that nothing in the Interim Remedial Measures Design or Remedial Design, constitutes a warranty or representation of any kind by TNRCC that compliance with this Administrative Order will achieve the performance standards set forth in the PRAD and that such compliance shall not foreclose TNRCC from seeking performance of all terms and conditions of this Administrative Order, including the applicable performance standards.

The parties to this Administrative Order agree that the State of Texas shall be under no obligation to assist the Respondent(s) or De Minimis Responsible Parties in any way in defending contribution actions brought by persons or entities not parties to this Administrative Order.

Agreeing Respondents Consent Form - (continued)

The Agreeing Respondent(s) agree to indemnify and hold harmless the State of Texas from any and all claims or causes of action arising from negligent acts or omissions or willful misconduct of the Agreeing Respondent(s) in carrying out activities for which the Agreeing Respondent(s) are responsible pursuant to this Administrative Order.

The Parties represent that this Administrative Order was negotiated in good faith and it is in the best interest of the State of Texas to encourage equitable settlements without burdensome litigation.

This Administrative Order may be executed in two or more counter-parts, each of which shall be deemed an original, but all of which together shall constitute one and the same document.

Agreeing Respondents Consent Form - (continued)

Agreeing Respondent(s):

USE SEPARATE SIGN OFF SHEET FROM EACH PARTY

AMERIGAS, INC.

by: *Frederic P. Rowland*

Date: January 25, 1996

Title: Vice President and General Counsel

by: _____

Date: _____

Title: _____

by: _____

Date: _____

Title: _____

by: _____

Date: _____

Title: _____

by: _____

Date: _____

Title: _____

Dan Pearson

Date: 2/8/96

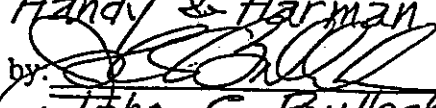
Dan Pearson
Executive Director
Texas Natural Resource Conservation Commission

Agreeing Respondents Consent Form - (continued)

Agreeing Respondent(s):

USE SEPARATE SIGN OFF SHEET FROM EACH PARTY

Handy & Harman

by: 

Date: 16 January 1996

Title: Environmental Counsel

by: _____

Date: _____

Title: _____

by: _____

Date: _____

Title: _____

by: _____

Date: _____

Title: _____

by: _____

Date: _____

Title: _____

Date: _____

Dan Pearson
Executive Director
Texas Natural Resource Conservation Commission

Agreeing Respondents Consent Form - (continued)

Agreeing Respondent(s):

USE SEPARATE SIGN OFF SHEET FROM EACH PARTY

Phelps Dodge Refining Corporation

by: *Arthur R. Miele*
Arthur R. Miele

Date: 1/17/96

Title: _____
President, Phelps Dodge Refining Corporation

by: _____

Date: _____

Title: _____

by: _____

Date: _____

Title: _____

by: _____

Date: _____

Title: _____

by: _____

Date: _____

Title: _____

Dan Pearson
Executive Director
Texas Natural Resource Conservation Commission

Date: _____

Agreeing Respondents Consent Form - (continued)

Agreeing Respondent(s):

