THIRD FIVE-YEAR REVIEW REPORT FOR SHERIDAN DISPOSAL SERVICES SUPERFUND SITE WALLER COUNTY, TEXAS

JULY 2020

Before Cleanup

2020

Prepared by

U.S. Environmental Protection Agency
Region 6
Dallas, Texas

THIRD FIVE-YEAR REVIEW REPORT
SHERIDAN DISPOSAL SERVICES SUPERFUND SITE
EPA ID#: TXD062132147
WALLER COUNTY, TEXAS

This memorandum documents the U.S. Environmental Protection Agency's performance, determinations and approval of the Sheridan Disposal Services Superfund site's third Five-Year Review under Section 121 (c) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S. Code Section 9621(c), as provided in the attached third Five-Year Review Report.

Summary of the Third Five-Year Review Report

This Five-Year Review Report summarizes the current status of the remedy at the Sheridan Disposal Services Superfund site. From 1958 to 1984, Sheridan Disposal Services operated a commercial waste disposal facility on site, which is located on the Brazos River. Waste disposal operations contaminated soil and groundwater with hazardous chemicals. The site's long-term remedy included in-place stabilization of waste ponds, erosion control, installation of a cap over the lagoon and dike area, natural attenuation, and groundwater monitoring. Remedial activities for lagoon wastes finished in 2006. Cap monitoring and maintenance and groundwater sampling are ongoing. Groundwater sampling is conducted every five years, and cap monitoring occurs quarterly. Monitoring indicates the remedy remains protective of human health and the environment.

Environmental Indicators

Human Exposure Status: Human Exposure Under Control
Contaminated Groundwater Status: Groundwater Migration Under Control
Site-Wide Ready for Reuse: Yes

Actions Needed

- No issues were identified during this five-year review process that affect the current protectiveness of the remedy. Minor issues were identified which, if not addressed, could affect the protectiveness of the remedy in the future:
    - measurements for potential riverbank erosion should be taken as required by the Monitoring, Operations and Maintenance (MOM) Plan and the results presented in the monitoring reports;
    - the MOM Plan should be revised to identify a threshold of cumulative bank loss to address river encroachment on the site and any need for modifications to the riverbank erosion control system.

Determination

I have determined that the remedy for the Sheridan Disposal Services Superfund site is protective of human health and the environment and will remain so provided the action items identified in the Third Five-Year Review Report are addressed as described above.

WREN STENGER

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Wren Stenger
Director, Superfund and Emergency Management Division

Date

CONCURRENCES

THIRD FIVE-YEAR REVIEW REPORT
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EPA ID#: TXD062132147
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Gary Baumgarten
Remedial Project Manager

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ISSUES/RECOMMENDATIONS

THIRD FIVE-YEAR REVIEW REPORT
SHERIDAN DISPOSAL SERVICES SUPERFUND SITE
EPA ID#: TXD062132147
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Issues and Recommendations Identified in the Five-Year Review:

OU(s): 1	Issue Category: Monitoring			
	Issue: Measurements related to bank erosion as specified in the MOM Plan have not been occurring on site, and a cumulative amount of bank loss threshold above which adaptive management is triggered has not been specified.			
	Recommendation: Measurements as outlined and specified in the MOM Plan should be implemented, and the MOM Plan should be revised to specify a threshold for cumulative bank loss, above which adaptive management is triggered and resubmitted to EPA.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party/Support Agency**	**Milestone Date**
No	Yes	PRP	EPA/State	9/30/2021

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LIST OF ABBREVIATIONS AND ACRONYMS

ACL	Alternate Concentration Limits
AQ	Protection of aquatic life (freshwater chronic)
ARAR	Applicable or Relevant and Appropriate Requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	Contaminant of Concern
DCE	Dichloroethylene
EPA	United States Environmental Protection Agency
FYR	Five-Year Review
HH – DWS	Protection of human health (drinking water and fish consumption)
IC	Institutional Control
MCL	Maximum Contaminant Level
mg/L	Milligrams per Liter
MNA	Monitored Natural Attenuation
MW	Monitoring Well
NCP	National Contingency Plan
NPL	National Priorities List
NRWQC	National Recommended Water Quality Criteria
O&M	Operation and Maintenance
OU	Operable Unit
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethylene
PFAS	Per- and polyfluoroalkyl substances
ppm	parts per million
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
RPM	Remedial Project Manager
SVOC	Semi-Volatile Organic Compound
SWQS	Surface Water Quality Standards
TCE	Trichloroethylene
TCEQ	Texas Commission on Environmental Quality
TSCA	Toxic Substances Control Act
USGS	United States Geological Survey
UU/UE	Unlimited Use/Unrestricted Exposure
VOC	Volatile Organic Compound

I. INTRODUCTION

The purpose of a five-year review (FYR) is to evaluate the implementation and performance of a remedy to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (NCP) (40 Code of Federal Regulations (CFR) Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the third FYR for the Sheridan Disposal Services Superfund site (Site). The triggering action for this statutory review is the completion date of the previous FYR. The FYR has been prepared because hazardous substances, pollutants or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE). The Site consists of two operable units (OUs). OU1 addresses the source control OU. OU2 addresses the groundwater migration management OU.

EPA remedial project manager (RPM) Gary Baumgarten led the FYR. Participants included Lauren Poulos (EPA RPM), Irina Afanasyeva and Midori Campbell (project managers for the Texas Commission on Environmental Quality [TCEQ]), John Cotterell and Brad Freeman (PRP project managers) and Kirby Webster (EPA support contractor). The review began on 1/28/2020.

Site Background

The 110-acre Site is located in northern Waller County, Texas, about nine miles north-northwest of the city of Hempstead (Figure 1). From 1958 to 1984, Sheridan Disposal Services operated a commercial waste disposal facility on site. The area included a 12-acre lagoon surrounded by a 17-acre dike and a 42-acre evaporation system (Appendix F, Figure F-1). Wastes disposed of on site included organic and inorganic chemicals and solid wastes. The Site is bounded on the north by the Brazos River. Surrounding land uses are primarily farm and ranch land. Part of the Site is used for agricultural use. A residence is also located on part of the site.

The first water-bearing unit at the Site is referred to as the shallow aquifer at about 30 feet below ground surface. Groundwater in the shallow aquifer generally flows toward and discharges to the Brazos River. The second water-bearing unit is known as the deep aquifer and is part of the Evangeline Aquifer at 80 to 100 feet below ground surface. A clay layer that is about 20 feet thick separates the shallow aquifer and the deep aquifer. There is no known use of the shallow aquifer in the vicinity of the Site. Nearby communities primarily use groundwater from the Evangeline Aquifer to meet their water supply needs.

Appendix A provides a list of the site-related resources used to prepare this FYR Report. Appendix B provides the Site's chronology of events.

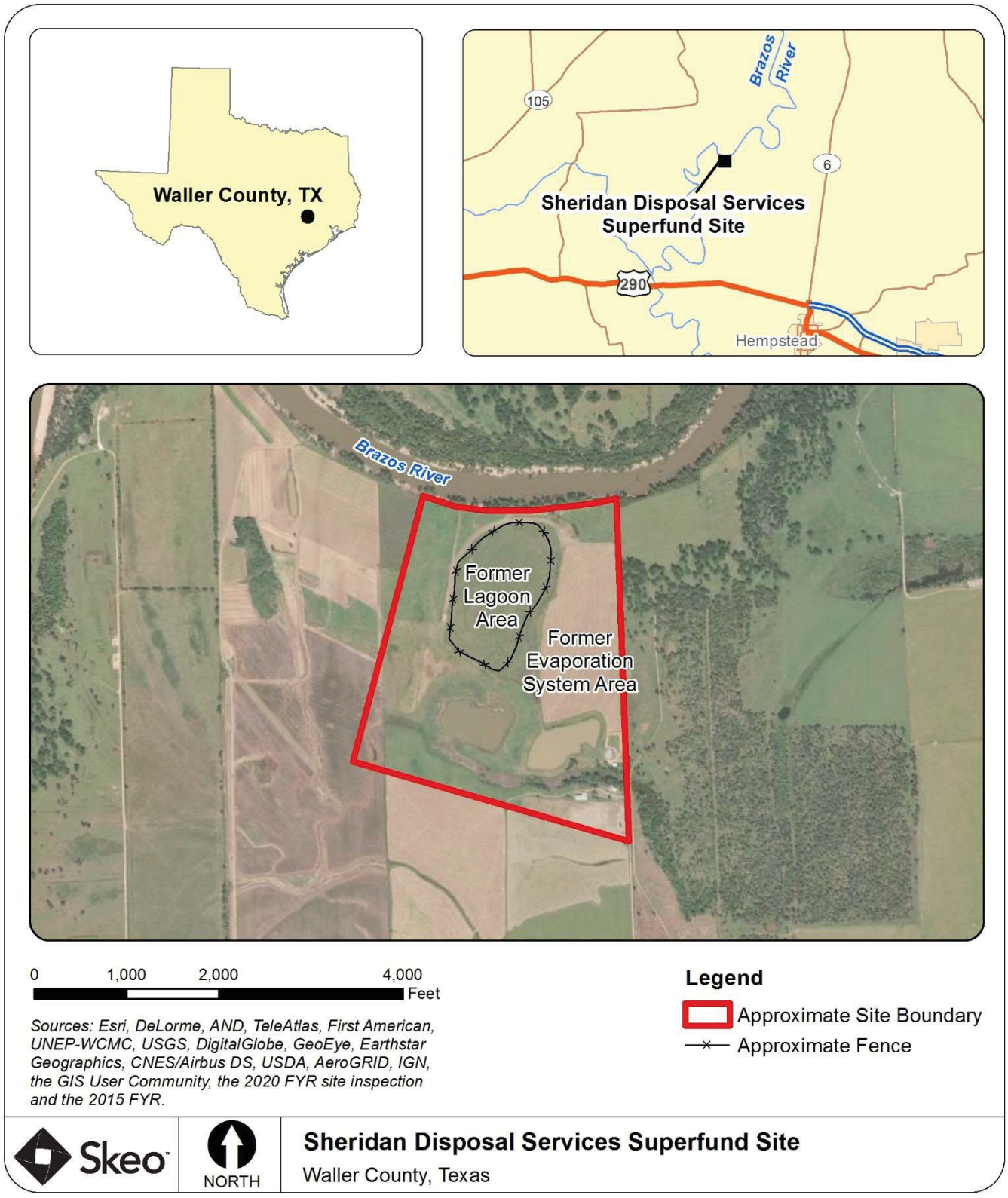
FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Sheridan Disposal Services		
EPA ID: TXD062132147		
Region: 6	**State:** Texas	**City/County:** Hempstead/Waller

SITE STATUS	
NPL Status: Final	
Multiple OUs? Yes	**Has the Site achieved construction completion?** Yes

REVIEW STATUS
Lead agency: EPA
Author name: Gary Baumgarten, with additional support provided by Skeo
Author affiliation: EPA Region 6
Review period: 1/28/2020 - 6/30/2020
Date of site inspection: 2/25/2020
Type of review: Statutory
Review number: 3
Triggering action date: 8/18/2015
Due date *(five years after triggering action date)*: 8/18/2020

Figure 1: Site Vicinity Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

In 1986, the Sheridan Site Committee submitted a remedial investigation to EPA for evaluation. The results identified organic and inorganic contaminants in soil and sludge, volatile organic compounds (VOCs) in shallow groundwater, no contamination detected in the deep aquifer, no impact to the Brazos River or Clark Lake (a Lake that existed on the south side of the Site), and no priority pollutants detected at concentrations above ambient background levels in air. The most significant compounds of concern found in the lagoon sludge in terms of concentration and toxicity include VOCs, polychlorinated biphenyls (PCBs), and inorganic compounds such as heavy metals. The wastes contained in the 12-acre lagoon were considered a principle threat, based on a potential to migrate to groundwater and surface water and the high concentrations of toxic compounds identified in the lagoon sludge. Unacceptable risks existed for a future agricultural or residential use for direct contact (ingestion and dermal absorption) with sludge and release of site wastes into the Brazos River due to the eventual erosion and failure of the riverbank between waste and the river. Ingestion of contaminated shallow groundwater also resulted in unacceptable cancer and non-cancer risk. Due to the age of the site, an ecological risk assessment was not conducted initially, and the waste on site has since been stabilized and capped, thus leaving no exposure pathways for ecological risk.

Response Actions

Following multiple fires in the 1970s, Sheridan Disposal Services began closing the main lagoon with portions of the dike and other materials. In 1979, the state approved an initial closure plan submitted by Sheridan Disposal Services. This plan called for closure of the lagoon, pumping the accumulated stormwater from the lagoon into the evaporation system, and maintenance of the lagoon dike. Sheridan Disposal Services submitted a final closure plan to the state that was rejected in 1984. The State had determined that Sheridan Disposal Services did not have the necessary expertise to close the facility and contacted companies that had sent waste to the facility for assistance. The Sheridan Site Committee (potentially responsible party (PRP) group) was formed to assist in closing the Site and began to investigate the extent of contamination. After PCBs were identified in the lagoon, EPA became directly involved in site closure through the Toxic Substances Control Act (TSCA).

EPA added the Site to the Superfund program's National Priorities List (NPL) in 1989.

OU1 – Source Control OU

EPA selected the OU1 remedy in the Site's 1988 Record of Decision (ROD) and modified it in a 2002 ROD Amendment. The objectives for remediation of the source control OU were to reduce the risk associated with exposure to contaminated material (e.g., soil/sediment/sludge) and address the ongoing source of contamination to groundwater by treating on-site wastes and soils.

The following OU1 remedy components identified in the 1988 ROD were not changed by the 2002 ROD Amendment:

- Installation of a Resource Conservation and Recovery Act (RCRA)-compliant cap over the entire pond and dike area.
- Installation of a flexible spur jetty riverbank erosion control system in the Brazos River.
- Monitoring of groundwater quality for a minimum of 30 years.
- Decontamination, disassembly and proper disposal of all on-site tanks and processing equipment.
- Proper disposal of any drums encountered during remediation. Contents of intact drums will be treated on site or disposed of off site, depending on the nature of the material.
- Treatment of potentially contaminated stormwater and wastewater streams resulting from the waste treatment alternatives, to remove solids, metals and organic constituents. The treated water will comply with all federal and state standards for discharge into the Brazos River.

- Implementation of institutional controls to preclude the use of contaminated groundwater and ensure the long-term integrity of the cap.

Major components of the amended remedy for OU1 included:

- In-situ stabilization/solidification of an estimated 44,000 cubic yards of waste containing greater than 25 milligrams per kilogram PCBs.
- Determination of a site-specific unconfined compressive strength performance standard to measure how well the stabilized material will hold up under mechanical stresses created by overburden and earth-moving equipment.
- Disposal of oversized materials (e.g., demolition scrap and equipment, crushed drums) with stabilized material underneath the final cap.
- Setting performance standards for leachate concentrations from treated wastes. Contaminant concentrations in leachate extracted from the treated waste (following a 28-day curing period) using the Synthetic Precipitation Leaching Procedure, cannot exceed leachate levels determined to be protective of human health and the environment in the Brazos River.

OU2 – Groundwater Migration Management

EPA selected the OU2 (Groundwater Migration Management) remedy in the Site's 1989 ROD as monitoring for natural attenuation. The ROD addressed the risks associated with the potential or actual exposure to contaminated groundwater. Implementation of the natural attenuation alternative remedy included the following components:

- The establishment of Alternate Concentration Limits (ACLs) as the site groundwater protection standards, as long as the conditions below remain valid. If any of these conditions change, the situation will be reevaluated and appropriate action taken. Table 1 shows the ACLs identified in the 1989 ROD. If additional contaminants are detected in the groundwater in the future, ACLs will be developed for them using the methodology described in the feasibility study.
    - The Brazos River must remain the discharge point for groundwater from the Site.
    - The Brazos River cannot be adversely impacted by the discharge of contaminated groundwater into the river. At the time of the ROD, no adverse impacts to the river from the Site had been observed. To ensure that future adverse impacts from the Site do not occur at the point of exposure for environmental receptors in the river, river water will be sampled to ensure that there is no statistically significant increase in contamination, as compared to upgradient locations.
    - The groundwater use restrictions below must be implemented and continued to ensure that affected groundwater is not consumed and the integrity of the Brazos River as a hydraulic barrier to groundwater flow is maintained.
- Groundwater monitoring to ensure ACLs are not exceeded.
- Sampling and analysis of the Brazos River immediately downgradient and upgradient of the point of entry of groundwater from the Site into the river.
- Implementation of controls to preclude potential use of contaminated groundwater.
- In the event ACLs are exceeded in the future, the implementation of a corrective action plan to ensure that protective levels are met at the point of potential exposure.

Table 1: Groundwater ACLs

Groundwater COC	1989 ROD ACL (mg/L)[a]	2011 ACL Updates (mg/L)[b]
Benzene	26	26 (no change)
Tetrachloroethylene (PCE)	41	26
Trans-1,2 dichloroethylene (DCE)	26	520
Trichloroethylene (TCE)	26	26 (no change)
Arsenic	260	52
Notes:		

Groundwater COC	1989 ROD ACL (mg/L)[a]	2011 ACL Updates (mg/L)[b]

a. Values calculated by determining the volume of affected water entering the river at any time and factoring in the dilution that would occur in the river under historical low-flow conditions.
b. Based on a recommendation from the Site's first FYR Report, the PRPs reviewed the ACLs to ensure that the assumptions used in their development are appropriate and the ACLs are calculated to meet drinking water criteria for the Brazos River. EPA approved the results of the ACL review in a June 2011 letter.
COC = contaminant of concern
mg/L = milligrams per liter
Source: 1989 OU2 ROD, page 13.

Status of Implementation

In 1992, the PRP group installed a flexible spur jetty riverbank erosion controls system in the Brazos River. The goal of the system is to prevent erosion of the riverbank and prevent the river from encroaching and ultimately reaching the waste area. The system is approximately three quarters of a mile long. It is made up of metal pilings drilled into the river substrate with synthetic webbing attached horizontally across the metal pilings.

The Consent Decree for the Source Control Operable Unit was lodged with the Court in 1991 and incorporated the December 1988 ROD; however, the Consent Decree was not entered by the Court until October 1997. Since nearly 10 years had elapsed since the original remedy evaluation and selection process, the responsible parties, with EPA oversight, initiated the Remedial Technology Review Program to identify whether advances in remedial technologies over the previous decade might provide an alternative remedy of at least equal protection to human health and the environment. The studies provided sufficient new information developed after the issuance of the 1988 ROD to support amending the selected remedy from the original biological treatment followed by stabilization and capping remedy to stabilization and capping.

The PRPs' remedial construction contractor began mobilizing to the Site in 2005. Stormwater in the impoundment was removed prior to stabilizing the sludge and soil in the lagoon. Stormwater was tested and verified to be in compliance with the existing Stormwater Discharge and Evaporation Plan in use at the Site. Only the water one foot or more above the sludge line was pumped by way of a floating suction line to the on-site evaporation area for settling of solids and subsequent evaporation. Once the water level was lowered to within 1 foot of the sludge, the remaining water was pumped through a temporary on-site treatment plant consisting of two 20,000-gallon frac tanks, organic carbon filters, sand filters and bag filters. Treated water meeting criteria in the Stormwater Discharge and Evaporation Plan was discharged and evaporated on site. Treated water not meeting the criteria was re-treated until it met the criteria or was used in the in-situ stabilization/solidification process.

The sludge and soil stabilization/solidification process took place from May to September 2005. About 87,000 cubic yards of sludge and soil were stabilized. Confirmation samples from the bottom of the lagoon were collected to verify that all wastes above the PCB cleanup level were remediated. In addition, sampling and analysis was conducted to verify that acceptable criteria were achieved, including an acceptable unconfined compressive strength, pH and protective concentrations in the leachate from the stabilized material.

Following stabilization of the waste material, demolition debris (vertical tanks, process equipment, barrels, drums and support structures that had been previously demolished) was flattened and placed in the lagoon on top of the stabilized material. Fill material was added on top, followed by a 2-foot clay RCRA-complaint cap installed over the former lagoon and dike area. The clay cap was completed in December 2005. To protect the cap from erosion, drainage swales were installed, 4 inches of topsoil were placed on the cap, and the cap and swale were seeded. A fence was placed around the capped area to prevent access by humans and animals.

In conjunction with the remedial activities, the PRPs also completed construction of a wildlife habitat area, which was required as part of the natural resource damage settlement. The completed habitat area included a 7-acre graded impoundment, waterfowl nesting boxes, aquatic vegetation, bank vegetation and trees. Representatives

from TCEQ and the U.S. Fish and Wildlife Service reviewed and approved the construction plans for the wildlife habitat area.

Institutional Control (IC) Review

In November 2010, a "Grant of Environmental Deed Restrictions and Right of Access" was executed and filed with Waller County for the site parcel that contains the cap and contaminated groundwater (Figure 2). A copy of the recorded institutional control document is included as Appendix I. The deed restrictions identify the part of the affected site parcel (parcel 8451) that comprises the approximately 32-acre fenced area as the "Vault Tract" and the rest of parcel 8451 as the "Remainder Tract." The institutional controls include the following restrictions:

- The Vault Tract shall not be used for the installation or operation of any groundwater wells for consumption by or contact with humans or for agricultural purposes.
- The surface of the Vault Tract shall not be used for the construction of any building, any grazing or other agricultural use, any planting of trees, or any other activities that would pierce the clay cap.
- No portion of the Remainder Tract situated within 100 feet of the boundary of the capped area or between the northern boundary of the capped area and the Brazos River shall be used for the installation or operation of any groundwater wells for consumption by or contact with humans or for agricultural purposes.
- Use of groundwater beneath the Vault Tract or Remainder Tract that would negatively affect the hydraulic barrier provided by the Brazos River is not allowed.

