



Final Close Out Report

Old Inger Oil Refinery Superfund Site

Superfund Site

Ascension Parish, Louisiana

**United States Environmental
Protection Agency
Region 6**

Superfund Division

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Concurrence page


**CONCURRENCE PAGE FOR THE OLD INGER
SUPERFUND SITE
FINAL CLOSE OUT REPORT**

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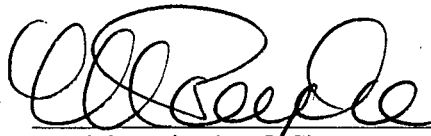
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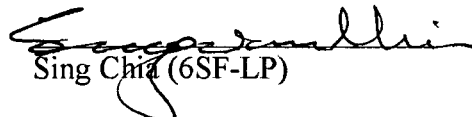
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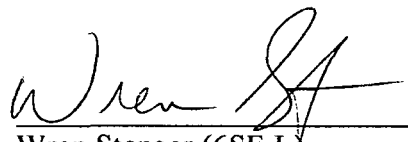
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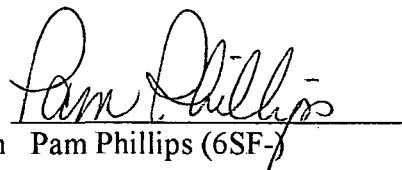
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**FINAL CLOSE OUT REPORT
OLD INGER OIL REFINERY SUPERFUND SITE
ASCENSION PARISH, LOUISIANA**

I. INTRODUCTION

This Close Out Report (COR) documents that the U.S. Environmental Protection Agency (EPA) and the State, the Louisiana Department of Environmental Quality (LDEQ or State) have completed response actions for all the Operable Units, (OUs) of the Old Inger Oil Refinery (OIOR or Site) Superfund site in Ascension Parish, Louisiana, in accordance with "Close Out Procedures for National Priorities List Sites," EPA 540-R-98-016, OSWER Directive 9320.2-09 A-P (January 2000).

The EPA and the State of Louisiana conducted a final construction inspection on October 26, 2001. The EPA and the State have determined that the site contractor performed the remedy in accordance with remedial design (RD) plans and specifications and the Record of Decision (ROD) for the Site dated September 25, 1984. All field construction-site activities required for the remedial actions have been completed.

These activities were completed in October 2001 as documented in the Final Report for the Old Inger Oil Refinery Superfund Site approved by the EPA on June 4, 2002.

Remedial Actions related to the ground water have been investigated. Shallow ground water was initially to be pumped and treated, however a final determination was deferred in the ROD. After construction of all field activities in 2002, monitoring wells were installed around the entire Site. Eight rounds of quarterly ground water monitoring were conducted and no contaminants were observed above levels that would present an unacceptable risk. Based on this, an Explanation of Significant Differences (ESD) was issued in May 2006 to delete this requirement from the ROD. At the same time, clarification was provided to explain that the location of an on-site well was not uncovered throughout all the remedial activities that were implemented.

II. SUMMARY OF SITE CONDITIONS

Background

The Site is located approximately 4.5 miles north of Darrow, Louisiana on the east bank of the Mississippi River on Highway 75. The Site was named to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) National Priorities List in 1983 (EPA ID# LAD980745533). Closure of the Site was conducted under a Cooperative Agreement between the U.S. Environmental Protection Agency (EPA) and the LDEQ.

The Site extends over approximately 10 acres and is bounded to the north by the Louisiana Highway 75, the levees of the Mississippi River to the south and to the east and west by vacant lots. The Site is in a very rural area; the nearest residence is 0.3 miles south of the Site. Agricultural farm properties are located north of LA Highway 75 in the vicinity of the Site.

History

The Site is a former waste oil reclamation facility that began operation in 1967. During operations, waste oils were brought in by truck and barge. Lagoons were used for disposal of waste sludges and oils. Periodically, the materials in the lagoons were pumped into the adjacent swamps to maintain storage capacity. Approximately ten Site storage tanks were used ranging in size from 37,500 to 225,500 gallons. According to statements, waste oil processing was based on acid treatment versus conventional refinery cracking. Some of the Site problems included a large spill during unloading of used oil from a barge, tanks overflowing, and drums and construction debris being buried in lagoons. After the major spill in 1978, the property changed ownership. The new owners had intended to clean up the Site, but abandoned it in 1980.

Investigations by both the EPA and LDEQ revealed the presence of contaminated waste oils, sludges, sediments, and water. From the investigations, it was determined that the types and concentrations of contaminants at the Site posed a potential hazard to human health and the environment. The Site was subsequently placed on the National Priorities List for remediation under CERCLA as the State's highest priority site.