USE SEPARATE SIGN OFF SHEET FROM EACH PARTY

SOUTHWIRE COMPANY

by: *John Wiley*

Date: 1/18/96

Title: Asst. V.P. Copper Operations

by: _____

Date: _____

Title: _____

by: _____

Date: _____

Title: _____

by: _____

Date: _____

Title: _____

by: _____

Date: _____

Title: _____

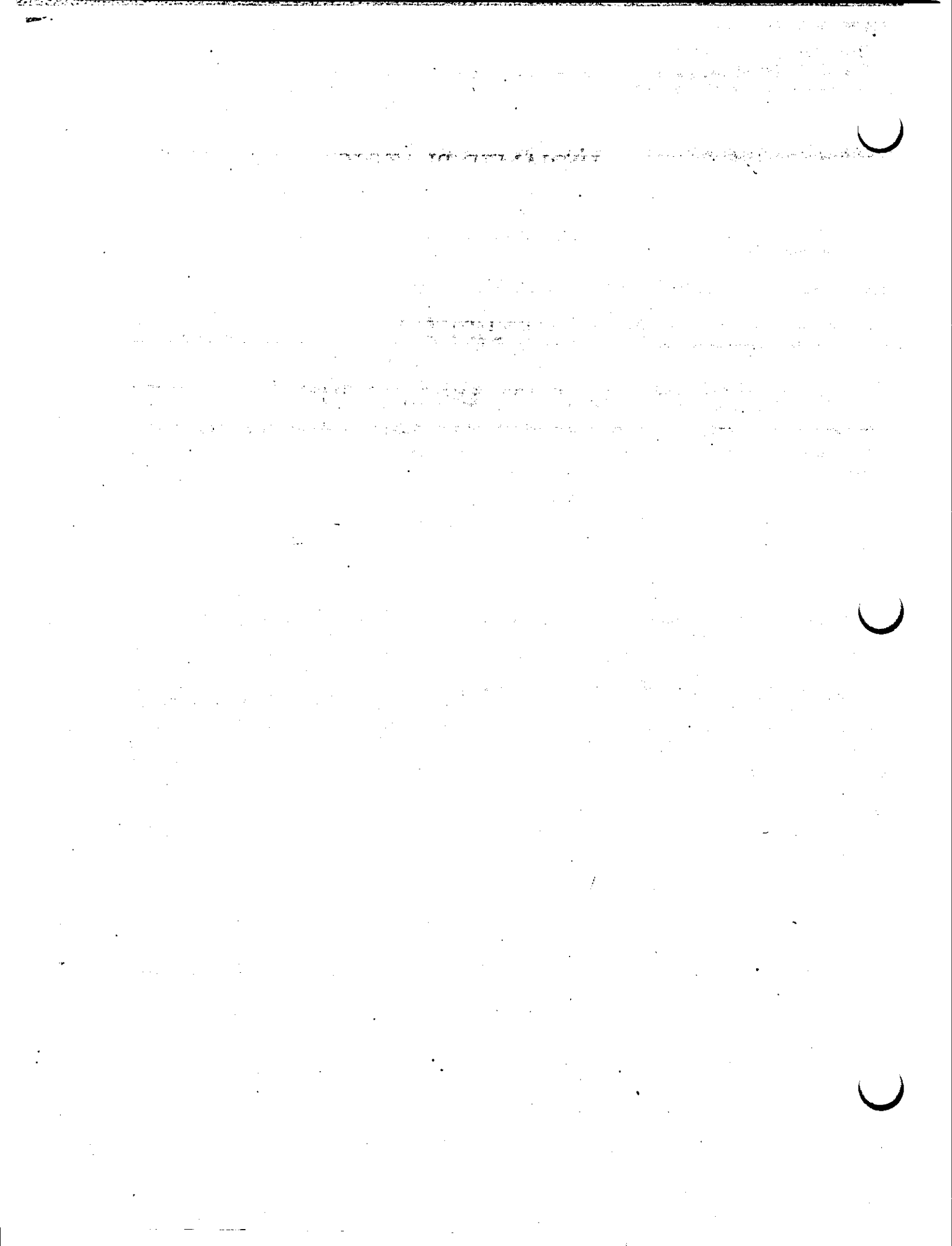
Date: _____

Dan Pearson
Executive Director
Texas Natural Resource Conservation Commission

UNNAMED PLATING
STATE SUPERFUND SITE
ADMINISTRATIVE ORDER

EXHIBIT C

PROPERTY DESCRIPTION



Property Description: All of Lots 4 and 5, and a portion of Lot 6, Block 4, Eastside Industrial District Unit One, El Paso, El Paso County, Texas

METES AND BOUNDS DESCRIPTION

The parcel of land herein described is all of Lots 4 and 5, and a portion of Lot 6, Block 4, Eastside Industrial District Unit One, El Paso, El Paso County, Texas, and is more particularly described by metes and bounds as follows:

Commencing at a point, said point being a found spike with a marked "X" lying at the centerline intersection of Humble Drive and Industrial Boulevard; Thence, North 58° 01' 00" West, along the centerline of Industrial Boulevard, a distance of 161.00 feet to a point; Thence, South 31° 59' 00" West, a distance of 30.00 feet to a point lying on the westerly right-of-way line of Industrial Boulevard, said point being the TRUE POINT OF BEGINNING of this description;

THENCE, South 31° 59' 00" West, a distance of 340.00 feet to a point for a corner, said point lying on the easterly line of a 20 foot railroad right-of-way;

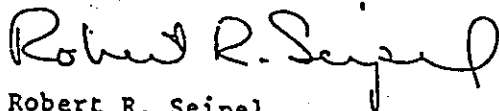
THENCE, North 58° 01' 00" West, along said right-of-way line, a distance of 125.00 feet to a point for a corner, said point lying on the common boundary line between Lots 3 and 4;

THENCE, North 31° 59' 00" East, along said boundary line, a distance of 340.00 feet to a point for a corner, said point lying on the westerly right-of-way line of Industrial Boulevard;

THENCE, South 58° 01' 00" East, along said right-of-way line, a distance of 125.00 feet to the TRUE POINT OF BEGINNING of this description.

Said parcel of land contains 0.97567 acres (42,500.00 sq. ft.) of land more or less.