Table 2 summarizes the current status of institutional controls at the Site. Figure 2 is an institutional control map.

Table 2: Summary of Planned and/or Implemented Institutional Controls (ICs)

Media, Engineered Controls, and Areas That Do Not Support UU/UE Based on Current Conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Groundwater and cap	Yes	Yes	8451	Preclude the use of contaminated groundwater and ensure the long-term integrity of the cap.	November 2010 Grant of Environmental Deed Restrictions and Right of Access. Instrument 1006155, Volume 232, pages 376-394
Source: Waller CAD Map Search: https://propaccess.trueautomation.com/mapSearch/?cid=92&p=8451					

Figure 2: Institutional Control Map

Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Systems Operations/Operation and Maintenance (O&M)

The Monitoring Operation and Maintenance Plan (Plan) describes the type and frequency of O&M activities performed at the Site. O&M activities conducted ensure the effectiveness, protectiveness and integrity of the remedy. O&M activities at the Site include routine inspections and maintenance of the cap, perimeter fencing, stormwater channels, monitoring wells, and the spur jetty system. Activities are documented in an annual report.

The Plan provides for the following regarding prevention of riverbank erosion: the Brazos riverbank will be inspected and monitored to ensure it does not erode and potentially expose the treated materials; three permanent markers (concrete survey monuments, 6-inch diameter with steel pins) will be installed 20 feet from the current top of the riverbank; the exact northing, easting, and elevation of each marker will be recorded and documented; and the distance between each monument and the riverbank will then be measured annually and if the riverbank has lost more than 2 feet, the spur jetty system will be evaluated and steps will be taken to ensure protection of the pond from encroachment, if necessary. Currently, this monitoring work is not being performed as required. The Plan does not identify a threshold of cumulative bank loss, above which adaptive management strategies would be employed to address river encroachment on the site.

The groundwater monitoring activities associated with OU2 are outlined in the 2006 Groundwater Migration Management Work Plan, revised in 2007. The Work Plan established groundwater COC trigger levels at approximately 4% of the ACL. If a constituent reaches a trigger level, increased monitoring will occur. The frequency of groundwater sampling is quarterly for the first year following completion of site construction, semi-annually for years two through five, annually for years six through ten, and every five years thereafter. In 2016, groundwater monitoring switched to being conducted every five years.

Surface water samples were initially collected from the Brazos River at two designated locations in conjunction with the groundwater monitoring events. In November 2007, the Groundwater Migration Management Work Plan was modified to forego collection of the surface water samples as long as groundwater concentrations remain below the trigger levels for increased frequency of groundwater monitoring.

Decision documents estimated annual O&M costs to be about $25,000 per year. In the last five years, O&M costs have been less than $50,000 per year.

III. PROGRESS SINCE THE PREVIOUS REVIEW

This section includes the protectiveness determinations and statements from the previous FYR Report as well as the recommendations from the previous FYR Report and the status of those recommendations.

Table 3: Protectiveness Determinations/Statements from the 2015 FYR Report

OU #	Protectiveness Determination	Protectiveness Statement
Sitewide	Protective	The remedy for the Sheridan Disposal Services Site remains protective. The remedial action completed for the source control operable unit has achieved the remedial action objectives. There is no evidence of a current exposure pathway for the treated waste material in the former waste lagoon because there are no breaches in the cap. Institutional controls to preclude the use of contaminated groundwater and ensure the long-term integrity of the cap have been implemented. The remedial action completed for the groundwater operable unit continues to meet the remedial action objectives. Concentrations of groundwater contaminants of concern continue to be lower than the cleanup levels identified for the Site.

The 2015 FYR Report did not identify any current or future issues or recommendations.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Community Involvement and Site Interviews

A public notice was made available by a newspaper posting in The Waller Times, on 3/4/2020 (Appendix C). It stated that the FYR was underway and invited the public to submit any comments to EPA. The results of the review and the report will be made available at the Site's information repository. The Site's document repository is temporarily closed due to renovation work. EPA will continue to check on the status of the repository. EPA may have to identify an alternative repository if the current repository does not reopen.

During the FYR process, interviews were conducted to document any perceived problems or successes with the remedy implemented to date**.** The interviews are summarized below.

The PRP project manager said that minimal work has been required at the site during this review period. Annual Monitoring, Operations and Maintenance Reports and Technical Reports have shown good results. He does not know of any community concerns or any incidents that required any action for local authorities. There have been no problems or difficulties encountered at this site. He does not have any comments, suggestions, or recommendations regarding the site's management or operation.

Ms. Irina Afanasyeva (TCEQ project manager) said that the cap appears to be well maintained, functioning as intended, and cap erosion repairs are performed as needed. She does not know of any community concerns or any incidents that required any action for local authorities. There have been no problems or difficulties encountered at this site. She does not have any comments, suggestions, or recommendations regarding the site's management or operation, and TCEQ feels well informed about the site's activities and progress.

A local landowner said work has been satisfactory, communication with the PRP project manager has been consistent and informative, and site visits and water tests have been conducted on a regular basis. She does not know of any community concerns or any incidents that required any action for local authorities. There have been no problems or difficulties encountered at this site. She does not have any comments, suggestions, or recommendations regarding the site's management or operation.

Data Review

The 1989 OU2 ROD selected natural attenuation (NA) as the remedial action. To ensure ACLs are not exceeded, the ROD required groundwater monitoring and sampling of the Brazos River immediately downgradient and upgradient of the point of entry of groundwater from the Site into the river. Surface water samples are no longer collected in the Brazos River, following a November 2007 modification to the Groundwater Migration Management Work Plan, as long as groundwater concentrations remain below the trigger levels for increased frequency of groundwater monitoring. The last annual groundwater sampling event was conducted in 2016. At that time, the Groundwater Migration and Management Work Plan was updated to require groundwater sampling every five years. The next groundwater sampling event is planned for FY 2021. The data review will evaluate the results of the 2015 and 2016 sampling events against the ROD ACLs and past sampling events.

In September 2017, groundwater samples were collected and analyzed for VOCs, SVOCs and metals to evaluate the potential effects from Hurricane Harvey. In addition, soil samples were collected and analyzed for VOCs, SVOCs, metals and PCBs. No VOCs or SVOCs were detected in groundwater. Arsenic was detected in groundwater significantly below the cleanup level presented in the decision documents. No VOCs, SVOCs or

PCBs were detected in soil. The concentrations of metals detected in the soil samples were comparable to concentrations of metals from backfill material used in constructing the cap at the Site.[1]

Groundwater Flow

One of the conditions for the ACLs is that the Brazos River must remain the discharge point for groundwater from the Site. The 1989 ROD states that if any of the conditions change, the situation will be reevaluated and appropriate action taken. Up to and including 2014 groundwater data, the groundwater gradient flow direction was northeast toward the Brazos River (Figure F-2). Based on the data collected during the 2016 sampling event, the groundwater flow direction is to the southwest, southeast and east away from the Brazos River (Figure F-4), which is consistent with the July 2015 sampling event (Figure F-3), but inconsistent with all other previous sampling events. This change in flow direction is the result of elevated water levels in the Brazos River due to the significant amount of rainfall the area received in 2015 (73.22 inches when the average annual rainfall is 45.08 inches), as well as the significant amount of rainfall the area and upstream areas received in the weeks and months preceding the sampling event (approximately 26 inches from April to June 2016). These elevated levels caused flooding along the Brazos River adjacent to and upstream of the site, which affected the groundwater flow direction at the site. The August 2016 Technical Memorandum states that heavy rain caused a sampling delay for the second year in a row. Based on United States Geological Survey (USGS) stream gauging data for the station on the Brazos River closest to Hempstead, in 2015 and 2016 the Brazos River was experiencing higher than normal flow.[2] The 1989 ROD says that groundwater generally flows towards the river, however, during high river stage conditions (less than about one third of the time) groundwater flow in the water table may shift to the west and south. It is recommended that future groundwater sampling events be conducted during normal river stage conditions to confirm that the Brazos River is generally the discharge point for shallow groundwater from the Site.

Groundwater

The fourth annual groundwater monitoring event took place in July 2015 and the fifth annual groundwater monitoring event took place in June 2016. Six groundwater wells were monitored (Figure 3). Samples are analyzed for VOCs, semi-volatile organic compounds (SVOCs), pesticides, PCBs, and metals.

The ROD identified ACLs for five groundwater contaminants of concern (COCs) to meet drinking water standards in the Brazos River. In 2011, the PRPs evaluated ACLs to ensure that the assumptions used in their development are appropriate and the ACLs are calculated to meet drinking water criteria for the Brazos River. EPA approved the results of the ACL review in June 2011.

The groundwater sampling results since the second FYR, the revised ACLs, and the trigger levels for increased monitoring and remedial action plan (RAP) preparation are listed in Table 4. All COC concentrations were below ACLs. Vinyl chloride was detected in 2015 in MW-6 (0.0016 mg/L) and MW-37 (0.041 mg/L) and in 2016 in MW-37 (0.003 mg/L). Chlorobenzene was detected in MW-37 in 2015 (0.0051 mg/L) but was below the contract reporting limit in 2016. MW-6 has periodically had detections of vinyl chloride based on a review of previously sampling results. MW-6 had a detection of vinyl chloride in 2015 (0.0016 mg/L) but vinyl chloride was not detected in 2016. The other well, MW-37 has seen detections of vinyl chloride dating back to 2006. The levels of vinyl chloride detected in 2015 and 2016 are in the same range of concentrations previously seen in this well. The 1989 ROD states that "If additional contaminants are detected in the groundwater in the future, ACLs will be developed for them using the methodology described in the feasibility study." Although additional contaminants have been detected in groundwater, EPA does not believe ACLs are needed for vinyl chloride and chlorobenzene. Since chlorobenzene has only been detected once EPA does not believe an ACL is needed for chlorobenzene.Vinyl chloride has been found to co-occur with other COCs on site that do have ACLs in place. In

[1] EPA Superfund Update: Hurricane Harvey. Located at: https://response.epa.gov/sites/12353/files/HH%20Superfund%20Update%20Sheridan%20Disposal%20Services%20UPDATED%2010.02.17.pdf (accessed 1/31/2020).

[2] USGS 08111500 Brazos Rv nr Hempstead, TX. Located at: https://nwis.waterdata.usgs.gov/tx/nwis/uv/?cb_00060=on&cb_00065=on&format=gif_default&site_no=08111500&period=&begin_date=2016-01-01&end_date=2016-12-31

addition, vinyl choride is only present in one monitoring well (MW-37). EPA informally calculated an ACL for vinyl chloride using the method outlined in the Feasibility Study and found that the vinyl chloride concentration in groundwater is well below the informally calculated ACL. Because of this, EPA does not feel establishing ACLs for these contaminants would provide additional protection.

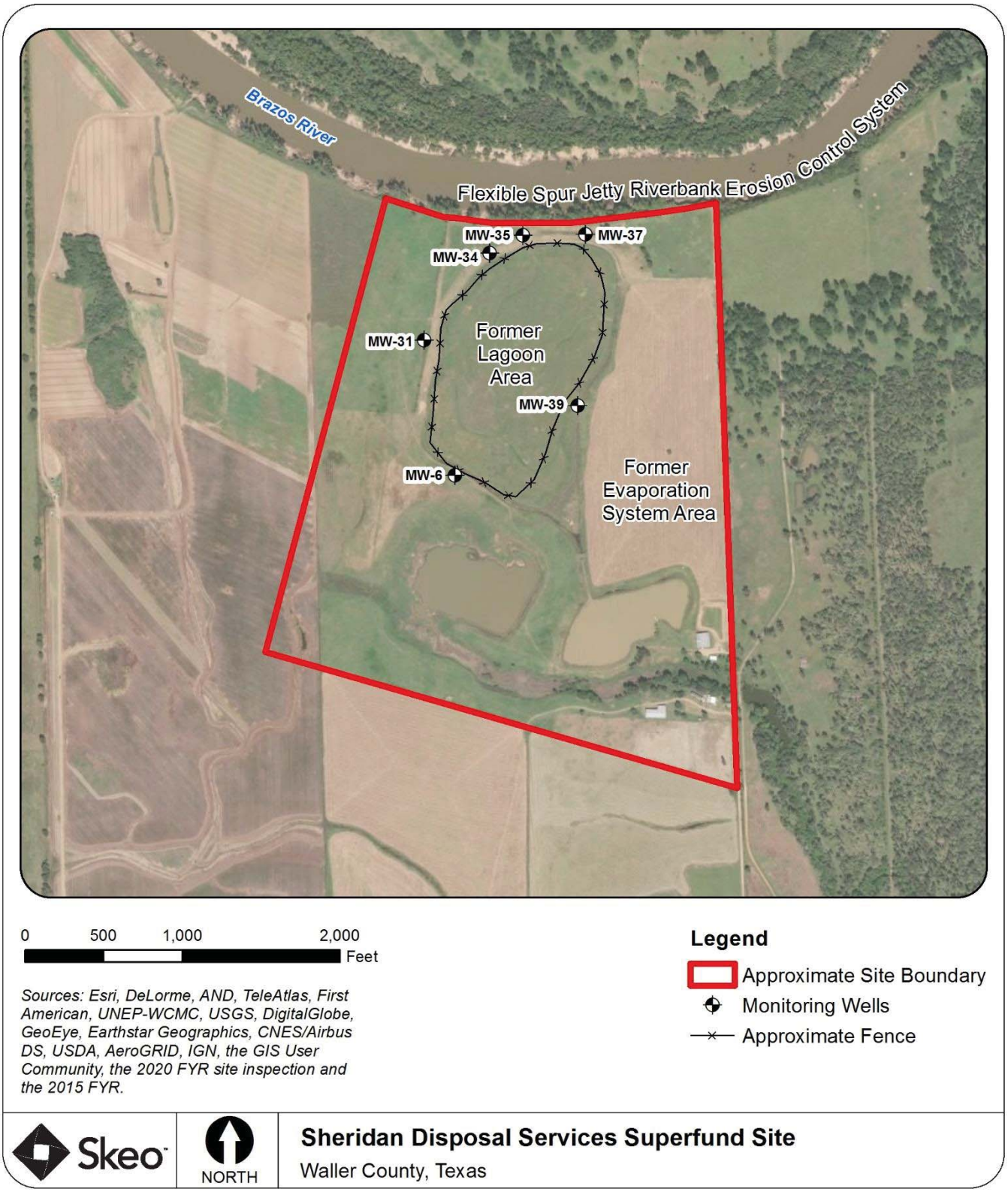
MW-37 has the most contamination remaining and is the closest monitoring well to the Brazos River. Concentrations have varied over the years, but generally remain similar to 1987 concentrations. For example, PCE was 0.013 mg/L in MW-37 in both 1987 and 2016. TCE was <0.005 mg/L in MW-37 in 1987 and 0.044 mg/L in 2016. MW-34 and MW-35 did not have any contaminant detections during 2015 and 2016 monitoring events. The 2007 Groundwater Migration and Management Work Plan established values for the five COCs that would trigger the preparation of a remedial action plan, as well as triggers for increased monitoring. Neither of these trigger limits have been met.

Table 4: 2015-2016 Groundwater Monitoring Detections

Well No.	Date	Benzene (mg/L)	PCE (mg/L)	Trans-1,2-DCE (mg/L)	TCE (mg/L)	Arsenic (mg/L)
2011 ACL		**26**	**26**	**520**	**26**	**52**
Trigger Level		**1**	**2**	**1**	**1**	**10**
MW-6	2015	<0.00033	<0.00019	<0.0002	<0.00032	<0.0011
	2016	<0.00033	<0.00019	<0.0002	<0.00032	0.0012 J
MW-31	2015	<0.00033	<0.00019	<0.0002	<0.00032	0.0029 J
	2016	<0.00033	<0.00019	<0.0002	<0.00032	0.0017 J
MW-34	2015	<0.00033	<0.00019	<0.0002	<0.00032	<0.0011
	2016	<0.00033	<0.00019	<0.0002	<0.00032	<0.0011
MW-35	2015	<0.00033	<0.00019	<0.0002	<0.00032	<0.0011
	2016	<0.00033	<0.00019	<0.0002	<0.00032	<0.0011
MW-37	2015	0.0099	0.034	0.037	0.12	0.0014 J
	2016	<0.00033	0.013	0.011	0.044	0.0012 J
MW-39	2015	<0.00033	<0.00019	<0.0002	<0.00032	0.0019 J
	2016	<0.00033	<0.00019	<0.0002	<0.00032	0.0033 J

Notes:
J = concentration is estimated.
Source: Table 1, Groundwater Monitoring Report No. 16 (4th Annual Monitoring Event), August 2015
Table 1, Groundwater Monitoring Report No. 17 (5th Annual Monitoring Event), August 2016

Figure 3: Detailed Site Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Flexible Spur Jetty Riverbank Erosion Control System

Visual inspections of the flexible spur jetty riverbank erosion control system have been occurring. The 2016-2017 and 2017-2018 Operation and Maintenance Reports indicate limited localized riverbank erosion. No measurements appear to be occurring as prescribed in the Monitoring, Operations and Maintenance (MOM) Plan. EPA is recommending that the measurements and work specified in the MOM Plan be implemented and a threshold level of cumulative bank loss be specified in a revised MOM Plan by September 30, 2021.

Site Inspection

The site inspection took place on 2/25/2020. Participants included Gary Baumgarten and Lauren Poulos (EPA), Irina Afanasyeva and Midori Campbell (TCEQ), Brad Freeman (GeoMonitoring Services), John M Cotterell (PE, Inc.) and Kirby Webster (EPA contractor) The purpose of the inspection was to assess the protectiveness of the remedy. Appendix D includes the site inspection checklist. Appendix E includes site inspection photographs.

Site inspection participants discussed the current status of the Sheridan Site Committee, recent groundwater monitoring data and the status of the Site. John Cotterell has been the project manager on the PRP side. He is retiring and Brad Freeman is his replacement.

Participants toured the Site, beginning on the landfill cap. The cap is surrounded by a fence with a locked gate. The fence is in good condition. The cap is well vegetated with grass. No shrubs or trees were observed on the cap. No evidence of unexpected erosion or animal disturbance was observed. A drainage area off the west side of the cap was in good condition. Inspection participants observed the groundwater wells. All were in good condition. There have been no issues with trespassing or damage to the cap. One of the adjoining landowners is hired to mow the cap when required. The adjacent landowner and the property owner report any issues at the Site to the PRPs.

Site inspection participants viewed the flexible spur jetty control system. The metal pillars of the system were observed above the water level of the Brazos River. The webbing could not be seen because of the river level. Some recent erosion was observed along the river. Participants reported that the control system has been working to limit movement of the river toward the waste.

The Waller County Library, the site's current document repository, has been closed until further notice for renovations. EPA will continue to check on the status of the repository. EPA may have to identify an alternative repository if the current repository does not reopen.

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

Question A Summary:

The OU1 remedy consisted of in-situ stabilization/solidification of waste containing greater than 25 parts per million (ppm) PCBs, installation of a RCRA-compliant cap over the entire pond and dike area, and installation of a flexible spur jetty riverbank erosion controls system in the Brazos River. It also included groundwater monitoring and institutional controls. The remedy has been put in place and is operating effectively. The cap is well maintained, and current uses are compatible with appropriate land use. Institutional controls have been recorded to protect the integrity of the cap. The OU2 remedy included natural attenuation, established groundwater ACLs and groundwater use restrictions.

Groundwater monitoring data indicate all COCs are below ACLs as well as below trigger levels for additional monitoring or need for remediation. The 1989 ROD required conditions for the ACLs, including that the Brazos River remain the discharge point for groundwater from the Site. Groundwater elevation figures from the 2015 and

2016 Monitoring Reports indicate the groundwater did not discharge to the River at these times. The 1989 ROD states that if any of the conditions change, the situation will be reevaluated and appropriate action taken. This change in flow direction is the result of elevated water levels in the Brazos River due to the significant amount of rainfall the area received in 2015 (73.22 inches when the average annual rainfall is 45.08 inches), as well as the significant amount of rainfall the area and upstream areas received in the weeks and months preceding the sampling event (approximately 26 inches from April to June 2016). These elevated levels caused flooding along the Brazos River adjacent to and upstream of the site, which affected the groundwater flow direction at the site. USGS stream gauging data for the station on the Brazos River closest to Hempstead indicates that in 2015 and 2016, the Brazos River was experiencing higher than normal flow. The 1989 ROD says that groundwater generally flows towards the river, however, during high river stage conditions (less than about one third of the time) groundwater flow in the water table may shift to the west and south. It is recommended that future groundwater sampling events be conducted during normal river stage conditions to confirm that the Brazos River is generally the discharge point for shallow groundwater from the Site. We will continue to evaluate this to confirm that the groundwater flow change was an anomaly resulting from rising river levels.

