SITE SAMPLING PLAN

RED PANTHER CHEMICAL COMPANY CLARKSDALE, COAHOMA COUNTY, MISSISSIPPI

U.S. EPA ID No. MSD000272385

Revision 0

Prepared for:

U.S. ENVIRONMENTAL PROTECTION AGENCY Region 4 61 Forsyth Street Atlanta, Georgia 30303

Prepared by:

T N & Associates, Inc. 1220 Kennestone Circle, Suite D Marietta, Georgia 30066

Contract No.	:	EP-W-05-053
Task Order No.	:	TNA-05-003-0004
Date Submitted	2	August 10, 2007
EPA Task Monitor	:	Donna Webster
Telephone No.	5	404-562-8870
Prepared by	:	Allyson Warrington
Telephone No.		678-355-5550

CONTENTS		
<u>Section</u>	<u>n</u> <u>Pa</u>	ige
1.0	INTRODUCTION	1
2.0	SITE BACKGROUND	2
2.1	Site Description	2
2.2	Environmental Setting	2
2.3	Regional Geology and Hydrogeology	
2.4	Site Operations	5
2.5	Regulatory History	5
2.6	Previous Investigations	13
2.7	Source Areas	15
3.0 3.1 3.2 3.3 3.4	PRELIMINARY HRS CONCERNS Ground water Migration Pathway Surface Water Migration Pathway Soil Exposure Pathway Air Migration Pathway	13 14 14 15 16
4.0 4.1	PROPOSED SAM PLING PLAN Groundwater Sampling	.16 .17
5.0	FIELD WORK SUMMARY	. 18
6.0	DISPOSAL OF INVESTIGATION-DERIVED WASTES	. 18
REFE	RENCES	. 19

APPENDIX A - FIGURES

1

a

- 1 Topographical Map
- 2 Site Layout Map
- 3 Municipal Well Sample Location Map
- 4 Temporary Well Sample Location Map

APPENDIX B - TABLES

- 1 Municipal Well Sample Locations
- 2 Temporary Well Sample Locations
- 3 Quality Control/Quality Assurance Samples
- 4 Analytical Methodology, Sample Containers, and Preservatives

1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) has tasked the T N & Associates, Inc., (TN&A) Superfund Technical Assessment Response Team (START) to perform a Site Inspection (SI) under Contract Number (No.) EP-W-05-053 at the Red Panther Chemical Company (Red Panther) site, EPA Identification (ID) No. MSD000272385, in Clarksdale, Coahoma County, Mississippi. The general purpose of an SI is to collect information about site conditions, including determination of the nature and extent of contamination, potential human and ecological exposure pathways, and the need for federal intervention under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 and the Superfund Amendments and Reauthorization Act (SARA) of 1986. All activities and procedures discussed and described in this sampling plan will be presented and conducted in accordance with the approved TN&A Quality Assurance Plan (QAP) (Ref. 1).

SI field activities will include collecting environmental samples used to define the nature and extent of contamination, documenting releases of hazardous substances from the site, and determining whether such releases have resulted in Actual Contamination of target populations. TN&A will provide results of the SI in a comprehensive report summarizing site conditions and history, relevant site features, field activities, and analytical results. The findings will also be used to generate a separate Hazard Ranking System (HRS) site score that may be used to propose the site for possible inclusion on the National Priorities List (NPL). All activities and procedures described in this sampling plan will be conducted in accordance with the EPA Region 4 Science and Ecosystem Support Division's (SESD) *Environmental Investigations Standard Operating Procedures and Quality Assurance Manual* (EISOPQAM) (Ref. 2). Analytical services will be provided by EPA's Contract Laboratory Program (CLP) facilities and will comply with CLP guidance (Ref. 3).

The following sections provide the details of this Site Sampling Plan (SSP):

- Section 2: Describes site layout, geologic setting, background information, previous investigations, and data gaps;
- Section 3: Details the HRS pathways of concern and the associated receptors potentially impacted as a result of site activities;
- Section 4: Describes the proposed sampling locations used to generate an HRS score;
- Section 5: Summarizes the proposed field activities supporting the sampling event; and
- Section 6: Discusses the proposed disposal of investigation-derived wastes (IDW).

2.0 SITE BACKGROUND

This section describes the site including its environmental, geologic and hydrogeologic settings, historical operations, waste disposal practices, regulatory history, and previous investigations.