SUB-LAND, INC.
Consulting Engineers -- Land Surveyors



Robert R. Seipel
Registered Public Surveyor
Texas License No. 4178

July 5, 1983
Job Number 05-83-4264
2432A

Property Description: .. portion of Lot 6 and all of Lots 7 and 8, Block 4, Eastside Industrial District Unit One, El Paso, El Paso County, Texas

METES AND BOUNDS DESCRIPTION

The parcel of land herein described is a portion of Lot 6 and all of Lots 7 and 8, Block 4, Eastside Industrial District Unit One, El Paso, El Paso County, Texas, and is more particularly described by metes and bounds as follows:

Commencing at a point, said point being a found spike with a marked "X" lying at the centerline intersection of Humble Drive and Industrial Boulevard; Thence, North $58^{\circ} 01' 00''$ West, along the centerline of Industrial Boulevard, a distance of 36.00 feet to a point; Thence, South $31^{\circ} 59' 00''$ West, a distance of 30.00 feet to a point lying on the westerly right-of-way line of Industrial Boulevard and lying on the common boundary line between Lots 8 and 9, said point also being the TRUE POINT OF BEGINNING of this description;

THENCE, South $31^{\circ} 59' 00''$ West, along said boundary line, a distance of 333.05 feet to a point for a curve, said point lying on the easterly line of a 20 foot railroad right-of-way;

THENCE, 91.03 feet along said right-of-way line and along the arc of a curve to the right, having a radius of 595.19 feet, a central angle of $08^{\circ} 45' 47''$ and a chord which bears North $62^{\circ} 23' 54''$ West, a distance of 90.94 feet to a point for a tangent;

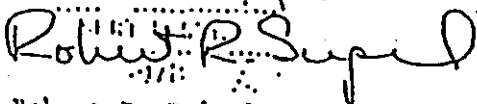
THENCE, North $58^{\circ} 01' 00''$ West, continuing along said right-of-way line, a distance of 34.33 feet to a point for a corner;

THENCE, North $31^{\circ} 59' 00''$ East, a distance of 340.00 feet to a point for a corner, said point lying on the westerly right-of-way line of Industrial Boulevard;

THENCE, South $58^{\circ} 01' 00''$ East, along said right-of-way line, a distance of 125.00 feet to the TRUE POINT OF BEGINNING of this description.

Said parcel of land contains 0.97089 acres (42,291.97 sq. ft.) of land more or less.

SUB-LAND, INC.
Consulting Engineers -- Land Surveyors



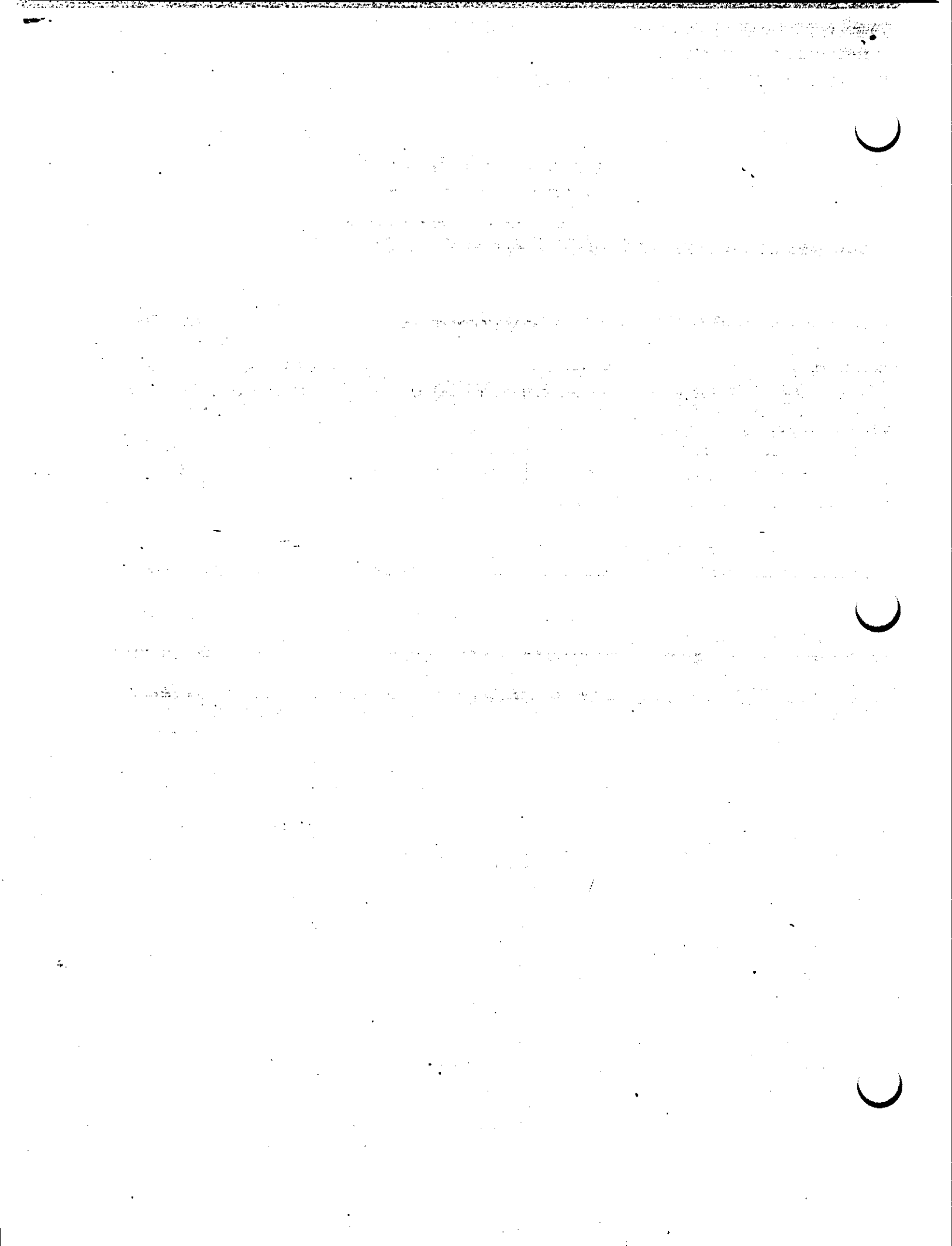
Robert R. Scipal
Registered Public Surveyor
Texas License No. 4178