The 1989 ROD states that if contaminants beyond the five COCs are detected in groundwater, ACLs will be developed for the newly-detected contaminants using the methodology described in the feasibility study. Vinyl chloride and chlorobenzene were detected in groundwater in 2015 and 2016 in two of the six monitoring wells. One of the monitoring wells (MW-6) has periodically had detections of vinyl chloride. MW-6 had a detection of vinyl chloride in 2015 but vinyl chloride was not detected in 2016. The other well, MW-37 has seen detections of vinyl chloride dating back to 2006. The levels of vinyl chloride detected in 2015 and 2016 are in the same range of concentrations previously seen in this well. Chlorobenzene has only had one detection in one well (MW37) but was below the contract reporting limit in 2016.. Institutional controls have been implemented and groundwater is not being used. Although additional contaminants have been detected in groundwater, EPA does not believe ACLs are needed for vinyl chloride and chlorobenzene. Since chlorobenzene has only been detected once EPA does not believe an ACL is needed. Vinyl chloride has been found to co-occur with other COCs on site that do have ACLs in place. In addition, vinyl choride is only present in one monitoring well (MW-37). EPA informally calculated an ACL for vinyl chloride using the method outlined in the Feasibility Study and found that the concentration found that the vinyl chloride concentration in groundwater is well below the informally calculated ACL. Because of this, EPA does not feel establishing ACLs for these contaminants would provide additional protection.

Current O&M activities appear adequate. Measurements of the Brazos riverbank are not being conducted as described in the Monitoring, Operations and Maintenance Plan, though visual observations indicate significant erosion has not occurred. Measurements should be taken and reported in accordance with the Monitoring, Operations and Maintenance Plan to ensure erosion is not occurring.

The institutional controls in place protect against groundwater use, construction of structures, agriculture, activities that may pierce the clay cap, and negative impacts to the hydraulic barrier provided by the Brazos River. As verified with a site inspection, EPA believes these measures are effective in preventing exposure. Additional access controls (e.g. fencing and warning signs) are in place and appear to be effective in preventing exposure.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

Question B Summary:

The objectives for remediation of the source control operable unit are to reduce the risks associated with exposure to contaminated material (e.g., soil/ sediment/ sludge) and address the ongoing source of contamination to groundwater by treating onsite wastes and soils. The objective for remediation of the groundwater operable unit is to prevent exposure to contaminated groundwater and maintain safe levels in the Brazos River.

Exposure assumptions, toxicity data and cleanup levels used at the time of the remedy selection generally remain valid. The remedial cleanup level for PCBs in soil was less than 25 ppm. The remedial action has been successful and was verified via confirmation samples taken on site, which indicated that soils beneath the stabilized material are below cleanup levels for PCBs. Additionally, the ROD indicated that ACLs will be used contingent on three conditions being met. Although one condition, all groundwater discharging to the Brazos River, was not met in the most recent sampling event, this anomaly was the result of rising river levels and it is anticipated that water levels will re-equilibrate once normal river levels return. Appendix G provides a detailed Applicable or Relevant and Appropriate Requirements (ARARs) review. As shown in Appendix G there have been no changes to ARARs since the PRPs' 2011 Memo reevaluated the ACLs.

While compounds exist in groundwater that could volatilize, the vapor intrusion pathway is not a concern at this Site at this time because institutional controls restrict the use of the property in the general area where contaminants are being detected. There is not a pathway for exposure as the institutional controls prevent the construction of structures, and without structures of any kind, there would not be an indoor air quality concern (i.e., no vapor intrusion concern).

Perfluoroalkyl substances (PFAS) have been identified as an emerging COC for sites where fire-fighting foams were used. Although two fires occurred on site in the 1970s, based on the rural location of the Site and other practices by the operator, it is very unlikely fire-fighting foams were used on site.

Due to the age of the site, an ecological risk assessment was not conducted initially, and the waste on site has since been stabilized and capped, thus leaving no exposure pathways for ecological risk.

QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?

Question C Summary:

No other information has come to light that would call into question the protectiveness of the remedy. In September 2017, groundwater samples were collected and analyzed for VOCs, SVOCs and metals to evaluate the potential effects from Hurricane Harvey. In addition, soil samples were collected and analyzed for VOCs, SVOCs, metals and PCBs. No VOCs or SVOCs were detected in groundwater. Arsenic was detected in groundwater significantly below the cleanup level presented in the decision documents. No VOCs, SVOCs or PCBs were detected in soil. The concentrations of metals detected in the soil samples were comparable to concentrations of metals from backfill material used in constructing the cap at the Site.[3]

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations	
OU(s): 1	**Issue Category: Monitoring**
	Issue: Measurements related to bank erosion as specified in the MOM Plan have not been occurring on site, and a cumulative amount of bank loss threshold above which adaptive management is triggered has not been specified.

[3] EPA Superfund Update: Hurricane Harvey. Located at: https://response.epa.gov/sites/12353/files/HH%20Superfund%20Update%20Sheridan%20Disposal%20Services%20UPDATED%2010.02.17.pdf (accessed 1/31/2020).

	Recommendation: Measurements as outlined and specified in the MOM Plan should be implemented, and the MOM Plan should be revised to specify a threshold for cumulative bank loss, above which adaptive management is triggered and resubmitted to EPA.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party/Support Agency**	**Milestone Date**
No	Yes	PRP	EPA/State	9/30/2021

OTHER FINDINGS

Several additional recommendations were identified during the FYR. These recommendations do not affect current protectiveness.

- Consider alternative options for the site repository if the Waller County Library does not reopen following renovation work.
- Conduct future groundwater sampling events during normal river stage conditions to ensure that the Brazos River is generally the discharge point for shallow groundwater from the Site.

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)	
Operable Unit: 1	*Protectiveness Determination:* Protective
Protectiveness Statement: The remedy at OU1 is protective of human health and the environment.	

Protectiveness Statement(s)	
Operable Unit: 2	*Protectiveness Determination:* Protective
Protectiveness Statement: The remedy at OU2 is protective of human health and the environment.	

Sitewide Protectiveness Statement
Protectiveness Determination: Protective
Protectiveness Statement: The remedy at the site is protective of human health and the environment and will remain so provided the action items identified in the Third Five-Year Review Report are addressed.

VIII. NEXT REVIEW

The next FYR Report for the Sheridan Waste Disposal Services Superfund site is required five years from the completion date of this review.

APPENDIX A – REFERENCE LIST

Amended Record of Decision. Sheridan Disposal Services Site. Waller County, Texas. United States Environmental Protection Agency. Region 6. Superfund Division. December 2002.

First Five-Year Review Report for the Sheridan Disposal Services Superfund Site. Waller County, Texas. Prepared by: United States Environmental Protection Agency. Region 6. Dallas, Texas. July 2010.

Groundwater Monitoring Report No. 16 (Fourth Annual Sampling Event) for the Sheridan Disposal Services Superfund Site Operable Unit 2 Waller County, Texas. August 25, 2015.

Groundwater Monitoring Report No. 17 (Fifth Annual Sampling Event) for the Sheridan Disposal Services Superfund Site Operable Unit 2 Waller County, Texas. August 15, 2016.

Monitoring, Operations and Maintenance Plan. Prepared by ENTACT. April 14, 2005.

Record of Decision for Sheridan Disposal Services Site. Waller County, Texas. Source Control Operable Unit. United States Environmental Protection Agency. December 1988.

Record of Decision for Sheridan Disposal Services Site. Waller County, Texas. Ground Water Migration Management Operable Unit. United States Environmental Protection Agency. September 1989.

Second Five-Year Review Report for Sheridan Disposal Services Superfund Site. Waller County, Texas. Prepared by U.S. Environmental Protection Agency, Region 6, Dallas, Texas. August 2015.

Sheridan Disposal Services Superfund Site. Civil Action No. H-91-3529. EPA ID# TXD062132147. Technical Status Report – Annual Monitoring, August 2016.

Sheridan Disposal Services Superfund Site Response to 5 Year Report ACL Review Action Item. Sheridan Site Trust. May 20, 2011.

Source Control OU1 Monitoring Operation and Maintenance Report 2016-2017. Sheridan Disposal Services Superfund Site. Sheridan Site Trust. April 28, 2017.

Source Control OU1 Monitoring Operation and Maintenance Report 2017-2018. Sheridan Disposal Services Superfund Site. Sheridan Site Trust. April 30, 2018.

APPENDIX B – SITE CHRONOLOGY

Table B-1: Site Chronology

Event	Date
A commercial waste disposal facility operated on site	1958 - 1984
A permit authorizing disposal of industrial solid waste on site was issued The Texas Water Quality Board received citizen complaints concerning odor, runoff and oil in the Brazos River	1963
The Texas Water Quality Board and Waller County filed suit against the Sheridan Disposal Services facility	1970
Court order issued prohibiting further discharge of wastes into the lagoon	1975
The Texas Department of Water Resources sent letters to generators and transporters of the waste stored at the Site notifying them of their potential liability under CERCLA	1984
EPA proposed the Site for listing on the NPL	June 10, 1986
The Sheridan Site Committee submitted remedial investigation results to EPA	1986
EPA and the Sheridan Site Committee signed an Administrative Order on Consent to complete the source control and groundwater remedial investigation and feasibility study	February 3, 1987
EPA issued a Unilateral Administrative Order to lower the water level in the lagoon	1988
EPA issued the ROD for OU1 (source control unit)	December 29, 1988
EPA finalized the Site's listing on the NPL	March 31, 1989
The Sheridan Site Committee submitted the groundwater feasibility study results to EPA	July 25, 1989
EPA issued the ROD for OU2 (groundwater unit)	September 27, 1989
Consent Decrees for OU1 and OU2 lodged with the U.S. District Court	December 9, 1991
Flexible spur jetty riverbank erosion control system installed in the Brazos River	1992
Consent Decrees for OU1 and OU2 entered by the U.S. District Court	October 16, 1997
Remedial technology review conducted to determine if advances in remedial technologies might provide an alternative remedy to the one selected in the ROD	1998 - 2001
EPA issued OU1 AROD	December 4, 2002
Consent Decree modified to reflect the AROD	May 19, 2004
Sheridan Site Trust submitted the Remedial Design / Remedial Action Work Plan	April 14, 2005
Sheridan Site Trust conducted remedial action activities	2005 - 2006
Sheridan Site Trust submitted Groundwater Migration Management Work Plan	March 29, 2006
EPA issued Site's Preliminary Close-Out Report	May 1, 2006
EPA designated the Site as "Ready for Reuse and Redevelopment"	September 21, 2007
EPA completed Site's first FYR Report	July 2010
Site PRPs executed and filed a "Grant of Environmental Deed Restriction and Right of Access" with Waller County	November 10, 2010
EPA completed Site's second FYR Report	August 18, 2015

APPENDIX C – PRESS NOTICE

Sheridan Disposal Services Superfund Site
Public Notice
U.S. Environmental Protection Agency, Region 6

March 2020

The U.S. Environmental Protection Agency, Region 6 (EPA) will be conducting the third five-year review of remedy implementation and performance at the Sheridan Disposal Services Superfund site (Site) in Hempstead, Texas. From about 1958 to 1984, Sheridan Disposal Services operated a commercial waste disposal facility on site. The 110-acre area included a 12-acre lagoon surrounded by a 17-acre dike and a 42-acre evaporation system. Nearby land uses are generally agricultural. To manage the cleanup, EPA divided the Site into operable units (OUs). The OU1 (former lagoon, surrounding dikes and the evaporation system) remedy included stabilization of waste, followed by capping of the stabilized waste, groundwater monitoring, and institutional controls. The OU2 (groundwater) remedy includes monitored natural attenuation, groundwater monitoring, sampling and analysis of the Brazos River, and institutional controls.

The five-year review will determine if the remedies are still protective of human health and the environment. The five-year review is scheduled for completion in June 2020.

The report will be made available to the public at the following local information repository:

Waller County Library
2331 11th Street
Hempstead, Texas 77445
(979) 826-7658

Site status updates are available on the Internet at
www.epa.gov/superfund/sheridan

All media inquiries should be directed
to the EPA Press Office at (214) 665-2200

For more information about the Site, contact:

Gary Baumgarten/Remedial Project Manager
(214) 665-6749
or 1-800-533-3508 (toll-free)
or by email at baumgarten.gary@epa.gov

Ed Mekeel/Community Involvement Coordinator
(214) 665-2252
or 1-800-533-3508 (toll-free)
or by email at mekeel.edward@epa.gov

APPENDIX D – SITE INSPECTION CHECKLIST

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST

I. SITE INFORMATION

Site Name: SHERIDAN DISPOSAL SERVICES	**Date of Inspection:** 02/25/2020
Location and Region: Hempstead, Texas 6	**EPA ID: TXD062132147**
Agency, Office or Company Leading the Five-Year Review: EPA Region 6	**Weather/Temperature:** Sunny/70 degrees Fahrenheit

Remedy Includes: (Check all that apply)

- ☒ Landfill cover/containment
- ☐ Access controls
- ☒ Institutional controls
- ☐ Groundwater pump and treatment
- ☐ Surface water collection and treatment
- ☒ Other: Flexible spur jetty erosion system in the Brazos River
- ☒ Monitored natural attenuation
- ☐ Groundwater containment
- ☐ Vertical barrier walls

Attachments: ☒ Inspection team roster attached ☐ Site map attached

II. INTERVIEWS (check all that apply)

1. **O&M Site Manager** _____ (Name) PRP Project Manager (Title) 02/27/2020 (Date)
   Interviewed ☐ at site ☐ at office ☐ by phone Phone: _____
   Problems, suggestions ☐ Report attached: _____

2. **O&M Staff** _____ (Name) _____ (Title) _____ (Date)
   Interviewed ☐ at site ☐ at office ☐ by phone Phone: _____
   Problems/suggestions ☐ Report attached: _____

3. **Local Regulatory Authorities and Response Agencies** (i.e., state and tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices). Fill in all that apply.

   Agency _____
   Contact _____ (Name) _____ (Title) _____ (Date) _____ (Phone No.)
   Problems/suggestions ☐ Report attached: _____

   Agency _____
   Contact _____Name _____ (Title) _____ (Date) _____ (Phone No.)
   Problems/suggestions ☐ Report attached:_____

   Agency _____
   Contact _____ (Name) _____ (Title) _____ (Date) _____ (Phone No.)
   Problems/suggestions ☐ Report attached:_____

   Agency _____
   Contact _____ (Name) _____ (Title) _____ (Date) _____ (Phone No.)
   Problems/suggestions ☐ Report attached: _____

   Agency _____

Contact _____ _____ _____ _____
Name Title Date Phone No.
Problems/suggestions ☐ Report attached:_____

4. **Other Interviews** (optional) ☐ Report attached: _____

III. ON-SITE DOCUMENTS AND RECORDS VERIFIED (check all that apply)

1. **O&M Documents**

☒ O&M manual	☐ Readily available	☒ Up to date	☐ N/A
☐ As-built drawings	☐ Readily available	☐ Up to date	☒ N/A
☐ Maintenance logs	☐ Readily available	☐ Up to date	☒ N/A

Remarks: _____

2. **Site-Specific Health and Safety Plan** ☐ Readily available ☐ Up to date ☒ N/A
☐ Contingency plan/emergency response plan ☐ Readily available ☐ Up to date ☒ N/A

Remarks: _____

3. **O&M and OSHA Training Records** ☒ Readily available ☒ Up to date ☐ N/A

Remarks: O&M records are provided to EPA in annual reports.

4. **Permits and Service Agreements**

☐ Air discharge permit	☐ Readily available	☐ Up to date	☒ N/A
☐ Effluent discharge	☐ Readily available	☐ Up to date	☒ N/A
☐ Waste disposal, POTW	☐ Readily available	☐ Up to date	☒ N/A
☐ Other permits: _____	☐ Readily available	☐ Up to date	☒ N/A

Remarks: _____

5. **Gas Generation Records** ☐ Readily available ☐ Up to date ☒ N/A

Remarks: _____

6. **Settlement Monument Records** ☐ Readily available ☐ Up to date ☒ N/A

Remarks: _____

7. **Groundwater Monitoring Records** ☒ Readily available ☒ Up to date ☐ N/A

Remarks: _____

8. **Leachate Extraction Records** ☐ Readily available ☐ Up to date ☒ N/A

Remarks: _____

9. **Discharge Compliance Records**

☐ Air	☐ Readily available	☐ Up to date	☒ N/A
☐ Water (effluent)	☐ Readily available	☐ Up to date	☐ N/A

Remarks: _____

10. **Daily Access/Security Logs** ☐ Readily available ☐ Up to date ☒ N/A

Remarks: _____

IV. O&M COSTS

1. **O&M Organization**

☐ State in-house ☐ Contractor for state

☐ PRP in-house ☒ Contractor for PRP

☐ Federal facility in-house ☐ Contractor for Federal facility

☐ _____

2. **O&M Cost Records**

☒ Readily available ☒ Up to date

☒ Funding mechanism/agreement in place ☐ Unavailable

Original O&M cost estimate: _____ ☐ Breakdown attached

Total annual cost by year for review period if available

From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached
From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached
From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached
From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached
From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached

3. **Unanticipated or Unusually High O&M Costs during Review Period**

Describe costs and reasons: _____

V. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable ☐ N/A

A. Fencing

1. **Fencing Damaged** ☐ Location shown on site map ☒ Gates secured ☐ N/A

Remarks: Fencing was observed to be in good condition.

B. Other Access Restrictions

1. **Signs and Other Security Measures** ☐ Location shown on site map ☐ N/A

Remarks: Sign is located on entrance gate.

C. Institutional Controls (ICs)

1. **Implementation and Enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒ No ☐ N/A

Site conditions imply ICs not being fully enforced ☐ Yes ☒ No ☐ N/A

Type of monitoring (e.g., self-reporting, drive by): Cap inspections and groundwater monitoring.

Frequency: Quarterly and every five years beginning in 2016.

Responsible party/agency: Sheridan Site Trust

Contact	Name	Title	Date	Phone no.
	Brad Freeman	Sheridan Site Trust Project Manager	_____	713-417-6141

Reporting is up to date ☒ Yes ☐ No ☐ N/A

Reports are verified by the lead agency ☒ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☒ Yes ☐ No ☐ N/A

Violations have been reported ☐ Yes ☒ No ☐ N/A

Other problems or suggestions: ☐ Report attached

2. **Adequacy** ☒ ICs are adequate ☐ ICs are inadequate ☐ N/A

Remarks: _____

D. General

1. **Vandalism/Trespassing** ☐ Location shown on site map ☒ No vandalism evident

Remarks: _____

2. **Land Use Changes On Site** ☒ N/A

Remarks: _____

3. **Land Use Changes Off Site** ☒ N/A

Remarks: _____

VI. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

1. **Roads Damaged** ☐ Location shown on site map ☒ Roads adequate ☐ N/A

Remarks: _____

B. Other Site Conditions

Remarks: _____

VII. LANDFILL COVERS ☒ Applicable ☐ N/A

A. Landfill Surface

1. **Settlement** (low spots) ☐ Location shown on site map ☒ Settlement not evident

Area extent: _____ Depth: _____

Remarks: _____

2. **Cracks** ☐ Location shown on site map ☒ Cracking not evident

Lengths: _____ Widths: _____ Depths: _____

Remarks: _____

3. **Erosion** ☐ Location shown on site map ☒ Erosion not evident
Area extent: _____ Depth: _____
Remarks: _____

4. **Holes** ☐ Location shown on site map ☒ Holes not evident
Area extent: _____ Depth: _____
Remarks: _____

5. **Vegetative Cover** ☒ Grass ☒ Cover properly established
☒ No signs of stress ☐ Trees/shrubs (indicate size and locations on a diagram)
Remarks: _____

6. **Alternative Cover** (e.g., armored rock, concrete) ☒ N/A
Remarks: _____

7. **Bulges** ☐ Location shown on site map ☒ Bulges not evident
Area extent: _____ Height: _____
Remarks: _____

8. **Wet Areas/Water Damage** ☒ Wet areas/water damage not evident

☐ Wet areas ☐ Location shown on site map Area extent: _____
☐ Ponding ☐ Location shown on site map Area extent: _____
☐ Seeps ☐ Location shown on site map Area extent: _____
☐ Soft subgrade ☐ Location shown on site map Area extent: _____
Remarks: _____

9. **Slope Instability** ☐ Slides ☐ Location shown on site map
☒ No evidence of slope instability
Area extent: _____
Remarks: _____

B. Benches ☐ Applicable ☒ N/A

(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

1. **Flows Bypass Bench** ☐ Location shown on site map ☐ N/A or okay
Remarks: _____

2. **Bench Breached** ☐ Location shown on site map ☐ N/A or okay
Remarks: _____

3. **Bench Overtopped** ☐ Location shown on site map ☐ N/A or okay
Remarks: _____

C. Letdown Channels ☒ Applicable ☐ N/A

(Channel lined with erosion control mats, riprap, grout bags or gabions that descend down the steep side

slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)

1. **Settlement** (Low spots) ☐ Location shown on site map ☒ No evidence of settlement
   Area extent: _____ Depth: _____
   Remarks: _____

2. **Material Degradation** ☐ Location shown on site map ☒ No evidence of degradation
   Material type:_____ Area extent: _____
   Remarks: _____

3. **Erosion** ☐ Location shown on site map ☒ No evidence of erosion
   Area extent: _____ Depth: _____
   Remarks: _____

4. **Undercutting** ☐ Location shown on site map ☒ No evidence of undercutting
   Area extent: _____ Depth: _____
   Remarks: _____

5. **Obstructions** Type: _____ ☒ No obstructions
   ☐ Location shown on site map Area extent: _____
   Size: _____
   Remarks: _____

