



**Explanation of Significant Differences**

**Old Inger Oil Refinery Superfund Site  
Ascension Parish, Louisiana**

**United States Environmental  
Protection Agency  
Region 6**

**Superfund Division**

**September 2006**



Concurrence page

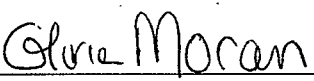
**CONCURRENCE PAGE FOR THE OLD INGER  
SUPERFUND SITE  
EXPLANATION OF SIGNIFICANT DIFFERENCES**

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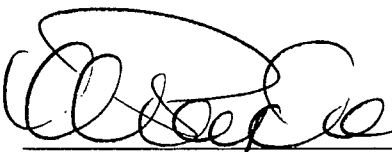
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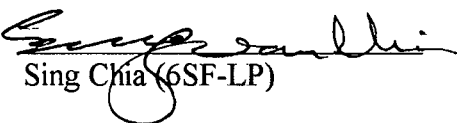
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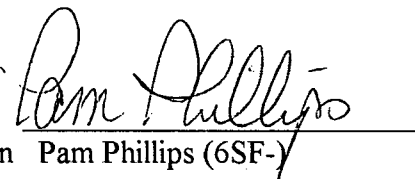
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## I. INTRODUCTION

Site Name: Old Inger Oil Refinery  
CERCLA Id No.: LAD980745533  
Site Location: Between Louisiana Highway 75 and the Mississippi River levee, Ascension Parish, Louisiana, 4.5 miles north of Darrow.  
Lead Agency: Louisiana Department of Environmental Quality (LDEQ)  
Support Agency: U.S. Environmental Protection Agency, Region 6 (EPA)

This decision document presents the Explanation of Significant Differences (ESD) for the Old Inger Oil Refinery Superfund Site (site), located in a rural setting, between Highway 75 and the Mississippi River, 4.5 miles north of Darrow, Ascension Parish, Louisiana. This ESD is issued in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9601 *et seq.*, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Section 300.435(c)(2)(i). The Director of the Superfund Division has been delegated the authority to sign this ESD.

## II. STATEMENT OF PURPOSE

The EPA is issuing this ESD for the site to document the final decisions on one of the remedial action items deferred in the September 25, 1984 Record of Decision (ROD) on this site that involved the level of cleanup for the shallow ground water. This ESD also clarifies that the existence of an ungrouted on-site well could not be verified on-site.

### Description of Significant Differences

Studies conducted by the Louisiana Department of Environmental Quality (LDEQ) indicate that no further action is necessary with regard to the shallow groundwater. Also, during the implementation of remedial activities and excavations conducted over the entire site, the location of the on-site well could not be confirmed.

## III. SITE HISTORY AND CONTAMINATION

### History

The site began operations in 1967 as an oil refinery and was purchased by Old Inger Refinery in 1976 to be used as an oil reclamation plant for refinery wastes. It remained active in this function until March 1978 when a large spill occurred, contaminating the surrounding area. The facility was purchased shortly thereafter with the intention of cleaning up the site. However, the new owners found facility restoration to be uneconomical and abandoned the site in 1980. The Louisiana Environmental Control Commission formally declared the site abandoned in 1981. The site was added to the National Priorities List (NPL) on September 6, 1983. In 1989, a contract was awarded for the first phase of Remedial Action.

### Removal Activities

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.

### Site Contamination

When the site was operated, waste oils were brought to the approximately 10 acre site by barge and truck. Waste oils were processed in a cracking tower and stored on site. Final products were generally removed by truck. The lagoons were used for disposal of waste sludges, oils, and surface water. Occasionally, liquid from one of the lagoons was siphoned into the swamp to help maintain storage capacity. The liquid was siphoned from the liquid fraction between the floating sludges and oils and the bottom sludges. Some oily materials were discharged into the swamp during the siphoning process. On at least one occasion, a feedstock line broke and discharged a substantial quantity of oil into the swamp.

