MALONE SERVICE COMPANY
Texas City, Texas

EPA ID# TXD980864789
Site ID: 0602922

EPA Region 6

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U.S. Congressional District: 14

Updated: June 2015

Current Status

The Potentially Responsible Parties (PRPs) completed the Remedial Investigation, which documented nature and extent of contaminants; and completed the treatability study, which documents that solidification and landfill of the source material (sludge) can be an effective remedy for site contaminants. The EPA Superfund Division Director signed the Record of Decision (ROD) on September 30, 2009; the ROD presents the selected remedy for sludge waste (solidification and placement in on-site Subtitle C cell), contaminated soil (placement in Subtitle C cell) and Class 3 ground water (monitor) at the Site.

The EPA and the PRPs have agreed to the Consent Decree (CD) for the implementation of the Remedial Design (RD) and Remedial Action (RA)/cleanup. The PRP completed Phase-1 RD field investigation activities (tank, soil, slurry wall, etc.) on June 28, 2013. The Phase-1 RA construction activities began on April 7, 2014. Descendants have agreed to the removal of remains from the onsite cemetery and interment in a perpetual care cemetery; removal began on April 7, 2014 and completed on June 11, 2014; re-interment is planned in near future. Phase-2 RA field activities, to address the sludge in pits and tanks, are to begin on May 1, 2015. All RA/cleanup activities are anticipated to be complete in 2016.

Background

The Malone Services Company (MSC) Site is located at 5300 Campbell Bayou Road, Texas City, Galveston County, Texas. The site is located approximately 1.6 miles southeast of the intersection of Loop 197 and State Highway 3. Wetlands, Galveston Bay and Swan Lake border the northeast and east sides of the site. Industrial and waste disposal facilities are located outside the northwestern and western boundaries of the Site. The southwestern, southern and southeastern boundaries of the facility border on marsh land. The facility which operated from 1964 until 1997 was a reclamation, storage and disposal facility for waste oils and chemicals.

MSC covers approximately 150 acres. The northeastern portion of the Site (100 acres) was developed for the storage, processing and disposal of industrial hazardous wastes. The developed acreage contains numerous waste handling areas; which include storage tanks, 2 API separators, a settling pond (Earthen Impoundment), a closed waste collection pond (Oil Pit), and two (2) deep subsurface injection wells. The northwestern portion of the Site (undeveloped 50 acres) contains a storm water collection pond. The entire facility is encircled by a 14-foot high flood control levee. The Earthen Impoundment, the Oil Pit and the storm-water pond were excavated through the shallow channel sand aquifer and into the

underlying clay layer, and therefore, the Impoundment and Pit supply contaminants to the shallow ground water. However, ground water contamination is immediate to the source areas, and sampling has indicated that contaminated ground water has not migrated offsite.

The principal contaminants of concern at this site are the myriad of organic and inorganic chemical wastes in the form of liquids, sludges and solids present in the above ground storage tanks, the API separators, the settling pond, and the surface soils of some of the secondary containment areas on the site. Wastes received at the facility included acids and caustics from industrial cleaning and surface preparations; contaminated residues and solvents removed from processing and storage units during cleaning operations; spent drilling fluids, including drilling muds and brines, from well workover and exploration activities; acids containing metals from etching and plating operations; inorganic slurries from sump cleaning; gasoline and crude oil tank bottoms; contaminated earth and water from chemical spill cleanup operations; general industrial plant wastes; phenolic tars; and waste oils.

The Site is located approximately 1.5 miles from the nearest residential area. An estimated 10,000 people live and/or work within a three-mile radius of the site.

The Record of Decision was signed September 30, 2009. The selected remedy is solidification of sludge and placement of solidified sludge and unsolidified contaminated soil into an onsite RCRA Subtitle “C” equivalent cell. The shallow contaminated ground water is Class 3 (non-drinking water); and therefore, will be monitored to document that the plume remains onsite; if offsite migration is probable, the plume will be subject to an active remedy.

Benefits

The Remedial Investigation (URS – April 24, 2006), Human Health and Ecological baseline risk assessments (June 2006), and the Feasibility Study (URS – June 2008) were completed. The Proposed Plan of action for site contaminants was presented to the public. The remedial action for site contaminants was presented in the Record of Decision (ROD) for the site. The ROD presents the cleanup measures determined to be protective of human health and the environment.