6. **Excessive Vegetative Growth** Type: _____
   ☒ No evidence of excessive growth
   ☐ Vegetation in channels does not obstruct flow
   ☐ Location shown on site map Area extent: _____
   Remarks: _____

D. Cover Penetrations ☐ Applicable ☒ N/A

1. **Gas Vents** ☐ Active ☐ Passive
   ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
   ☐ Evidence of leakage at penetration ☐ Needs maintenance ☐ N/A
   Remarks: _____

2. **Gas Monitoring Probes**
   ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
   ☐ Evidence of leakage at penetration ☐ Needs maintenance ☐ N/A
   Remarks: _____

3. **Monitoring Wells** (within surface area of landfill)
   ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
   ☐ Evidence of leakage at penetration ☐ Needs maintenance ☐ N/A
   Remarks: _____

4. **Extraction Wells Leachate**

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs maintenance ☐ N/A
Remarks: _____

5. **Settlement Monuments** ☐ Located ☐ Routinely surveyed ☐ N/A
Remarks: _____

E. Gas Collection and Treatment ☐ Applicable ☒ N/A

1. **Gas Treatment Facilities**
☐ Flaring ☐ Thermal destruction ☐ Collection for reuse
☐ Good condition ☐ Needs maintenance
Remarks: _____

2. **Gas Collection Wells, Manifolds and Piping**
☐ Good condition ☐ Needs maintenance
Remarks: _____

3. **Gas Monitoring Facilities** (e.g., gas monitoring of adjacent homes or buildings)
☐ Good condition ☐ Needs maintenance ☐ N/A
Remarks: _____

F. Cover Drainage Layer ☐ Applicable ☒ N/A

1. **Outlet Pipes Inspected** ☐ Functioning ☐ N/A
Remarks: _____

2. **Outlet Rock Inspected** ☐ Functioning ☐ N/A
Remarks: _____

G. Detention/Sedimentation Ponds ☐ Applicable ☒ N/A

1. **Siltation** Area extent: _____ Depth: _____ ☐ N/A
☐ Siltation not evident
Remarks: _____

2. **Erosion** Area extent: _____ Depth: _____
☐ Erosion not evident
Remarks: _____

3. **Outlet Works** ☐ Functioning ☐ N/A
Remarks: _____

4. **Dam** ☐ Functioning ☐ N/A
Remarks: _____

H. Retaining Walls ☐ Applicable ☒ N/A

1. **Deformations** ☐ Location shown on site map ☐ Deformation not evident
Horizontal displacement: _____ Vertical displacement: _____
Rotational displacement: _____

Remarks: _____

2. **Degradation** ☐ Location shown on site map ☐ Degradation not evident

Remarks: _____

I. Perimeter Ditches/Off-Site Discharge ☐ Applicable ☒ N/A

1. **Siltation** ☐ Location shown on site map ☐ Siltation not evident

Area extent: _____ Depth: _____

Remarks: _____

2. **Vegetative Growth** ☐ Location shown on site map ☐ N/A

☐ Vegetation does not impede flow

Area extent: _____ Type: _____

Remarks: _____

3. **Erosion** ☐ Location shown on site map ☐ Erosion not evident

Area extent: _____ Depth: _____

Remarks: _____

4. **Discharge Structure** ☐ Functioning ☐ N/A

Remarks: _____

VIII. VERTICAL BARRIER WALLS ☐ Applicable ☒ N/A

1. **Settlement** ☐ Location shown on site map ☐ Settlement not evident

Area extent: _____ Depth: _____

Remarks: _____

2. **Performance Monitoring** Type of monitoring: _____

☐ Performance not monitored

Frequency: _____ ☐ Evidence of breaching

Head differential: _____

Remarks: _____

IX. GROUNDWATER/SURFACE WATER REMEDIES ☒ Applicable ☐ N/A

A. Groundwater Extraction Wells, Pumps and Pipelines ☐ Applicable ☐ N/A

1. **Pumps, Wellhead Plumbing and Electrical**

☐ Good condition ☐ All required wells properly operating ☐ Needs maintenance ☒ N/A

Remarks: _____

2. **Extraction System Pipelines, Valves, Valve Boxes and Other Appurtenances**

☐ Good condition ☐ Needs maintenance

Remarks: N/A

3. **Spare Parts and Equipment**

☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided

Remarks: N/A

B. Surface Water Collection Structures, Pumps and Pipelines ☐ Applicable ☒ N/A

1. **Collection Structures, Pumps and Electrical**

   ☐ Good condition ☐ Needs maintenance

   Remarks: _____

2. **Surface Water Collection System Pipelines, Valves, Valve Boxes and Other Appurtenances**

   ☐ Good condition ☐ Needs maintenance

   Remarks: _____

3. **Spare Parts and Equipment**

   ☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided

   Remarks: _____

C. Treatment System ☐ Applicable ☒ N/A

1. **Treatment Train** (check components that apply)

   ☐ Metals removal ☐ Oil/water separation ☐ Bioremediation

   ☐ Air stripping ☐ Carbon adsorbers

   ☐ Filters: _____

   ☐ Additive (e.g., chelation agent, flocculent): _____

   ☐ Others: _____

   ☐ Good condition ☐ Needs maintenance

   ☐ Sampling ports properly marked and functional

   ☐ Sampling/maintenance log displayed and up to date

   ☐ Equipment properly identified

   ☐ Quantity of groundwater treated annually: _____

   ☐ Quantity of surface water treated annually: _____

   Remarks: _____

2. **Electrical Enclosures and Panels** (properly rated and functional)

   ☐ N/A ☐ Good condition ☐ Needs maintenance

   Remarks: _____

3. **Tanks, Vaults, Storage Vessels**

   ☐ N/A ☐ Good condition ☐ Proper secondary containment ☐ Needs maintenance

   Remarks: _____

4. **Discharge Structure and Appurtenances**

   ☐ N/A ☐ Good condition ☐ Needs maintenance

   Remarks: _____

5. **Treatment Building(s)**

   ☐ N/A ☐ Good condition (esp. roof and doorways) ☐ Needs repair

   ☐ Chemicals and equipment properly stored

   Remarks: _____

6. **Monitoring Wells** (pump and treatment remedy)

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition

☐ All required wells located ☐ Needs maintenance ☐ N/A

Remarks: _____

D. Monitoring Data

1. **Monitoring Data**

☒ Is routinely submitted on time ☒ Is of acceptable quality

2. **Monitoring Data Suggests:**

☒ Groundwater plume is effectively contained ☐ Contaminant concentrations are declining

E. Monitored Natural Attenuation

1. **Monitoring Wells** (natural attenuation remedy)

☐ Properly secured/locked ☐ Functioning ☒ Routinely sampled ☐ Good condition

☐ All required wells located ☐ Needs maintenance ☐ N/A

Remarks: _____

X. OTHER REMEDIES

If there are remedies applied at the site and not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is designed to accomplish (e.g., to contain contaminant plume, minimize infiltration and gas emissions).

The purpose of the remedy is to keep the Brazos River from shifting into the location of the now stabilized waste by installing the flexible spur jetty river bank erosion control system and to address the sources of contamination to groundwater by treating on-site wastes and soils. The flexible spur jetty river bank erosion control system is effective in keeping the Brazos River in place. The cap and stabilization is effective in reducing exposure to contaminated materials. Routine maintenance of the impoundment cap is necessary for the remedy to remain protective of human health and the environment.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

Current O&M activities appear adequate in maintining current and long-term protectiveness of the remedy.

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.

No early indicators of potential remedy problems have been identified.

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

No opportunities for optimization are identified.

Site inspection participants:

Gary Baumgarten, EPA
Lauren Poulos, EPA
Irina Afanasyeva, TCEQ
Midori Campbell, TCEQ
John Cotterell, PE, Inc.

Brad Freeman, GeoMonitoring Services
Kirby Webster, Skeo

APPENDIX E – REMEDIAL ACTION AND SITE INSPECTION PHOTOS

BEFORE CLEANUP

Impoundment prior to remediation

Impoundment prior to remediation

Impoundment prior to remediation

AFTER CLEANUP – Site Inspection Photos: February 2020

Locked gate with sign at impoundment entrance

View from the north down the western side of the impoundment

Monitoring well in between the impoundment area and the Brazos River

View from the top of the impoundment, looking south

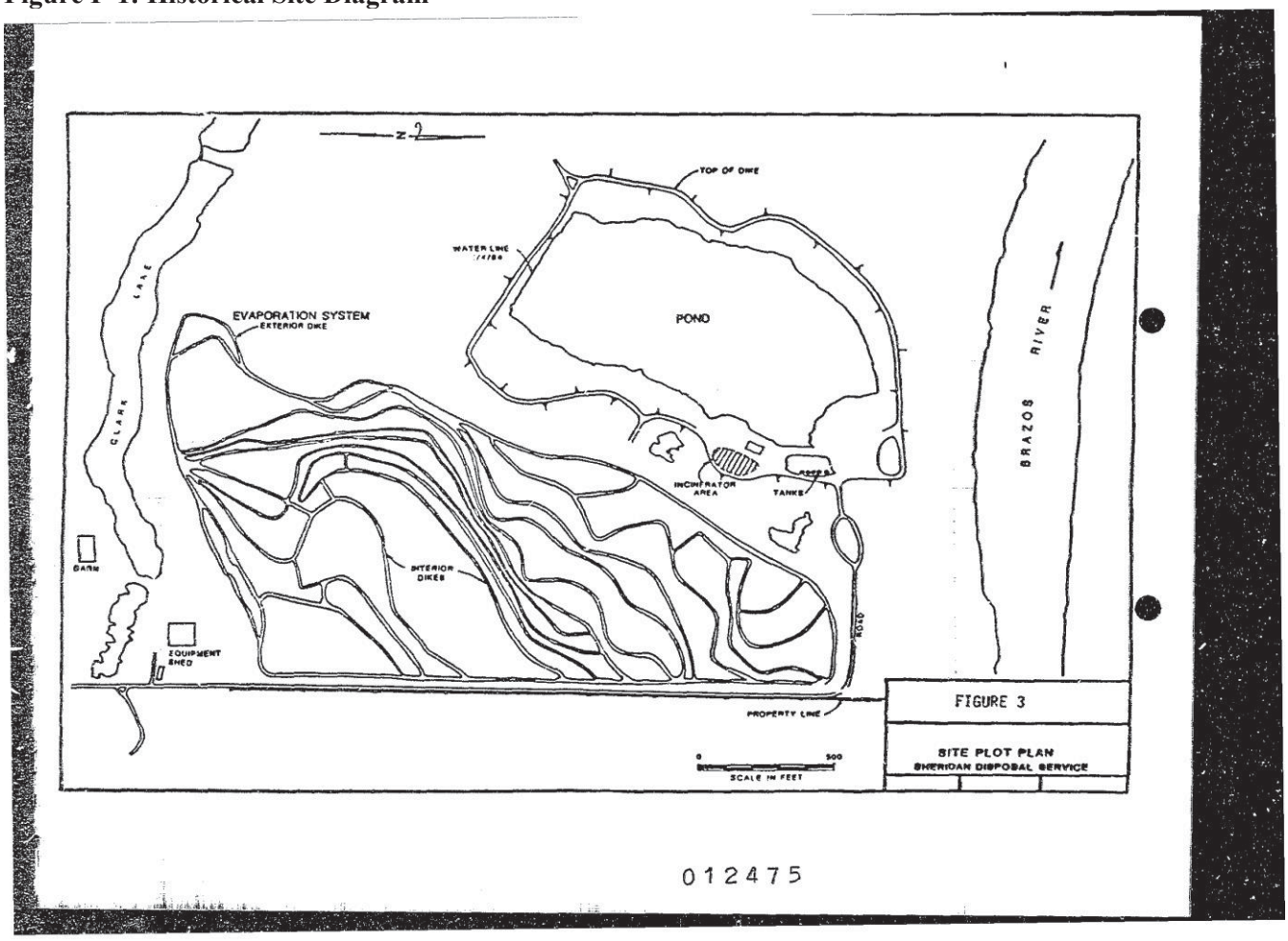
View from the top of the impoundment, looking north

Drainage area on the western side of the impoundment that has been repaired

Flexible spur jetty system in the Brazos River

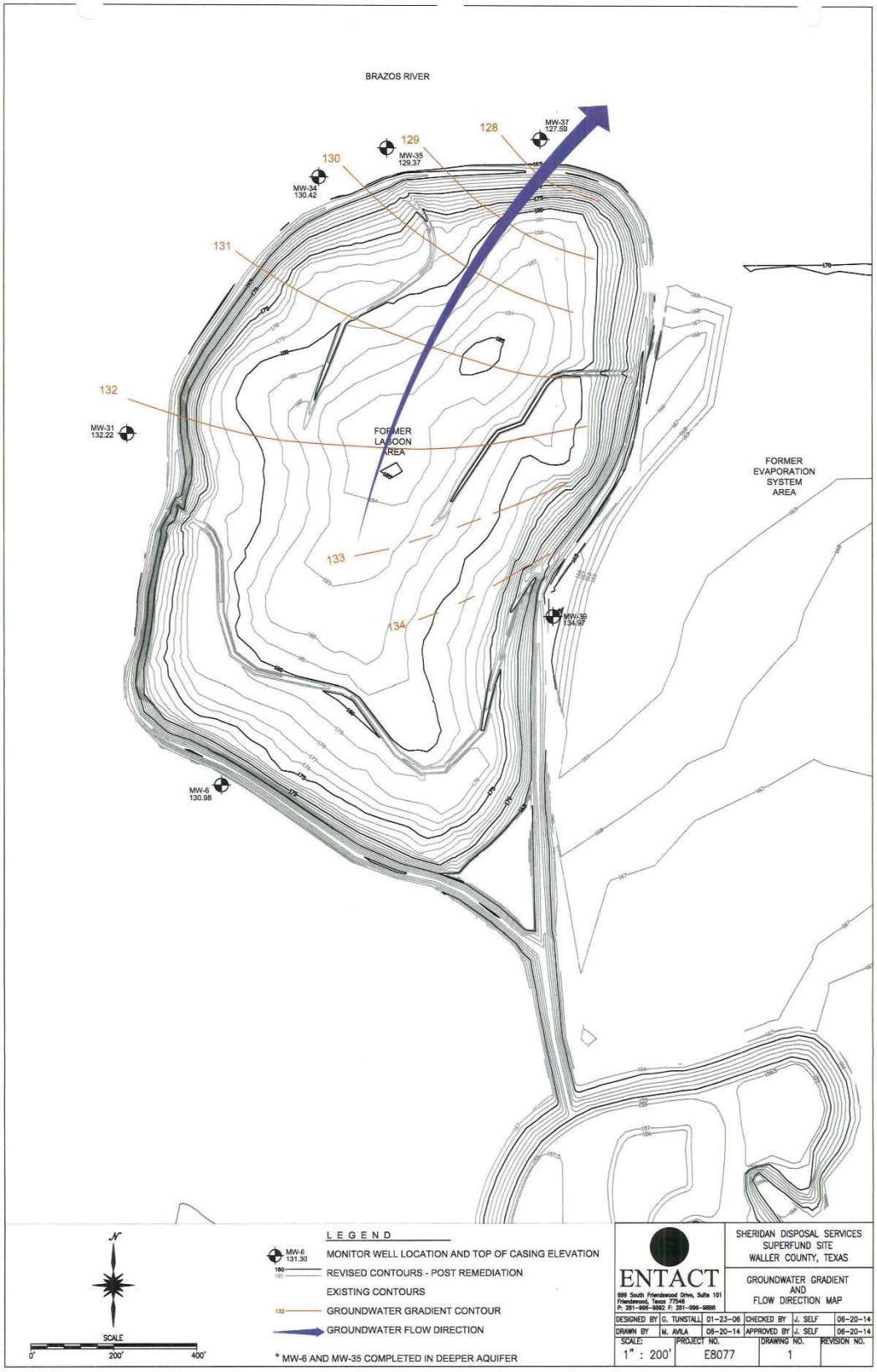
APPENDIX F – SITE FIGURES

Figure F-1: Historical Site Diagram[4]



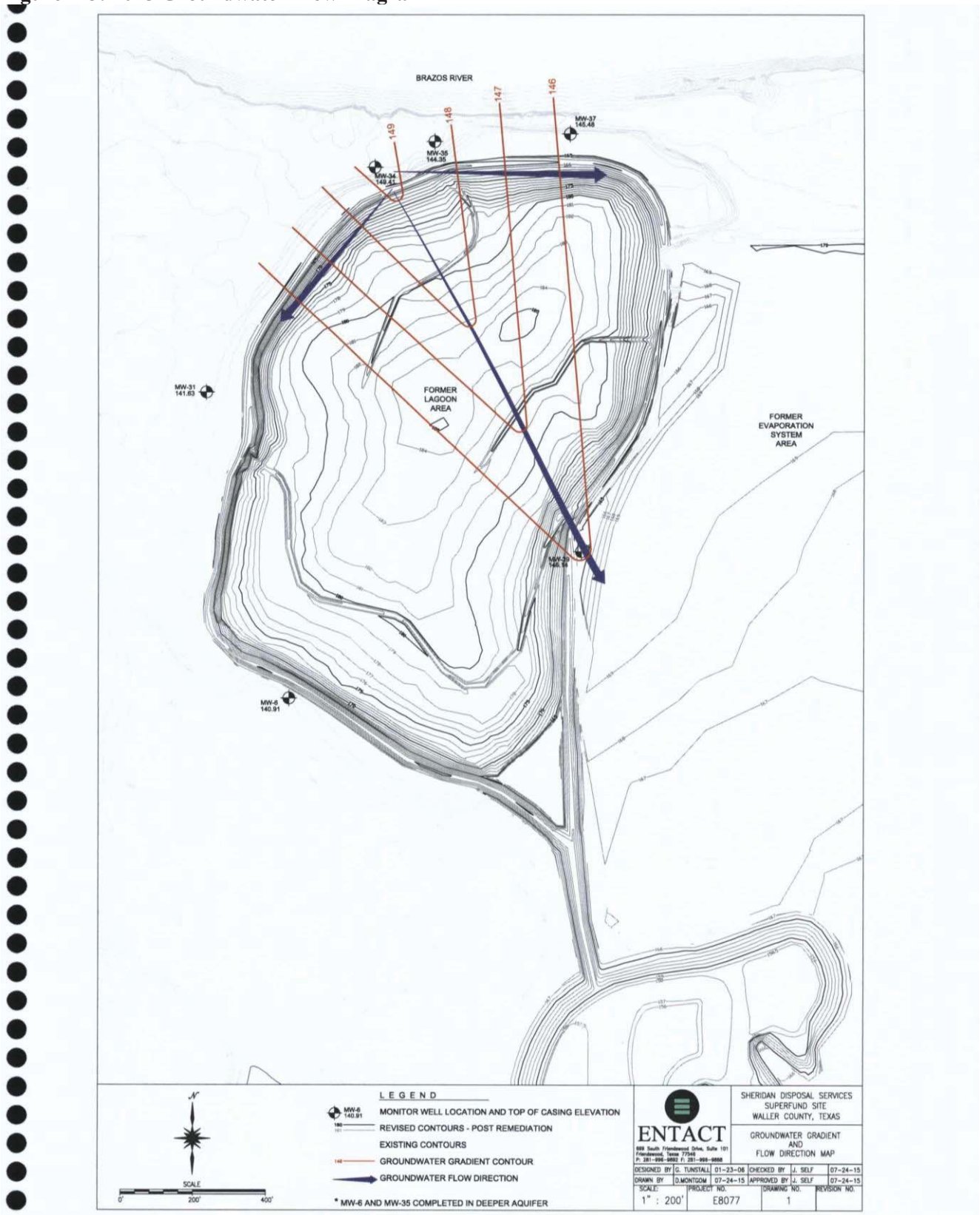
[4] From the 1988 OU1 ROD (pdf page 12).

