

TNRCC
DOCKET 98-0081-SPF

**TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION**

ADMINISTRATIVE ORDER

FOR THE

**HARRIS SAND PITS
STATE SUPERFUND SITE**

Table of Contents

AN ADMINISTRATIVE ORDER

I.	Introduction	1
II.	Findings of Fact	1
III.	Conclusions of Law and Determinations	5
IV.	Definitions	6
V.	Order	8
VI.	Failure to Attain Performance Standards or Findings of Significant Difference	27
VII.	Designated Project Manager/Facility Coordinator	29
VIII.	Endangerment and Emergency Response	31
IX.	Submittal Requiring TNRCC's Approval	31
X.	Submittal of Documents, Sampling, and Analysis	32
XI.	Notices and Submittal	33
XII.	Periodic Review	34
XIII.	Termination of Post Closure	36
XIV.	Records	36
XV.	Access	37
XVI.	Delay in Performance	38
XVII.	Extension of Deadlines	38
XVIII.	Stipulated Administrative Penalties	39
XIX.	Compliance with Applicable Laws	43
XX.	Force Majeure	43

XXII. RESERVED 45

XXIII. Liability 45

XXIV. Severability 45

XXV. Reservation of Rights/Retention of Claims 45

XXVI. Section Headings 45

XXVII. Continuing Authority 45

XXVIII. Enforcement and Reservations 46

XXIX. Computation of Time 46

XXX. Opportunity to Conference 46

XXXI. Termination and Satisfaction 47

XXXII. Construction of Rules 47

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION



DOCKET NUMBER [98-0081-SPF]

IN THE MATTER OF	§	
THE SITE KNOWN AS	§	BEFORE THE
HARRIS SAND PITS	§	TEXAS NATURAL RESOURCE
STATE SUPERFUND SITE	§	CONSERVATION COMMISSION

AN ADMINISTRATIVE ORDER

I. INTRODUCTION

On [**FEB 18 1998**], the Texas Natural Resource Conservation Commission ("Commission" or "TNRCC") considered the Executive Director's allegations of 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 the Executive Director's requested relief, including but not limited to issuance of a Commission order to require persons responsible for solid waste to conduct Remedial Activities which include Remedial Design (RD), Remedial Action (RA) and Post Closure Activity, as authorized by §361.188 of the Act.

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

II. FINDINGS OF FACT

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

None.

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 Agreeing Respondents but do not admit liability except for the purpose of enforcing this Administrative Order:

Freddie E. Harris

Frances Alice Harris Trust

Diamond Shamrock Refining and Marketing Company

- D. The portion of the Harris Sand Pits State Superfund Site (Site) used for rankings (State Superfund Registry) is described as follows:

OF A 9.936 ACRES(432,823 SQ. FT.) TRACT OF LAND OUT OF THE J.E. HARRIS SURVEY NO. 265 ½, ABSTRACT 1202, SITUATED IN BEXAR COUNTY, TEXAS, BEING A PORTION OF THAT 106.566 ACRE TRACT (TRACT 1) CONVEYED TO FRANCES ALICE HARRIS TRUST BY DEED OF RECORD IN VOLUME 6182, PAGE 810 OF THE REAL PROPERTY RECORDS OF BEXAR COUNTY, TEXAS; SAID 9.936 ACRES BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS IN TWO TRACTS AS FOLLOWS:

COMMENCING, at a ½ inch iron rod found in the west line of that tract conveyed to Frances Alice Harris Trust (Tract 3) by deed of record in Volume 6182, Page 810 of said Real Property Records for the northeast corner of said Tract 1, same being the southeast corner of that tract conveyed to Leon Harris by deed of record in Volume 1885, Page 603 of said Real Property Records;

THENCE, S00°00'14"W, along the west line of said Tract 3, same being the east line of said Tract 1, a distance of 636.73 feet to a point;

THENCE, N88°56'54"W, leaving the west line of said Tract 3, over and across said Tract 1, a distance of 35.44 feet to a ½ inch iron rod found for the POINT OF BEGINNING and northeast corner hereof;

THENCE, continuing over and across said Tract 1, the following seven (7) courses and distances:

1. S00°56'18"E, a distance of 790.06 feet to a ½ inch iron rod found for an angle point;

2. S87°50'02"W, a distance of 420.85 feet to a ½ inch iron rod found for an angle point;
 3. N49°33'18"W, a distance of 280.86 feet to a ½ inch iron rod found for an angle point;
 4. N09°25'35"E, a distance of 259.96 feet to a ½ inch iron rod found for an angle point;
 5. N17°59'40"E, a distance of 249.27 feet to a ½ inch iron rod found for an angle point;
 6. N52°45'39"E, a distance of 224.82 feet to a ½ inch iron rod found for an angle point;
 7. S88°56'54"E, a distance of 322.85 feet to the POINT OF BEGINNING, containing an area of 9.936 acres (432,823 sq. ft.) of land, more or less, within these metes and bounds.
- E. The Site consists of the area listed in item D above. In addition, the Site includes any areas outside the area listed in Item D above 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 listed in the Texas Register on January 22, 1988, Volume 13, Tex. Reg. 427-428.
- G. When ranked, the Site had a State Superfund Hazard Ranking System score of 14.16 as specified in 30 TAC §335.343.
- H. The hazardous substances at the Site pursuant to §361.003(11) of the Act are found in the soil, groundwater, and waste tar material at the Site. These hazardous substances are arsenic, benzene, lead, methylene chloride, 1,2-dichloroethane (1,2-DCA), 1,2-dichloropropane (1,2-DCP), tetrachloroethylene (PCE), and trichloroethylene (TCE) in the soil, and arsenic, cadmium and chromium in the groundwater. The hazardous substances are co-mingled.
- I. The Remedial Investigation (RI) demonstrated that a release of hazardous substances has occurred at the Site. Surface soil and subsurface soil sample results demonstrated that arsenic, benzene, lead, methylene chloride, 1,2-DCA, 1,2-DCP, PCE, and TCE contamination of soil has occurred. Groundwater sample results indicated that arsenic, cadmium and chromium contamination of groundwater has

occurred. The contamination is most prevalent in the exposed areas of the waste tar and weathered waste tar material located throughout the Site.

- J. The primary chemical release migration is through dispersion of the contaminated surface soils. The cap on the waste pits has been breached due to the erosion from the sand and clay quarry adjacent to the Site. Present and potential pathways for migration include mobilization of surface soil contaminants to the subsurface soil and groundwater through infiltration and leaching, contaminated soil erosion in surface water runoff, and mobilization by groundwater. The exposure pathways to the contaminants of concern in the soil are via ingestion, dermal contact, or inhalation of dust-borne particulates. The complete exposure pathways to chemical contaminants in the groundwater are via ingestion and dermal contact.
- K. The Baseline Risk Assessment conducted for the Site considered the hazardous substances listed in item H above. The risk was evaluated for current and future receptors. Current receptors are limited to Site or commercial workers and Site visitors to the adjacent quarry. Potential future receptors are on-Site remediation construction workers and future on-Site residents. The primary risk is carcinogenic risk through direct contact and ingestion of the contaminated soil and groundwater. The contaminant contributing most to the Site risk is arsenic. The primary noncarcinogenic risk is through dermal contact, ingestion and inhalation of lead-contaminated soils. Lead concentrations in the soil at the Site exceed the acceptable level for a child receptor, but are below the acceptable level for an adult receptor.
- L. The substances at the Site are not capable of being managed separately under the Remedial Action plan.
- M. On October 5, 1987, the Commission provided a written notice to each identified PRP of the proposed listing of the Site on the State Registry.
- N. On June 17, 1997, the Commission provided to each identified PRP the written notice of the public meeting and of the opportunity to comment on the proposed Remedial Action as specified in 30 TAC §361.187(b and c). The Commission received comments from the PRP and the public, but the Commission's consideration of these comments did not effect a change to the Remedy Selection Document.
- O. Under Section 361.187(d) of the Act, each PRP has been notified at its last known address and has been provided an opportunity to fund or perform the proposed Remedial Activities.

- P. The following potentially responsible party funded or prepared the Remedial Investigation and the Feasibility Study:

Freddie E. Harris

Diamond Shamrock Refining and Marketing Company

- Q. The Remedy Selection Document (RSD) 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 is selected as the remedy to be implemented in accordance with this Administrative Order.

III. CONCLUSIONS OF LAW AND DETERMINATIONS

- A. Any potentially responsible parties listed in Items A and B of Section II, FINDINGS OF FACT, of this Administrative Order are Responsible Parties.
- B. Substances found at the Site are a "hazardous substance" as defined in §361.003(11) 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, present and potential for future migration of hazardous substances from the Site is a "release" as defined in §361.003(28) of the Act.
- G. Hazardous substances have been released from the facility into the soil and groundwater, and threaten to be released from the facility into the 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"	Remedy Selection Document (RSD)
"Exhibit B"	De Minimis Responsible Party Consent Form (Not Applicable)
"Exhibit C"	Agreeing Respondent Consent Form
"Exhibit D"	Data Quality Objectives
"Exhibit E"	Deed Certification of Remedial Action
"Exhibit F"	Deed Restriction
"Agreeing Respondent"	The potentially responsible parties listed in <u>Item C of Section II, FINDINGS OF FACT</u> , of this Administrative Order.
"De Minimis Responsible Party"	The potentially responsible parties listed in <u>Item B of Section II, FINDINGS OF FACT</u> , 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.
"Effective Date"	The effective date of this Administrative Order is ten (10) days after the issue date of this Administrative Order.

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

"Facility Coordinator" The individual designated by the Performing Respondent to oversee implementation of the activities required in this Administrative Order on behalf of Performing Respondent and to coordinate communications with the TNRCC.

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

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

"Performing Respondent" The parties listed in Item A or C of Section II, FINDINGS OF FACT, of this Administrative Order who comply with the terms of this Administrative Order.

"Post Closure" The phase of the Remedial Activities in which groundwater monitoring, surficial maintenance, any necessary groundwater recovery, and other similar activities are undertaken to ensure that the remedy continues to perform as designed.

"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.

"Remedial Action" (RA) For purposes of this Administrative Order, the phase of the Remedial Activities in which the remedy is undertaken through implementation of the selected remedy specified in Exhibit A of this Administrative Order. The areal extent for the remedial action is not limited to the Site. It includes all suitable areas in proximity to the contamination necessary for implementation of the Remedial Activities.

"Remedial Activities" The implementation of the Remedial Design (RD), Remedial Action (RA) and Post Closure Activity of the selected remedy in accordance with this Administrative Order.

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

"Respondent" The parties listed in Items A and C of Section II, FINDINGS OF FACT, of this Administrative Order.

"Site Remedial Activities Plan" (SRAP) The plan described in Section V, ORDER, of this Administrative Order.

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

"Submittal of Deliverables" Delivery of five (5) complete copies of each document or notice 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, or Remedial Action Quality Assurance Official on behalf of the Performing Respondent 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. **RESERVED**

B. Any De Minimis Responsible Party shall pay the amount set out within the De Minimis Responsible Party Consent Form within thirty (30) days after the effective

date of this Administrative Order. The payment shall be paid to "The Hazardous and Solid Waste Remediation Fee Account (Fund 550) of the State of Texas" and shall be mailed to the address listed in Item I, Section XVIII, STIPULATED PENALTIES, of this Administrative Order.

- C. Any Respondent not listed in Item P of Section II, FINDINGS OF FACT, of this Administrative Order, shall reimburse the Hazardous and Solid Waste Remediation Fee Account for all costs of Pre-Remedial Investigation, Remedial Investigation (RI), Feasibility Study (FS), and oversight of these activities. The responsible party listed in Item A of Section II, FINDINGS OF FACT, of this Administrative Order shall, in addition, reimburse the Hazardous and Solid Waste Remediation Fee Account for all costs incurred by the Account in implementing the RD, RA, Post Closure Activity and 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.
- D. This Administrative Order shall apply to and be binding upon any De Minimis Responsible Party and Respondent, their agents, successors, and assigns. Respondents 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 shall alter the responsibilities under this Administrative Order.
- E. Respondent shall provide a copy of this Administrative Order to any prospective owners, successors, or future lessees of the Site before all or substantially all property rights, stock, or assets are transferred. Respondent shall provide a copy of this Administrative Order to all contractors, subcontractors, laboratories, and consultants retained by Respondent to perform any work under this Administrative Order, within five (5) 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 is responsible for compliance with this Administrative Order and for ensuring that its 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 forty-five (45) days after the effective date of this Administrative Order, each Party that owns real property at the Site shall record a copy or copies of this Administrative Order, with all exhibits, 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. Each Party that owns real property at the Site shall, within sixty (60) days after the effective date of this Administrative Order, send notice of such recording and indexing to TNRCC.