From April 1983 through August 1988, five emergency removal actions were conducted to stabilize the Site including: Site security, migration control, excavation and containment of consolidated soils, sampling and analysis. These immediate actions reduced the potential for contact with Site contamination and the further spread of contaminated materials to make the Site safer while long-term cleanup activities proceeded.

Remedy Selection

The EPA, with concurrence from the State of Louisiana, signed the ROD on September 25, 1984. The major components of the selected remedy included:

- **Closing and sealing of an ungrouted on-site well**

The closing and sealing of an ungrouted on-site well was not accomplished. As explained in the ESD, throughout the remediation process the alleged location of the well and the majority of the Site were excavated and the existence of this on-site well was not verified.

- Pumping and treatment of the shallow ground water aquifer via carbon adsorption.

As explained in the ESD, the decisions on the need for corrective action for the intermediate aquifer and the level of cleanup for the shallow aquifer were deferred in the ROD and after eight rounds of quarterly monitoring a decision was reached that this action is not required.

- Carbon adsorption treatment and discharge of contaminated fluids.

The treatment and discharge of contaminated fluids were implemented through the construction and operation of a wastewater treatment plant on-site.

- In situ containment and capping of slightly contaminated soils.

The in situ containment and capping of soils were implemented.

- On-site land treatment of heavily contaminated soils and sludges.

The on-site land treatment of soils was implemented through the construction and operation of a Land Treatment Unit (LTU). The LTU provided treatment through the biological degradation of wastes in the contaminated soils. These were spread over the treatment area and biodegradation rates were optimized by the addition of amendments, nutrients, moisture control, and tilling.

- Disposal of contaminated wood.

The final method for disposal of contaminated wood was also deferred in the ROD. During the implementation of the remedial activities, soils were excavated and screened using a Trommel Power Screen. Pieces of wood, debris, garbage and metal left by the original owners (including buried gas cylinders) were separated and decontaminated. Decontaminated material was buried on-site under State oversight and approval. Decontaminated metal debris was shipped off-site to a metal recycler and the uncovered cylinders were shipped off-site for disposal at a facility approved by the State, meeting all State and RCRA requirements.

- Land Use Restrictions.

The ROD contemplates implementing land use restrictions for waste left in place. Restrictions include a lien on the property of \$15,437,639.00 for the amount of remedial costs; and a notice in the mortgage and conveyance records that residual contaminant concentrations remain at the site but are below established remedial standards.

A clay protective cap complete with topsoil and grass, necessary for protectiveness of the remedy or for its successful operation and maintenance, remains on the site. Disturbing or moving this protective feature of the remedy may pose a threat to human health or the environment, and may subject the property owner and the party causing the disturbance to liability under CERCLA or other laws.

Due to the location of the site, a rural area adjacent to the levee of the Mississippi River, restrictions by the U.S. Corps of Engineers, the Louisiana Department of Transportation and Development and the Pontchartrain Levee Control Board have established

restrictions and prohibitions against excavation and coring on properties adjacent to the toe of the levee.

Remedial Construction Activities

The remedial design was completed and remedial activities were implemented in phases.

The initial phase started in 1990 and was completed in 1992. During this phase, contaminated liquids and sludges were removed from the surface impoundment, and the wastewater treatment plant and the LTU were constructed. On September 22, 1993, an ESD was signed to document the increase in quantities of contaminated soils, sludges and liquids that were discovered during this initial phase of the remedial action.

A second phase was started in 1998 and completed in 2002. During this phase, the increased volumes of contaminated soils were excavated, treated in the LTU and returned back to the excavation or used in the final grading and capping of the site.

Approximately 15,712,300 gallons of water were treated in the treatment plant; soils totaling approximately 63,398 tons were excavated, screened and treated; the Site was graded and approximately 40,000 cubic yards of clay and 24,800 cubic yards of topsoil were applied to build the cap.

The final phase of remedial work involved the evaluation of the shallow groundwater. For this phase, a surface- and borehole- geophysical investigation was conducted in coordination with the U.S. Geological Survey (USGS), and their findings were reported in the letter dated October 25, 2001. Also, a network of monitoring wells was installed and a quarterly sampling and evaluation program was instituted to run for a period of two years.

In summary, the Site was remediated by removing the impoundments, tanks, associated refinery equipment and debris. Contaminated soils were treated by on-site bioremediation of the affected media in a LTU, capped with a two-foot thick clay cap and revegetated with a topsoil layer and native grasses. Finally, the shallow ground water was investigated and no unacceptable risks were identified.

III. DEMONSTRATION OF QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) FROM CLEANUP ACTIVITIES

The quality assurance/quality control (QA/QC) program for this remedial action was conducted in accordance with the OIOR Site Quality Assurance Project Plan (QAPP) prepared by the LDEQ for this Site. The LDEQ was the lead for remediation at this Site and EPA was the support agency. Contracts were awarded by the LDEQ for the different phases and the LDEQ provided oversight for the construction activities.