July 5, 1983
Job Number 05-83-4264
2430A

UNNAMED PLATING
STATE SUPERFUND SITE
ADMINISTRATIVE ORDER

EXHIBIT D

REMEDIAL ACTIVITIES SCOPE OF WORK



**UNNAMED PLATING
STATE SUPERFUND SITE
ADMINISTRATIVE ORDER**

EXHIBIT D

**REMEDIAL ACTIVITIES
SCOPE OF WORK**

Introduction

This Remedial Activities Scope of Work covers the sequence of work to be performed and outlines all the stages of activities that are covered by the Remedial Action. It specifies the specific deliverables that are due at each stage and describes their contents in general terms. Finally, it specifies timeframes for the submittal of each deliverable. The engineering practices required to complete the Remedial Activities shall be in accordance with the Texas Engineering Practice Act (Article 3271a, V.A.T.S.). The work to be performed includes an interim remedial measures [IRM] to cover the barren area of the site, a remedial design phase, a remedial action implementation, and a post closure operation and maintenance phase.

Phase 1: Interim Remedial Measures

Task 1A - Preliminary IRM Design

An Interim Remedial Measures (IRM) Plan shall be completed for the subject site. The IRM deliverables shall include a;

- an IRM Plan Design,
- an IRM Construction Quality Assurance Plan (CQAP),
- a Quality Assurance Project Plan (QAPP),
- a Health and Safety Plan (HASP),
- a plan for potential off-site delineation and removal (Off-site Removal Plan), and
- Implementation Schedule (Schedule)

It is anticipated that the implementation of the Off-site Removal Plan, shall have been completed as part of the IRM and will be completed prior to completion of the Remedial Design Phase.

The IRM Plan Design Drawings shall consist of 24 X 36 inch sized drawings showing the completion of the IRM, including the proposed geotextile site cover and erosion control devices. Drawings shall include a topographic and property survey of the subject property, prepared by a licensed Texas land surveyor and

show existing conditions and proposed temporary improvements in one foot contour intervals. The drawings shall be sufficiently detailed to provide approximate cut and fill quantities associated with IRM and erosion controls sufficient to comply with the City of El Paso regulations, and methods to handle, dispose and/or reuse any on-site materials, debris, etc. A tentative list of IRM Plan Design Drawings is provided in Appendix A-1. IRM Plan Design drawings shall include pertinent design criteria for the IRM;

- Anticipated storm water flows,
- Geotextile cover strength based on intended level of anticipated end use of material, and
- Geotextile anchoring precautions

The IRM Design Plan drawings shall include outline specifications. Outline specifications will consist of a brief technical description of equipment, materials and procedures to be used in implementing the IRM. A preliminary list of IRM Plan Design Outline Specifications is provided in Appendix B-1. The only anticipated permit and/or approval required for the IRM is identified in Appendix C.

A CQAP shall include proposed methods to document that the IRM is installed in accordance with the plans and specifications. The CQAP shall delineate soil compaction requirements, rip rap and geomembrane liner placement procedures, material and shop drawing review procedures, "as-built" field survey requirements, noise and dust suppression measures, etc.

The HASP shall consist of health and safety precautions for the IRM on the subject site and work in an environment with potentially metallic tainted dusts/particulates and personnel protective procedures needed in construction during high wind events. The HASP shall conform to applicable provisions of the Occupational Safety & Health Administration (OSHA) rules, including but not limited to 29 CFR 1910 and 1926.

The QAPP will also address suitable construction precautions and/or air monitoring procedures to control, limit and/or monitor air emissions associated with construction activity related to the IRM. In accordance with TNRCC requirements the QAPP for the IRM shall also be usable for the Remedial Action., and shall

be prepared in accordance with current EPA guidance documents. The QAPP shall, where applicable, be prepared in accordance with current EPA guidance, "Data Quality Objectives Process For Superfund, Interim Final Guidance" Sept. 1993. (EPA 540-R-93-071); and "Interim Draft EPA Requirements for Quality Assurance Project Plans," May 1994, (EPA QA/R-5). The QAPP shall identify field and laboratory analytical procedures for sampling environmental media on and off site.