G. Any change in use of the listed facility shall be pursuant to §361.190 of the Act. Not later than ninety (90) days before any transfer of any property interest in any property included within the Site, the Party that owns or leases real property at the Site shall submit the transfer documents to TNRCC.

H. All aspects of the work to be performed by Respondent pursuant to this Administrative Order shall be under the direction and supervision of a qualified Supervising Contractor. Within ten (10) days after the effective date of this Administrative Order, Respondent shall notify TNRCC in writing of the name, 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 to demonstrate the proposed Supervising Contractor has any necessary licenses to do business in the State of Texas and necessary permits to perform work under this Administrative Order. If at any time Respondent proposes to use a different Supervising Contractor, Respondent 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 and any De Minimis Responsible Party upon approval by the Commission after notice to all parties.

J. Community Relations Plan: The Respondent shall provide all the necessary information and assistance for TNRCC's Community Relations personnel to implement the Community Relations Plan.

K. The Respondent shall implement the remedy presented in Exhibit A, Remedy Selection Document (RSD), of this Administrative Order. The Remedial Activities shall be undertaken in the following Phases:

Remedial Design;

Remedial Action; and

Post Closure Activity.

1. *Remedial Design*

- a. Not later than fifteen (15) days after the effective date of this Administrative Order, the Respondent shall submit to TNRCC a draft Remedial Activities Schedule (RAS) for review and comment. The RAS shall summarize the sequence of submittals as required in this Administrative Order, including anticipated TNRCC review times, and shall list milestone dates, or milestone windows, for each submittal required by this Administrative Order. The RAS shall demonstrate that the Remedial Action can be completed in the timeframe approved by TNRCC.

- b. Within thirty (30) days after receipt of the TNRCC's comments on the RAS, the Respondent shall submit to TNRCC a Remedial Design (RD) Work Plan for review and comment. The RD Work Plan must describe in detail the tasks and deliverables Respondent will complete during the Remedial Design, and a schedule for completing the tasks and deliverables in the RD Work Plan. The RD Work Plan shall include, but not be limited to, the following: (1) discussion of the elements of a Preliminary (i.e., 30% completion) Design; (2) discussion of the elements of a Pre-Final (i.e., 95% completion) Design; (3) discussion of the elements of a Final (i.e., 100%) Design; (4) a design Site Health and Safety Plan (HASP); (5) a Spill/Volatile Organics Release Contingency Plan; (6) waste treatability studies work plan(s); (7) a plan for gathering additional data or information, or performing additional feasibility studies, if necessary; (8) a design sampling and analysis plan, if necessary; (9) a Remedial Design Quality Assurance Project Plan (QAPP), if necessary; and (10) any other appropriate components.
 - (1) The QAPP shall describe the approach to quality assurance during remedial design at the Site and shall specify a quality assurance official (QA Official), independent of the remedial design contractor, to conduct a quality assurance program during the remedial design phase of the project. The QAPP shall:
 - (a) 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 Respondent and its 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 shall:

- i) Ensure that all contracts with laboratories utilized by the Respondent 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.
- ii) Ensure that laboratories utilized by the Respondent for analysis of samples taken pursuant to this Administrative Order perform all analyses using methods approved by the TNRCC.
- iii) Ensure that all laboratories utilized by the Respondent 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:
 - a) Repeated or numerous deficiencies found in the laboratory quality assurance program during TNRCC or EPA laboratory inspections.
 - b) 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.

- c) 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."
 - d) Repeated or numerous deficiencies in laboratory performance during the life of the project.
- (2) The Health and Safety Plan for field activities required by the RD Work Plan shall conform to applicable Occupational Safety and Health Administration's rules, including but not limited to 29 CFR 1910 & 1926. Note: The Site Health and Safety Plan (HASP) required by this Administrative Order will be reviewed, but will not be approved, by the TNRCC. Approval of the RD Work Plan specifically excludes the HASP.
- (3) The Spill/Volatile Organics Release Contingency Plan shall address both worker exposure and public exposure to releases or spills involved in substances from the Site.
- c. After receipt and review of the RD Work Plan, TNRCC will notify Performing Respondent of its approval/disapproval with comments.
 - d. Within fifteen (15) days after receipt of TNRCC's comments, the Respondent shall resubmit the RD Work Plan with a summary note. The summary note shall clearly indicate how this document has satisfactorily addressed each comment from TNRCC's previous comments and any other changes made to this document.
 - e. Within 15 days after receipt of the resubmittal of the RD Work Plan, TNRCC will notify Performing Respondent of its approval/disapproval. Disapproval of this resubmittal, and each subsequent resubmittal, is subject to assessment of Stipulated Penalties in addition to any Stipulated Penalty assessed for failure to make timely submittals.
 - f. Not later than ten (10) days after receipt of TNRCC's approval of the RD Work Plan by TNRCC, Respondent shall implement the RD Work Plan according to the schedule in the approved RD Work

Plan. Unless otherwise directed by TNRCC, Respondent shall not commence work at the Site prior to TNRCC's written approval of the RD Work Plan.

- g. Within ninety (90) days after TNRCC approves the RD Work Plan, Respondent shall submit a Preliminary Design to TNRCC for review and approval. The Preliminary Design submittal shall include, at a minimum, the following: (1) design criteria; (2) project delivery strategy; (3) preliminary plans, drawings and sketches; (4) required specifications in outline form; (5) a preliminary remedial action schedule; (6) any value engineering proposals; (7) results of waste treatability studies; and, (8) results of additional field sampling (if necessary).
- h. After receipt of the Preliminary Design, TNRCC will provide comments to the Performing Respondent.
- i. Within ninety (90) days after TNRCC provides comments on the Preliminary Design, Respondent shall submit a Pre-Final Design to TNRCC for review and approval. The Pre-Final Design submittal shall include, at a *minimum*, the following: (1) pre-final plans and specifications; (2) an RA Operation and Maintenance Plan; (3) a Remedial Action Quality Assurance Project Plan (QAPP); (4) a Field Sampling Plan (directed at measuring progress towards meeting performance standards); (5) a Spill/Volatile Organics Release Contingency Plan; (6) a Remedial Action Construction Quality Assurance Plan (CQAP); and, (7) a summary note that clearly indicates how this document has satisfactorily addressed each comment from TNRCC's previous comments and any other changes made to this document.
 - (1) The Remedial Action 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 QAPP shall:

- (a) Be based on attainment of the Data Quality Objectives specified in Exhibit D to this Administrative Order and shall address, at a minimum, data relating to the following Remedial Activities:
- i) Confirmation of excavation of hazardous substances;
 - ii) Air emissions monitoring;
 - iii) Excavation, backfill, and cap construction;
 - iv) Monitoring surface water runoff;
 - v) Background concentration determination for affected Site soils and impacted groundwater;
 - vi) Groundwater monitoring during post-closure; and,
 - vii) Waste stabilization and treatment.
- (b) The Remedial Action 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 include a description of the mechanism used to verify that the remedy process is operating within the limits specified in the Selected Remedy Action and a schedule for submittal of QAPP reports. The Respondent and its 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 shall:
- i) Ensure that all contracts with laboratories utilized by the Respondent 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.

- ii) Ensure that laboratories utilized by the Respondent for analysis of samples taken pursuant to this Administrative Order perform all analyses using methods approved by the TNRCC.
- iii) Ensure that all laboratories utilized by the Respondent 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:
 - a) Repeated or numerous deficiencies found in the laboratory quality assurance program during TNRCC or EPA laboratory inspections.
 - b) 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.
 - c) 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."
 - d) Repeated or numerous deficiencies in laboratory performance during the life of the project.

- iv) The Spill/Volatile Organics Release Contingency Plan shall address both worker exposure and public exposure to releases or spills involved in substances from the Site.
- j. After receipt of the Pre-Final Design, TNRCC will provide comments to the Performing Respondent.
- k. Within thirty (30) days after receipt of TNRCC's comments, the Respondent shall submit a Final Design, prepared and sealed in accordance with the requirements of the Texas Engineering Practice Act by a Professional Engineer registered in the State of Texas, with a summary note which satisfactorily addresses each comment and other changes made to this document. The Final Design shall contain a certification from said professional engineer registered in the State of Texas that the Final Design has been completed in compliance with the terms of the Administrative Order, and will attain all applicable performance standards specified in the RSD with its implementation. Preparation of the Final Design may require additional field work not contemplated by either Party upon entry of this Administrative Order. If the Project Managers agree that such additional field work is required, TNRCC and the Respondent shall meet to discuss whether additional time is necessary.
- l. After receipt of the Final Design, TNRCC will notify Performing Respondent of its approval/disapproval with comments.
- m. Within fifteen (15) days after receipt of TNRCC's comments, the Respondent shall resubmit the Final Design with a summary note. The summary note shall clearly indicate how this document has satisfactorily addressed each comment from TNRCC's previous comments and any other changes made to this document.
- n. Within twenty (20) days after receipt of the resubmittal of the Final Design, TNRCC will notify Performing Respondent of its approval/disapproval. Disapproval of this resubmittal, and each subsequent resubmittal, is subject to assessment of Stipulated Penalties in addition to any Stipulated Penalty assessed for failure to make timely submittals.

- o. The Final Design, the Final Field Sampling Plan, the Final Remedial Action QAPP, the Final Remedial Action CQAP and the Final Remedial Action Spill/Volatile Organics Release Contingency Plan are, upon TNRCC approval, incorporated into this Administrative Order as requirements of this Administrative Order and shall be an enforceable part of this Administrative Order.

2. *Remedial Action*

- a. Not later than twenty (20) days after TNRCC approves all deliverables required as part of the Final Design, Respondent shall submit a Remedial Action Work Plan (RA Work Plan) to TNRCC for review and approval. The RA Work Plan shall be developed in accordance with the RSD and shall be consistent with the design plans and specifications developed pursuant to the Final Design. The RA Work Plan shall include, but not be limited to, the following: (1) a Remedial Action Operation and Maintenance Plan; (2) an Air Monitoring Plan; (3) a Performance Standards Assessment Plan; (4) implementation of the Remedial Action QAPP; (5) implementation of the Field Sampling Plan; (6) implementation of the Remedial Action Spill/Volatile Organics Release Contingency Plan; (7) a Groundwater Sampling and Monitoring Plan; (8) a Mobilization and Demobilization Plan; (9) implementation of the Remedial Action CQAP; (10) identification of, and satisfactory compliance with, permitting requirements; (11) development and submittal of the Performance Standards Assessment Plan; and, (12) a Site-specific Health and Safety Plan (HASP). The RA Work Plan shall also include a schedule for implementing all remedial action tasks.

(1) The Health and Safety Plan for field activities required by the RA Work Plan shall conform to applicable Occupational Safety and Health Administration's rules, including but not limited to 29 CFR 1910 & 1926. Note: The Site Health and Safety Plan (HASP) required by this Administrative Order will be reviewed, but will not be approved, by the TNRCC. Approval of the RA Work Plan specifically excludes the HASP.

(2) The sampling results shall be included in the periodic report in accordance with Section XII, PERIODIC REVIEW SECTION, of this Administrative Order.