Site Description

- **Location:** The Malone Services Company (MSC) Site is located in Galveston County, Texas City, Texas, at 5300 Campbell Bayou Road. The site is located in an industrial and petrochemical area, on the shores of Swan Lake and Galveston Bay, approximately 1.6 miles southeast of the intersection of Loop 197 and State Highway 3.
- **Population:** The Site is located in a remote marsh/wetlands area, and approximately 1.5 miles from the nearest residential area. An estimated 10,000 people live and/or work within a three-mile radius of the site.
- **Setting:** The MSC was a reclamation, storage and disposal facility for waste oils and chemicals that included acid and caustic compounds, solvents, and gasoline and crude oil tank bottoms.

  The MSC site covers approximately 150 acres. Approximately 100 acres (northeastern portion of the Site) of the 150-acre site were developed for the storage, processing and disposal of industrial hazardous wastes. The developed acreage contains numerous waste handling areas;

which include storage tanks, 2 API separators, a ±5 acre settling pond (Earthen Impoundment), a closed ±0.5 acre waste collection pond (Oil Pit), and two (2) deep subsurface injection wells. The remaining undeveloped 50 acres (northwestern portion of the Site) contain a ±7 acre storm water collection pond.

The entire facility is encircled by a 14-foot high flood control levee. Wetlands, Galveston Bay and Swan Lake border the northeast and east sides of the site. Industrial and waste disposal facilities are located outside the northwestern and western boundaries of the Site. The southwestern, southern and southeastern boundaries of the facility border on marsh land/wetlands.

- **Hydrology:** Within the Site boundary, two shallow channel sands merge into one channel sand to form the primary aquifer of concern below the site. Due to its shallow nature and its high chloride and Total Dissolved Solids (TDS) content, this aquifer is not a drinking water source. The channel sands trend northwest to southeast, and merge midpoint within the facility. Ground water flow appears to be northwest to southeast, into Galveston Bay.

  The Earthen Impoundment, the Oil Pit and the stormwater pond were excavated through the shallow channel sand aquifer and into the underlying clay layer, and therefore, the Impoundment and Pit supply/supplied contaminants to the shallow ground water; however, ground water contamination is immediate to the source areas, and sampling has indicated that contaminated ground water has not migrated offsite.

  In addition to the stormwater pond, which collects the majority of runoff within the northwestern portion of the facility, several areas on the western and southwestern portions of the Site collect the remaining surface water runoff. Following testing, this stormwater is either discharged into Galveston Bay or deep well injected; to date, all stormwater surface runoff has been discharged to Galveston Bay. All rainwater that collects in the hazardous waste units is deep well injected.

  The Chicot Aquifer, which is a primary drinking water aquifer at depth, underlies the site from approximately 100 feet to 1100 feet below ground level.

Wastes and Volumes

- The principal contaminants of concern at this site are the myriad of organic and inorganic chemical wastes in the form of liquids, sludges and solids present in the above ground storage tanks, the API separators, the settling pond, and the surface soils of some of the secondary containment areas on the site.
- Wastes received at the facility included acids and caustics from industrial cleaning and surface preparations; contaminated residues and solvents removed from processing and storage units during cleaning operations; spent drilling fluids, including drilling muds and brines, from well workover and exploration activities; acids containing metals from etching and plating operations; inorganic slurries from sump cleaning; gasoline and crude oil tank bottoms; contaminated earth and water from chemical spill cleanup operations; general industrial plant wastes; phenolic tars; and waste oils.
- The groundwater pathway appears to be the only ongoing active release of hazardous substances occurring at the Site; however, ground water contamination is immediate to the source area, and no ground water contamination has migrated offsite. The settling pond (Earthen Impoundment/Sludge Pit) is located within a sand channel. The limits of the pond on the north and south appear to coincide with the approximate limits of the sand channel; the east and west ends are exposed to the sand channel. The operator had indicated the east and west ends of the pond had been sealed with clay, apparently to prevent contaminants from entering the ground water. However, ground water and pond constituent characterization indicate that the sand channel has been impacted by the ponds, but it appears, to a minor degree.
- Ground water samples collected during a 1997 Texas Natural Resource Conservation Commission (TNRCC)(now the Texas Commission on Environmental Quality (TCEQ) inspection indicated that hazardous substances originally found in the impoundment and API separator in

the 1980's field sampling had been released to the underlying aquifer. Chemical analysis of Galveston Bay sediments (adjacent to the Site) determined the presence of chromium and lead; it appears these contaminants are related to the Site. The RI and risk assessment samples indicated that the offsite marsh had low contaminant levels, and that only natural siltation would be an appropriate remedy for the offsite sediments.