The Off-site Removal Plan shall consist of plans for limited excavation, along the eastern and southern property boundaries and the contiguous strips of land between the subject property line and neighboring building (to the east) and parking lot (to the south). The Off-site Removal Plan shall include a clearance sampling plan using procedures specified in the QAPP. To the extent possible, excavated material shall be used as a borrow source for backfilling the subject property and clearance sampling will confirm that no contaminated residues remain at these Off-site locations.

The Performing Respondents shall submit four (4) copies of the following IRM plans to the TNRCC within thirty (30) days of the effective date of the Administrative Order (AO effective date), which shall include the following:

- IRM Plan Design Drawings,
- a CQAP,
- a HASP,
- a QAPP,
- an Off-site Removal Plan, and
- implementation schedule.

Task 1B - Receive and evaluate TNRCC's comments on the IRM Plan Design and deliverables.

Task 1C - Final IRM Plan Design

A Final IRM Plan Design, shall be prepared for the subject site. The Final IRM Design deliverable shall

include IRM Design Drawings prepared and sealed by a Professional Engineer registered in the State of Texas. A tentative list of Final IRM Plan Design Drawings is provided in Appendix A-1. Deliverables shall include a summary note which addresses comments received from TNRCC in Task 1B and appropriate revisions or changes required by TNRCC on drawings specifications listed in Appendices A-1 and B-1, respectively. Preparation of the Final IRM Design may require additional field work not contemplated by either party upon entry of the Order. If the project managers agree that such additional field work is required, TNRCC and the Performing Respondents shall meet to discuss whether additional time is necessary.

The Performing Respondents shall submit four (4) copies of the Final IRM Design within thirty (30) days of receipt of TNRCC's comments in Task 1B. Deliverables in this phase shall include certification that access agreements required have been secured or are under negotiation, and documentation that city permit applications have been filed.

Task 1D - Receive and evaluate TNRCC notifications vis-a-vis the Final IRM Design approval/disapproval with comments.

Task 1F - IRM Implementation

The Work at the site will not begin prior to TNRCC approval of the final IRM design. Prior to implementing the IRM, the Performing Respondent shall notify TNRCC and identify who is doing the work (providing names and phone numbers), ten days prior to mobilization.

The IRM shall be implemented on the subject site. The IRM shall include mobilization, initial site work, site grading, site cover and erosion controls. Project mobilization and contract finalization shall be completed for the proposed site improvements. Purchasing geomembrane or prefabricated materials will be initiated and completed in this task. Work activities in this task shall also include development of subcontract agreements and/or addenda to previous subcontracts to include any requirements necessitated by TNRCC. Subcontracts shall be drafted between the contractor and trained specialists needed to complete the proposed site improvements. This task shall include evaluating subcontractors for

qualifications, insurance coverage, permits/licenses and health and safety training, availability and access to required equipment.

Agreements (and/or addenda to prior contracts) presently contemplated for the proposed site improvements include subcontracts with the following appropriately trained specialists;

- site excavator/compaction equipment operators,
- surveyor,
- quarry suppliers,
- liner manufacturers,
- liner seamer technicians, and
- laborers.

Initial site work shall include placement of field trailers, staging and decon areas, dismantling structures, fences, temporary improvements and, clearing the site of rubbish, and debris, stockpiling borrow material, and preparing the site for earthwork activities.

Site grading shall include excavation of selected areas, off loading drummed soils from container trailers, rough grading the site, fine grading and compaction of backfill using suitable compaction methods and selected borrow materials originating from off-site sources.

Site cover shall include installation of geotextiles, erosion controls and rip rap. The Performing Respondents shall complete this task in accordance with the requirements of the Schedule contained in the IRM Plan Design.

Phase 2: Remedial Design

Task 2A - Preliminary Design

A Preliminary Design shall be prepared for the subject site. The Preliminary Design deliverables shall include;

- Preliminary Design Plans,
- Preliminary Design Criteria,
- a Construction Quality Assurance Plan (CQAP),
- a Remedial Design QAPP (QAPP),
- a Health & Safety Plan (HASP),
- a Operations & Maintenance Plan, and
- a remedial action implementation schedule (RA Schedule).

The Preliminary Design Plans shall consist of 24 X 36 inch sized drawings showing forty percent design completion of the proposed cap and storm water management facilities (remedy/proposed site improvements). Preliminary Drawings shall include a topographic and property survey of the subject property, prepared by a licensed Texas land surveyor. The drawings shall show existing conditions and proposed site improvements in one foot contour intervals. The Preliminary Design Plans shall be sufficiently detailed to provide approximate cut and fill quantities associated with proposed site improvements, storm water retention plans, and methods to handle, dispose and/or reuse any on-site materials, debris, etc. A tentative list of Preliminary Design Drawings is provided in Appendix A-2.

The Preliminary Design Criteria shall consist of a document summarizing pertinent design criteria for the proposed site improvements. The design criteria shall delineate at a minimum:

- On-site storm water retention,
- Soil bearing capacity and subgrade compaction requirements, and
- Cap strength based on intended level of anticipated end use of cap surface, and
- Settlement design precautions needed for cap & subsurface utilities (electric, sewer and water, etc).