- (3) The Air Monitoring Plan shall include the action levels necessary to protect off-Site receptors from exposure to the chemicals of concern; the number, type, and location of monitors; the sampling and reporting frequency; and actions to be taken in response to exceedences.
 - (4) The Groundwater Sampling and Monitoring Plan shall include the number, type, and location of monitoring wells; the sampling and reporting frequency, constituents monitored, constituent concentration levels that trigger a response action, and actions to be taken in response to trigger constituent concentrations that are detected. This plan shall also detail the groundwater monitoring activities that will be used to assess the progress of the natural attenuation of the arsenic, cadmium, and chromium contamination of the groundwater in accordance with the requirements of the Data Quality Objective Number 2 in Exhibit D to this Administrative Order and the requirements of the RSD.
- b. After receipt and review of the RA Work Plan, TNRCC will notify Performing Respondent of its approval/disapproval with comments.
 - c. Within fifteen (15) days after receipt of TNRCC's comments, the Respondent shall resubmit the RA Work Plan with a summary note. The summary note shall clearly indicate how this document has satisfactorily addressed each comment from TNRCC's previous comments and any other changes made to this document and shall show the revised start date for work at the Site..
 - d. Within fifteen (15) days after receipt of the resubmittal of the RA Work Plan, TNRCC will notify Performing Respondent of its approval/disapproval. Disapproval of this resubmittal, and each subsequent resubmittal, is subject to assessment of Stipulated Penalties in addition to any Stipulated Penalty assessed for failure to make timely submittals.
 - e. Upon approval of the RA Work Plan by TNRCC, Respondent shall implement the RA Work Plan according to the schedules in the RA Work Plan. Unless otherwise directed by TNRCC, Respondent shall not commence physical on-Site activities at the Site prior to

approval of the RA Work Plan and completion of the activities required under that Plan.

- f. When TNRCC approves the RA Work Plan, the RA Work Plan shall be incorporated into this Administrative Order as requirements of this Administrative Order and shall be an enforceable part of this Administrative Order.
- g. Within sixty (60) days after TNRCC approves the RA Work Plan, Respondent shall notify TNRCC in writing of the names, title, qualifications, license and permit of any Remedial Action Contractor proposed to be used in carrying out work under this Administrative Order. It is the responsibility of Respondent to demonstrate that the proposed Remedial Action Contractor is 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 proposes to change the Remedial Action Contractor, Respondent shall notify TNRCC thirty (30) days prior to the change.
- h. Not later than ten (10) days after Respondent selects a Remedial Action Contractor, Respondent shall submit a Remedial Action Management Plan to TNRCC for review and approval. The Remedial Action Management Plan shall identify key personnel and their responsibilities for remedial action, and shall include a detailed schedule for completing all remedial action activities.
- i. After receipt of the Remedial Action Management Plan, TNRCC will notify Performing Respondent of its approval/ disapproval with comments.
- j. Within fifteen (15) days after receipt of TNRCC's comments, the Respondent shall resubmit the Remedial Action Management Plan with a summary note. The summary note shall clearly indicate how this document has satisfactorily addressed each comment from TNRCC's previous comments and any other changes made to this document.
- k. After receipt of the resubmittal of the Remedial Action Management Plan, TNRCC will notify Performing Respondent of its approval/disapproval. Disapproval of this resubmittal, and each subsequent resubmittal, is subject to assessment of Stipulated

Penalties in addition to any Stipulated Penalty assessed for failure to make timely submittals.

1. Within twenty (20) days after TNRCC approves the Remedial Action Management Plan, Respondent shall begin on-Site Remedial Action. Respondent shall implement and comply with the schedules and terms of all deliverables relating to Remedial Action including the RA Work Plan and the Remedial Action Management Plan.

- m. TNRCC will inspect the Site work as it progresses for compliance with the Final Design and applicable performance standards specified in the RSD. In addition;
 - (1) At the point of achieving Substantial Completion of the Site work, TNRCC will conduct an inspection of the work in order to confirm compliance with the Final Design and applicable performance standards specified in the RSD. At least ten (10) days prior to the expected date of achieving Substantial Completion of the Site work, Respondent shall notify TNRCC in writing of the date in order to schedule the inspection. Upon completion of the inspection, TNRCC will provide Respondent with a written list of items to be corrected or completed prior to TNRCC's acceptance of the Site work. Respondent shall provide the schedule for completion of Site work and Demobilization.

 - (2) At the point of achieving completion of the Site work, Respondent shall notify TNRCC in writing that Site work is complete and that the remedy has attained all applicable performance standards specified in the RSD. TNRCC will conduct an inspection of the work in order to confirm compliance with the Final Design and applicable performance standards specified in the RSD. If TNRCC identifies items to be corrected or completed, Respondent shall immediately correct or complete these items. When TNRCC concurs that Site work is complete, TNRCC will issue a notification confirming this to Respondent. The date of TNRCC's notification will be considered the date of completion of the Site work.

- n. Within ten (10) days after the completion of the Demobilization, Respondent shall provide TNRCC a Completion of Demobilization Notification.
- o. Within forty-five (45) days after completion of Demobilization, the Respondent shall submit to TNRCC a Final Remedial Action Report containing the following:
 - (1) All data collected during the Remedial Action Phase and documentation of compliance with the terms of the Remedial Action QAPP and Remedial Action CQAP;
 - (2) Proposed areas for soil and groundwater that will require land use and deed restrictions;
 - (3) Summary of the groundwater natural attenuation monitoring data to date, and a proposed schedule for continuing the groundwater monitoring for natural attenuation if the groundwater performance standards in the RSD and Data Quality Objective Number 2 have not been met.
 - (4) Proposed language for the deed certification(s) and land and groundwater use restriction(s) as contemplated in Exhibits E and F of this Administrative Order; and,
 - (5) A certification in accordance with the requirements of the Texas Engineering Practice Act from a professional engineer registered in the State of Texas that work has been completed in compliance with the terms of the Final Design, and that all remedial equipment has been dismantled and removed from the Site.
- p. Within forty-five (45) days after receipt of the Final Remedial Action Report, TNRCC will provide approval/disapproval with comments to the Respondent.
- q. Within fifteen (15) days after receipt of TNRCC's comments, the Respondent shall resubmit the Final Remedial Action Report with a summary note. The summary note shall clearly indicate how this document has satisfactorily addressed each comment from TNRCC's previous comments and any other changes made to this document.

- r. Within fifteen (15) days after receipt of the resubmittal of the Final Remedial Action Report, TNRCC will notify Performing Respondent of its approval/disapproval. Disapproval of this resubmittal, and each subsequent resubmittal, is subject to assessment of Stipulated Penalties in addition to any Stipulated Penalty assessed for failure to make timely submittals.
- s. Within thirty (30) days after approval of the Final Remedial Action Report, each party that owns property at the Site shall record a copy or copies of the deed certification(s) and deed restriction(s) in the appropriate office where land ownership and transfer records are filed or recorded. Each party that owns property at the Site shall ensure that the recording of these documents is indexed to the titles of each and every property at the Site so as to provide notice to third parties of the deed certification(s) and to implement deed restriction(s) pertaining to use with respect to those properties. Each party that owns property at the Site shall send evidence of such recording and indexing to the TNRCC.
- t. Upon receipt of the evidence of the deed certification(s) and deed restriction(s) from the property owner, TNRCC will issue a Certification of Completion of the Remedial Action Phase. If the Remedial Action Report indicates that the groundwater performance standards in the RSD and Data Quality Objective Number 2 have not been met, the TNRCC will issue a Certification of Completion of the Remedial Action Phase for Soils. The TNRCC will issue the Certification of Completion of the Remedial Action Phase for Groundwater once the Respondent submits a letter report indicating that the groundwater performance standards in the RSD and Data Quality Objective Number 2 have not been met. This letter report shall contain a certification in accordance with the requirements of the Texas Engineering Practice Act from a professional engineer registered in the State of Texas that work has been completed in compliance with the terms of the Final Design and the Groundwater Sampling and Monitoring Plan, and an attestation that the natural attenuation of groundwater contaminants has been achieved in accordance with the requirements of Data Quality Objective Number 2.
- u. The work performed by Respondent pursuant to this Administrative Order shall, at a *minimum*, achieve the performance standards specified in the RSD by collection and analysis of samples from the

media of concern. Persons shall utilize techniques described in SW 846, Test Methods for Evaluating Solid Waste, United States Environmental Protection Agency, techniques and methods described in the federal Clean Water Act, or other available guidance in developing a sampling and analysis plan appropriate for the distribution, composition and heterogeneity of contaminants and environmental media. A sufficient number of samples shall be collected and analyzed for individual compounds to both accurately assess the risk to human health and the environment posed by the facility or area and to demonstrate the attainment of cleanup levels. Non compound-specific analytical techniques (e.g., Total Petroleum Hydrocarbons, Total Organic Carbon, etc.) may, where appropriate for the nature of the wastes or contaminants, be used to aid in the determination of the lateral and vertical extent and volume of contaminated media; however, such non compound-specific analyses will serve only as indicator measures and must be appropriately supported by compound-specific analyses. Comparisons may be based on the following methods:

- (1) Direct comparison of the results of analysis of discrete samples of the medium of concern with the cleanup level;
- (2) For a data set of ten (10) or more samples, statistical comparison of the results of analysis utilizing the 95% confidence limit of the mean concentration of the contaminant as determined by the following expression:

$$\text{Cleanup Level} \geq \bar{x} + \frac{ts}{\sqrt{n}}$$

where:

- \bar{x} is the mean concentration
- t is a value from Table 1 (located following paragraph (3) of this subsection) based on the number of samples
- s is the standard deviation
- \sqrt{n} is the square root of the sample size; or

- (3) Other statistical methods appropriate for the distribution of the data, subject to prior approval by the executive director.

TABLE 1. VALUES FOR t

n	t	n	t	n	t
10	1.812	20	1.725	50	1.676
11	1.796	21	1.721	60	1.671
12	1.782	22	1.717	70	1.667
13	1.771	23	1.714	80	1.664
14	1.761	24	1.711	90	1.662
15	1.753	25	1.708	100	1.661
16	1.746	30	1.697	120	1.658
17	1.740	35	1.690	145	1.656
18	1.734	40	1.684		
19	1.729	45	1.680		

- v. Respondent 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.
- (1) 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 shall notify TNRCC of major changes in the shipment plan, such as a decision to ship the hazardous substances to another facility.
 - (2) The identity of the receiving facility will be determined by Respondent following the award of the contract for Remedial Action. Respondent 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 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.

3. *Post Closure Activity*

- a. At least ninety (90) days prior to anticipated completion of the Remedial Action Phase, the Respondent shall submit to TNRCC a draft Post Closure Activity Plan. Such Plan shall specify the activities necessary after completion of the Remedial Action Phase to ensure that the remedy continues to perform as designed. If the TNRCC has not issued the Certification of Completion of the Remedial Action Phase for Groundwater at this time, the Post Closure Activity Plan shall also include the groundwater sampling and monitoring activities that are to be conducted in order to continue to evaluate the natural attenuation of groundwater contaminants in accordance with the requirements of the RSD and Data Quality Objective Number 2. A schedule for Post-Closure activities shall be included in the Post Closure Activity Plan.
- b. After receipt of the Post Closure Activity Plan, TNRCC will provide approval/disapproval with comments to the Performing Respondent.
- c. Within thirty (30) days after receipt of TNRCC's comments, the Respondent shall resubmit the Post Closure Activity Plan with a summary note. The summary note shall clearly indicate how this document has satisfactorily addressed each comment from TNRCC's previous comments and any other changes made to this document.
- d. After receipt of the resubmittal of the Post Closure Activity Plan, TNRCC will notify Performing Respondent of its approval/disapproval with comments.
- e. Within fifteen (15) days after receipt of any disapproval under Item d above, the Respondent shall resubmit the Post Closure Activity Plan which satisfactorily addresses each comment and any other changes made to this document.

- f. After receipt of any resubmittal under Item e above, TNRCC will notify the Performing Respondent of its approval/disapproval. Disapproval of this resubmittal, and each subsequent resubmittal, is subject to assessment of Stipulated Penalties in addition to any Stipulated Penalty assessed for failure to make timely submittals.
- g. The Respondent shall initiate the Post Closure Activity Phase in accordance with the schedule included in the approved Post Closure Activity Plan. [REDACTED]

VI. FAILURE TO ATTAIN PERFORMANCE STANDARDS OR FINDINGS OF SIGNIFICANT DIFFERENCE

If the Remedial Activities implemented in accordance with this Administrative Order by the Respondent fail to attain the performance standards set forth in this Administrative Order, or if the Respondent finds 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 this Administrative Order, then the following actions shall be taken:

- A. Within ten (10) days of Respondent initially determining that a probable failure to attain performance standards 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 sixty (60) days after the initial determination of such failure to attain performance standards or finding of significant difference, the Respondent 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 to attain performance standards or finding of significant difference, conclusions concerning all data obtained during the evaluation, the cause of the failure to attain performance standards or significant difference, if known, and, if appropriate, a recommendation for additional study regarding the failure to attain performance standards or significant difference. In cases where the Respondent makes a claim of failure to attain performance standards or significant difference, the Failure Evaluation Report shall present data consistent with the data quality objectives established for the Remedial Activities to substantiate the failure to attain performance standards or significant difference.