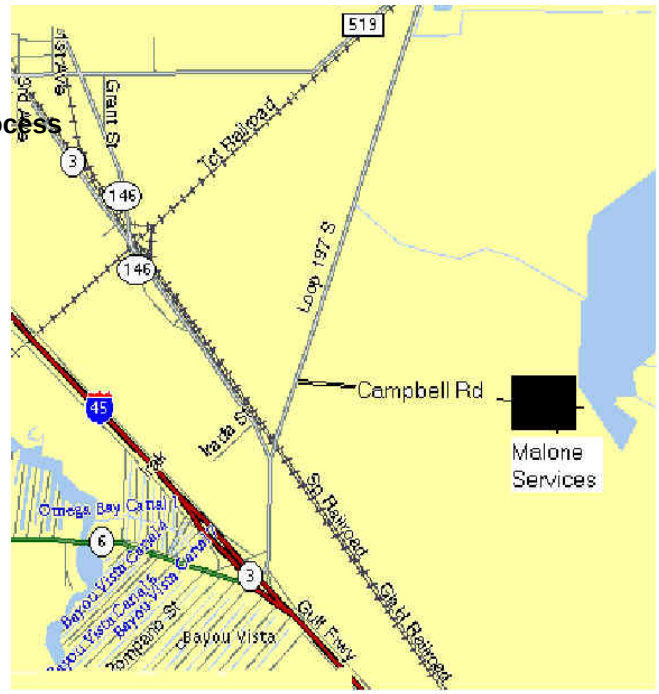
- Through the most recent investigations, volumes of materials to be remediated have been determined through completion of the Remedial Investigation (RI - April 2006) and Feasibility Study (FS – June 2008). Approximately 215,000 cy of sludge and 160,000 cy of contaminated soil must be addressed with a response action. A Treatability Study was completed and determined that Solidification of the source material (sludge) would be an appropriate remedy.

Site Assessment and Ranking

NPL LISTING HISTORY
Site HRS Score: 50
Proposed Date: 8/24/00
Final Date: 6/14/01
NPL Update

Site Map and Diagram

The Remediation Process



The Remediation Process

Site History:

- The Site consists of buildings, approximately 83 holding/storage/blending tanks, two API separators, one hazardous waste pond (and one which was recently closed), a stormwater pond, and a rainwater runoff collection and discharge area.