2.1 Site Description

Red Panther is located at 550 Patton & Leflore Roads, Clarksdale, Coahoma County, Mississippi (see Figure 1, Appendix A) (Ref. 1). The geographic coordinates from the center of the property are 34° 11' 14" north latitude and 90° 33' 43" west longitude. The facility is bordered to the north by commercial property (Graeber Brothers), to the south by Sasse Street, to the east by Patton Street and Normandy Avenue/Leflore Street, and to the west by East Tallahatchie Street/Old Highway 49 South and the Illinois Central Railroad tracks (Refs. 1; 2; 3).

The former Red Panther facility is approximately 6.5 acres in size (Ref. 3, p. 4). Former operation features included a septic tank and drainfield located on the north side of the property. Three hazardous waste above-ground storage tanks (AST) with a total capacity of 33,000 gallons were located on the south side of the property. A small wastewater settling basin was located on the east central side of the property (Ref. 3). Several structures remain on the property; however, their use is undetermined at this time (see Figure 2, Appendix A).

2.2 Environmental Setting

The average annual temperature in Clarksdale is 64 degrees Fahrenheit (°F) with average winter temperatures near 45°F and average summer temperatures near 81°F (Ref. 9). The lowest and highest recorded temperatures are 8°F and 109°F, respectively. The average annual rainfall for the area is 49.8 inches with the heaviest rainfalls occurring during March and April. The mean annual lake evaporation in the area is approximately 42 inches, yielding an annual net precipitation of approximately 9 inches (Ref. 3, p. 7). The 1-year, 24-hour rainfall event for the area is approximately 3.5 inches.

The topography of the area is relatively flat, with an average elevation at 175 feet above mean sea level (amsl) (Ref. 5, p. 3). The property is situated at 170 feet amsl. Drainage pipes direct surface water runoff to the east and west into off-site ditches and storm water drains, which lead to the Sunflower River, located less than 0.5 mile west of the facility.

2.3 Regional Geology and Hydrogeology

Clarksdale is located in the northwestern portion of the State of Mississippi within the Mississippi Delta physiographic province (Ref. 10, pp. 4, 10). The stratigraphic units in this part of the state include, in descending order; the Mississippi River Alluvium, Cook Mountain Formation, Sparta Sand, Zilpha Clay and Winona Sand, Tallahatta Formation, Meridian-Upper Wilcox Aquifer, Wilcox Group, and the Lower Wilcox Aquifer (Ref. 11, p. 11).

The alluvium directly underlies the property, dips gently to the south, and is exposed at the surface over its entire area of occurrence. The alluvium ranges from less than 50 feet to more than 200 feet thick, with an average thickness of 140 feet. The alluvium generally consists of three layers: a discontinuous silty clay layer, a middle sand layer, and a lower gravel layer.

The Cook Mountain underlies the alluvium and is composed of clay and shale. In some portions of northwestern Mississippi, the Cook Mountain confines the underlying Sparta Aquifer (Ref. 3, p. 6). However, geophysical logs of wells near the site suggest that Cook Mountain is approaching a stratigrahic pinch-out in the Clarksdale area.

The Sparta Sand underlies the Cook Mountain and is composed of rounded, well-sorted quartz grains in two or three thick beds separated by beds of clay (Ref. 11, p. 31). The thickness of the Sparta Sand ranges from 420 to 480 feet.

The Zilpha and Winona Formation underlies the Sparta Sand and occurs at approximately 655 feet below land surface (bls) (Ref. 3, p. 6). The Zilpha overlies the Winona and consists of dark-brown clay. The Winona consists of glauconitic fossiliferous sands and clays.

The Tallahatta Formation is hydraulically connected to the overlying Winona and contains several thick to very thin sand beds separated by clay (Ref. 10, pp. 10, 45). Thickness ranges from 50 to 400 feet, with an average thickness of slightly more than 200 feet. The formation dips to the west and southwest.

The Meridian Sand underlies the Tallahatta and is a massive unit consisting of fine-to-coarse micaceous sand that dips west to southwest. The average thickness is approximately 160 feet (Ref. 10, pp. 43, 45).