The mere failure of a design or mean or method of Remedial Activity which is not required by this Administrative Order is not the basis for a finding of failure to

attain performance standards. Only when failure to attain performance standards is due to a requirement of this Administrative Order shall it be considered as a basis for application of this Item.

The mere finding of contaminants in quantities or extents greater than those contemplated by this Administrative Order is not 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 as compared with alternative appropriate remedies shall they be considered as a basis for application of this Item;

- D. After receipt of the Failure Evaluation Report, TNRCC will notify Performing Respondent of its approval/disapproval with identification of deficiencies. If TNRCC determines that the basis of the finding of failure to attain performance standards or 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 failure to attain performance standards or significant difference does not meet the criteria set forth in Item C above, TNRCC shall direct that Remedial Activities continue and that Respondent pay stipulated penalties for any missed deadlines;
- E. Unless TNRCC directs continuation of Remedial Activities, within thirty (30) days after receipt of TNRCC's comments, the Respondent 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 of its approval/disapproval with identification of deficiencies;
- G. Not later than ninety (90) days after a determination by TNRCC that failure to attain performance standards or significant difference does meet the criteria set forth in Item C above, the Respondent shall submit to TNRCC for approval a written report evaluating alternatives and may submit a proposal for such additional Remedial Activities as may be necessary to achieve appropriate objectives. Any proposed alternatives must comply with the remedy selection criteria and the Risk Reduction Rules in accordance with Subchapter S of 30 TAC Chapter 335;

- H. After receipt of the report described in Item G above, TNRCC will notify the Performing Respondent of its approval/disapproval with comments and identification of deficiencies;
- I. Within thirty (30) days after receipt of TNRCC's comments, the Respondent shall resubmit the report described in Item G 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 of the resubmittal under Item I above, TNRCC will notify Performing Respondent of its approval/disapproval with identification of deficiencies. Disapproval of this resubmittal, and each subsequent resubmittal, is subject to assessment of Stipulated Penalties for failure to make responsive resubmittals in addition to any Stipulated Penalty assessed for failure to make timely submittals. Respondent shall resubmit the report and a summary note within fifteen (15) days of receipt of TNRCC's disapproval, until the report is approved by TNRCC;
- K. Before selecting any further Remedial Activities, TNRCC will comply with the public participation requirement pursuant to §361.187 of the Act;
- L. TNRCC will notify Respondent of its selection of further Remedial Activities; and,
- M. TNRCC and Performing Respondent agree to negotiate in good faith to amend this Administrative Order to include further Remedial Activities.

VII. DESIGNATED PROJECT MANAGER/FACILITY COORDINATOR

- A. All communications, whether written or oral, from Respondent to TNRCC shall be directed to the designated TNRCC Project Manager or if not available, the designated alternate TNRCC 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.
- C. Respondent shall, within ten (10) calendar days after 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 shall submit a written notice to the TNRCC Project Manager at that time as to the Facility Coordinator's identity, address, phone number and/or pager number at which he may be contacted at anytime in case of emergency. The Facility Coordinator shall also be responsible for notifying the TNRCC in writing

at least seven (7) calendar days prior to the start date of any field activities associated with the RD, RA, and Post Closure Activity.

- D. The TNRCC Project Manager shall have the authority to require that the Remedial Activities are performed in accordance with all applicable statutes, regulations and this Administrative Order. In addition, 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 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 opinion, is not in conformance with any approved work plan; or
 3. In his opinion, is a violation of any work plan, Health & Safety Plan (HASP), or Quality Assurance Project Plan (QAPP).
- E. 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 fourteen (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 may 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 associated with the cessation of work will be incurred by the Respondent.
- F. During the Remedial Design and Remedial Action, meetings shall be held at least monthly between the TNRCC 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 shall deliver an agenda for the meeting and any documents to be discussed to the TNRCC Project Manager.
- G. TNRCC and the Respondent may change their respective Project Manager or Facility Coordinator. The other Party shall be informed in writing of the name, address, and telephone number of the new designated Project Manager or Facility Coordinator seven (7) days prior to the change, or if seven days notice is not feasible, as soon as possible.

- H. 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 Activities. The TNRCC Project Manager may delegate on a temporary basis his 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 shall immediately take all appropriate action to prevent, abate, or minimize such release or endangerment, and shall immediately notify the TNRCC's Project Manager or, if the TNRCC Project Manager cannot be contacted, the designated alternate TNRCC Project Manager. The Respondent shall also notify the TNRCC Emergency Response Unit, Region 13. Respondent shall take such action in accordance with all applicable provisions of the Health and Safety Plan and the Spill/Volatile Organics Release Contingency Plan developed under this Administrative Order. If Respondent fails to take appropriate response action as required by this Section, and TNRCC takes such action instead, Respondent shall reimburse TNRCC all costs of the response action. Payment of such costs of response shall be made in the manner described in Item C, Section V, 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 of deficiencies.
 3. In the case of any HASP submitted, notify the Respondent that the HASP has been "reviewed" and include comments if appropriate.

- B. Upon approval of a submittal by TNRCC, Respondent 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 shall, within the time frame as specified in this Administrative Order, correct the deficiencies and resubmit the plan, report, or other item for approval. Respondent will only be required to correct specific written comments from TNRCC concerning such deficiencies.
- D. TNRCC's approval of submittals is administrative in nature and allows the Performing Respondent to proceed to the next steps in the Remedial Activities. TNRCC's approval does not imply any warranty of performance, nor does it imply that the remedy, when constructed, will meet performance standards, nor does it imply that the remedy will function properly and be ultimately accepted by TNRCC.

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 related to the Site shall be provided to TNRCC within twenty (20) days after 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 to TNRCC pursuant to this Administrative Order shall be available to the public.
- C. Respondent may assert a claim of business confidentiality pursuant to the Texas Public Information Act, as to any process, method, technique, or any description thereof that the Respondent claims constitutes proprietary or trade secret information developed by the Respondent or developed by its contractors or subcontractors. Respondent 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 confidentiality claim accompanies the information when it is submitted to TNRCC, it may be made available to the public by TNRCC or the State of Texas without further notice to the Respondent.
- D. Respondent shall maintain, for the period during which this Administrative Order is in effect, an index of documents that Respondent 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

shall submit a copy of the index to TNRCC within ten (10) days after receipt of the request from TNRCC.

- E. TNRCC or its Site Representatives may take splits or duplicates of any samples obtained by the Respondent or its Site Representatives at the Site during the implementation of the Remedial Activities and will provide the analytical results to the Performing Respondent within thirty (30) days of receipt. The Respondent shall provide assistance necessary for TNRCC to take split or duplicate samples.
- F. The Respondent shall notify TNRCC at least seven (7) days before any sampling is conducted in accordance with approved work plans and all samples shall be handled in accordance with the approved QAPP.
- G. The Respondent shall submit all data, factual information, reports, schedules and other documents required by this Administrative Order in hard copy format and 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 Party 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: TNRCC Project Manager/Harris Sand Pits

For overnight express mail or delivery service:

TNRCC Project Manager, MC 144
Harris Sand Pits
TNRCC, Superfund Engineering Section
Building D, Floor 2, Room 211
12100 Park 35 Circle
Austin, TX 78753

As to the Performing Respondents:

Diamond Shamrock Refining and Marketing
Company

Freddie E. Harris/Frances Alice Harris Trust

For mail:

Corporate Environmental Manager
Ultramar Diamond Shamrock Corporation
P.O. Box 696000
San Antonio, TX 78269-6000

For mail:

Freddie Harris Sand and Clay
23340 So. Highway 16
Von Ormy, TX 78703

For overnight express mail or delivery service: *For overnight express mail or delivery service:*

Corporate Environmental Manager
Ultramar Diamond Shamrock Corporation
6000 N. Loop 1604 West
San Antonio, TX 78249

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, Pollution Cleanup Division.
- B. In addition to the deliverables set forth in this Administrative Order, Respondent 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 written notice that Respondent has 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. RD and RA Progress Reports

1. Commencing on and including the 10th day of the month following the month when this Administrative Order becomes effective, the Respondent 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 encountered or anticipated by the Respondent in commencing or completing the Remedial Activities. 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 is required to pay under Section XVIII, STIPULATED PENALTIES, of this Administrative Order. The monthly progress report shall be terminated at the earlier of: 1) the submittal of the first Post Closure Progress Report; or 2) 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 is deficient, TNRCC will notify the Performing Respondent within ten (10) work days after 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 of a notice of deficiency of a progress report, the Respondent 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 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 encountered or are anticipated by the Respondent 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 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 is deficient, TNRCC will notify the Performing Respondent within ten (10) work days after 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 of a notice of deficiency of a progress report, the Respondent shall make the necessary changes and resubmit the progress report to TNRCC.

XIII. TERMINATION OF POST CLOSURE

Any Post Closure Operation and Maintenance shall continue until such time as there is no longer a threat to human health and the environment. The threshold for each medium will be deemed met when Respondent demonstrates to the TNRCC that the remediation levels specified in the Exhibit A (RSD) have been attained.

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 Activities and satisfaction of this Administrative Order, the Respondent shall preserve, and shall instruct its contractors and subcontractors, and anyone else acting on its 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 Activities 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 Activities, 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 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 Respondent's possession at any time prior to termination of this Administrative Order that relate to liability, public health and safety or the environment associated with the Site shall be preserved for a minimum of ten (10) years after TNRCC certification of completion of Remedial Activities under this Administrative Order. Respondent 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 ten (10) year period, Respondent shall notify TNRCC at least ninety (90) days before the documents are scheduled to be destroyed. If TNRCC requests that the documents be saved, Respondent shall, at no cost to TNRCC, give TNRCC the documents or copies of the documents.
- E. Upon request by TNRCC, Respondent shall submit to TNRCC all documents relevant to the items specified in 361.182(b) of the Act for possible inclusion in the administrative record in accordance with 30 TAC §335.345.

XV. ACCESS

- A. If a person other than those bound by this Administrative Order owns, in whole or in part, the Site, or an 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, then Respondent 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 their contractors as approved by TNRCC, and Respondent or Respondent's authorized representatives and contractors. Such agreements shall specify that TNRCC is not liable for any loss or claim arising out of any activities at the Site. Copies of such agreements shall be provided to TNRCC before Respondent initiates field activities. Respondent's best efforts shall include, if necessary, providing reasonable compensation to any property owner not bound by this Administrative Order. If access agreements are not obtained within the time referenced above, Respondent 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. Any revisions to the submittal deadlines necessitated by the inability of Respondent to obtain such access shall be considered a reasonable ground for extending the deadline affected thereby pursuant to Section XVII, EXTENSIONS OF DEADLINES, of this Administrative Order.

- B. Subject to reasonable safety and internal security requirements of Respondent, 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 cleanup 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 and its representatives or contractors pursuant to this Administrative Order; reviewing the progress of the Respondent 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; and performing any necessary remedial action not being performed by the Respondent or not being satisfactorily performed by Respondent. Respondent 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 persons with access to the Site, including TNRCC and its authorized representatives and contractors, shall comply with Site health and safety plans.

XVI. DELAY IN PERFORMANCE

Respondent 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 the TNRCC Project Manager or if not available, the TNRCC alternate Project Manager within forty-eight (48) hours after Respondent first knew or should have known that an event might cause a delay. Within seven (7) calendar days after notifying TNRCC by telephone, Respondent shall provide written notification fully describing the cause of the delay, the anticipated duration of the delay, the measures taken and to be taken by Respondent, its 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.

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 (such Respondent is referred to herein as the "Defaulting Respondent"), the non-defaulting Respondent shall bear no costs for any resulting fines, penalties, or TNRCC oversight of the Remedial Activities. Defaulting Respondent 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 RD/RA, Post Closure Activity 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, the non-defaulting Respondent 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 to adhere to all remaining deadlines in this Administrative Order.