The Preliminary Design Criteria shall include outline specifications. A preliminary list of outline specifications is provided in Appendix B-2. The Preliminary Design Criteria shall also include a project delivery and permit procurement strategy. A tentative list of anticipated permits and or approvals is

provided in Appendix C.

The CQAP shall include proposed methods to document that site improvements are installed in accordance with the plans and specifications. The CQAP shall delineate soil compaction requirements, concrete and admixture and geomembrane liner placement procedures, documentation on how cap thickness, strength and integrity shall be ascertained, material and shop drawing review procedures, "as-built" field survey requirements, noise and dust suppression measures, etc. The CQAP shall also identify key project personnel and include methodologies, plans and schedules for implementing and completing the remedial action and mobilization/demobilization procedures. The CQAP shall also provide practical measures to assess achievement of design performance identified in Design Criteria. Performance standards to be assessed at the completion of the project shall be identified in the CQAP and include final contours of site improvements, documentation of cap thickness, and methods for gauging performance of storm water conveyance/retention facilities. The former will be assessed on the basis of surveyed "as-built" survey data and the latter on the basis of flow and sediment transport standards for these types of facilities during the appropriate design storm event.

The QAPP shall identify field and laboratory analytical procedures for sampling environmental media on and off site and describe the approach to quality assurance during remedial action at the subject site including identification of a Quality Assurance Official (QA Official), independent of the remedial action contractor, to conduct a quality assurance program during the remedial action phase of the project. The QAPP will also address suitable construction precautions and/or air monitoring procedures. The Performing Respondents shall include an implementation schedule (RA Schedule) for completing various phases of the remedial action.

The HASP shall consist of health and safety precautions for construction activities on the subject site and work in an environment with potentially metallic tainted dusts and particulates and personnel protective procedures needed in construction during high wind events. The HASP shall conform to applicable provisions of the Occupational Safety & Health Administration (OSHA) rules, including but not limited to 29 CFR 1910 and 1926.

The O & M Plan shall consist of a document specifying activities necessary after completion of the remedial action phase to ensure the remedy continues to perform as designed and a post closure activity schedule for completing required follow-up operations and maintenance. The O & M Plan shall provide a criteria to determine what constitutes sufficient degradation of the remedy to trigger a repair or corrective action(s).

The Performing Respondents shall submit four (4) copies of the Preliminary Design to the TNRCC within ninety (90) days of the AO effective date or thirty days from receipt of TNRCC comments on the IRM Design deliverables in Task 1A, whichever is longer.

Task 2B - Receive and evaluate TNRCC's comments on the Preliminary Design

Task 2C - Final Remedial Design

A Final Remedial Design, shall be prepared for the subject site. The Final Remedial Design deliverables shall include Final Remedial Design Drawings and Specifications prepared and sealed by a Professional Engineer registered in the State of Texas. A tentative list of Final Remedial Design Drawings is provided in Appendix A-3. A partial list of Final Remedial Design specifications is provided in Appendix B-3. The Final Design shall include a cover letter which indicates how comments on the Preliminary Design have been addressed. Preparation of the Final Remedial Design may require additional field work not contemplated by either party upon entry of the Order. If the project managers agree that such additional field work is required, TNRCC and the Performing Respondents shall meet to discuss whether additional time is necessary, and what additional plans or deliverables are required in order to allow such field work to proceed.

The Performing Respondents shall submit four (4) copies of the Final Remedial Design within one hundred and ten (110) days of receipt of TNRCC's comments in Task 2B. The Final Remedial Design will consist of:

- Final Design Plans
- Final Design Criteria
- Final Design Specifications
- a Construction Quality Assurance Plan (CQAP),
- a Remedial Design QAPP (QAPP),
- a Health & Safety Plan (HASP),
- a Operations & Maintenance Plan, and
- a remedial action implementation schedule (RA Schedule).

Task 2D - Receive and evaluate TNRCC notifications vis-a-vis the Final Remedial Design approval/disapproval with comments.

Task 2E - Final Design Approval (Final RD Approval)

The Performing Respondents shall resubmit the Final Remedial Design with a summary note within thirty (30) days of receipt of TNRCC's comments in Task 2D. The Summary Note shall indicate how the Final Remedial Design document has addressed TNRCC's comments received in Task 2D. The Performing Respondents shall submit four (4) copies of the Final Design containing stamped and certified drawings.

Phase 3 - Remedial Action

The remedial action shall not be initiated until final Remedial Design Approval from the TNRCC is received.

Task 3A - Project mobilization, contract finalization and Identification of contractors.