The performance of the activities described in the OIOR RD plan and the Site Sampling and Analysis Plan (SAP) resulted in the demonstration of achievement of the cleanup levels. These plans provided a system to identify general areas of contamination and a

procedure to confirm that treated material met the performance standards. The quality control objectives of the waste treatment activities and post-treatment sampling were to demonstrate and document that contaminated waste materials were stabilized, and blended to meet the waste treatment standards.

The quality assurance objective for transportation and disposal was to verify and document that material removed from the site was transported and disposed in EPA and LDEQ approved facilities.

On-site scales were used to weigh all materials being excavated and scales were calibrated prior to the initial operations. Copies of the weight tickets, and laboratory analysis certifications were submitted to LDEQ throughout the implementation of the remedial activities.

Procedures and activities established in the Air Monitoring Plan (AMP) were used to obtain data of sufficient quantity and quality to demonstrate compliance with the air quality standards at the site work area and site boundaries. The AMP established the procedures for monitoring and sampling ambient air for hazardous chemicals potentially emitted during remedial activities. Air monitoring was conducted during all phases of the remedial action construction activities.

In summary, the construction QA/QC plans for this Site were implemented throughout the remedial activities. Construction completion is consistent with the ROD, ESDs, and the remedial design plans and specifications.

IV. MONITORING RESULTS AND SITE COMPLETION

All Site construction activities have been completed.

The EPA defines Institutional Controls (ICs) as “non-engineered instruments, such as administrative and legal controls, that help to minimize the potential for human exposure to contamination and protect the integrity of the remedy.” ICs work by limiting land or resource use and by providing information that helps modify or guide human behavior at properties where hazardous substances prevent unlimited use and unrestricted exposure. (EPA Office of Solid Waste and Emergency Response (OSWER) **Directive No. 9355.0-106**, September 2004)

Residual waste left in place does not allow for “unlimited use and unrestricted exposure (uu/ue).” Residual contaminant concentrations remain at the Site but are below established remedial standards. As indicated above, ground water monitoring was conducted quarterly for two years to confirm that shallow ground water does not represent an unacceptable risk.

Due to the location of the Site, a rural area adjacent to the Mississippi River levee, additional restrictions against excavation and coring are applicable to the Site. Both the U.S. Army Corps of Engineers and the Pontchartrain Levee Control Board have

restrictions and prohibitions against coring and excavation on properties adjacent to the toe of the levee.

The Institutional Controls (ICs) at the Site include a lien on the property for the amount of the remedial costs, which shows that the property has contaminants, and has been subject to a remedial action; and a notice in the mortgage and conveyance records stating that residual contaminant concentrations remain at the Site but are below established remedial standards.

V. SUMMARY OF OPERATION AND MAINTENANCE (O&M)

The EPA, the LDEQ and the U.S. Geological Survey conducted additional studies to evaluate the Site, and to demonstrate that the shallow ground water does not represent an unacceptable risk. The ten monitor wells used for this study have been plugged and abandoned according to State of Louisiana regulations and guidelines.

Long term O&M activities will be to maintain the cap and to ensure the fencing remains intact and secure.

VI. SUMMARY OF REMEDIATION COST

As of (date) March 2006 Superfund has spent over \$ 20,000,000 in the investigation and remediation of the OIOR site. Through a Superfund Cooperative Agreement (SCA) the State of Louisiana has received approximately \$15,000,000. The State also contributed 10% of the cost for all remedial action activities at the site.

Future O&M activities to be conducted by the State include periodic mowing and tracking the maintenance of the Site cap currently estimated at \$25,000, and the continuation of Five-Year reviews to be conducted by the EPA estimated at \$50,000 every five years.

VII. PROTECTIVENESS

Because the remedial actions at all OUs are protective, the Site is protective of human health and the environment. The protectiveness of this Site will be verified through the Five-Year Review process.

VIII. FIVE-YEAR REVIEW

Hazardous substances will not remain on-site above health-based levels for the anticipated future land uses as rural vacant land.

The threshold for Five-Years Reviews is uu/ue. Future Five-Year Reviews, as indicated in this document, will continue to monitor the maintenance of the ICs and the limited use

of the Site at the toe of the Mississippi River levee, to ensure protection of human health and the environment.

Pursuant to CERCLA Section 121(c) and as provided in OSWER Directive 9355.7-03 B-P, Comprehensive Five-Year Review Guidance, dated June 2001, the EPA will continue to conduct Five-Year reviews for the Site.

U.S. Environmental Protection Agency

By: Samuel Coleman, P.E. Acting Date: 9/12/06
Director
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Louisiana Department of Environmental Quality

(See concurrence on separate document)

By: Wilbert F. Jordan, Jr. Date: 8-29-06
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