Respondent 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. 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 ADMINISTRATIVE PENALTIES

Subject to Section XX, FORCE MAJEURE, and the conditions set out in Section XXI, RESOLUTION OF DISAGREEMENTS, of this Administrative Order, noncompliance with this Administrative Order shall result in stipulated administrative penalties. The Agreeing Respondent shall pay stipulated administrative penalties as set forth below.

A. Penalties Related to Timeliness or Competency of Submittals

1. For failure to:

- a. meet the submittal deadlines set forth in Item K of Section V, ORDER, 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 Agreeing Respondent shall pay stipulated administrative penalties in the following amounts for each day during which the delay continues:

<i>Period of Delay</i>	<i>Amount/Day</i>
1st through 14th day	\$500.00
15th through 45th day	2,000.00
46th day and beyond	3,000.00

2. For each failure to make a responsive and acceptable resubmittal of any final package (or part thereof) as set forth in Item K of Section V, ORDER, the Agreeing Respondent shall pay a stipulated administrative penalty in the amount of \$5000 for each week during which the delay continues.
3. By submitting required submittals in advance of the initial submittal deadline applicable under this Administrative Order, the Agreeing Respondent shall obtain credits against deadlines for submitting subsequently due documents belonging to the same group. A maximum of 10 days may be accrued for credit in each group, and a maximum of 10 days credit may be applied against any one deadline in each group. The groups are as follows:
 - a. Submittals required under Item K of Section V, ORDER, of this Administrative Order;
 - b. Reports required under Section XII, PERIODIC REVIEW, of this Administrative Order;
 - c. Data submittals required under Section X, SUBMITTAL OF DOCUMENTS, SAMPLING, AND ANALYSIS, of this Administrative Order; and,
 - d. Resubmitted documents as set forth in Section IX, SUBMITTAL REQUIRING TNRCC's APPROVAL, of this Administrative Order.

B. Penalties Related to Project Milestones

1. For failure to:
 - a. complete Remedial Design according to the schedule approved under Subsection K.1.c., "Remedial Design" of Section V, ORDER, of this Administrative Order;

- b. initiate Remedial Action on Site in accordance with the schedule approved under Subsection K.2.e., "Remedial Action" of Section V, ORDER, of this Administrative Order;
- c. initiate Post Closure Activities in accordance with the schedule approved under Subsection K.3.g., "Post Closure Activity" of Section V, ORDER, of this Administrative Order;

the Agreeing Respondent shall pay stipulated administrative penalties in the following amounts for each day during which the delay continues:

<i>Period of Delay</i>	<i>Amount/Day</i>
1st through 30th day	\$1,000.00
31st through 60th day	3,000.00
61st day and beyond	10,000.00

- 2. By achieving the project milestones identified in Subsection B.1., "Penalties Related to Project Milestones" of Section XVIII, STIPULATED ADMINISTRATIVE PENALTIES, of this Administrative Order, in advance of the milestone completion dates contained within the approved schedule, the Agreeing Respondent shall obtain credits against subsequent milestones within the corresponding schedule. A maximum of 20 days credit may be accrued at any one time, and a maximum of 10 days may be applied against any one milestone completion date that is not met according to the approved corresponding schedule.
- C. For disobeying an order to halt work under Section VII, DESIGNATED PROJECT MANAGER/FACILITY COORDINATOR, of this Administrative Order, the Agreeing Respondent shall pay stipulated administrative penalties of \$10,000 per day.
- D. For failure to use best efforts to obtain Site access in accordance with Section XV, ACCESS, of this Administrative Order, the Agreeing Respondent shall pay a stipulated administrative penalty of \$1,000 per day.
- E. For denying access provided for in Section XV, ACCESS, of this Administrative Order, the Agreeing Respondent shall pay stipulated administrative penalties of \$10,000 per day.

- F. For failure to provide records within ten (10) days after TNRCC request, any Agreeing Respondent shall pay a stipulated administrative penalty of \$10,000 per day.
- G. With the exception of individual violations referred to in Item F above, all penalties referred to herein represent joint and several, not individual obligations of each Agreeing Respondent.
- H. Stipulated administrative penalties under this Section shall be submitted within sixty (60) days after receipt of a demand letter that stipulated administrative penalties have accrued and have not been waived, or after resolution of disagreements pursuant to this Administrative Order, whichever comes later. Penalties shall accrue from the date of noncompliance until the noncompliance is corrected; provided however, that if Agreeing Respondent is successful in any resolution of disagreements, it shall have no liability to pay stipulated administrative penalties with regard to matters submitted for resolution of disagreements in accordance with this Administrative Order.
- I. Stipulated administrative penalties shall be paid to "General Revenue Fund of the State of Texas," and payment shall be mailed to:
- Chief Fiscal Officer (MC 180)
Texas Natural Resource Conservation Commission
"Re: Harris Sand Pits State Superfund Site Administrative Order"
P.O. Box 13088
Austin, Texas 78711-3088
- J. The above stipulated administrative penalty requirements shall expire upon satisfactory completion of the terms of this Administrative Order, including full payment of any stipulated administrative penalties incurred prior to that date.
- K. A single act or omission shall not be the basis for more than one type of stipulated administrative penalty. However, a single act or omission is subject to more than one (1) day of stipulated administrative penalties. In addition, in cases where more than one stipulated administrative penalty applies to a single act or omission, the Executive Director may choose which stipulated administrative penalty to assess.
- L. The TNRCC has the sole discretion to reduce or waive stipulated administrative penalties.

- M. Stipulated administrative penalties shall be in lieu of enforcement penalties for the same violation of the Order, but shall not prevent the TNRCC from seeking enforcement of the ordering provisions by injunctive relief.

XIX. COMPLIANCE WITH APPLICABLE LAWS

- A. All actions by Respondent pursuant to this Administrative Order shall be performed in accordance with the requirements of all applicable or relevant and appropriate laws, including the Texas Solid Waste Disposal Act, Texas Health and Safety Code; and the Texas Hazardous Substances Spill Prevention and Control Act, 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 which is in compliance with all applicable or relevant and appropriate federal, state, and local requirements.

XX. FORCE MAJEURE

- A. If a delay in performance is caused (in whole or in part) by events beyond the reasonable control of Respondent, that failure shall not be construed as a violation of this Administrative Order. The burden of establishing that an event is beyond its reasonable control lies with the Respondent. The Respondent 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. 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.

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, its 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. However, TNRCC's approval of the revised timetable shall not be construed as excusing the delay or a waiver of TNRCC's rights to enforce this Administrative Order.

- 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 to perform such work.
- C. If the TNRCC and the Respondent cannot agree that the reason for the delay was a "Force Majeure" event or cannot agree upon the amount of additional time neces-

sary to complete the affected Phases, then the disagreement shall be resolved by reference to Section XXI, RESOLUTION OF DISAGREEMENTS, of this Administrative Order. Respondent shall have the burden of demonstrating that a "Force Majeure" is warranted under the circumstances.

XXI. RESOLUTION OF DISAGREEMENTS

- A. The Respondent and the TNRCC shall attempt to resolve any issues arising under Sections V through XXXII of this Administrative Order on which there is disagreement on an informal basis. Respondent shall commence informal negotiations by notifying the TNRCC Project Manager in writing that there is a disagreement and that this Section 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. Respondent shall notify TNRCC in accordance with Item A of this Section within ninety (90) days of the day Respondent knew or should have known of the events giving rise to the disagreement. Should Respondent fail to give such notice, the TNRCC's decision on any disagreement shall be binding.
- C. Notifying TNRCC in accordance with Item A of this Section shall not by itself postpone the deadlines for Respondent to meet its obligations under this Administrative Order or stay the accrual of stipulated administrative penalties for the matter at issue. However, the obligation to submit stipulated administrative penalties to the TNRCC shall be stayed pending resolution of the disagreement.
- D. If the TNRCC makes a determination to perform a portion or all of the Remedial Activities under Section V, ORDER, of this Administrative Order, Respondent shall have five (5) days to commence informal negotiations by notifying TNRCC in accordance with Item A of this Section. Informal negotiations shall not extend beyond fifteen (15) days from the date TNRCC receives notification unless the Parties agree otherwise in writing.
- E. The procedure for any resolution of disagreements subsequent to informal negotiations shall be found in §361.321 of the Act.
- F. Unless otherwise specifically set forth herein, the fact that resolution of disagreements is not specifically set forth in the individual Sections of this Administrative Order is not intended to and shall not bar Performing Respondent from invoking this Section as to any disagreement arising under Sections V through

XXXII of this Administrative Order, including any disagreement concerning the exercise of discretion by TNRCC under the terms of this Administrative Order.

XXII. RESERVED

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, or its 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 or its directors, officers, employees, agents, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Administrative Order.

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.

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 Respondents listed in Item A of Section II, FINDINGS OF FACT, of this Administrative Order only, the TNRCC specifically retains authority over such respondents 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 the State of Texas may require.

XXVIII. ENFORCEMENT AND RESERVATIONS

- A. Except as provided in Section XVIII, STIPULATED ADMINISTRATIVE PENALTIES, nothing herein shall preclude TNRCC from taking any additional enforcement actions including issuing additional orders as TNRCC may deem necessary, or from requiring Respondent in the future to perform additional activities.
- B. Except as provided in Section XVIII, STIPULATED ADMINISTRATIVE PENALTIES, 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. COMPUTATION OF TIME

- A. Except where 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 of Texas 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.

XXX. OPPORTUNITY TO CONFERENCE

- A. Respondent 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 Remedial Activities required by this Administrative Order.

XXXI. TERMINATION AND SATISFACTION

Except as provided in this Section, the provisions of this Administrative Order shall be deemed to be satisfied in regard to Performing Respondent when TNRCC notifies Performing Respondent in writing that Performing Respondent has demonstrated, to TNRCC's satisfaction, that all terms of this Administrative Order, including any amendments, have been completed. Such notice will be issued within one hundred and eighty (180) days after completion of the terms of this order. This notice shall not, however, terminate Respondent's obligation to comply with record preservation, liability, and other provisions intended to survive 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

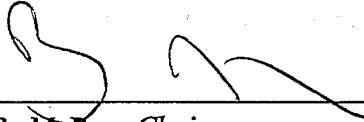
The masculine, feminine, and neuter gender shall each include the other, and the singular and plural number shall each include the other.

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

Issued date:

FEB 27 1998

Texas Natural Resource Conservation Commission



Barry R. McBee, Chairman

**HARRIS SAND PITTS
STATE SUPERFUND SITE
ADMINISTRATIVE ORDER**

EXHIBIT A

REMEDY SELECTION DOCUMENT

EXHIBIT A

Remedy Selection Document

I. SITE NAME, LOCATION, AND DESCRIPTION

Harris Sand Pits
23340 South Highway 16
Von Ormy, Texas

The Harris Sand Pits State Superfund Site is located on the property of an active sand and clay quarry in southern Bexar County, Texas, approximately one-half mile east of U.S. Highway 16, and approximately one-half mile north of the Atascosa County Line.

II. STATEMENT OF BASIS AND PURPOSE

This document presents the proposed remedy for surface soils, subsurface soils and groundwater at the Harris Sand Pits State Superfund site. A remedial action is designed to insure the protection of human health and the environment. The proposed remedy selection was made following the Texas Solid Waste Disposal Act, codified as Texas Health and Safety Code, Chapter 361, and all applicable State and Federal environmental regulations.

III. SUMMARY OF SITE CONTAMINATION

A black, clay like waste tar material was encountered between five and ten feet below the ground surface. The tar occurred in layers up to ten feet in thickness near the original location of the disposal pits. The weathered tar is also exposed at the surface due to erosion. Results of the field investigation found that the waste tar is composed of organic compounds typical of refinery waste. The waste tar also contains heavy metals, including lead, displays a high sulfate content, and has a pH less than 0.5. The approximate volume of mixed sand and waste tar in the original pit area is estimated to be 34,580 cubic yards. In addition, an estimated 3,000 cubic yards of waste tar are mixed with sand that has eroded from the pit area.