Project mobilization and contract finalization shall be completed for the remedial action as described in the approved Remedial Design. Purchasing geomembrane or prefabricated materials will be initiated and completed in this task. Work activities in this task shall also include development of subcontract agreements and/or addenda to previous subcontracts to include any requirements necessitated previously offered by TNRCC. Subcontracts shall be drafted between the contractor and trained specialists needed to complete the Remedial Action. This task shall include evaluating subcontractors for qualifications, insurance coverage, permits/licenses and health and safety training, availability and access to required equipment. Ten days prior to mobilization a list of contractors shall be submitted to TNRCC in this phase including names and phone numbers.

Agreements (and/or addenda to prior contracts) presently contemplated for the proposed site improvements include subcontracts with the following appropriately trained specialists:

- geotechnical boring drilling subcontractor,
- site excavator/compaction equipment operators,
- surveyor,
- quarry suppliers,
- concrete plants,
- liner manufacturers,
- liner seamer technicians,
- laborers.

The Performing Respondents shall complete this task in accordance with the RA Schedule contained in the Final Remedial Design.

Task 3B - Initial Site Work

Initial site work shall include placement of field trailers, staging and decon areas, dismantling structures, fences, temporary improvements and, clearing the site of rubbish, and debris, stockpiling borrow material, and preparing the site for earthwork activities.

The Performing Respondents shall complete this task in accordance with the RA Schedule.

Task 3C - Site Grading

Site grading shall include excavation of selected areas, off loading drummed soils, if required, from container trailers, rough grading the site, fine grading and compaction of backfill in using suitable compaction methods and borrow materials from and off-site sources. This task will also include installation and backfill of subsurface utilities.

The Performing Respondents shall complete this task in accordance with the RA Schedule.

Task 3D - Site Covering and Ancillary Structures

Site covering and ancillary structures shall include installation of geomembrane, geomembrane drainage layer, concrete pavement/building foundations and footings and pavement for exterior parking and retention basin areas, or other site improvements, as designed and as required.

The Performing Respondents shall complete this task in accordance with the RA Schedule.

Task 3E - Demobilization

Demobilization shall include removal of all equipment, machinery, construction appurtenances, materials and debris from the subject site. The Performing Respondents shall complete demobilization within

twenty (20) days of completion of performance standards identified in the CQAP.

Task 3F - Demobilization Notification

The Performing Respondents shall notify TNRCC within ten (10) days of completion of Task 3E.

Task 3G - Draft Site Remediation Report

A Draft Site Remediation Report shall be prepared for the subject site. The Draft Remediation Report shall consist of a document containing data collected during the Remedial Action phase and documentation of compliance with terms stipulated in the CQAP. The Draft Site Remediation Report shall include certification from a professional engineer registered in the State of Texas that

- work has been completed in accordance with the Final Remedial Design,
- performance standards stipulated in the CQAP have been achieved, and
- remedial equipment has been dismantled and removed from the subject site.

The Draft Site Remediation Report shall include "as built" or record drawings. The Performing Respondents shall submit four (4) copies of the Draft Site Remediation Report to the TNRCC within 60 days of completion of Task 3F.

Task 3H - Receive and evaluate TNRCC's comments on Task 3G deliverables

Task 3I - Final Remediation Report

A Final Remediation Report shall be prepared for the subject site. The Final Remediation Report shall include a summary note that indicates how this document addresses comments received from TNRCC in Task 3H. The Performing Respondents shall submit the Final Remediation Report within thirty (30) days of receipt of TNRCC's comments on Task 3H. After completion of Task 3H, the Performing Respondents shall also implement the O & M Plan as approved by TNRCC in the Remedial Design Phase. The O & M

Plan shall include those activities necessary after completion of the Remedial Action to ensure the remedy continues to perform as designed and that required follow-up action is completed.

EXHIBIT D
APPENDIX A-1
List of IRM Plan Design Drawings

<u>Number</u>	<u>Title</u>	<u>Scale</u>
CP 1 of 15	Title Sheet	Varies
CP 3 of 15	Site Plan, Existing Conditions, and Mobilization Plan	1" = 20'
CP 5 of 15	Site Plan, Proposed Site Improvements	1" = 20'
CP 6 of 15	Grading, Cross Sections A,B,C,	horizontal 1" = 10'-0" vertical 1" = 1' - 0"
CP 7 of 15	Grading, Cross Sections D,E,F	horizontal 1" = 10' - 0" vertical 1" = 1' - 0"
CP 8 of 15	Grading, Cross Sections G,H,I	horizontal 1" = 10' - 0" vertical 1" = 1' - 0"
CP 9 of 15	Grading, Cross Sections J,K,L	horizontal 1" = 10' - 0" vertical 1" = 1' - 0"

EXHIBIT D

EXHIBIT D
APPENDIX A-2

List of Preliminary Remedial Design Drawings

<u>Number</u>	<u>Title</u>	<u>Scale</u>
CP 1 of 15	Title Sheet	Varies
CP 2 of 15	City of El Paso Area Drainage Plan	1" = 600'
CP 3 of 15	Site Plan, Existing Conditions, (completed IRM and Mobilization Plan)	1" = 20'
CP 4 of 15	Site Plan, Demolition Plan	1" = 20'
CP 5 of 15	Site Plan, Proposed Site Improvements	1" = 20'
CP 6 of 15	Grading, Cross Sections A,B,C,	horizontal 1" = 10'-0" vertical 1" = 1' - 0"
CP 13 of 15	Typical Details	Varies 1/2" to 2" - 1' - 0"