Figure F-2: 2014 Groundwater Flow Diagram[5]



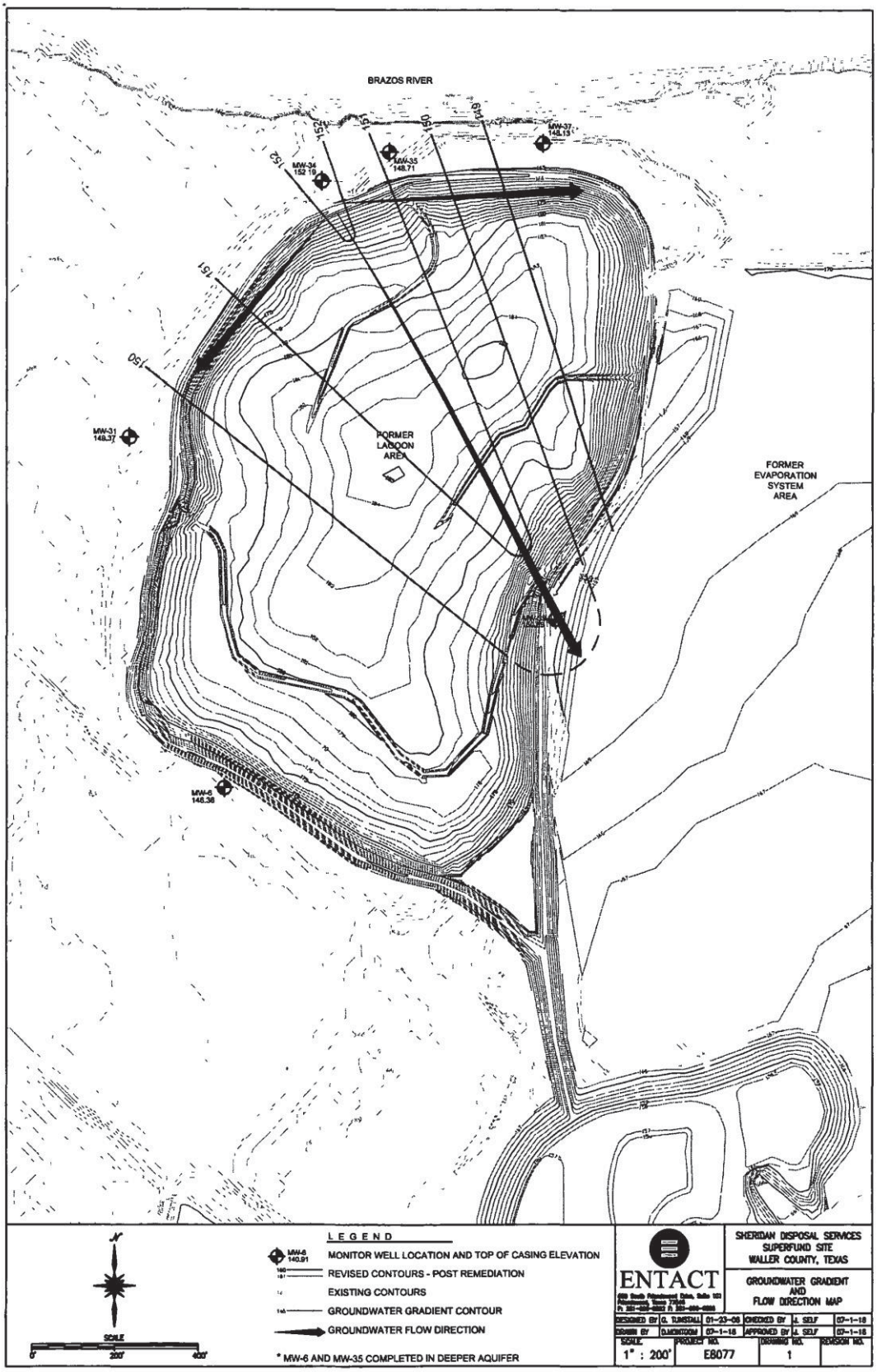
[5] Groundwater flow figure from the Groundwater Monitoring Report No. 15 (Third Annual Sampling Event) for the Sheridan Disposal Services Superfund Site Operable Unit 2, Waller County, Texas. Prepared by ENTACT LLC. July 2014.

Figure F-3: 2015 Groundwater Flow Diagram[6]



[6] Groundwater flow figure from the Groundwater Monitoring Report No. 16 (Fourth Annual Sampling Event) for the Sheridan Disposal Services Superfund Site Operable Unit 2, Waller County, Texas. Prepared by ENTACT LLC. August 25, 2015.

Figure F-4: 2016 Groundwater Flow Diagram[7]



[7] Groundwater flow figure from the Technical Status Report – Annual Monitoring. Sheridan Site Trust. August 2016

APPENDIX G – DETAILED ARARS REVIEW

CERCLA Section 121(d)(1) requires that Superfund remedial actions attain "a degree of cleanup of hazardous substance, pollutants, and contaminants released into the environment and control of further release at a minimum which assures protection of human health and the environment." The remedial action must achieve a level of cleanup that at least attains those requirements that are legally applicable or relevant and appropriate. In performing the FYR for compliance with ARARs, only those ARARs that address the protectiveness of the remedy are reviewed.

Principle waste

For PCB-contaminated waste, the 1988 ROD and 2002 AROD identified an action level of 25 ppm PCBs. The TSCA cleanup policy is an ARAR that defines action levels for cleanup. The 1988 ROD explained that action levels, in this sense, are levels of concentration of PCBs in material at or above which the material must be remediated. The 2002 AROD describes the cleanup level of 25 ppm PCBs set forth in §761.125(c)(3) is the most appropriate action level for the Site. As of 2020, the cleanup level of 25 ppm PCBs set forth in §761.125(c)(3) remains the same.[8]

Groundwater

In the 1989 ROD, EPA determined that ACLs are the relevant and appropriate standards at the Site. ACLs are groundwater protection standards used to ensure that hazardous constituents found in the groundwater do not pose a risk to human health or the environment. In addition, groundwater use restrictions have been implemented to ensure that contaminated groundwater is not consumed and the integrity of the Brazos River as a hydraulic barrier to groundwater flow is maintained. EPA set ACLs in order to meet drinking water criteria in the Brazos River. The values were calculated by determining the volume of affected water entering the river at any time and factoring in the dilution that would occur in the river at historical low flow conditions. The 2010 FYR identified the need to review the ACLs identified in the 1989 ROD given changes in water quality criteria since 1989 to ensure the assumptions used in their development are still appropriate and that the ACLs are developed to meet current drinking water criteria in the Brazos River. In a 2011 Memo to EPA, the PRPs reviewed the ACLs and proposed revised ACLs for three of the constituents. Table G-1 compares the ARARs used in 2011 to current standards to determine if any additional revisions may need to be considered. As shown in Table G-1 there have been no changes to ARARs since the PRPs 2011 Memo reevaluated the ACLs.

[8] Environmental Protection Agency §761.125 located at: https://www.govinfo.gov/content/pkg/CFR-2011-title40-vol31/pdf/CFR-2011-title40-vol31-sec761-125.pdf (accessed 1/31/2020).

Table G-1: Comparison of 2011 ARARs to Current Standards

COC	2011 MCL[a] (mg/L)	2020 MCL[b] (mg/L)	2011 Texas SWQS[c] (mg/L)		2020 Texas SWQS[d] (mg/L)		2011 NRWQC[e] (mg/L)		2020 NRWQC[g] (mg/L)		2011 TCEQ Freshwater Chronic[j] (mg/L)	2020 TCEQ Freshwater Chronic[k] (mg/L)
			AQ	HH-DWS	AQ	HH-DWS	AQ	HH-DWS	AQ	HH-DWS		
Benzene	0.005	0.005	NA	0.005	NA	0.005	NA	0.022	NA	0.0058[h]	0.13	0.13
Trans-1,2 DCE	0.1	0.1	NA	NA	NA	NA	NA	1.4	NA	0.1	22	22
PCE	0.005	0.005	NA	0.005	NA	0.005	NA	0.0069	NA	0.1	0.79	1.28
TCE	0.005	0.005	NA	0.005	NA	0.005	NA	0.025	NA	0.006	0.555	3
Arsenic	0.01	0.01	0.15	0.01	0.15	0.010	0.15	0.00018[f]	0.15	**0.00018**[i]	0.19	0.15

Notes:

a. Summer 2009 version.
b. National Primary Drinking Water Regulations located at: https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations, accessed 2/28/2020.
c. Texas Surface Water Quality Standards (SWQS), Texas Administrative Code Title 30 Chapter 307, adopted June 30, 2010.
d. Current Texas SWQS located at: https://www.tceq.texas.gov/assets/public/waterquality/standards/tswqs2018/2018swqs_allsections_nopreamble.pdf, accessed 2/28/2020
e. National Recommended Water Quality Criteria (NRWQC) June 2009 version. When federal criterion was based on carcinogenicity, the federal value corresponded to 1 x 10^{-6} cancer risk. The value was increased by 10-fold to account for State standards based on 1 x 10^{-5} cancer risk. When the 1 x 10^{-5} equivalent concentration was greater than the available federal MCL (in parentheses), Section 307.6(d)(8)(A) of the Texas SWQS specifies use of the MCL as the target concentration.
f. EPA was reviewing the basis of this value at the time of the 2011 Memo. Therefore it was not included as an ARAR for this evaluation.
g. NRWQC located at: https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table and https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table, accessed 2/28/2020. When federal criterion was based on carcinogenicity, the federal value corresponded to 1 x 10^{-6} cancer risk. The value was increased by 10-fold to account for State standards based on 1 x 10^{-5} cancer risk.
h. Using the lower value in the range.
i. This recommended water quality criterion for arsenic refers to the inorganic form only.
j. Texas Commission on Environmental Quality, Freshwater Ecological Screening Benchmark (October 2005).
k. Texas Risk Reduction Program Protective Concentrations – Freshwater Chronic Benchmarks updated by the Texas Risk Reduction Program in August 2019 http://www.tceq.texas.gov/assets/public/remediation/eco/RG263b_Benchmarks.xlsx (Accessed 2/28/2020).

AQ = Protection of aquatic life (freshwater chronic)
HH – DWS = Protection of human health (drinking water and fish consumption
NA = not available

Surface Water

The 1989 ROD identified MCLs and State and Federal Water Quality Criteria promulgated pursuant to the Clean Water Act as relevant and appropriate to the Brazos River since the reach of the Brazos River adjacent to the Site is classified by the State as suitable for public water supply and recreational use. The ROD states that all actions will meet the applicable requirements of 31 Texas Administrative Code Sections 39, 21-29, 3017.1 to 307.10. If corrective action is required, the ROD requires all discharges to be treated to satisfy the requirements of the Clean Water Act application of best available technology and best conventional technology.

APPENDIX H – INTERVIEW FORMS

SUPERFUND FIVE-YEAR REVIEW INTERVIEW RECORD		
Site Name: Sheridan Disposal Services	**EPA ID No.:** TXD 062132147	
Location: Hempstead, Texas	**Date of Interview:** 2/27/2020	**Interview Method:** Email
Contact Made By:		
Name: Lauren Poulos	**Title:** Project Manager	**Organization:** EPA Region 6
Telephone No: (214) 665-8371 **E-Mail:** poulos.lauren@epa.gov	**Street Address:** 1201 Elm Street, Suite 500 (SEDRA) **City, State, Zip:** Dallas, Texas 75270	
Individual Interviewed		
Name: [redacted]	**Title:** Project Manager	**Organization:** Sheridan Site Trust
Telephone No: **E-Mail:** [redacted]	**Street Address:** [redacted] **City, State, Zip:** [redacted]	

Interview Questions

1. What is your overall impression of the work conducted at the site since July 2015?

Response:

Minimal work has been required, only occasional normal maintenance items like mowing.

2. From your perspective, what effect have remedial operations at the site had on the surrounding community?

Response:

It has had little or no effect on the surrounding community.

3. Are you aware of any ongoing community concerns regarding the site or its operation and maintenance? If so, please provide details.

Response:

I know of no community concerns about this site.

4. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please describe purpose and results.

Response:

Yes. I have generally visited quarterly. There have been annual Monitoring, Operations and Maintenance Reports and Technical Reports submitted to the USEPA and TCEQ. Reports have shown good results with limited maintenance required.

5. Are you aware of any events, incidents, or activities that have occurred at the site such as dumping, trespassing, vandalism, or anything that required emergency response from local authorities? If so, please give details.

Response:

There have been no incidents or activities at the site that required any action from local authorities.

6. Have there been any complaints, violations, or other incidents related to the site that required a response by your office? If so, please summarize the events and result.

Response:

I have received no complaints, violations or other incidents related to the site.

7. Are you aware of any problems or difficulties encountered which impacted the effectiveness of the remedial action, or a change in O&M procedures? If so, please describe changes and impacts.

Response:

There have been no problems or difficulties encountered at this site.

8. Have there been any changes in state or federal environmental standards since 2010 which may call into question the protectiveness or effectiveness of the remedial action?

Response:

To my knowledge, there have been no changes in state or federal environmental standards that affect the protectiveness or effectiveness of the site remedial action.

9. Do you know of opportunities to optimize the operation, maintenance, or sampling efforts at the site since 2010, and have such changes been implemented?

Response:

The O&M and sampling has been conducted according to all Consent Decree and approved work plan requirements. No additional optimization has been required.

10. Do you feel well-informed about the site's activities and progress? If not, please indicate how you would like to be informed about site activities – for example by e-mail, regular mail, fact sheets, meetings, etc.

Response:

Yes.

11. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

Response:

No.

SUPERFUND FIVE-YEAR REVIEW INTERVIEW RECORD

Site Name: Sheridan Disposal Services	**EPA ID No.:** TXD 062132147	
Location: Hempstead, Texas	**Date of Interview:** March 26, 2020	**Interview Method:** e-mail

Contact Made By:

Name: Lauren Poulos	**Title:** Project Manager	**Organization:** EPA Region 6
Telephone No: (214) 665-8371 **E-Mail:** poulos.lauren@epa.gov	**Street Address:** 1201 Elm Street, Suite 500 (SEDRA) **City, State, Zip:** Dallas, Texas 75270	

Individual Interviewed

Name: Irina Afanasyeva	**Title:** Project Manager	**Organization:** TCEQ
Telephone No: (512)-239-6759 **E-Mail:** irina.Afanasyeva@tceq.texas.gov	**Street Address:** P.O. Box 13087 **City, State, Zip:** Austin, TX 78711-3087	

Interview Questions

1. What is your overall impression of the work conducted at the site since July 2015?

Response:

The current TCEQ PM has managed the site since September 2018. The cap appeared to be well maintained and functioning as intended. Cap erosion repairs are performed as needed.

2. From your perspective, what effect have remedial operations at the site had on the surrounding community?

Response: None have been observed.

3. Are you aware of any ongoing community concerns regarding the site or its operation and maintenance? If so, please provide details.

Response: None are known.

4. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please describe purpose and results.

Response: No.

5. Are you aware of any events, incidents, or activities that have occurred at the site such as dumping, trespassing, vandalism, or anything that required emergency response from local authorities? If so, please give details.

Response: None are known.

6. Have there been any complaints, violations, or other incidents related to the site that required a response by your office? If so, please summarize the events and result.

Response: None are known.

7. Are you aware of any problems or difficulties encountered which impacted the effectiveness of the remedial action, or a change in O&M procedures? If so, please describe changes and impacts.

Response: None are known.

8. Have there been any changes in state or federal environmental standards since 2010 which may call into question the protectiveness or effectiveness of the remedial action?

Response: None are known.

9. Do you know of opportunities to optimize the operation, maintenance, or sampling efforts at the site since 2010, and have such changes been implemented? **Response:** None are known.
10. Do you feel well-informed about the site's activities and progress? If not, please indicate how you would like to be informed about site activities – for example by e-mail, regular mail, fact sheets, meetings, etc. **Response:** TCEQ feels well informed.
11. Do you have any comments, suggestions, or recommendations regarding the site's management or operation? **Response:** None at this time.

SUPERFUND FIVE-YEAR REVIEW INTERVIEW RECORD		
Site Name: Sheridan Disposal Services	**EPA ID No.:** TXD 062132147	
Location: Hempstead, Texas	**Date of Interview:** 3-20-2020	**Interview Method:** e-mail
Contact Made By:		
Name: Lauren Poulos	**Title:** Project Manager	**Organization:** EPA Region 6
Telephone No: (214) 665-8371 **E-Mail:** poulos.lauren@epa.gov	**Street Address:** 1201 Elm Street, Suite 500 (SEDRA) **City, State, Zip:** Dallas, Texas 75270	
Individual Interviewed		
Name: [redacted]	**Title:** Land owner	**Organization:** n/a
Telephone No: **E-Mail:** [redacted]	**Street Address:** [redacted] **City, State, Zip:**	

Interview Questions

1. What is your overall impression of the work conducted at the site since July 2010?

Response: WORK HAS BEEN SATISFACTORY + COMMUNICATION WITH [redacted] HAS BEEN CONSISTENT + INFORMATIVE.

2. From your perspective, what effect have remedial operations at the site had on the surrounding community?

Response: NONE SINCE OUR TIME OF OWNERSHIP OF OUR PROPERTY.

3. Are you aware of any ongoing community concerns regarding the site or its operation and maintenance? If so, please provide details.

Response: NO

4. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please describe purpose and results.

Response: THERE HAVE BEEN SITE VISITS TO THE PROPERTY ON A REGULAR BASIS → WATER TESTS.

5. Are you aware of any events, incidents, or activities that have occurred at the site such as dumping, trespassing, vandalism, or anything that required emergency response from local authorities? If so, please give details.

Response: NO

6. Have there been any complaints, violations, or other incidents related to the site that required a response by your office? If so, please summarize the events and result.

Response: No

7. Are you aware of any problems or difficulties encountered which impacted the effectiveness of the remedial action, or a change in O&M procedures? If so, please describe changes and impacts.

Response: NO

8. Do you know of opportunities to optimize the operation, maintenance, or sampling efforts at the site since 2010, and have such changes been implemented?

Response: NO

9. Do you feel well-informed about the site's activities and progress? If not, please indicate how you would like to be informed about site activities – for example by e-mail, regular mail, fact sheets, meetings, etc.

Response: EMAIL, SEND TO [redacted]

10. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

Response: NO

APPENDIX I – INSTITUTIONAL CONTROLS

Figure I-1: Grant of Environmental Deed Restrictions and Right of Access

VOL1232 PG376

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GRANT OF ENVIRONMENTAL DEED RESTRICTIONS AND RIGHT OF ACCESS

STATE OF TEXAS	§	
	§	KNOW ALL BY THESE PRESENTS THAT:
	§	
COUNTY OF WALLER	§	

THIS GRANT OF ENVIRONMENTAL DEED RESTRICTIONS AND RIGHT OF ACCESS is granted and confirmed by **Rupert Daniel Sheridan and Pat John Sheridan** (collectively, "**Grantors**") in favor of the **Sheridan Site Trust and the Co-Trustees of the Sheridan Site Trust or any successor in interest managing the remedial action, including the operation and maintenance, at the site known as the Sheridan Disposal Services Superfund Site** ("**Grantee**").

RECITALS

A. By Federal Register Notice at 54 Fed. Reg. 13296 published on March 31. 1989, the United States Environmental Protection Agency ("**EPA**") listed the site in Waller County, Texas known as the Sheridan Disposal Services Superfund Site on the National Priorities List.

B. The grantors of the Sheridan Site Trust consist of settlors to the Source Control Consent Decree and to the Ground Water Consent Decree for the Sheridan Waste Disposal Services Site filed in the United States District Court for the Southern District of Texas on December 3, 1991 (as amended, collectively, the "**Consent Decrees**"), or their successors-in-interest who have performed a remediation of the Sheridan Disposal Services Superfund Site.

C. Originally, EPA referred to approximately 92.054 acres of land in Waller County, Texas as the Sheridan Disposal Services Superfund Site, more particularly described in **Exhibit A** attached hereto and made a part hereof (the "**Original Superfund Tract**"). Following implementation of the response action by the grantors of the Sheridan Disposal Services Superfund Site, the surface boundary of the Sheridan Disposal Services Superfund Site consists of approximately 32.656 fenced acres of the Original Superfund Tract, more particularly described in **Exhibit B** attached hereto and made a part hereof (the "**Vault Tract**"). That portion of the Original Superfund Tract that does not comprise the Vault Tract is referred to herein as the "**Remainder Tract**" and is more particularly described in **Exhibit C** attached hereto and made a part hereof.

D. Grantors are the sole fee owners of the Original Superfund Tract, which consists of the Vault Tract and the Remainder Tract.

E. Grantors and the then co-owners of the Original Superfund Tract , Duane Clifford Sheridan and Grace Crofton Woolever Sheridan (collectively, the "**Sheridans**"), entered into that certain Settlement Agreement dated June 19, 1989 with the Sheridan Site Committee, comprised

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of the grantors of the Sheridan Site Trust (the "**Settlement Agreement**"), a copy of which is attached hereto as **Exhibit D** and made a part hereof.

F. Among other things, the Settlement Agreement included certain restrictions on the use of the Original Superfund Tract and obligations on the owners thereof as more particularly set forth therein and provided that it would be placed of record.

G. Grantors and, by its acceptance hereof, Grantee desire to enter into this Grant of Environmental Deed Restrictions and Right of Access to memorialize the restrictions and access rights set forth in the Settlement Agreement with respect to the Vault Tract and Remainder Tract and satisfy the deed restriction and access requirements contained in the Consent Decrees for these tracts.

GRANT

NOW, THEREFORE, in consideration of the Grantee's performance of remediation of the Sheridan Disposal Services Superfund Site and its ongoing responsibility for the Vault Tract pursuant to the Consent Decrees and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, Grantors covenant with the Grantee that they have the right to grant and convey the rights and restrictions (collectively, the "**Deed Restrictions**") set forth herein and in the Settlement Agreement as the current sole fee owners of the Vault Tract and the Remainder Tract, and Grantors grant and affirm the Deed Restrictions in favor of Grantee and its assigns on the following terms and conditions:

1. Right of Access. Grantors hereby grant Grantee and its assigns and authorized representatives, including but not limited to contractors, a perpetual right of access in, on, upon, over, and through the Vault Tract and Remainder Tract for the purposes of performing all activities required by the Consent Decrees, including implementing, overseeing, operating, maintaining, and monitoring the remedial activities relating to the Sheridan Disposal Services Superfund Site, which include but are not limited to inspecting, testing, surveying, monitoring, and treating hazardous substances on, over, under, and across the surface of the Vault Tract and Remainder Tract. Neither Grantors nor any subsequent owner of all or any portion of the Vault Tract or the Remainder Tract shall interfere with any right or authority the EPA or its authorized representatives, including but not limited to contractors, have to move freely about the Vault Tract and, as needed in connection with activities related to the Vault Tract, the Remainder Tract. Grantors grant to the EPA and the Texas Commission on Environmental Quality and their authorized representatives, including contractors, the same access rights afforded to Grantee hereunder. The owner of the Remainder Tract may designate reasonable routes for ingress and egress across the Remainder Tract for the purposes of accessing the Vault Tract and conducting any monitoring required by EPA on the Remainder Tract, including the installation, repair, maintenance and replacement of monitoring wells.