An unconfined shallow aquifer is present in the upper sand zone. Organic compounds have been detected in groundwater samples from monitor well MW-01. This well is located near the original pits. Organic contaminants have not been detected in wells down gradient, indicating that the contaminants have not migrated. Metals concentrations exceed the EPA maximum contaminant level (MCL) for arsenic and chromium in two wells. Inorganic groundwater analyses detected high levels of total dissolved solids and sulfate in the wells near the waste tar pits. Results of fate and transport modeling suggest that the contaminants will attenuate before they reach the property boundary. No organic contaminants were detected in soil samples collected from the basal clay layer. Groundwater was not encountered in the lower sand.

IV. CLEANUP LEVELS

Cleanup levels are the maximum concentrations of the chemicals of concern, which if allowed to remain on the Harris Sand Pits Site, will not pose an unacceptable risk of adverse health effects.

<u>Chemical</u>	<u>Medium</u>	<u>Cleanup Level</u>	<u>Units</u>
Arsenic	Groundwater	50	µg/l
Chromium	Groundwater	100	µg/l
Cadmium	Groundwater	5	µg/l
Lead	Soil	500	mg/Kg
Arsenic	Soil	20	mg/Kg
Trichloroethylene	Soil	0.5	mg/Kg
Tetrachloroethylene	Soil	0.5	mg/Kg
Benzene	Soil	0.5	mg/Kg
1,2-dichloroethane	Soil	0.5	mg/Kg
1,2-dichloropropane	Soil	0.5	mg/Kg
Methylene chloride	Soil	0.5	mg/Kg
pH	Waste Tar	>2.0	pH units

V. DESCRIPTION OF THE SELECTED REMEDY

The selected remedy shall address the potential threat from the surface soils, subsurface soils, waste material, and the groundwater. The potential threat from surface and subsurface soils and waste material shall be addressed by excavation of said media with contamination which exceeds the specified cleanup levels. These excavated media shall be consolidated on-site, treated on-site as necessary, and contained within a capped area in accordance with applicable or relevant and appropriate local, state, and federal laws and regulations. All excavated areas shall be graded for positive site drainage, backfilled with clean soil where necessary, and revegetated with grasses.

Waste treatment, consolidation, and on-site containment of contaminated soil and waste will isolate the source for groundwater contamination. Groundwater monitoring will be conducted to confirm that this results in the natural attenuation of groundwater contaminated above the groundwater remediation goals. Periodic reviews of groundwater monitoring data will determine when these remediation goals have been met. Regular monitoring will continue to demonstrate that groundwater contamination is not migrating off-site. Although the groundwater in the shallow aquifer is not currently being used, the groundwater will be deed restricted to prevent human exposure to contaminated groundwater.

This alternative employs treatment to permanently reduce the mobility of contaminants. It provides an engineered cap and institutional controls (deed recordation and restrictions, and fencing with warning signs) to prevent exposure to contaminated soil above health-based levels. This alternative is acceptable to the community since it will remove the contaminants above the acceptable risk levels from the surface and allow future use of the land that is not included in the containment area. Based on all available information, the selected remedy will provide adequate protection of human health and the environment at the Harris Sand Pits State Superfund Site.

**HARRIS SAND PITS
STATE SUPERFUND SITE
ADMINISTRATIVE ORDER**

EXHIBIT B

DE MINIMIS RESPONSIBLE PARTY CONSENT FORM

(NOT APPLICABLE)

**HARRIS SAND PITS
STATE SUPERFUND SITE
ADMINISTRATIVE ORDER**

EXHIBIT C

AGREEING RESPONDENT CONSENT FORM

EXHIBIT C

Agreeing Respondent Consent Form

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

Agreeing Respondents 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 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 and TNRCC reserve their rights to deny all of these matters. The Agreeing Respondent 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 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, Agreeing 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.

Agreeing Respondent acknowledges and agrees that nothing in the Remedial Design or Remedial Action Work Plans, 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 RSD 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 Agreeing Respondent or De Minimis Responsible Party in any way in defending contribution actions brought by persons or entities not parties to this Administrative Order.

The Agreeing Respondent agrees to indemnify and hold harmless the TNRCC and its officers, employees, agents, principals and assigns from and against all fines, penalties, claims, damages, losses, demands, judgements, settlements, costs of suit and attorneys fees that arise out of or result from:

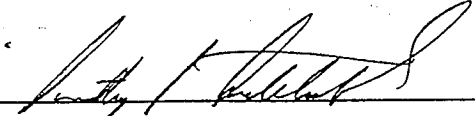
- a. the Agreeing Respondent's performance of an inherently dangerous activity or handling of a hazardous substance;
- b. the negligent or reckless or intentional acts or omissions of the Agreeing Respondent or any of its agents or employees;
- c. the negligent or reckless or intentional acts or omissions of any of the Agreeing Respondent's contractors or suppliers or their agents or employees.

The Parties represent that this Administrative Order was negotiated in good faith and that, for the purposes of this Administrative Order, the mutual obligations represent a fair and equitable assumption of the Agreeing Respondent's alleged responsibilities for matters concerning the Site, considering, among other factors, the fact that 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 RESPONDENT:

Diamond Shamrock Refining and Marketing Company
Name of Agreeing Respondent

 *Signature* HJM

Jan 29, 1998
Date

Timothy J. Fretthold
Printed or Typed Name

Executive Vice President
Title

6000 N. Loop 1604 W., San Antonio, TX 78249-1112
Address

AGREEING RESPONDENT:

Frances Alice Harris Trust
Name of Agreeing Respondent

Leon Harris
Leon Harris, Co-Trustee

Dorothy Harris
Dorothy Harris, Co-Trustee

Date: January 29, 1998

Beverly Saunders
Beverly Saunders, Co-Trustee

Co-Trustees
Title

23340 Highway 16 South, Von Ormy, Texas 78073
Address

AGREEING RESPONDENT:

Freddie E. Harris

Name of Agreeing Respondent

Beverly Saunders

Signature

Date: January 29, 1998

Beverly Saunders

Typed or Printed Name

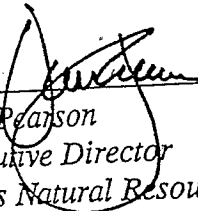
Attorney-in-Fact

Title

23340 Highway 16 South, Von Ormy, Texas 78073

Address

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION:



Dan Pearson
Executive Director
Texas Natural Resource Conservation Commission

2/13/98
Date

**HARRIS SAND PITTS
STATE SUPERFUND SITE
ADMINISTRATIVE ORDER**

EXHIBIT D

DATA QUALITY OBJECTIVES

EXHIBIT D

Data Quality Objectives

DATA QUALITY OBJECTIVE (DQO) NUMBER 1

Step Number 1 - State the Problem

1. State the Problem:

- a. Identify members of the Scoping Team:
 - TNRCC Staff
 - Ultramar Diamond Shamrock (UDS) Representatives
 - Harris Representatives
- b. Identify the Primary Decision Maker:
 - The Primary Decision Maker is the TNRCC Project Manager.

2. Develop/Refine the Site Conceptual Model:

Not applicable.

3. Define Exposure Pathways and Exposure Scenarios:

Not applicable.

4. Specify the Available Resources:

- a. Monetary budget available for investigation
 - As necessary
- b. Define Relative Time Constraints:
 - Prior to completion of Remedial Action for:
 - i) Soils, and;
 - ii) Groundwater.

5. Summarize the Problem:

The problem is described as follows: Background concentrations for site chemicals of concern listed in the Remedy Selection Document (RSD) (Exhibit A) must be determined to support the Deed Recordation process.

Step Number 2 - Identify the Decision

Determine the background concentration for each of the chemicals of concern listed for the site in the Remedy Selection Document.

Step Number 3 - Identify the Inputs to the Decision

1. Identify the Informational Inputs Needed to Resolve the Decision:

- a. List of all of the data needed to resolve the decision:
 - The background concentrations of the chemicals of concern (COCs) listed in the RSD for soil and for water.
- b. Indicate how to generate the necessary data:
 - Published background values acceptable to the TNRCC
 - Sampling and analyses of unaffected media outside the site
 - For groundwater, collect samples at the boundary immediately upgradient of the plume

2. Identify Sources for Each Environmental Input and List Those Inputs that are Obtained Through Environmental Measurements:

- a. Identify existing sources of information that can support the decision:
 - Published Background Study Data

3. Determine the Basis for Establishing the Background Concentrations:

- a. List the possible basis for establishing the background:
 - Background concentration values are necessary for Deed Recordation in accordance with the requirements of the RSD.

4. Identify Potential Sampling Approaches and Appropriate Analytical Methods:

- If sampling is necessary to determine the background concentration values, the sampling approaches and the appropriate analytical methods will be determined as part of the Sampling and Analysis Plan (SAP) and as part of the Quality Assurance Project Plan (QAPP) submittals that are approved by the TNRCC.

Step Number 4 - Define the Boundaries of the Study

1. Define the Geographic Area of the Field Investigation:
 - a. Define the domain or geographic area within which all decisions must apply:
 - “Unaffected media (i.e., soil)” for soil background concentrations.
 - “Upgradient” for groundwater background concentrations.
 - b. Specify the characteristics that define the population of interest:
 - Surface Soils - sample within the top 2-feet of the soil profile
 - Groundwater - upgradient concentrations
 - c. When appropriate, divide the population into strata that have relatively homogeneous characteristics:
 - Not applicable
 - d. Define the Scale of Decision Making:
 - Not applicable
2. Define the Temporal Boundaries of the Decision:
 - a. Determine the time frame to which the study data apply:
 - Soils - not applicable
 - Groundwater - 2 years of background monitoring required (or less if approved by the TNRCC); 2 year period begins after the completion of the Soils Remedial Action.
 - b. Determine when to collect data:
 - Soils - prior to completion of Soils Remedial Action
 - Groundwater - After completion of Soils Remedial Action field work
3. Identify Any Practical Constraints on Data Collection:
 - Not applicable

Step Number 5 - Develop the Decision Rule

1. Specify the Parameter that Characterizes the Population of Interest:
 - The mean of the 98% Upper Confidence Limit
2. Specify the Action Level or Preliminary Action Level for the Decision:
 - Not Applicable

3. Develop the Decision Rule:

a. Combine the outputs of the previous DQO steps into an "if...then..." decision rule that includes the parameter of interest, the action level, and the alternative actions:

- If the concentration of a COC is greater than the mean of the 98% Upper Confidence Limit for that same COC, then the measured concentration is above its background concentration.

Step Number 6 -Specify Acceptable Limits on Decision Errors

The elements of this step will be deferred to and developed in the QAPP and SAP submittals as appropriate and will be approved by the TNRCC as part of these submittals.

Step Number 7 -Optimize the Design

The elements of this step will be deferred to and developed in the QAPP and SAP submittals as appropriate and will be approved by the TNRCC as part of these submittals.

DOO NUMBER 1 NOTES:

- Sample analyses COC concentrations that are measured as "non-detectable" by laboratory procedures shall be input as one-half the method detection limit for the respective COC when computing the 98% Upper Confidence Limit.

DATA QUALITY OBJECTIVE (DQO) NUMBER 2

Step Number 1 - State the Problem

1. State the Problem:

- a. Identify members of the Scoping Team:
 - TNRCC Staff
 - Ultramar Diamond Shamrock (UDS) Representatives
 - Harris Representatives
- b. Identify the Primary Decision Maker:
 - The Primary Decision Maker is the TNRCC Project Manager.

2. Develop/Refine the Site Conceptual Model:

Not applicable.

3. Define Exposure Pathways and Exposure Scenarios:

a., b. & d. Not applicable.

- d. Define applicable or relevant and appropriate requirements (ARARs):
 - Concentrations as listed in the Remedy Selection Document (RSD) for meeting the remediation goals.

4. Specify the Available Resources:

- a. Monetary budget available for investigation
 - As necessary
- b. Define Relative Time Constraints:
 - Not applicable

5. Summarize the Problem:

The problem is described as follows: Groundwater must be monitored to determine if the chemicals of concern are attenuating naturally and to determine when the requirements contained in the RSD have been met.

Step Number 2 - Identify the Decision

1. Select the appropriate decision for the current phase of the process:
Cleanup Attainment - Groundwater COC concentrations above background and groundwater COC concentrations below the RSD groundwater cleanup goals via natural attenuation.

2. Identify Alternative Actions That May be Taken Based on the Findings of the Field Investigation:

- a. Select the actions that will be taken based on the outcome of the field investigation that corresponds with the selected decision:
- Groundwater remediation standards according to the RSD have been attained - proceed with delisting.
 - Recommend further response.
 - Deed record all areas of the site with groundwater COC concentrations above the corresponding background concentrations.