The contaminants found on the site included hazardous substances which are not petroleum and are not subject to the exclusions under CERCLA Sections 101 (14) and 104 (a)(2). These substances were believed to result largely from the presence of oil additives and products of combustion. The waste at the site contained quantities of hazardous constituents which potentially have toxic, carcinogenic, mutagenic or teratogenic effects on humans or other life forms. These included: trace heavy metals, naphthalene, phenols, benzene, benzo (a) anthracene and benzo (a) pyrene.

## **IV. SELECTED REMEDY**

### Record of Decision

A Record of Decision (ROD) was signed on September 25, 1984 for this site. The selected remedy consisted of the following major components:

1. Closing and sealing of an ungrouted on-site well.

The closing and sealing of an ungrouted on-site well was not accomplished due to the fact that the location and existence of the well was never verified. Several attempts were made to locate the alleged on-site well throughout the remediation of the site, which involved extensive excavation of affected soils. However, all monitoring wells installed throughout the remediation process were removed and grouted (plugged and abandoned) in accordance with State requirements.

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

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.

3. Carbon adsorption treatment and discharge of contaminated fluids.

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

4. In situ containment and capping of slightly contaminated soils.

The in situ containment and capping of soils were implemented.

5. 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.

6. 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.

7. 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.

8. ESD date September 22, 1993

An ESD for this site was signed on September 22, 1993. The significant change that was

documented in this ESD resulted from an increase in quantities of contaminated materials that were discovered during the remedial action. Specifically, the significant change documented in this ESD included:

- a. The volume of contaminated soils and sludges requiring treatment increased from an estimated 40,000 cubic yards to approximately 100,000 cubic yards.
- b. The volume of contaminated water requiring treatment increased from an estimated 10 million gallons to approximately 28 million gallons.

In accordance with this ESD, the additional volumes of soils and sludges were treated throughout the remedial action activities and the operation of the LTU unit. The wastewater treatment plant was kept in operation throughout the remedial action activities to treat the contaminated water.

## **V. BASIS FOR THE DOCUMENT**

The 1984 ROD projected a cost of \$481,000 for the treatment of contaminated liquids and \$565,000 for the on-site land treatment.

Remedial Action was implemented at this site under separate phases. An initial phase, Phase IV-A, removed contaminated liquids and sludges from a site impoundment, built the wastewater treatment unit, and the LTU in 1992. This first phase was implemented at a total cost of over \$7,796,980.

During the second phase, May 1998 through March 2002, 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. This last phase was implemented at a total cost of over \$6.3 million dollars. A "Final Report for Old Inger Superfund Site," Phase IV-C, was prepared by IT Corporation on February 15, 2001 for the LDEQ. The report is considered the basis for an upcoming Final Close Out Report or RA Completion Report.

Phase IV-C treated approximately 15,712,300 gallons of water; excavated, screened and treated approximately 63,398 tons of material; and applied approximately 40,000 cubic yards of clay and 24,800 cubic yards of topsoil to build the cap. Phases IV-B and IV-C were implemented at a total cost of over \$7,107,677.

The final phase of remedial work involves the evaluation of the shallow groundwater after implementation of the above remedial activities. For this phase a surface- and borehole-geophysical investigation was conducted in coordination with the U.S. Geological Survey (USGS), and their findings are presented in the letter report dated October 25, 2001, (Superfund Document Management System (SDMS) record number 904038). 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. These monitoring activities involve a total cost of approximately \$134,377.

Information based in eight quarterly reports is the basis for this ESD. These reports indicate that the shallow ground water, upon review against the State Risk Evaluation Corrective Action Program (RECAP) requirements, does not represent any unacceptable risk to human health or the environment. These requirements require the same level of protection as EPA requirements

( $1 \times 10^{-6}$  or one in a million risk). The reports are available under the following titles and SDMS record numbers:

First Quarter 2004 Groundwater Monitoring Report	SDMS 168917
Second Quarter 2004 Groundwater Monitoring Report	SDMS 172660
Third Quarter 2004 Groundwater Monitoring Report	SDMS 183476
Fourth Quarter 2004, Groundwater Monitoring Report	SDMS 184002
First Quarter 2005, Groundwater Monitoring Report	SDMS 189055
Second Quarter 2005, Groundwater Monitoring Report	SDMS 192605
Third Quarter 2005, Groundwater Monitoring Report	SDMS 196415
Fourth Quarter 2005, Groundwater Monitoring Report	SDMS 197094

The EPA and the LDEQ anticipate proceeding with final close out, construction completion and site deletion activities.