2. Restrictions and Owner Obligations.

(a) The Vault Tract is subject to all the restrictions and terms and conditions with respect to the "Site" set forth in the Settlement Agreement, which is incorporated fully herein by reference.

(b) In order to satisfy the requirements of paragraph 1 of the Settlement Agreement and the terms of the Consent Decrees, Grantors hereby restrict use of the Vault Tract and the Remainder Tract, with Grantors jointly imposing such restrictions against the Vault Tract and the Remainder Tract, as follows:

i. The Vault Tract shall not be used for the installation or operation of any ground water wells for consumption by or contact with humans or for agricultural purposes. The surface of the Vault Tract shall only be used for the purposes of performing activities required by the Consent Decrees and shall not, without the prior written consent of EPA and Grantee, be used for any other purposes. Among other things, this restriction on the use of the surface of the Vault Tract prohibits the following: the construction of any building, any grazing or other agricultural use, any planting of trees, any other activities that would pierce the clay cap on the Vault Tract.

ii. No portion of the Remainder Tract situated within 100 feet of the boundary of the Vault Tract or between the northern boundary of the Vault Tract and the Brazos River shall be used for the installation or operation of any ground water wells for consumption by or contact with humans or for agricultural purposes.

iii. No use of groundwater beneath the Vault Tract or the Remainder Tract that would negatively affect the hydraulic barrier provided by the Brazos River shall be allowed. The plume direction and water elevation shall be reviewed by USEPA Project Manager after each monitoring activity to verify this condition.

iv. Except as may be necessary or appropriate to implement, oversee, operate, maintain, and monitor remedial activities at the Vault Tract, the installation or use of any well on the Vault Tract or the Remainder Tract that could potentially affect the size or position of the plume of ground water contamination underlying the Vault Tract or the Remainder Tract shall be prohibited. Prior written approval must be received from USEPA and Grantees before any such site activity begins.

(c) No activity at the Vault Tract will be initiated or permitted unless and until the EPA and the Grantee have been provided at least ninety (90) days prior written notice and given their prior written consent to such activity. Consent for such activity granted by Grantee's designated project manager, which as of the date hereof is John M. Cotterell shall constitute Grantee's consent for purposes of this provision.

(d) At least ninety (90) days prior to any transfer, lease, or sale of any ownership interest in the Vault Tract or the Remainder Tract, the then owner of such portion of the Vault Tract or the Remainder Tract, shall provide notice to the EPA and the Grantee of the intent to transfer, lease or sell. All potential and/or actual buyers and/or lessees shall be given copies of

the Ground Water Consent Decree and all documents of transfer, lease, or sale will contain a provision requiring compliance with the Settlement Agreement and applicable provisions of the Ground Water Consent Decree. A copy of the letter or document transmitting notice of a copy of the Settlement Agreement and Ground Water Consent Decree to the potential and/or actual buyers and/or lessees shall be sent to EPA and the Grantee; provided the provisions set forth in this paragraph shall not apply to any transfer or sale of all or a portion of the Vault Tract or the Remainder Tract to one of the signatories to the Settlement Agreement.

3. Provisions to Run with the Land. The rights, liabilities, agreements, and obligations herein set forth shall run with the Vault Tract and the Remainder Tract and shall inure to the benefit of the Grantee and EPA, as third party beneficiary, and their successors and be binding upon Grantors and all parties claiming by, through or under Grantors. The rights hereby granted to the Grantee, and its successors and assigns, include the right of Grantee and EPA, as third party beneficiary, to enforce these Deed Restrictions.

4. Severability. If any court or other tribunal determines that any provision of these Deed Restrictions is invalid or unenforceable, such provision shall be deemed to have been modified automatically to conform to the requirements for validity and enforceability as determined by such court or tribunal. In the event the provision invalidated is of such a nature that it cannot be so modified, the provision shall be deemed deleted from these Deed Restrictions as though it had never been included herein. In either case, the remaining provisions of these Deed Restrictions shall remain in full force and effect.

5. Governing Law. It is expressly agreed that the law of the State of Texas is the law governing these Deed Restrictions and any disputes regarding its contents and interpretation.

6. Binding Effect. The covenants, terms, conditions, and restrictions of these Deed Restrictions shall be binding upon the Grantors and their personal representatives, heirs, successors, and assigns, and shall continue as a servitude running into perpetuity with the Vault Tract and the Remainder Tract.

7. Notices. Any notice required hereunder shall be in writing and shall be delivered by hand, reputable overnight carrier, or certified mail, return receipt requested as follows:

To Grantors:

Rupert Daniel Sheridan
28636 Clarkebottom
Hempstead, Tx
77445

To Grantee:

Sheridan Site Trust
Attn: Project Manager
P.O. Box 440005
Houston, TX 77244-0005

with a copy to:

Baker Botts L.L.P.
Attn: Aileen Hooks
98 San Jacinto Blvd., Suite 1500
Austin, Texas 78701-4039

To EPA:

Office of Regional Counsel
U.S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75202-2733

All notices shall be deemed effective three (3) business days after delivery by the means set forth above. Grantors, Grantee or EPA (or any of their respective successors) may change their address for by written notice to the others (or their respective successors).

EXECUTED this the 1st day of November 2010.

Rupert Daniel Sheridan

Pat John Sheridan

STATE OF TEXAS §
§
COUNTY OF WALLER §

This instrument was acknowledged before me on 11-10, 2010, by Rupert Daniel Sheridan.

D. E. GREEN
MY COMMISSION EXPIRES
January 8, 2013

Notary Public in and for the State of Texas
My Commission Expires: _____

STATE OF TEXAS §
§
COUNTY OF WALLER §

This instrument was acknowledged before me on 11-10, 2010, by Pat John Daniel Sheridan.

D. E. GREEN
MY COMMISSION EXPIRES
January 8, 2013

Notary Public in and for the State of Texas
My Commission Expires: _____

EXHIBIT A

DESCRIPTION OF ORIGINAL SUPERFUND TRACT
(92.054 Acres)

ORIGINAL SUPERFUND TRACT

A tract or parcel of land lying and being situated in the Thomas Stevens Survey, A-57, Waller County, Texas, and being part of the 696 1/2 acres tract described as FIRST TRACT in the Deed recorded in Volume 108, Page 309, of the Official Public Records of Waller County, Texas, said FIRST TRACT being the same tract of land conveyed to Rupert S. Sheridan and Pat John Sheridan by Duane Sheridan in the Deed of Gift recorded in Volume 396, Page 370, of the Official Public Records of Waller County, Texas, said 92.054 acres tract being more particularly described as follows:

COMMENCING at a 3/4-inch Pipe set for corner in the northwest right-of-way line of Clark Bottom Road, said pipe being located in an easterly line of the 696 1/2 acres tract, said pipe marking the southwest corner of the Odis Styers, Jr. 128.310 acres tract (242/196), said pipe marking the southeast corner of the 277.698 acres Tract No. 2 out of the 696 1/2 acres tract and surveyed on this date;

THENCE along the fence found marking the common lines of the 696 1/2 acres tract and the Styers 128.310 acres tract, same being the easterly lines of the 277.698 acres Tract No. 2, for the following calls:

N 01° 46' 26" W for a distance of 2,343.92 feet to a 12-inch Cedar Post for angle point;

N 01° 36' 30" W for a distance of 1,219.73 feet to a point for corner;

THENCE S 88° 23' 30" W for a distance of 47.82 feet to a 4-inch Pipe found for the southeast corner of the herein described tract and the PLACE OF BEGINNING of this description;

THENCE along an existing fence for the following calls:

S 88° 34' 39" W for a distance of 12.52 feet to a 4-inch Pipe;
S 74° 30' 05" W for a distance of 223.98 feet to a 4-inch Pipe;
S 59° 58' 21" W for a distance of 289.30 feet to a 4-inch Pipe;
S 65° 39' 25" W for a distance of 267.97 feet to a 4-inch Pipe;
S 74° 19' 24" W for a distance of 308.01 feet to a 4-inch Pipe;
N 88° 58' 26" W for a distance of 101.12 feet to a 4-inch Pipe;
N 73° 42' 41" W for a distance of 196.54 feet to a 4-inch Pipe;
N 11° 31' 44" E for a distance of 176.54 feet to a 4-inch Pipe;
N 56° 46' 11" E for a distance of 209.68 feet to a 4-inch Pipe;
N 20° 24' 05" E for a distance of 228.65 feet to a 4-inch Pipe;
N 31° 30' 18" W for a distance of 169.40 feet to a 4-inch Pipe;
N 09° 24' 54" E for a distance of 114.03 feet to a 4-inch Pipe;
N 69° 17' 10" W for a distance of 123.21 feet to a 4-inch Pipe;
N 57° 06' 35" W for a distance of 681.05 feet to a 4-inch Pipe;
N 58° 42' 52" W for a distance of 267.05 feet to a 4-inch Pipe;
N 10° 28' 22" E for a distance of 1,458.40 feet to a 4-inch Pipe for the northwest corner of the herein described tract;
S 85° 57' 55" E for a distance of 254.03 feet to a 4-inch Pipe;
S 25° 14' 18" E for a distance of 16.99 feet to a 4-inch Pipe;
S 89° 52' 06" E for a distance of 753.28 feet to a 4-inch Pipe;
S 58° 58' 17" E for a distance of 283.58 feet to a 4-inch Pipe;
S 23° 03' 45" E for a distance of 160.33 feet to a 4-inch Pipe;
S 86° 39' 35" E for a distance of 169.63 feet to a 4-inch Pipe;
S 86° 44' 48" E for a distance of 192.41 feet to a 4-inch Pipe for the northeast corner of the herein described tract;
S 01° 36' 48" E for a distance of 2,054.98 feet to the PLACE OF BEGINNING containing 92.054 acres of land, more or less.

EXHIBIT B

DESCRIPTION OF VAULT TRACT
(32.656 Acres)

VAULT TRACT VOL 1232 PG385

A **TRACT** OF LAND OUT OF A 92.054 ACRE TRACT OF LAND DESCRIBED IN EXHIBIT C IN VOLUME 600, PAGE 105 OFFICIAL RECORDS AND BEING SITUATED IN THE THOMAS STEVENS SURVEY, ABSTRACT 57, WALLER COUNTY, TEXAS

COMMENCING: At a ¾ inch iron pipe found for the Southeast corner of a 337.057 acre tract (called Tract 2 being 277.698 acres in Volume 600, Page 105 in Exhibit B of the Official Records of Waller County), said point also being the Southeast corner of a 40 foot wide ingress-egress and utility easement and also the Southwest corner of a 128.310 acre tract (Volume 342, Page 194 Deed Records), said corner is located in the North right-of-way line of Clarke Bottom Road (60 foot width as described in Volume 142, Page 528 Deed Records);

THENCE: North 01° 46' 26" West a distance of 2343.92 feet to a ½ inch iron rod set for an angle point in the East line of the 369.713 acre tract and of the 40 foot wide easement;

THENCE: North 01° 36' 30" West a distance of 3239.68 to a point in the East line of the 369.713 acre tract and being the Northeast corner of the 40 foot ingress-egress and utility easement;

THENCE: South 89° 42' 42" West a distance of 659.27 feet to a point being the Northwest corner of the 40 foot ingress-egress and public utility ease in a Northeast line of this 32.656 acre tract;

THENCE: South 09° 22' 32" East a distance of 14.28 feet to a ½ inch iron rod set at a fence corner for an East corner of this 32.656 acre tract and being **THE ACTUAL PLACE OF BEGINNING** of this tract;

THENCE: Following a fence line around the 32.656 acre tract to a ½ inch iron rod set at each angle point the following calls:

S 06° 06' 54" W a distance of 261.901 feet
S 11° 08' 35" W a distance of 48.802 feet
S 15° 10' 51" W a distance of 103.442 feet
S 28° 07' 56" W a distance of 156.816 feet
S 37° 33' 15" W a distance of 130.436 feet
S 29° 39' 51" W a distance of 100.258 feet
S 13° 36' 46" W a distance of 59.694 feet
S 01° 57' 08" W a distance of 410.986 feet
S 09° 49' 26" W a distance of 21.178 feet
S 23° 05' 20" W a distance of 11.694 feet
S 33° 35' 47" W a distance of 29.431 feet
S 42° 58' 29" W a distance of 111.167 feet
S 47° 51' 30" W a distance of 110.146 feet
S 62° 26' 33" W a distance of 25.795 feet
N 74° 32' 39" W a distance of 127.863 feet
N 69° 49' 08" W a distance of 50.127 feet
N 57° 51' 49" W a distance of 584.720 feet
N 39° 03' 52" W a distance of 97.714 feet
N 01° 27' 29" W a distance of 60.134 feet
N 13° 38' 21" E a distance of 109.159 feet
N 05° 29' 47" E a distance of 129.597 feet
N 13° 26' 00" E a distance of 69.084 feet
N 22° 43' 39" E a distance of 80.880 feet
N 21° 03' 33" E a distance of 95.584 feet
N 01° 13' 46" W a distance of 51.948 feet
N 03° 53' 29" W a distance of 78.106 feet
N 04° 53' 44" E a distance of 52.615 feet
N 28° 38' 24" E a distance of 226.791 feet
N 35° 35' 48" E a distance of 140.375 feet
N 49° 39' 29" E a distance of 168.051 feet
N 66° 59' 45" E a distance of 206.736 feet
N 71° 57' 49" E a distance of 43.574 feet
N 84° 40' 33" E a distance of 69.275 feet
N 89° 43' 14" E a distance of 300.301 feet
S 81° 24' 57" E a distance of 39.922 feet
S 68° 43' 38" E a distance of 79.195 feet
S 43° 27' 55" E a distance of 59.001 feet
S 24° 22' 01" E a distance of 40.014 feet
S 09° 22' 32" E a distance of 129.645 feet to a ½ inch iron rod set at a fence post for the **PLACE OF BEGINNING** and containing 32.656 acres of land.

EXHIBIT C

DESCRIPTION OF REMAINDER TRACT

REMAINDER TRACT

A tract or parcel of land lying and being situated in the Thomas Stevens Survey, A-57, Waller County, Texas, and being part of the 696 1/2 acres tract described as FIRST TRACT in the Deed recorded in Volume 108, Page 309, of the Official Public Records of Waller County, Texas, said FIRST TRACT being the same tract of land conveyed to Rupert S. Sheridan and Pat John Sheridan by Duane Sheridan in the Deed of Gift recorded in Volume 396, Page 370, of the Official Public Records of Waller County, Texas, said 92.054 acres tract being more particularly described as follows:

COMMENCING at a 3/4-inch Pipe set for corner in the northwest right-of-way line of Clark Bottom Road, said pipe being located in an easterly line of the 696 1/2 acres tract, said pipe marking the southwest corner of the Odis Styers, Jr. 128.310 acres tract (242/196), said pipe marking the southeast corner of the 277.698 acres Tract No. 2 out of the 696 1/2 acres tract and surveyed on this date;

THENCE along the fence found marking the common lines of the 696 1/2 acres tract and the Styers 128.310 acres tract, same being the easterly lines of the 277.698 acres Tract No. 2, for the following calls:

N 01° 46' 26" W for a distance of 2,343.92 feet to a 12-inch Cedar Post for angle point;

N 01° 36' 30" W for a distance of 1,219.73 feet to a point for corner;

THENCE S 88° 23' 30" W for a distance of 47.82 feet to a 4-inch Pipe found for the southeast corner of the herein described tract and the PLACE OF BEGINNING of this description;

THENCE along an existing fence for the following calls:

S 88° 34' 39" W for a distance of 12.52 feet to a 4-inch Pipe;
S 74° 30' 05" W for a distance of 223.98 feet to a 4-inch Pipe;
S 59° 58' 21" W for a distance of 289.30 feet to a 4-inch Pipe;
S 65° 39' 25" W for a distance of 267.97 feet to a 4-inch Pipe;
S 74° 19' 24" W for a distance of 308.01 feet to a 4-inch Pipe;
N 88° 58' 26" W for a distance of 101.12 feet to a 4-inch Pipe;
N 73° 42' 41" W for a distance of 196.54 feet to a 4-inch Pipe;
N 11° 31' 44" E for a distance of 176.54 feet to a 4-inch Pipe;
N 56° 46' 11" E for a distance of 209.68 feet to a 4-inch Pipe;
N 20° 24' 05" E for a distance of 228.65 feet to a 4-inch Pipe;
N 31° 30' 18" W for a distance of 169.40 feet to a 4-inch Pipe;
N 09° 24' 54" E for a distance of 114.03 feet to a 4-inch Pipe;
N 69° 17' 10" W for a distance of 123.21 feet to a 4-inch Pipe;
N 57° 06' 35" W for a distance of 681.05 feet to a 4-inch Pipe;
N 58° 42' 52" W for a distance of 267.05 feet to a 4-inch Pipe;
N 10° 28' 22" E for a distance of 1,458.40 feet to a 4-inch Pipe for the northwest corner of the herein described tract;
S 85° 57' 55" E for a distance of 254.03 feet to a 4-inch Pipe;
S 25° 14' 18" E for a distance of 16.99 feet to a 4-inch Pipe;
S 89° 52' 06" E for a distance of 753.28 feet to a 4-inch Pipe;
S 58° 58' 17" E for a distance of 283.58 feet to a 4-inch Pipe;
S 23° 03' 45" E for a distance of 160.33 feet to a 4-inch Pipe;
S 86° 39' 35" E for a distance of 169.63 feet to a 4-inch Pipe;
S 86° 44' 48" E for a distance of 192.41 feet to a 4-inch Pipe for the northeast corner of the herein described tract;
S 01° 36' 48" E for a distance of 2,054.98 feet to the PLACE OF BEGINNING containing 92.054 acres of land, more or less.

LESS AND EXCEPT THE 32.656 ACRES CALLED VAULT TRACT

EXHIBIT D

SETTLEMENT AGREEMENT

Sheridan Site Committee

Larry Feldkamp, Chairman, 713 / 229-1573

June 19, 1989

Mr. Duane Clifford Sheridan
Route 1, Box 128-D
Hempstead, TX 77445

Re: Sheridan Disposal Services Site

Dear Mr. Sheridan:

The purpose of this letter is to set forth the basis of a settlement between you and the Sheridan Site Committee (the "Committee") with respect to the Sheridan Disposal Services Site located on property owned by you in Waller County near Clark Bottom Road near Hempstead, Texas (the "Site"). This letter solicits an offer from you to the Sheridan Site Committee Participants listed in Attachment A (the "Participants") to settle any liability which you may have to the Participants under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") on the terms and conditions set forth herein. This offer may be made by you, your wife and your children by signing and returning this letter to the Committee. Once the Participants have signed this letter, it becomes a settlement agreement between you, your wife and your children and the Participants.

This settlement agreement is conditioned on the Participants entering into a Consent Decree with the United States Environmental Protection Agency (the "U.S. EPA") with respect to the Site. Moreover, this settlement is effective only with respect to your personal liability and is not intended in any way to affect the rights of the Participants against Sheridan Disposal Services, Inc., which operated the Site. By signing this letter, you are offering to settle only in your individual capacity as owner of the Site and not as an agent of Sheridan Disposal Services, Inc., the Site operator.

After this letter is signed by you, your wife, your children and the Participants, you are released by its terms and conditions from liability to the Participants for claims that they may have against you, as owner of the Site, under CERCLA, provided that such release is conditioned upon the Participants entering into a Consent Decree with the U.S. EPA

resolving their liability under the same statute. Moreover, the Participants agree that they will not object to your becoming a signatory to such Consent Decree. By signing such Consent Decree, you will be further protected personally from contribution and indemnity claims pursuant to CERCLA § 113(f)(2). In consideration of the foregoing, by signing this letter, you offer the following without cost to the Participants:

1. You will provide institutional controls on the Site as the Participants deem necessary or desirable concerning use of property contained within the Site; for example, deed restrictions and fences. In addition, you agree to execute and file a deed restriction prohibiting use of the shallow groundwater at and/or emanating from the Site which the Source Control Remedial Investigation and/or Feasibility Study for the Site approved by EPA has indicated is contaminated.

2. You will provide soil and clay from the Site and other areas of your property in Waller County as deemed desirable by the Participants to carry out the remedial action; provided that to the extent feasible (i) soil and clay from the Site and/or from drainage areas on other locations on your property in Waller County will be used, (ii) existing uses of your property in Waller County will not be interfered with, and (iii) the pattern of the areas of soil and clay use will be reasonable.

3. You will make available portions of the Site and other areas of your property in Waller County for use and/or transfer in mitigation of any natural resource damages as deemed desirable by the Participants and the United States Department of the Interior; provided that (i) to the extent feasible, the obligation set forth in this paragraph 3 shall be limited to the Site and any portions of your property in Waller County from which soil and clay have been or are to be used pursuant to paragraph 2 above and (ii) in no event shall the areas designated on Attachment B hereto be used to satisfy the obligation set forth in this paragraph 3.

4. You will cooperate with the Participants in performing the remedial action and any operation or maintenance.

5. You will maintain ownership and reasonable upkeep of your existing construction equipment and operate such equipment as the Participants deem desirable.