3. Identify Relationships Among Decisions:

- a. Prioritize decisions:
- Not applicable.
- b. Determine the logical sequence of actions:
- When it appears that an unexplainable, statistically significant, increase in a COC concentration has occurred, the first response will be to re-sample and analyze the location in question.
 - The TNRCC will review the Periodic Groundwater Monitoring Data as it is received. However, if an unexplained trend continues for consecutive review periods, the TNRCC will not require a response action unless the plume is moving outside of the originally defined boundaries, or if a COC has increased beyond its baseline concentration.

Step Number 3 - Identify the Inputs to the Decision

1. Identify the Informational Inputs Needed to Resolve the Decision:

- a. List of all of the data needed to resolve the decision:
- Concentrations of the chemicals of concern (COCs) in the groundwater plume:
 - Baseline period (i.e., Two years of quarterly monitoring)
 - Annual sampling occurs after the 2-year baseline period

- Background values for groundwater COCs as determined by DQO Number 1
 - Drinking Water Standards for Method Detection Limits
- b. Indicate how to generate the necessary data:
- Physical groundwater samples with laboratory analysis
2. Identify Sources for Each Environmental Input and List Those Inputs that are Obtained Through Environmental Measurements:
- a. Identify existing sources of information that can support the decision:
- Remedial Investigation (RI) Data
3. Determine the Basis for Establishing the Contaminant-Specific Action Levels:
- a. List the possible basis for establishing the background:
- In the RSD/Not Applicable.
4. Identify Potential Sampling Approaches and Appropriate Analytical Methods:
- The sampling approaches and the appropriate analytical methods will be determined as part of the Sampling and Analysis Plan (SAP) and as part of the Quality Assurance Project Plan (QAPP) submittals that are approved by the TNRCC.

Step Number 4 - Define the Boundaries of the Study

1. Define the Geographic Area of the Field Investigation:
- a. Define the domain or geographic area within which all decisions must apply:
- Decisions regarding the cleanup attainment decision and the evaluation of the natural attenuation shall apply to the groundwater plume in the perched zone.
 - Decisions regarding defining the limits of the groundwater background concentration plume shall apply to the portion of the groundwater perched zone that is located outside of the groundwater plume in the perched zone.
- b. Specify the characteristics that define the population of interest:
- COC Concentrations in the perched zone groundwater plume.

c. When appropriate, divide the population into strata that have relatively homogeneous characteristics:

- Not applicable

d. Define the Scale of Decision Making:

- Data collected from separate sample locations (e.g., wells) shall be used collectively to make decisions concerning cleanup attainment and natural attenuation.
- Data collected from individual sample locations shall be used independently to make decisions concerning defining the background concentration limits of the groundwater plume.

2. Define the Temporal Boundaries of the Decision:

a. Determine the time frame to which the study data apply:

- Not applicable

b. Determine when to collect data:

- Baseline determination - Quarterly sampling for the first two years.
- Annual sampling thereafter with a 5-year review period, or a more frequent review period as requested by Respondent or TNRCC. Respondent may cease groundwater data collection once it has been demonstrated that the groundwater remediation standards specified in the RSD have been satisfied.
- Background determination - Locations sampled during the first two years coinciding with the baseline determination.

3. Identify Any Practical Constraints on Data Collection:

- Not applicable

Step Number 5 -Develop the Decision Rule

1. Specify the Parameter that Characterizes the Population of Interest:

- *This part of the DQO Process has been deferred to the Groundwater Monitoring Plan, Sampling and Analysis Plan (SAP), and Quality Assurance Project Plan (QAPP) submittals as applicable.*

2. Specify the Action Level or Preliminary Action Level for the Decision:

- *This part of the DQO Process has been deferred to the Groundwater Monitoring Plan, Sampling and Analysis Plan (SAP), and Quality Assurance Project Plan (QAPP) submittals as applicable.*

3. Develop the Decision Rule:

a. Combine the outputs of the previous DQO steps into an "if...then..." decision rule that includes the parameter of interest, the action level, and the alternative actions:

- ***Attenuation Rule*** - During the Periodic Review, if the annual COC concentrations are stable or decreasing as compared to the baseline COC concentrations, then attenuation is occurring.
- ***Groundwater Remediation Rule*** - During the Periodic Review, if the annual COC concentrations are less than or equal to the groundwater remediation goals in the RSD, then remediation of the groundwater has been achieved.
- ***Deed Recordation Rule*** - If the groundwater COC concentrations from the individual groundwater sample are less than or equal to the background COC concentrations as determined according to DQO Number 1, then the Deed Recordation Outer Limit has been established for the part of the groundwater plume represented by the individual sample.

Step Number 6 -Specify Acceptable Limits on Decision Errors

The elements of this part of the DQO Process have been deferred to the Groundwater Monitoring Plan, Sampling and Analysis Plan (SAP), and Quality Assurance Project Plan (QAPP) submittals as applicable, and will be approved by the TNRCC as part of these submittals.

Step Number 7 -Optimize the Design

The elements of this part of the DQO Process have been deferred to the Groundwater Monitoring Plan, Sampling and Analysis Plan (SAP), and Quality Assurance Project Plan (QAPP) submittals as applicable, and will be approved by the TNRCC as part of these submittals.

DQO NUMBER 2 NOTES:

- If the groundwater contamination is below cleanup levels specified in the RSD but above background concentrations, then in accordance with the requirements of the RSD, deed recordation of the groundwater is required, but deed restriction of the groundwater is not required.

DATA QUALITY OBJECTIVE (DQO) NUMBER 3

Step Number 1 - State the Problem

1. State the Problem:

- a. Identify members of the Scoping Team:
 - TNRCC Staff
 - Ultramar Diamond Shamrock (UDS) Representatives
 - Harris Representatives
- b. Identify the Primary Decision Maker:
 - The Primary Decision Maker is the TNRCC Project Manager.

2. Develop/Refine the Site Conceptual Model:

Not applicable.

3. Define Exposure Pathways and Exposure Scenarios:

a., b. & d. Not applicable.

- d. Define applicable or relevant and appropriate requirements (ARARs):
 - Concentrations as listed in the Remedy Selection Document (RSD) for meeting the remediation goals.

4. Specify the Available Resources:

- a. Monetary budget available for investigation
 - As necessary
- b. Define Relative Time Constraints:
 - Not applicable

5. Summarize the Problem:

The problem is described as follows: The site must be remediated according to the requirements contained in the RSD. Data must show that all areas of the site that require remediation have been remediated.

Step Number 2 - Identify the Decision

1. Select the appropriate decision for the current phase of the process:
Cleanup Attainment - Soil COC concentrations above background and soil COC concentrations below the RSD soil cleanup goals.

2. Identify Alternative Actions That May be Taken Based on the Findings of the Field Investigation:

- a. Select the actions that will be taken based on the outcome of the field investigation that corresponds with the selected decision:
- Deed record all areas of the site with soil COC concentrations above the corresponding background concentrations.
 - Remediate all soils with COC's greater than the RSD-specified soil cleanup goals, in accordance with the spatial and temporal boundaries defined within this DQO.

3. Identify Relationships Among Decisions:

- a. Prioritize decisions:
- Not applicable.
- b. Determine the logical sequence of actions:
- Not applicable

Step Number 3 -Identify the Inputs to the Decision

1. Identify the Informational Inputs Needed to Resolve the Decision:

- a. List of all of the data needed to resolve the decision:
- Background values for soil COCs as determined by DQO Number 1
 - Analytical data from collected soil samples
- b. Indicate how to generate the necessary data:
- Physical soil sample with laboratory analysis

2. Identify Sources for Each Environmental Input and List Those Inputs that are Obtained Through Environmental Measurements:

- a. Identify existing sources of information that can support the decision:
- None

3. Determine the Basis for Establishing the Contaminant-Specific Action Levels:

- a. List the possible basis for establishing the background:
- In the RSD/Not Applicable.

4. Identify Potential Sampling Approaches and Appropriate Analytical Methods:

- As approved by the TNRCC as part of the Sampling and Analysis Plan (SAP) and as part of the Quality Assurance Project Plan (QAPP) submittals, the sample representing the maximum 10,000 ft² area will be a composite sample consisting of a minimum of one aliquot per 2,000 ft² of area.

Step Number 4 - Define the Boundaries of the Study

1. Define the Geographic Area of the Field Investigation:

- a. Define the domain or geographic area within which all decisions must apply:
 - The outer limits of the deed recorded area will be used to establish the background line of demarcation.
- b. Specify the characteristics that define the population of interest:
 - Areas of known contamination (from RI Data, or other data)
 - COC Concentrations within the top 12 inches of the exposed excavation surface
- c. When appropriate, divide the population into strata that have relatively homogeneous characteristics:
 - Not applicable
- d. Define the Scale of Decision Making:
 - Samples will represent a maximum 10,000 ft² area. A separate decision will be made for each sample that represents a maximum area of 10,000 ft².

2. Define the Temporal Boundaries of the Decision:

- a. Determine the time frame to which the study data apply:
 - Not applicable
- b. Determine when to collect data:
 - During soil excavation activities

3. Identify Any Practical Constraints on Data Collection:

- Soil at the groundwater level will not be excavated.

Step Number 5 -Develop the Decision Rule

1. Specify the Parameter that Characterizes the Population of Interest:
 - Analytical data from each representative area shall be compared directly to the COC background concentrations as determined according to DQO Number 1.
 - Analytical data from each representative area shall be compared directly to the COC concentrations as listed in the RSD and shall be the basis for determining if the representative area has met the remediation standards for the soils it contains according to the RSD.
2. Specify the Action Level or Preliminary Action Level for the Decision:
 - Background Concentrations - Established according to DQO No. 1
 - Soil COC cleanup goals - Listed in the RSD
3. Develop the Decision Rule:
 - a. Combine the outputs of the previous DQO steps into an "if...then..." decision rule that includes the parameter of interest, the action level, and the alternative actions:
 - **Deed Recordation Rule** - If the soil COC concentrations from the representative soil sample are less than or equal to the background COC concentrations as determined according to DQO Number 1, then the Deed Recordation Outer Limit has been established for the representative area sampled.
 - **Soil Remediation Rule** - If the soil COC concentrations from the representative soil sample are less than or equal to the soil COC cleanup goals listed in the RSD, then the representative area has been remediated in accordance with the RSD.

Step Number 6 -Specify Acceptable Limits on Decision Errors

The elements of this step will be deferred to and developed in the QAPP and SAP submittals as appropriate and will be approved by the TNRCC as part of these submittals.

Step Number 7 -Optimize the Design

The elements of this step will be deferred to and developed in the QAPP and SAP submittals as appropriate and will be approved by the TNRCC as part of these submittals.

DQO NUMBER 3 NOTES:

•

DATA QUALITY OBJECTIVE (DQO) NUMBER 4

Step Number 1 - State the Problem

1. State the Problem:

- a. Identify members of the Scoping Team:
 - TNRCC Staff
 - Ultramar Diamond Shamrock (UDS) Representatives
 - Harris Representatives
- b. Identify the Primary Decision Maker:
 - The Primary Decision Maker is the TNRCC Project Manager.

2. Develop/Refine the Site Conceptual Model:

- a. Not applicable.
- b. List known or suspected sources of contamination:
 - Contaminated soils at the site that exceed RSD Soil cleanup standards.

3. Define Exposure Pathways and Exposure Scenarios:

- a., b. & d. Not applicable.
- c. Define applicable or relevant and appropriate requirements (ARARs):
 - Containment-option design specific - to be determined during the Remedial Design

4. Specify the Available Resources:

- a. Monetary budget available for investigation
 - As necessary
- b. Define Relative Time Constraints:
 - Not applicable

5. Summarize the Problem:

The problem is described as follows: Determine if the material to be consolidated and contained on-site requires treatment.