- The facility operated from 1964 until 1997. MSC was originally permitted as a waste oil reclamation facility, but later added hazardous waste underground injection/disposal wells. Wastes were received by the facility from a variety of industries. Wastes from the reclamation process were disposed down the onsite deep injection wells.
- The original operation, which began in 1964, consisted of two earthen unlined pits, which received incoming wastes. The larger pit, which served as a settling pond, was used for wastes with high solids and /or water content. The oil fraction would rise to the surface of the large pit where it was skimmed off and pumped to a smaller oil pit (which is closed). Oils in the oil pit were then pumped to one of several tanks for treatment. The oil was then resold as waste oil for energy recovery.
- API separators were installed in 1979 and 1987 to replace the settling pond and oil pit; however the pond and pit were never cleaned/removed, hazardous liquid wastes and solids still remain in the open large pit and closed small oil pit. Oils separated in the two API units were pumped to holding/treatment tanks; waste water was pumped to the injection wells for disposal and the solids were sent to an offsite hazardous waste landfill for disposal.
- Surface drainage directs rainwater runoff on the developed acreage to one collection point within the Site; runoff on the undeveloped acreage is collected in the southwest stormwater pond. In the past, this collected runoff from within the Site was analyzed and discharged to Galveston Bay or injected dependent on analytical results. Presently, this runoff is managed as it was in the past.
- Ground water sampling results indicate that ground water has been impacted by hazardous wastes in the area of the inactive five acre impoundment and the 100 Unit Separator; as well as areas with subsurface soil contamination. However, the groundwater is classified by EPA and the TCEQ as Class 3, which is non-potable, and therefore, not a drinking water source.
- EPA Removal conducted removal actions at the Site from 1999 to 2000.
- The Site was listed to the NPL on June 14, 2001.
- Texas Natural Resource Conservation Commission contractors conducted periodic inspections of stormwater controls at the site and maintained stormwater capacity in ponds and separators at the site. EPA Removal assumed this responsibility in 2000. Stormwater runoff is directed to one collection point within the Site, analyzed, and dependent on analytical results, discharged to Galveston Bay or injected into the onsite deep injection/disposal well. The Malone Cooperating Parties (MCP – the PRPs) have assumed Site storm water management activities from EPA Region 6.
- EPA issued General Notice Letters to major generators (those who contributed 0.6% or greater of total waste delivered to the Site) and the current owner. Several of the Potentially Responsible Parties (PRPs) have formed a steering committee (the Malone Cooperating Parties (MCP)) and have signed the Administrative Order on Consent (AOC) to conduct the Remedial Investigation and the Feasibility Study (RI/FS).
- EPA Region 6 approved the Remedial Investigation Feasibility Study Work Plan for the Site on June 29, 2005. Mobilization to the site to conduct the investigation to determine risk and nature and extent of contamination was conducted in mid July. Field work to collect ground/surface water, soils, sediment and sludge samples is on-going and is scheduled to be completed the end of September. No Public Informational Meetings will be held until sufficient information is available to answer possible community concerns, which would most probably be in 2009.
- EPA and the Potential Responsible Parties (PRP) completed the Remedial investigation to determine nature and extent of contaminants at the site in March 2006. The Final RI document was approved by EPA on June 14, 2006.
- EPA and the PRP completed the Baseline Human Health Risk assessment.
- The Final Screening Level Ecological Risk Assessment (SLERA)/Baseline Ecological Risk Assessment (BERA) Work Plan (for ecological sampling field work) document was completed by the MCP. The BERA Work Plan portion of the document was approved to allow the MCP's primary contractor to mobilize to the field to conduct the BERA field work; the field work began on July 17, 2006 and was completed in September 2006.
- The Final BERA document was reviewed and approved by EPA.
- The MCP completed an acceptable treatability Study (approved by EPA March 6, 2008), which

determined that solidification-stabilization of the wastes and placement in an onsite RCRA Subtitle “C” equivalent cell/landfill would be an effective remedy.

- EPA approved the Final Feasiblity Study document on December 22, 2008. The document was developed to evaluate several remedial alternatives (the cleanup) to address the contamination at this Site.
- Ready-For-Reuse - a court-approved settlement, between the present site owner and the Malone Cooperating Parties (MCP - PRPs) enables the MCP to impose on the property an institutional control prohibiting residential, commercial and industrial development. The settlement further requires that the land eventually be transferred to an environmental non-profit organization or, if such a transfer cannot be completed, requires that the land be used in the future only to complete the response action and for purposes not inconsistent with final use as a natural preservation or conservation area.
- Human exposure is presently under control due to site access measures; however, remedial action is required to address site contaminants for long term protection. Ground water analytical data indicate that contaminated Class 3 ground water has not migrated offsite.
- EPA completed the Proposed Plan, which presented the preferred remedy, and held the Public Meeting on June 9, 2009, and responded to comments.
- The EPA Superfund Division Director signed the Record of Decision (ROD) on September 30, 2009. The ROD presents the selected remedy for sludge waste, contaminated soil and ground water at the Site. The remedy is the solidification/stabilization of the sludge (source material) which exists in the Earthen Impoundment, API separators and above ground storage tanks; the consolidation of solidified material in an above ground RCRA Subtitle “C” equivalent cell. The shallow contaminated soil will not be solidified, but will be excavated and consolidated in the “C” cell. The shallow contaminated ground water is Class 3 (non-drinking water); and therefore, will be monitored to document that the plume remains onsite; if offsite migration is probable, the plume will be subject to an active remedy.
- The EPA Superfund Division Director signed the Record of Decision (ROD) on September 30, 2009; the ROD presents the selected remedy for sludge waste, contaminated soil and ground water at the Site.
- A scoping/preliminary meeting with all stakeholders (PRPs, State, and EPA), to discuss general RD/RA approach, was held on August 1, 2012.
- A Consent Decree (CD), which will bind the parties to implement the Remedial Design (RD) and Remedial Action (RA) phases for the site, has been negotiated between the EPA and the PRPs. The CD was filed/entered by the court on September 24, 2012. Filing of the CD begins RD/RA.
- EPA received the first Remedial Design (RD) submittal (the General RD/RA Work Plan) from the MCP on October 31, 2012, and approved the document on March 18, 2013.
- EPA approved the second RD submittal (Phase-1 RD Work Plan) on May 28, 2013. The PRP completed Phase-1 RD field investigation activities (tank, soil, slurry wall, etc.) on June 28, 2013.
- It was determined that remains from the existing on-site cemetery must be moved to complete the Site cleanup. The MCP has conducted extensive investigations, acquired archeological experts to record and excavate the remains, have excavated the remains and are presently negotiating with an offsite perpetual care cemetery to accept the remains. Descendants have agreed to the removal of remains and interment in a perpetual care cemetery; removal began April 7, 2014 and completed June 11, 2014.
- Remedial Action/cleanup activities began on April 7, 2014, and are expected to be completed in 2016.