6. You will cooperate with the Participants in performing the remedial action, including but not limited to the Participants' installation of a spur jetty system along the Brazos River and a cap on the waste pond at the Site.

7. You will not interfere with any right or authority which the U.S. EPA and its authorized representatives have to move freely about the Site and you further specifically authorize, permit and grant access to the Site to the the U.S. EPA, the Texas Water Commission, the Participants and any person acting pursuant to an order or consent decree with the United States or the U.S. EPA, including their representatives and contractors, for purposes of performing remedial activities, which shall include but not be limited to free and uninterrupted use for purposes of inspecting, testing, surveying, monitoring and treating hazardous substances on, over, under and across the surface of the Site and for conducting the monitoring, operation and maintenance portion of the remedial action.

8. You will not undertake any action which would or might interfere with implementation of the actions described in No. 7 above or with the integrity of the remedy.

9. You will not institute any legal action against the Participants for liability, cost, loss or expense under CERCLA or for liability, cost, loss or expense relating to any remedial action performed by Participants, their representatives and contractors, in accordance with the Consent Decree with U.S. EPA and/or the engineering plans pursuant thereto.

10. You will not permit any change in the existing use of the Site, or any part thereof, without the prior written consent of the Region VI Regional Administrator of the U.S. EPA and the Participants.

11. Ninety (90) days prior to any transfer, lease or sale of any ownership interest in the Site, you will notify the EPA and the Participants of the intent to transfer, lease or sell. All potential and/or actual buyers and/or lessees shall be given a copy of this Agreement and all documents of transfer, lease or sale must contain a provision requiring compliance with this Agreement. A copy of the letter or document transmitting notice of a copy of

this Agreement to the potential and/or actual buyers and/or lessees shall be sent to the U.S. EPA and the Participants. The obligations set forth in this paragraph 11 shall not apply to any transfer or sale of all or a portion of the Site to any person who is a signatory to this Agreement and the Consent Decree.

12. You will record a copy of this Agreement in the deed registry office or in the real estate records of Waller County to put prospective buyers and/or lessees and all others on notice of the existence of, and requirements of, this Agreement.

13. The provisions of this Agreement shall apply to and be binding upon you and your employees, agents, receivers, trustees, successors and/or assigns.

Please acknowledge that you make this offer to the Participants by signing below and returning to the undersigned.

Sincerely,

Robert T. Stewart

Robert T. Stewart, Vice Chairman
Sheridan Site Committee

Duane Clifford Sheridan
Duane Clifford Sheridan

Grace Crafton Woolever Sheridan
Grace Crafton Woolever Sheridan

Rupert Daniel Sheridan
Rupert Daniel Sheridan

Pat John Sheridan
Pat John Sheridan

4235L

RECORDER'S MEMORANDUM
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ATTACHMENT A

SHERIDAN SITE PARTICIPANTS

1. DIXIE CHEMICAL CO., INC.
2. LUBRIZOL
3. TENNECO CHEMICALS, PETRO-TEX
4. EXXON CHEMICAL CO. (ENJAY, ESSO, HUMBLE, ETC.)
5. SII DRILCO (SMITH)
6. DUPONT
7. MERICHEM COMPANY
8. JOHNSTON
9. GOODYEAR
10. PPG INDUSTRIES
11. OXIRANE CHEMICAL, ARCO CHEMICAL
12. GRAY TOOL CO. (VETCO GRAY)
13. A-B CHEMICAL CORP. (NATIONAL DISTILLERS, USI)
14. PETROLITE CORP.
15. TBW MISSION DRILLING PRODUCTS
16. GALVESTON-HOUSTON (GH HATTCO, GH BETTIS, GEMC CENTER
17. CANGO CORPORATION (ENTERPRISE)
18. NL INDUSTRIES (SPERRY SUN)
19. BOEM & MAAS
20. FMC CORPORATION
21. BAKER(PLAS.APP.,MILCHEM,REED(R.B.,AM.,T.),LYNES,AQU
22. FRENCH LIMITED
23. HYDRIL COMPANY
24. CELANESE CHEMICAL COMPANY
25. HUGHES-ONCOR (ONCOR)
26. DART INDUSTRIAL, INC. (KRAFT)
27. DSI TRANSPORTS
28. GATX, FULLER CO.
29. INDUSTRIAL TOWEL & UNIFORM CO. (CINTAS)
30. PEARSALL CHEMICAL CORP., WITCO CHEMICAL
31. JETCO CHEMICALS
32. TUBULAR FINISHING WORKS
33. EVANS COOPERAGE CO., INC.
34. ETHYL CORPORATION
35. DRESSER INDUSTRIES, INC.
36. HUGHES TOOLS, BROWN OIL TOOL
37. OTECO EQUIPMENT CO.
38. BETZ LABORATORIES, INC.
39. CROWN
40. CHEMICAL EXCHANGE
41. TEXAS IRON WORKS, INC.
42. UNION CARBIDE
43. U.S. STEEL
44. BRINER PAINT MANUFACTURING CO., INC.
45. COMET WELL SERVICE

RECORDER'S MEMORANDUM
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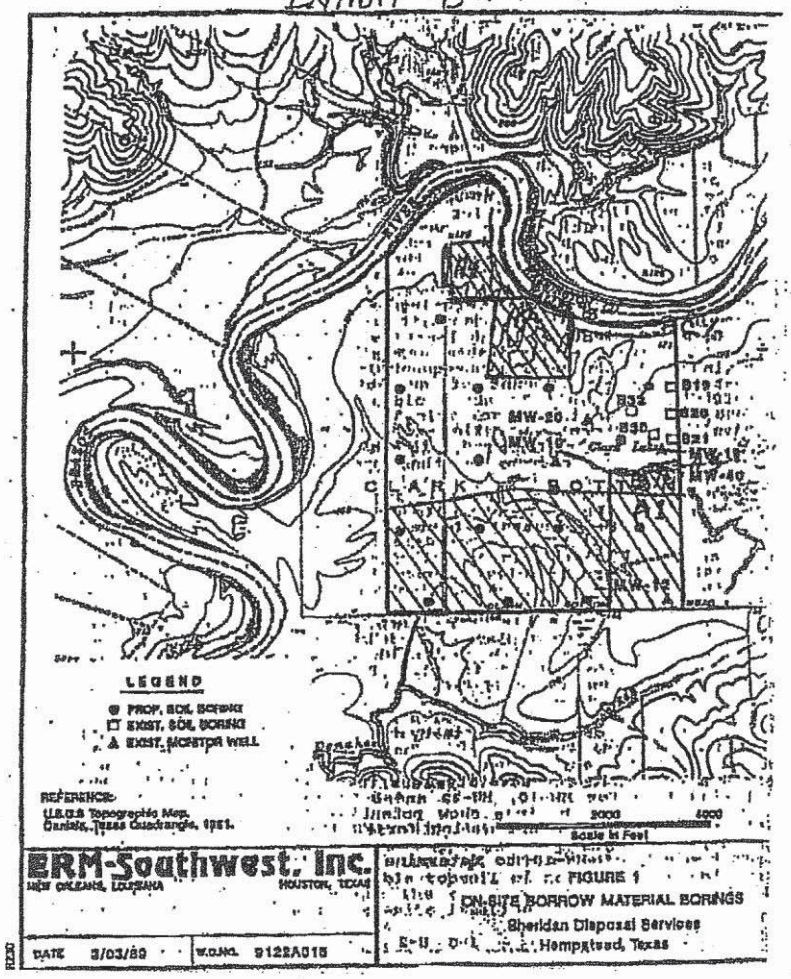
EXHIBIT "B"



RECORDER'S MEMORANDUM
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Figure I-2: Grant of Right of Access

VOL 1232 PG354

1006154

GRANT OF RIGHT OF ACCESS

STATE OF TEXAS §
§
§
COUNTY OF WALLER §

KNOW ALL BY THESE PRESENTS THAT:

THIS GRANT OF RIGHT OF ACCESS is granted and confirmed by **Rupert Daniel Sheridan** ("**Grantor**") in favor of the **Sheridan Site Trust and the Co-Trustees of the Sheridan Site Trust or any successor in interest managing the remedial action, including the operation and maintenance, at the site known as the Sheridan Disposal Services Superfund Site** ("**Grantee**").

RECITALS

A. By Federal Register Notice at 54 Fed. Reg. 13296 published on March 31, 1989, the United States Environmental Protection Agency ("**EPA**") listed the site in Waller County, Texas known as the Sheridan Disposal Services Superfund Site on the National Priorities List.

B. The grantors of the Sheridan Site Trust consist of settlors to the Source Control Consent Decree and to the Ground Water Consent Decree for the Sheridan Waste Disposal Services Site filed in the United States District Court for the Southern District of Texas on December 3, 1991 (as amended, collectively, the "**Consent Decrees**"), or their successors-in-interest who have performed a remediation of the Sheridan Disposal Services Superfund Site.

C. Originally, EPA referred to approximately 92.054 acres of land in Waller County, Texas as the Sheridan Disposal Services Superfund Site, more particularly described in **Exhibit A** attached hereto and made a part hereof (the "**Original Superfund Tract**"). Following implementation of the response action by the grantors of the Sheridan Disposal Services Superfund Site, the surface boundary of the Sheridan Disposal Services Superfund Site consists of approximately 32.656 fenced acres of the Original Superfund Tract, more particularly described in **Exhibit B** attached hereto and made a part hereof (the "**Vault Tract**"). That portion of the Original Superfund Tract that does not comprise the Vault Tract is referred to herein as the "**Remainder Tract**" and is more particularly described in **Exhibit C** attached hereto and made a part hereof

D. Grantor is the sole fee owner of that certain approximately 277.698 acres of real property located in Waller County, Texas, more particularly described in **Exhibit D** attached hereto and made a part hereof, which is located adjacent to the Original Superfund Tract (the "**Rupert Sheridan Tract**").

BOTH
WR-101606

E. Grantor and the then co-owners of the Original Superfund Tract and the Rupert Sheridan Tract, Pat John Sheridan, Duane Clifford Sheridan and Grace Crofton Woolever Sheridan (collectively, the "**Sheridans**"), entered into that certain Settlement Agreement dated June 19, 1989 with the Sheridan Site Committee, comprised of the grantors of the Sheridan Site Trust (the "**Settlement Agreement**"), a copy of which is attached hereto as **Exhibit E** and made a part hereof.

F Among other things, the Settlement Agreement included certain restrictions on the use of and a right of access to the Original Superfund Tract, which was accomplished by separate Grant of Environmental Deed Restrictions and Right of Access burdening the Vault Tract and Remainder Tract, and granted a right of access to the Rupert Sheridan Tract as more particularly set forth therein and provided that such restrictions and access rights would be placed of record.

G. Grantor and, by its acceptance hereof, Grantee desire to enter into this Grant of Right of Access to memorialize the access rights set forth in the Settlement Agreement with respect to the Rupert Sheridan Tract and satisfy the access requirements contained in the Consent Decrees for that tract.

GRANT

NOW, THEREFORE, in consideration of the Grantee's performance of remediation of the Sheridan Disposal Services Superfund Site and its ongoing responsibility for the Vault Tract pursuant to the Consent Decrees and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, Grantor covenants with the Grantee that he has the right to grant and convey the access rights (collectively, the "**Access Right**") set forth herein and in the Settlement Agreement as the current sole fee owner of the Rupert Sheridan Tract, Grantor grants and affirms the Access Right with respect to the Rupert Sheridan Tract in favor of Grantee and its assigns on the following terms and conditions:

1. Right of Access. Grantor hereby grants Grantee and its assigns and authorized representatives, including but not limited to contractors, a perpetual right of access in, on, upon, over, and through the Rupert Sheridan Tract for the purposes of accessing the Vault Tract and Remainder Tract and performing natural resource damage mitigation activities on the Rupert Sheridan Tract required to satisfy Grantee's obligation under the Consent Decrees . Neither Grantor nor any subsequent owner of all or any portion of the Rupert Sheridan Tract shall interfere with any right or authority the EPA or its authorized representatives, including but not limited to contractors, have to move freely about the Rupert Sheridan Tract as needed to access and perform activities on the Vault Tract or the Remainder Tract or to complete the required natural resource damage mitigation activities on the Rupert Sheridan Tract. Grantor grants to the EPA and the Texas Commission on Environmental Quality and their authorized representatives, including contractors, the same access rights afforded to Grantee hereunder. The owner of the Rupert Sheridan Tract may designate reasonable routes for ingress and egress across the Rupert Sheridan Tract for the purposes of accessing the Vault Tract and the Remainder Tract and

conducting the natural resource damage mitigation projects required by EPA on the Rupert Sheridan Tract.

2. Access for Future Monitoring. Grantor hereby agrees that if EPA requires Grantee to conduct additional monitoring on the Rupert Sheridan Tract related to Grantee's response actions for the Sheridan Disposal Superfund Site that Grantor will, at no additional cost, provide access to Grantee to the Rupert Sheridan Tract to conduct such monitoring activity on the terms set forth in this section. Grantor will grant to the EPA and the Texas Commission on Environmental Quality and their authorized representatives, including contractors, the same access rights afforded to Grantee hereunder. Following a request by EPA for monitoring on the Rupert Sheridan Tract, Grantee shall consult with Grantor concerning the location and nature of any sampling activity to be performed, with the understanding that any sample or well locations will be identified in consultation with Grantor to minimize any interference with Grantor's use of the Rupert Sheridan Tract and any improvements thereon. If any monitoring wells are installed on the Rupert Sheridan Tract under this section, they shall be maintained by Grantee or its agent until the EPA approves or authorizes Grantee or its agent to close/remove them. Within one hundred and eighty (180) calendar days after such approval or authorization from the EPA, Grantee shall, or shall cause its agent to, (a) plug and abandon all groundwater monitoring wells in accordance with all applicable laws, and (b) correct any surface damage caused by the installation of such wells and restore the surface of the Rupert Sheridan Tract impacted by the monitoring well to an adequate condition.

3. Transfer, Lease or Sale Notifications. Within 10 days of any transfer, lease, or sale of any ownership interest in the Rupert Sheridan Tract, the then owner of such portion of the Rupert Sheridan Tract, shall provide notice to the EPA and the Grantee of the transfer, lease or sale, and shall provide EPA and Grantee with the contact information for the new owner or tenant.

4. Provisions to Run with the Land. The rights, liabilities, agreements, and obligations herein set forth shall run with the Rupert Sheridan Tract and shall inure to the benefit of the Grantee and EPA, as third party beneficiary, and their successors and be binding upon Grantor and all parties claiming by, through or under Grantor. The rights hereby granted to the Grantee, and its successors and assigns, include the right of Grantee and EPA, as third party beneficiary, to enforce this Access Right.

5. Severability. If any court or other tribunal determines that any provision of this Access Right is invalid or unenforceable, such provision shall be deemed to have been modified automatically to conform to the requirements for validity and enforceability as determined by such court or tribunal. In the event the provision invalidated is of such a nature that it cannot be so modified, the provision shall be deemed deleted from this Access Right as though it had never been included herein. In either case, the remaining provisions of this Access Right shall remain in full force and effect.

6. Governing Law. It is expressly agreed that the law of the State of Texas is the law governing this Access Right and any disputes regarding its contents and interpretation.

7. Binding Effect. The covenants, terms, and conditions of this Access Right shall be binding upon the Grantor and his personal representatives, heirs, successors, and assigns, and shall continue as a servitude running into perpetuity with the Rupert Sheridan Tract.

8. Notices. Any notice required hereunder shall be in writing and shall be delivered by hand, reputable overnight carrier, or certified mail, return receipt requested as follows:

To Grantor:

Rupert Daniel Sheridan
25636 Clarke Bottom
Hempstead, TX
77445

To Grantee:

Sheridan Site Trust
Attn: Project Manager
P.O. Box 440005
Houston, TX 77244-0005

with a copy to:

Baker Botts L.L.P.
Attn: Aileen Hooks
98 San Jacinto Blvd., Suite 1500
Austin, Texas 78701-4039

To EPA:

Office of Regional Counsel
U.S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75202-2733

All notices shall be deemed effective three (3) business days after delivery by the means set forth above. Grantor, Grantee or EPA (or any of their respective successors) may change their address for by written notice to the others (or their respective successors).

EXECUTED this the 10th day of November, 2010.

Rupert Daniel Sheridan

STATE OF TEXAS §
§
COUNTY OF WALLER §

This instrument was acknowledged before me on 1/5/10, 2010, by Rupert Daniel Sheridan.

D. E. GREEN
MY COMMISSION EXPIRES
January 8, 2013

Notary Public in and for the State of Texas
My Commission Expires: _____

EXHIBIT A

DESCRIPTION OF ORIGINAL SUPERFUND TRACT
(92.054 Acres)

ORIGINAL SUPERFUND TRACT

A tract or parcel of land lying and being situated in the Thomas Stevens Survey, A-57, Waller County, Texas, and being part of the 696 1/2 acres tract described as FIRST TRACT in the Deed recorded in Volume 108, Page 309, of the Official Public Records of Waller County, Texas, said FIRST TRACT being the same tract of land conveyed to Rupert S. Sheridan and Pat John Sheridan by Duane Sheridan in the Deed of Gift recorded in Volume 396, Page 370, of the Official Public Records of Waller County, Texas, said 92.054 acres tract being more particularly described as follows:

COMMENCING at a 3/4-inch Pipe set for corner in the northwest right-of-way line of Clark Bottom Road, said pipe being located in an easterly line of the 696 1/2 acres tract, said pipe marking the southwest corner of the Odis Styers, Jr. 128.310 acres tract (242/196), said pipe marking the southeast corner of the 277.698 acres Tract No. 2 out of the 696 1/2 acres tract and surveyed on this date;

THENCE along the fence found marking the common lines of the 696 1/2 acres tract and the Styers 128.310 acres tract, same being the easterly lines of the 277.698 acres Tract No. 2, for the following calls:

N 01° 46' 26" W for a distance of 2,343.92 feet to a 12-inch Cedar Post for angle point;

N 01° 36' 30" W for a distance of 1,219.73 feet to a point for corner;

THENCE S 88° 23' 30" W for a distance of 47.82 feet to a 4-inch Pipe found for the southeast corner of the herein described tract and the PLACE OF BEGINNING of this description;

THENCE along an existing fence for the following calls:

S 88° 34' 39" W for a distance of 12.52 feet to a 4-inch Pipe;
S 74° 30' 05" W for a distance of 223.98 feet to a 4-inch Pipe;
S 59° 58' 21" W for a distance of 289.30 feet to a 4-inch Pipe;
S 65° 39' 25" W for a distance of 267.97 feet to a 4-inch Pipe;
S 74° 19' 24" W for a distance of 308.01 feet to a 4-inch Pipe;
N 88° 58' 26" W for a distance of 101.12 feet to a 4-inch Pipe;
N 73° 42' 41" W for a distance of 196.54 feet to a 4-inch Pipe;
N 11° 31' 44" E for a distance of 176.54 feet to a 4-inch Pipe;
N 56° 46' 11" E for a distance of 209.68 feet to a 4-inch Pipe;
N 20° 24' 05" E for a distance of 228.65 feet to a 4-inch Pipe;
N 31° 30' 18" W for a distance of 169.40 feet to a 4-inch Pipe;
N 09° 24' 54" E for a distance of 114.03 feet to a 4-inch Pipe;
N 69° 17' 10" W for a distance of 123.21 feet to a 4-inch Pipe;
N 57° 06' 35" W for a distance of 681.05 feet to a 4-inch Pipe;
N 58° 42' 52" W for a distance of 267.05 feet to a 4-inch Pipe;
N 10° 28' 22" E for a distance of 1,458.40 feet to a 4-inch Pipe for the northwest corner of the herein described tract;
S 85° 57' 55" E for a distance of 254.03 feet to a 4-inch Pipe;
S 25° 14' 18" E for a distance of 16.99 feet to a 4-inch Pipe;
S 89° 52' 06" E for a distance of 753.28 feet to a 4-inch Pipe;
S 58° 58' 17" E for a distance of 283.58 feet to a 4-inch Pipe;
S 23° 03' 45" E for a distance of 160.33 feet to a 4-inch Pipe;
S 86° 39' 35" E for a distance of 169.63 feet to a 4-inch Pipe;
S 86° 44' 48" E for a distance of 192.41 feet to a 4-inch Pipe for the northeast corner of the herein described tract;
S 01° 36' 48" E for a distance of 2,054.98 feet to the PLACE OF BEGINNING containing 92.054 acres of land, more or less.