Step Number 2 - Identify the Decision

1. Select the appropriate decision for the current phase of the process:
Treatment Decision - to be based on the containment option ARARs as determined during the Remedial Design.
2. Identify Alternative Actions That May be Taken Based on the Findings of the Field Investigation:
 - a. Select the actions that will be taken based on the outcome of the field investigation that corresponds with the selected decision:
 - Not applicable
3. Identify Relationships Among Decisions:
 - a. Prioritize decisions:
 - Not applicable.
 - b. Determine the logical sequence of actions:
 - Not applicable

Step Number 3 - Identify the Inputs to the Decision

1. Identify the Informational Inputs Needed to Resolve the Decision:
 - a. List of all of the data needed to resolve the decision:
 - ARAR-specific based on the containment option selected during the Remedial Design.
 - b. Indicate how to generate the necessary data:
 - Not applicable at this time.
2. Identify Sources for Each Environmental Input and List Those Inputs that are Obtained Through Environmental Measurements:
 - a. Identify existing sources of information that can support the decision:
 - None
3. Determine the Basis for Establishing the Contaminant-Specific Action Levels:
 - a. List the possible basis for establishing the treatment criteria:
 - To be based on the containment option developed in the Remedial Design.

4. Identify Potential Sampling Approaches and Appropriate Analytical Methods:

- If analytical data is required, then a maximum treatment batch size of 2000 cubic yards will be sampled based on a composite sample consisting of a minimum of one aliquot per each 50 cubic yards. Screening data may be used as part of the analytical methods, but it will be augmented by definitive data collection on a frequency acceptable to the TNRCC as approved in the submitted Quality Assurance Project Plan (QAPP) and the Sampling and Analysis Plan (SAP) submittals.

Step Number 4 - Define the Boundaries of the Study

1. Define the Geographic Area of the Field Investigation:

a. Define the domain or geographic area within which all decisions must apply:

- Not applicable

b. Specify the characteristics that define the population of interest:

- Not applicable

c. When appropriate, divide the population into strata that have relatively homogeneous characteristics:

- Not applicable

d. Define the Scale of Decision Making:

- Decisions will be made on a per batch basis. Batch size will not exceed 2,000 cubic yards. The composite sample representing each batch will be compared directly to the treatment criteria established during the Remedial Design.

2. Define the Temporal Boundaries of the Decision:

a. Determine the time frame to which the study data apply:

- Not applicable

b. Determine when to collect data:

- During soil excavation activities

3. Identify Any Practical Constraints on Data Collection:

- Not applicable

Step Number 5 - Develop the Decision Rule

1. Specify the Parameter that Characterizes the Population of Interest:
 - To be determined during the Remedial Design (ARAR-dependent)
2. Specify the Action Level or Preliminary Action Level for the Decision:
 - To be determined during the Remedial Design (ARAR-dependent)
3. Develop the Decision Rule:
 - a. Combine the outputs of the previous DQO steps into an "if...then..." decision rule that includes the parameter of interest, the action level, and the alternative actions:
 - If the treatment criteria established during the Remedial Design are met based on each batch composite sample, then treatment of that batch is not required prior to its consolidation.

Step Number 6 -Specify Acceptable Limits on Decision Errors

The elements of this step will be deferred to and developed in the Remedial Design phase, QAPP, and SAP submittals as appropriate and will be approved by the TNRCC as part of these submittals.

Step Number 7 -Optimize the Design

The elements of this step will be deferred to and developed in the Remedial Design phase, QAPP, and SAP submittals as appropriate and will be approved by the TNRCC as part of these submittals.

DQO NUMBER 4 NOTES:

•

**HARRIS SAND PITS
STATE SUPERFUND SITE
ADMINISTRATIVE ORDER**

EXHIBIT E

DEED CERTIFICATION OF REMEDIAL ACTION

EXHIBIT E

Sample Deed Certification of Remediation

STATE OF TEXAS
[] COUNTY

*Industrial Solid Waste
Deed Certification of Remediation*

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Natural Resource Conservation Commission pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of [] County, Texas in compliance with the recordation requirements of said rules:

I

[Company Name] has performed a remediation of the land described herein. A list of the known waste constituents, including known concentrations [i.e., soil and ground water, if applicable], which have been left in place is attached hereto and is made part of this filing. Further information concerning this matter may be found by an examination of company records or in the Harris Sand Pits State Superfund Site files [if applicable, "and Solid Waste Registration Number _____ files"], which are available for inspection upon request at the central office of the Texas Natural Resource Conservation Commission in Austin, Texas.

The Texas Natural Resource Conservation Commission derives its authority to review the remediation of this tract of land from the Texas Solid Waste Disposal Act, §361.002, Texas Health and Safety Code, Chapter 361, which enables the Texas Natural Resource Conservation Commission to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to the Texas Water Code, §5.012 and §5.013, Texas Water Code, Annotated, Chapter 5, the Texas Natural Resource Conservation Commission is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Natural Resource Conservation Commission requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Natural Resource Conservation Commission of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Natural Resource Conservation Commission that the remediation standards specified in this certification have been met by (Company name).

I

II

Being a [] acre tract, more or less, out of the [Company's or Individual's Name]'s ___ acre tract in the [Name] League [No.], Abstract [No.], recorded in Volume [No.], Page [No.] of the Deed of Records [] County, Texas, said [] acre tract being more particularly described as follows:

[Insert metes and bounds description here]

For Standard 2 cleanups: [Contaminants/contaminants and waste] deposited hereon have been remediated [to meet residential soil criteria/ to meet non-residential (i.e., industrial/commercial) soil criteria], in accordance with a plan designed to meet the Texas Natural Resource Conservation Commission's requirements in 30 Texas Administrative Code, §335.555 (Risk Reduction Standard Number 2); which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for [residential, non-residential (i.e., industrial/commercial)] purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be [residential, non-residential].

For Standard 3 cleanups: [Contaminants/contaminants and waste] deposited hereon have been remediated [to meet residential soil criteria/to meet non-residential (i.e., industrial/commercial) soil criteria] in accordance with a plan designed to meet the requirements of 30 Texas Administrative Code, §335.561 (Risk Reduction Standard Number 3), which mandates that the remedy be designed to eliminate or reduce to the maximum extent practicable, substantial present or future risk. The remediation plan [does/ does not] require continued post-closure care or engineering or institutional control measures. Future use of the property is considered appropriate for [describe] in accordance with risk reduction standards applicable at the time of this filing. Institutional or legal controls placed on the property to ensure appropriate future use include [describe].

For both Standard 2 and 3 cleanups where the remedy is based upon non-residential soil criteria: The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Natural Resource Conservation Commission.

III

The owner of the site is [Company's (put state of incorporation) or Individual's Name] and its address is [P.O. Box or Street, City, Texas, Zip Code].

EXECUTED this the _____ day of _____, 19____.

[Company's (put state of incorporation) or Individual's Name]

[Name]

STATE OF TEXAS
[_____] COUNTY

BEFORE ME, on this the ___ day of _____, personally appeared (Name), (Plant Manager, Owner) of (Company Name), a Texas corporation, known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the _____ day of _____, 19____.

Notary Public in and
for the State of Texas,

County of _____

My Commission Expires: _____

STATE OF TEXAS
BEXAR COUNTY

*Industrial Solid Waste
Deed Certification of Remediation*

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Natural Resource Conservation Commission pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Bexar County, Texas in compliance with the recordation requirements of said rules:

I.

Freddie E. Harris, Frances Alice Harris Trust, and Diamond Shamrock Refining and Marketing Company have performed a remediation of the land described herein. A list of the known waste constituents that have been left in place, including the maximum allowable clean up concentrations for the Site, is attached hereto and is made part of this filing (Attachment A). Soil with contaminant concentrations that exceeded these specified cleanup levels were excavated and consolidated on-site within a capped area. The location of the on-site cap and areas in which the soil currently exceeds background levels but is below specified cleanup levels is indicated on the attached maps (Attachment B). Further information concerning this matter may be found by an examination of company records or in the Harris Sand Pits State Superfund Site files, which are available for inspection upon request at the central office of the Texas Natural Resource Conservation Commission in Austin, Texas.

The Texas Natural Resource Conservation Commission derives its authority to review the remediation of this tract of land from § 361.002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code, Chapter 361, which enables the Texas Natural Resource Conservation Commission to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to § 5.012 and § 5.013 of the Texas Water Code, the Texas Natural Resource Conservation Commission is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the Texas Natural Resource Conservation Commission requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Natural Resource Conservation Commission of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Natural Resource Conservation Commission that

the remediation standards specified in this certification have been met by Freddie E. Harris, Frances Alice Harris Trust, and Diamond Shamrock Refining and Marketing Company

II.

Being a 10.787 acre (469,886 sq. ft.) tract of land, more or less, out of the J.E. Harris Survey No. 265 1/2, abstract 1202, situated in Bexar County, Texas, being a portion of that 106.566 acre tract (Tract 1) conveyed to Frances Alice Harris Trust by deed of record in volume 6182, page 810 of the real property records of Bexar County, Texas; said 10.787 acres being more particularly described by metes and bounds in two tracts as follows:

COMMENCING, at a 1/2 inch iron rod found in the west line of that tract conveyed to Frances Alice Harris Trust (Tract 3) by deed of record in Volume 6182, Page 810 of said Real Property Records for the northeast corner of said Tract 1, same being the southeast corner of that tract conveyed to Leon Harris by deed of record in Volume 1885, Page 603 of said Real Property Records;

THENCE, S00° 00' 14"W, along the west line of said Tract 3, same being the east line of said Tract 1, a distance of 809.01 feet to a 1/2 inch iron rod set for the **POINT OF BEGINNING** and the northeast corner hereof;

THENCE, S00° 00' 14"W, along the west line of said Tract 3, same being the east line of said Tract 1, a distance of 756.62 feet to a 1/2 inch iron rod set for the southeast corner hereof, and from which a 1/2 inch iron rod found for an angle point of said Tract 1 and said Tract 3 bears S00° 00' 14"W, a distance of 955.85 feet,

THENCE, leaving the west line of said Tract 3, over and across said Tract 1, the following four (4) courses and distances:

1. N89° 59' 46"W, a distance of 264.54 feet to a 1/2 inch iron rod set for the southernmost, southwest corner hereof;
2. N52° 27' 56"W, a distance of 538.52 feet to a 1/2 inch iron rod set for the westernmost corner hereof;
3. N15° 43' 58"E, a distance of 600.00 feet to a 1/2 inch iron rod set for the northwest corner hereof;
4. S74° 16' 02"E, a distance of 549.52 feet to the **POINT OF BEGINNING**, containing an area of 10.787 acres (469,886 sq. ft.) of land, more or less within these metes and bounds.

Contaminated soils outside the capped area have been remediated to meet residential soil criteria in accordance with a plan designed to meet the requirements of 30 Texas Administrative Code § 335.561 (Risk Reduction Standard No. 3: Closure/Remediation with Controls). Risk Reduction Standard Number 3 mandates that the remedy be designed to eliminate or reduce to the maximum extent practicable, substantial present or future risk. The capped area constitutes an engineering control of the underlying contaminated soils as long as the integrity of the cap is maintained.

The remediation plan requires continued post-closure care and institutional control measures. Future use of the property is restricted as described in the Deed Restriction for the Site (Attachment C). Institutional or legal controls that have been placed on the property to ensure appropriate future use include the deed restriction covenant which runs with the land.

The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Natural Resource Conservation Commission.

**HARRIS SAND PITS
STATE SUPERFUND SITE
ADMINISTRATIVE ORDER**

EXHIBIT F

DEED RESTRICTION

EXHIBIT F

Deed Restriction

[_____] is the owner of the property described in the attached Deed Certification of Remediation. In consideration of the issuance of the Certification of Completion of Remedial Action Phase, the owner has agreed to place a restriction on the Site in favor of the State of Texas. Now therefore, in consideration of the premises and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the following restrictive covenants in favor of the State of Texas are placed on the Site described in the attached Deed Certification of Remediation, to-wit:

1. The construction and development of water production wells in the first shallow water-bearing zone located beneath the ground surface and delineated laterally by the Site boundaries, or any other use of the groundwater contained therein, is prohibited.
2. This restriction shall be a covenant running with the land.

Owner or Authorized Representative

By: _____

Print Name: _____

STATE OF TEXAS
COUNTY OF _____

BEFORE ME, on this the ____ day of _____, 19__ personally appeared the person whose name is subscribed to the foregoing instrument, and acknowledged to me that the same was executed for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the _____ day of _____, 19__.

Notary Public in and
for the State of Texas,

County of _____

My Commission Expires: _____