Health Considerations:

- Site contaminants have been found in soil, and ground water below the site. Constituents related to the site have been found in Galveston Bay sediments; however, at levels which allow for natural siltation as the remedy. Site surface water runoff is discharged to Galveston Bay following sampling.

Record of Decision

EPA has completed the Record of Decision (signed September 30, 2009). The selected remedy is solidification of sludge and placement of solidified sludge and unsolidified contaminated soil into an onsite RCRA Subtitle C equivalent cell. Class 3 ground water will be monitored.

Community Involvement

The Texas City administration is regularly informed of the Site status and EPA's continuing Site assessment process; meetings have been held with interested community groups. EPA has defined the nature and extent of contamination at the site through the remedial investigation, and has approved the Feasibility Study (FS) document, which presents several remedial alternatives (cleanup methods) for the site.

The notice of the availability of the Proposed Plan, which presents the preferred/proposed cleanup method, was published in the Galveston County Daily News newspaper on May 20, 2009. The public comment period was from May 22 to June 22, 2009. A public meeting was held on June 9, 2009, to present the Proposed Plan to the community. At this meeting, representatives from EPA and the TCEQ answered questions about the Site and the remedial alternatives presented in the Proposed Plan. The Record of Decision, which presents the selected remedy, was signed by the Superfund Division Director on September 30, 2009.

The Texas City Moore Memorial Public Library is the public repository for documents relating to this Site.

Technical Assistance Grant

- Availability Notice: August 30, 2000, June 25, 2001
- Letters of Intent (LOI) Received: May 9, 2003
  Lalise Mason
  Scenic Galveston, Inc.
  20 Colony Park Circle
  Galveston, TX 77551
  713-664-1870
- LOI Newspaper Notice: May 9, 2003, Texas City Sun & Galveston County Daily
- First Application Received: July 3, 2003
- Final Application Received: Sent letter to applicant asking for revised technical advisor SOW. EPA contractor work plan available approximately September 2004.
- Grant Award: n/a

Contacts

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State Contact: (TCEQ): Marilyn Czimer Long (PM Superfund Section) 512-239-0761
Community Involvement Coordinator (EPA): Donn Walters, 214-665-6483, Mail Code: 6SF-PO
Attorney (EPA): Anne Foster, 214.665.2169; I-jung Chiang, 214-665-2160, Mail Code: 6RC-S
State Coordinator (EPA): TBD, 214-665-3139, Mail Code: 6SF-AP
R6 Public Liaison (EPA): Donn R. Walters, 214-665-6483
On Scene Coordinator (EPA): Warren Zehner, 281-983-2229, Mail Code: 6SF-R2
EPA Region 6 Toll Free Number: 1-800-533-3508
PRP Prime Contractor: ENTACT
EPA Prime Contractor: N/A

Enforcement

The enforcement process is ongoing. EPA and several of the major PRPs have agreed to the Consent Decree for remedial design and remedial action.