EXHIBIT B

DESCRIPTION OF VAULT TRACT
(32.656 Acres)

VAULT TRACT

A **TRACT** OF LAND OUT OF A 92.054 ACRE TRACT OF LAND DESCRIBED IN EXHIBIT C IN VOLUME 600, PAGE 105 OFFICIAL RECORDS AND BEING SITUATED IN THE THOMAS STEVENS SURVEY, ABSTRACT 57, WALLER COUNTY, TEXAS

COMMENCING: At a ¾ inch iron pipe found for the Southeast corner of a 337.057 acre tract (called Tract 2 being 277.698 acres in Volume 600, Page 105 in Exhibit B of the Official Records of Waller County), said point also being the Southeast corner of a 40 foot wide ingress-egress and utility easement and also the Southwest corner of a 128.310 acre tract (Volume 342, Page 194 Deed Records), said corner is located in the North right-of-way line of Clarke Bottom Road (60 foot width as described in Volume 142, Page 528 Deed Records);

THENCE: North 01° 46' 26" West a distance of 2343.92 feet to a ½ inch iron rod set for an angle point in the East line of the 369.713 acre tract and of the 40 foot wide easement;

THENCE: North 01° 36' 30" West a distance of 3239.68 to a point in the East line of the 369.713 acre tract and being the Northeast corner of the 40 foot ingress-egress and utility easement;

THENCE: South 89° 42' 42" West a distance of 659.27 feet to a point being the Northwest corner of the 40 foot ingress-egress and public utility ease in a Northeast line of this 32.656 acre tract;

THENCE: South 09° 22' 32" East a distance of 14.28 feet to a ½ inch iron rod set at a fence corner for an East corner of this 32.656 acre tract and being **THE ACTUAL PLACE OF BEGINNING** of this tract;

THENCE: Following a fence line around the 32.656 acre tract to a ½ inch iron rod set at each angle point the following calls:

S 06° 06' 54" W a distance of 261.901 feet
S 11° 08' 35" W a distance of 48.802 feet
S 15° 10' 51" W a distance of 103.442 feet
S 28° 07' 56" W a distance of 156.816 feet
S 37° 33' 15" W a distance of 130.436 feet
S 29° 39' 51" W a distance of 100.258 feet
S 13° 36' 46" W a distance of 59.694 feet
S 01° 57' 08" W a distance of 410.986 feet
S 09° 49' 26" W a distance of 21.178 feet
S 23° 05' 20" W a distance of 11.694 feet
S 33° 35' 47" W a distance of 29.431 feet
S 42° 58' 29" W a distance of 111.167 feet
S 47° 51' 30" W a distance of 110.146 feet
S 62° 26' 33" W a distance of 25.795 feet
N 74° 32' 39" W a distance of 127.863 feet
N 69° 49' 08" W a distance of 50.127 feet
N 57° 51' 49" W a distance of 584.720 feet
N 39° 03' 52" W a distance of 97.714 feet
N 01° 27' 29" W a distance of 60.134 feet
N 13° 38' 21" E a distance of 109.159 feet
N 05° 29' 47" E a distance of 129.597 feet
N 13° 26' 00" E a distance of 69.084 feet
N 22° 43' 39" E a distance of 80.880 feet
N 21° 03' 33" E a distance of 95.584 feet
N 01° 13' 46" W a distance of 51.948 feet
N 03° 53' 29" W a distance of 78.106 feet
N 04° 53' 44" E a distance of 52.615 feet
N 28° 38' 24" E a distance of 226.791 feet
N 35° 35' 48" E a distance of 140.375 feet
N 49° 39' 29" E a distance of 168.051 feet
N 66° 59' 45" E a distance of 206.736 feet
N 71° 57' 49" E a distance of 43.574 feet
N 84° 40' 33" E a distance of 69.275 feet
N 89° 43' 14" E a distance of 300.301 feet
S 81° 24' 57" E a distance of 39.922 feet
S 68° 43' 38" E a distance of 79.195 feet
S 43° 27' 55" E a distance of 59.001 feet
S 24° 22' 01" E a distance of 40.014 feet
S 09° 22' 32" E a distance of 129.645 feet to a ½ inch iron rod set at a fence post for the **PLACE OF BEGINNING** and containing 32.656 acres of land.

EXHIBIT C

DESCRIPTION OF REMAINDER TRACT

REMAINDER TRACT

A tract or parcel of land lying and being situated in the Thomas Stevens Survey, A-57, Waller County, Texas, and being part of the 696 1/2 acres tract described as FIRST TRACT in the Deed recorded in Volume 108, Page 309, of the Official Public Records of Waller County, Texas, said FIRST TRACT being the same tract of land conveyed to Rupert S. Sheridan and Pat John Sheridan by Duane Sheridan in the Deed of Gift recorded in Volume 396, Page 370, of the Official Public Records of Waller County, Texas, said 92.054 acres tract being more particularly described as follows:

COMMENCING at a 3/4-inch Pipe set for corner in the northwest right-of-way line of Clark Bottom Road, said pipe being located in an easterly line of the 696 1/2 acres tract, said pipe marking the southwest corner of the Odis Styers, Jr. 128.310 acres tract (242/196), said pipe marking the southeast corner of the 277.698 acres Tract No. 2 out of the 696 1/2 acres tract and surveyed on this date;

THENCE along the fence found marking the common lines of the 696 1/2 acres tract and the Styers 128.310 acres tract, same being the easterly lines of the 277.698 acres Tract No. 2, for the following calls:

N 01° 46' 26" W for a distance of 2,343.92 feet to a 12-inch Cedar Post for angle point;

N 01° 36' 30" W for a distance of 1,219.73 feet to a point for corner;

THENCE S 88° 23' 30" W for a distance of 47.82 feet to a 4-inch Pipe found for the southeast corner of the herein described tract and the PLACE OF BEGINNING of this description;

THENCE along an existing fence for the following calls:

S 88° 34' 39" W for a distance of 12.52 feet to a 4-inch Pipe;
S 74° 30' 05" W for a distance of 223.98 feet to a 4-inch Pipe;
S 59° 58' 21" W for a distance of 289.30 feet to a 4-inch Pipe;
S 65° 39' 25" W for a distance of 267.97 feet to a 4-inch Pipe;
S 74° 19' 24" W for a distance of 308.01 feet to a 4-inch Pipe;
N 88° 58' 26" W for a distance of 101.12 feet to a 4-inch Pipe;
N 73° 42' 41" W for a distance of 196.54 feet to a 4-inch Pipe;
N 11° 31' 44" E for a distance of 176.54 feet to a 4-inch Pipe;
N 56° 46' 11" E for a distance of 209.68 feet to a 4-inch Pipe;
N 20° 24' 05" E for a distance of 228.65 feet to a 4-inch Pipe;
N 31° 30' 18" W for a distance of 169.40 feet to a 4-inch Pipe;
N 09° 24' 54" E for a distance of 114.03 feet to a 4-inch Pipe;
N 69° 17' 10" W for a distance of 123.21 feet to a 4-inch Pipe;
N 57° 06' 35" W for a distance of 681.05 feet to a 4-inch Pipe;
N 58° 42' 52" W for a distance of 267.05 feet to a 4-inch Pipe;
N 10° 28' 22" E for a distance of 1,458.40 feet to a 4-inch Pipe for the northwest corner of the herein described tract;
S 85° 57' 55" E for a distance of 254.03 feet to a 4-inch Pipe;
S 25° 14' 18" E for a distance of 16.99 feet to a 4-inch Pipe;
S 89° 52' 06" E for a distance of 753.28 feet to a 4-inch Pipe;
S 58° 58' 17" E for a distance of 283.58 feet to a 4-inch Pipe;
S 23° 03' 45" E for a distance of 160.33 feet to a 4-inch Pipe;
S 86° 39' 35" E for a distance of 169.63 feet to a 4-inch Pipe;
S 86° 44' 48" E for a distance of 192.41 feet to a 4-inch Pipe for the northeast corner of the herein described tract;
S 01° 36' 48" E for a distance of 2,054.98 feet to the PLACE OF BEGINNING containing 92.054 acres of land, more or less.

LESS AND EXCEPT THE 32.656 ACRES CALLED VAULT TRACT

EXHIBIT D

DESCRIPTION OF RUPERT SHERIDAN TRACT
(277.698 Acres)

RUPERT SHERIDAN TRACT

A tract or parcel of land lying and being situated in the Thomas Stevens Survey, A-57, Waller County, Texas, and being part of the 696 1/2 acres tract described as FIRST TRACT in the Deed recorded in Volume 108, Page 309, of the Official Public Records of Waller County, Texas, said FIRST TRACT being the same tract conveyed to Rupert S. Sheridan and Pat John Sheridan by Duane Sheridan in the Deed of Gift recorded in Volume 396, Page 370, of the Official Public Records of Waller County, Texas, said 277.698 acres tract being more particularly described as follows:

BEGINNING at a 3/4-inch Pipe set for corner in the easterly line of the 696 1/2 acres FIRST TRACT, said pipe being located in the northwest right-of-way line of Clark Bottom Road, said pipe marking the southwest corner of the Odis Styers, Jr. 128.310 acres tract (242/196);

THENCE along the fence found marking the northwest right-of-way line of Clark Bottom Road for the following calls:

S 88° 22' 27" W for a distance of 1,461.61 feet to a 4-inch Pipe found for angle point;

S 88° 26' 01" W for a distance of 1,242.62 feet to a 1/2-inch iron rod set for corner, said iron rod marking the southeast corner of the 291.699 acres Tract No. 1 out of the 696 1/2 acres FIRST TRACT and the 34.72 Acres SECOND TRACT (108/309);

THENCE N 00° 35' 55" W along the easterly line of the 291.699 acres Tract No. 1 for a distance of 6,399.24 feet to a point for corner on the existing high bank of the Brazos River, a 1/2-inch iron rod set for reference bears S 00° 35' 55" E a distance of 20.00 feet, said point marking the northeast corner of the 291.699 acres Tract No. 1;

THENCE along the existing high bank of the Brazos River for the following calls:

S 61° 53' 20" E for a distance of 116.32 feet;
S 89° 00' 06" E for a distance of 73.24 feet;
S 70° 58' 14" E for a distance of 113.32 feet;
S 59° 43' 14" E for a distance of 160.22 feet;
S 86° 17' 43" E for a distance of 67.45 feet;
S 72° 48' 25" E for a distance of 83.33 feet;
S 64° 23' 46" E for a distance of 257.88 feet;
S 81° 07' 20" E for a distance of 98.13 feet;
S 81° 30' 11" E for a distance of 100.31 feet;
N 86° 34' 48" E for a distance of 102.89 feet;
S 82° 23' 43" E for a distance of 185.71 feet;
S 89° 07' 25" E for a distance of 376.34 feet;
N 85° 20' 20" E for a distance of 233.46 feet;
N 81° 55' 18" E for a distance of 233.44 feet;
N 69° 51' 00" E for a distance of 139.39 feet;
N 82° 50' 56" E for a distance of 149.78 feet;
S 84° 54' 14" E for a distance of 123.70 feet;
S 85° 18' 45" E for a distance of 66.87 feet to a 4-inch Cedar Post for corner, said cedar post being located in the northeast line of of the 696 1/2 acres FIRST TRACT and the southwest line of the Odis Styers, Jr. 128.310 acres tract (242/196);

THENCE along the fence found marking the common line of the 696 1/2 acres FIRST TRACT and the Styers 128.310 acres tract for the following calls:

S 01° 36' 30" E for a distance of 3,715.69 feet to a 12-inch Cedar Post found for angle point;

S 01° 46' 26" E for a distance of 2,343.92 feet to the PLACE OF BEGINNING containing 369.752 acres of land.

LESS AND EXCEPT THE 92.054 ACRES CALLED ORIGINAL SUPERFUND TRACT

EXHIBIT E
SETTLEMENT AGREEMENT

Sheridan Site Committee

Larry Feldcamp, Chairman, 713 / 229-1573

June 19, 1989

Mr. Duane Clifford Sheridan
Route 1, Box 128-D
Hempstead, TX 77445

Re: Sheridan Disposal Services Site

Dear Mr. Sheridan:

The purpose of this letter is to set forth the basis of a settlement between you and the Sheridan Site Committee (the "Committee") with respect to the Sheridan Disposal Services Site located on property owned by you in Waller County near Clark Bottom Road near Hempstead, Texas (the "Site"). This letter solicits an offer from you to the Sheridan Site Committee Participants listed in Attachment A (the "Participants") to settle any liability which you may have to the Participants under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") on the terms and conditions set forth herein. This offer may be made by you, your wife and your children by signing and returning this letter to the Committee. Once the Participants have signed this letter, it becomes a settlement agreement between you, your wife and your children and the Participants.

This settlement agreement is conditioned on the Participants entering into a Consent Decree with the United States Environmental Protection Agency (the "U.S. EPA") with respect to the Site. Moreover, this settlement is effective only with respect to your personal liability and is not intended in any way to affect the rights of the Participants against Sheridan Disposal Services, Inc., which operated the Site. By signing this letter, you are offering to settle only in your individual capacity as owner of the Site and not as an agent of Sheridan Disposal Services, Inc., the Site operator.

After this letter is signed by you, your wife, your children and the Participants, you are released by its terms and conditions from liability to the Participants for claims that they may have against you, as owner of the Site, under CERCLA, provided that such release is conditioned upon the Participants entering into a Consent Decree with the U.S. EPA

resolving their liability under the same statute. Moreover, the Participants agree that they will not object to your becoming a signatory to such Consent Decree. By signing such Consent Decree, you will be further protected personally from contribution and indemnity claims pursuant to CERCLA § 113(f)(2). In consideration of the foregoing, by signing this letter, you offer the following without cost to the Participants:

1. You will provide institutional controls on the Site as the Participants deem necessary or desirable concerning use of property contained within the Site; for example, deed restrictions and fences. In addition, you agree to execute and file a deed restriction prohibiting use of the shallow groundwater at and/or emanating from the Site which the Source Control Remedial Investigation and/or Feasibility Study for the Site approved by EPA has indicated is contaminated.

2. You will provide soil and clay from the Site and other areas of your property in Waller County as deemed desirable by the Participants to carry out the remedial action; provided that to the extent feasible (i) soil and clay from the Site and/or from drainage areas on other locations on your property in Waller County will be used, (ii) existing uses of your property in Waller County will not be interfered with, and (iii) the pattern of the areas of soil and clay use will be reasonable.

3. You will make available portions of the Site and other areas of your property in Waller County for use and/or transfer in mitigation of any natural resource damages as deemed desirable by the Participants and the United States Department of the Interior; provided that (i) to the extent feasible, the obligation set forth in this paragraph 3 shall be limited to the Site and any portions of your property in Waller County from which soil and clay have been or are to be used pursuant to paragraph 2 above and (ii) in no event shall the areas designated on Attachment B hereto be used to satisfy the obligation set forth in this paragraph 3.

4. You will cooperate with the Participants in performing the remedial action and any operation or maintenance.

5. You will maintain ownership and reasonable upkeep of your existing construction equipment and operate such equipment as the Participants deem desirable.

6. You will cooperate with the Participants in performing the remedial action, including but not limited to the Participants' installation of a spur jetty system along the Brazos River and a cap on the waste pond at the Site.

7. You will not interfere with any right or authority which the U.S. EPA and its authorized representatives have to move freely about the Site and you further specifically authorize, permit and grant access to the Site to the the U.S. EPA, the Texas Water Commission, the Participants and any person acting pursuant to an order or consent decree with the United States or the U.S. EPA, including their representatives and contractors, for purposes of performing remedial activities, which shall include but not be limited to free and uninterrupted use for purposes of inspecting, testing, surveying, monitoring and treating hazardous substances on, over, under and across the surface of the Site and for conducting the monitoring, operation and maintenance portion of the remedial action.

8. You will not undertake any action which would or might interfere with implementation of the actions described in No. 7 above or with the integrity of the remedy.

9. You will not institute any legal action against the Participants for liability, cost, loss or expense under CERCLA or for liability, cost, loss or expense relating to any remedial action performed by Participants, their representatives and contractors, in accordance with the Consent Decree with U.S. EPA and/or the engineering plans pursuant thereto.

10. You will not permit any change in the existing use of the Site, or any part thereof, without the prior written consent of the Region VI Regional Administrator of the U.S. EPA and the Participants.

11. Ninety (90) days prior to any transfer, lease or sale of any ownership interest in the Site, you will notify the EPA and the Participants of the intent to transfer, lease or sell. All potential and/or actual buyers and/or lessees shall be given a copy of this Agreement and all documents of transfer, lease or sale must contain a provision requiring compliance with this Agreement. A copy of the letter or document transmitting notice of a copy of

this Agreement to the potential and/or actual buyers and/or lessees shall be sent to the U.S. EPA and the Participants. The obligations set forth in this paragraph 11 shall not apply to any transfer or sale of all or a portion of the Site to any person who is a signatory to this Agreement and the Consent Decree.

12. You will record a copy of this Agreement in the deed registry office or in the real estate records of Waller County to put prospective buyers and/or lessees and all others on notice of the existence of, and requirements of, this Agreement.

13. The provisions of this Agreement shall apply to and be binding upon you and your employees, agents, receivers, trustees, successors and/or assigns.

Please acknowledge that you make this offer to the Participants by signing below and returning to the undersigned.

Sincerely,

Robert T. Stewart

Robert T. Stewart, Vice Chairman
Sheridan Site Committee

Duane Clifford Sheridan

Duane Clifford Sheridan

Grace Crafton Woolever Sheridan

Rupert Daniel Sheridan

Pat John Sheridan

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RECORDER'S MEMORANDUM
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ATTACHMENT A

SHERIDAN SITE PARTICIPANTS

1. DIXIE CHEMICAL CO., INC.
2. LUBRIZOL
3. TENNECO CHEMICALS, PETRO-TEX
4. EXXON CHEMICAL CO. (ENJAY, ESSO, HUMBLE, ETC.)
5. SII DRILCO (SMITH)
6. DUPONT
7. MERICHEM COMPANY
8. JOHNSTON
9. GOODYEAR
10. PPG INDUSTRIES
11. OXIRANE CHEMICAL, ARCO CHEMICAL
12. GRAY TOOL CO. (VETCO GRAY)
13. A-B CHEMICAL CORP. (NATIONAL DISTILLERS, USI)
14. PETROLITE CORP.
15. TEN MISSION DRILLING PRODUCTS
16. GALVESTON-HOUSTON (GH HATTCO, GH BETTIS, GEMC CENTER
17. CANGO CORPORATION (ENTERPRISE)
18. NL INDUSTRIES (SPERRY SUN)
19. ROHM & HAAS
20. FMC CORPORATION
21. BAKER(PLAS.APP.,MILCHEM,REED(R.B.,AM.,T.),LYNES,AQU
22. FRENCH LIMITED
23. HYDRIL COMPANY
24. CELANESE CHEMICAL COMPANY
25. HUGHES-OMCOR (OMCOR)
26. DART INDUSTRIAL, INC. (KRAFT)
27. DSI TRANSPORTS
28. GATX, FULLER CO.
29. INDUSTRIAL TOWEL & UNIFORM CO. (CINTAS)
30. PEARSALL CHEMICAL CORP., WITCO CHEMICAL
31. JETCO CHEMICALS
32. TUBULAR FINISHING WORKS
33. EVANS COOPERAGE CO., INC.
34. ETHYL CORPORATION
35. DRESSER INDUSTRIES, INC.
36. HUGHES TOOLS, BROWN OIL TOOL
37. OTECO EQUIPMENT CO.
38. BETZ LABORATORIES, INC.
39. CROWN
40. CHEMICAL EXCHANGE
41. TEXAS IRON WORKS, INC.
42. UNION CARBIDE
43. U.S. STEEL
44. BRINER PAINT MANUFACTURING CO., INC.
45. COMET WELL SERVICE

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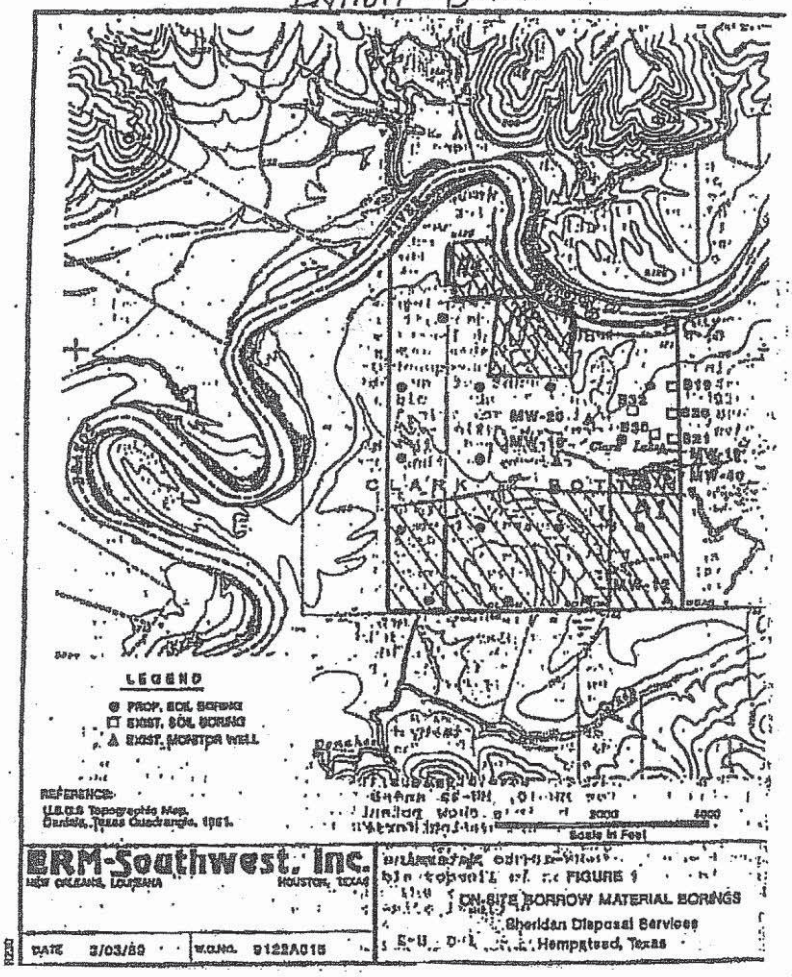
EXHIBIT "B"



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