## **VI. DESCRIPTION OF SIGNIFICANT DIFFERENCES**

This ESD documents that through the implementation of remedial activities and excavations conducted over the entire site, the location of an on-site well could not be confirmed.

This ESD documents a final decision on the requirement of pumping the shallow ground water, an item in the original ROD deferred for a later day resolution. At this time, studies conducted indicated that no further action is necessary in regard to pumping the shallow groundwater or implementing other actions in relation to the intermediate aquifer.

## **VII. LEAD AND SUPPORT AGENCY COMMENTS**

The EPA and the State of Louisiana, through the LDEQ, agree there is no need to further treat the shallow groundwater at this time, since studies are showing that currently the groundwater, after treatment of contaminated soils and sludges, does not represent an unacceptable risk. This determination is made based on groundwater studies and sampling events that show the groundwater meets the LDEQ Risk Evaluation/Corrective Action Program (RECAP) regulations or requirements. These regulations were promulgated and became final on October 20, 2003. They establish the minimum remediation standards for present and past uncontrolled constituent releases.

The Remedial Action is being conducted as a State-lead project under a Cooperative Agreement with EPA which provides 90% funding and therefore does not require a Superfund State Contract

for the 10% match.

The support agency, EPA, has been consulted and provided the opportunity to comment on this ESD in accordance with NCP §§ 300.435 (c)(2) and 300.435 (c)(2)(i) and CERCLA § 121 (f).

### **VIII. STATUTORY DETERMINATIONS**

The EPA has determined that these significant changes comply with the statutory requirements of CERCLA § 121, 42 U.S.C. § 9621, are protective of human health and the environment, comply with Federal and State requirements that are applicable or relevant and appropriate to the remedial action, are cost-effective, and utilize permanent solutions and alternative treatment technologies to the maximum extent practicable.

This remedy will not result in hazardous substances, pollutants, or contaminants remaining on-site above levels that require remedial action. But because the site location does not allow for unlimited use and unrestricted exposure, a statutory review will be conducted no less often than every five years after the initiation of the remedial action to ensure that the remedy is, or will be, protective of human health and the environment.

### **IX. PUBLIC PARTICIPATION**

This ESD will become part of the Administrative Record (NCP 300.825(a)(2)), which has been developed in accordance with Section 113 (k) of CERCLA, 42 U.S.C. § 9613 (k), and which is available for review at the:

Louisiana Department of Environmental Quality  
Public Records Center  
Galvez Building Rm 127  
602 N. Fifth Street  
Baton Rouge, Louisiana, 70802  
Monday - Friday, 8:00 a.m. to 4:30 p.m.

and

United States Environmental Protection Agency  
Region 6  
12th Floor Library  
1445 Ross Avenue  
Dallas, Texas, 75202  
Monday - Friday, 7:30 a.m. to 4:30 p.m.

As required by NCP § 300.435(c)(2)(i)(B), a Notice of Availability and a brief description of the ESD has been published in the local paper.



**X. PROTECTIVENESS STATEMENT**

I have determined the remedy for the Old Inger Oil Refinery site as modified by this ESD is protective of human health and the environment, and will remain so provided the actions presented in this report are implemented as described above.

**XI. AUTHORIZING SIGNATURE**

This ESD documents the significant changes related to the remedy at the Old Inger Oil Refinery Superfund Site. These changes were selected by EPA with the concurrence of the Louisiana Department of Environmental Quality (see separate concurrence document).

U.S. Environmental Protection Agency

By: Samuel Coleman, P/E.  
Samuel Coleman, P/E.  
Director  
Superfund Division

Date: 9/12/06

Louisiana Department of Environmental Quality

By: Wilbert F. Jordan, Jr., M.S., J.D.  
Wilbert F. Jordan, Jr., M.S., J.D.  
Assistant Secretary  
Office of Environmental Assessment

Date: 8-29-06