EXHIBIT D
APPENDIX A-3
 List of Final Remedial Design Drawings

<u>Number</u>	<u>Title</u>	<u>Scale</u>
CP 1 of 15	Title Sheet	Varies
CP 2 of 15	City of El Paso Area Drainage Plan	1" = 600'
CP 3 of 15	Site Plan, Existing Conditions, and Mobilization Plan	1" = 20'
CP 4 of 15	Site Plan, Demolition Plan	1" = 20'
CP 5 of 15	Site Plan, Proposed Site Improvements	1" = 20'
CP 6 of 15	Grading, Cross Sections A,B,C,	horizontal 1" = 10'-0" vertical 1" = 1' - 0"
CP 7 of 15	Grading, Cross Sections D,E,F	horizontal 1" = 10' - 0" vertical 1" = 1' - 0"
CP 8 of 15	Grading, Cross Sections G,H,I	horizontal 1" = 10' - 0" vertical 1" = 1' - 0"
CP 9 of 15	Grading, Cross Sections J,K,L	horizontal 1" = 10' - 0" vertical 1" = 1' - 0"
CP 10 of 15	Utilities Plan (Sheet 1 of 2)	1" = 20'
CP 11 of 15	Utility Installation Details	Varies 1/2" to 2" = 1' - 0"
CP 12 of 15	Concrete Cap Reinforcement & Building Footer Plan	1" = 20'
CP 13 of 15	Concrete Installation Details	Varies 1/2" to 2" - 1' - 0"
CP 14 of 15	Retention Basin, Drainage & Paving Details (Sheet 1 of 2)	Varies 1/2" to 2" = 1' - 0"
CP 15 of 15	Retention Basin, Drainage & Paving Details (Sheet 2 of 2)	Varies 1/2" to 2" = 1' - 0"

APPENDIX A

[The following text is extremely faint and illegible due to low contrast and noise. It appears to be a list or table of contents with multiple columns.]



**EXHIBIT D
APPENDIX B-1**

List of IRM Plan Design

OUTLINE SPECIFICATIONS

SPEC. NUMBER	TITLE
02101	Off Loading Drummed Soil From On-Site Container Trailers
02221	Excavation, Trenching and Backfilling
02235	Geotextiles
02239	4 Inch (Minus) Rip Rap Stone

EXHIBIT D
APPENDIX B-2

List of Preliminary Design

OUTLINE SPECIFICATIONS

<u>SPEC. NUMBER</u>	<u>TITLE</u>
01430	Environmental Protection
02210	Grading
02221	Excavation, Trenching and Backfilling
02230	Excavation, Embankment and Preparation of Subgrade for Pavement
02231	Excavation of Contaminated Soil
02234	Subbase Course
02235	Geotextiles
03300	Concrete for Cap

EXHIBIT D
APPENDIX B-3

List of Final Remedial Design

SPECIFICATIONS

SPEC. NUMBER	TITLE
01250	Measurement and Payment
01380	Construction Photographs
01400	Contractor Quality Control
01417	Performance and Systems Audit and Corrective Actions
01418	Reports to TNRCC
01430	Environmental Protection
01580	Project and Safety Signs
01700	As-Built Drawings
02050	Demolition
02051	Removal of Structures and Appurtenances
02052	Equipment Washing and Rinseate Sampling
02100	Clearing and Grubbing
02101	Off Loading Drummed Soil From On-Site Container Trailers
02210	Grading
02221	Excavation, Trenching and Backfilling
02230	Excavation, Embankment and Preparation of Subgrade for Pavement
02231	Excavation of Contaminated Soil
02234	Subbase Course
02235	Geotextiles
02238	Bituminous - Stabilized Base Course, Subbase or Subgrade
02239	4 Inch (Minus) Rip Rap Stone
02444	Fence, Chain-Link
02450	Concrete Sidewalks, Curbs, and Gutters
02485	Turf
02556	Bituminous Intermediate and Wearing Courses for Air Fields and Heavy-Duty Pavements
02558	Bituminous Tack Coat
02559	Bituminous Prime Coat
02580	Joint Sealing in Concrete Pavements
03300	Concrete for Cap

EXHIBIT D
APPENDIX C

PERMITS & APPROVALS

<u>AGENCY</u>	<u>PERMIT</u>	<u>ANTICIPATED PERMIT PROCUREMENT TIME</u>
City of El Paso, (CEP) + Land Development & Flood Central Division	Grading Plan	1 month
CEP Land Development & Flood Central Division	Grading & Drainage	1 - 2 months
El Paso Brokers + Warehouse	Permission to work on parcel east of subject property	1 - 2 months
Southern Pacific Railroad	Permission to work on parcel south of subject property	1-2 months

Approvals required for IRM - identified by cross (+)