The Mississippi River Valley Alluvial Aquifer is a water table aquifer located along the western boundary

of the state and underlies the property (Ref. 11, p. 11). Generally, recharge is from the direct infiltration of rainfall into the aquifer, and water moves to the south and towards streams in the area. Some water moves into the underlying Sparta and Cockfield Aquifers, which subcrop below the alluvium in the area. The Cook Mountain Formation, which acts as a confining unit throughout most of the state; however it pinches out in the vicinity of the property indicating that the Alluvial and underlying Sparta aquifers are interconnected. Regionally, water in the Sparta flows from east to west (Ref. 10, p. 47). Water bearing sands within the Sparta, many 100 feet or more in thickness, are separated by varying thicknesses of clay. The Zilpha and Winona confining layer, consisting primarily of clay, retards the movement of water from the overlying Sparta Sand into the underlying Meridian-Upper Wilcox aquifer.

The Meridian-Upper Wilcox Aquifer consists of the Meridian Sand of the Tallahatta Formation and the uppermost sand beds of the Wilcox Group (Refs. 11, p. 41; 12). These units are regarded as one aquifer because they are hydraulically connected. The Upper Wilcox Aquifer consists of sandy clay. The regional movement of water in the aquifer is westward.

The Lower Wilcox is the deepest aquifer underlying the region and consists of a thick sand unit containing over 60 percent sand (Ref. 3, p. 7). The aquifer dips to the southwest in the southern part of the region. Multiple clay beds in the overlying part of the Wilcox hydraulically separate the Lower Wilcox Aquifer from overlying aquifers. The Lower Wilcox Aquifer occurs approximately 1,900 feet bls and extends to a depth of approximately 2,100 feet in the vicinity of the property.

2.4 Site Operations

Red Panther operated as a pesticide formulation plant between 1949 and 1978 producing liquid and dry herbicides, insecticides, and fungicides (Ref. 2). Chemicals used in the formulation included toxaphene, methyl parathion, chloropyrifos, 2,4-D, malathion, carbaryl, diazinon, methoxychlor, disodium methanearsonate, monosodium acid methanearsonate, chlorothalonil, and parathion (Ref. 4). Contamination on the property is believed to have originated from numerous spills during loading and unloading operations, from leaking transport piping between the process and tank farm areas, contaminated wastewater releases, and from spills and leaking underground piping in the tank farm area (Ref. 5, p. 3).

4

Previous owners of the facility include Coahoma Chemical Company, Riverside Chemical Company, and MFC Services (Ref. 3). The property is currently used by Coahoma, Inc. as a storage facility for seeds, cotton, and farm chemicals (Ref. 2).

In November 1985, a fire erupted at one of the Red Panther warehouses (Ref. 3, p. 4). Contaminated runoff resulting from the fire-fighting efforts caused a fish kill in the nearby Sunflower River. The contaminant was determined to be Lorox, a slightly toxic herbicide. A large volume of contaminated water was contained on the property and later shipped to a commercial hazardous waste disposal facility. During cleanup of the fire, approximately 382 old fiber drums were discovered in the crawlspace below the warehouse. Approximately 287 drums were empty. These drums were crushed and sent to the local municipal landfill. Ninety-five drums contained trace residues of technical grade dieldrin and were disposed of at a commercial hazardous waste facility (Ref. 3, p. 4). A new warehouse was built over this area in 1986 (Ref. 6).

2.5 Regulatory History

A query for "MSD000272385" in the EPA Envirofacts database listed a site discovery date of November 1, 1979 (Ref. 7). In 1980, Red Panther filed for a Resource Conservation and Recovery Act (RCRA) hazardous waste management activity notification and Part A application for the storage of wastewater and used solvents on site (Refs. 2; 3, p. 3). Wastewater containing pesticide and solvent residues were generated from the cleaning of equipment at the facility. It is not clear whether a storage permit was granted at this time.

In November 1984, the Mississippi Bureau of Pollution Control (MBPC) granted the facility a RCRA Part B permit to store wastewater and spent solvents at the site (Ref. 3). Prior to obtaining the RCRA permit, wastewater and spent solvents were discharged directly to an off-site ditch or into an underground leaching field on the property. According to Envirofacts, a Preliminary Assessment (PA) was completed on June 1, 1984.

In November 1986, Red Panther's storage permit was terminated because Red Panther lost its liability insurance coverage that is required for long-term storage of hazardous wastes (Ref. 3). At that time, Red Panther reverted to the status of a hazardous waste generator with short-term (less than 90 days) storage only.

5

According to Envirofacts, a Site Inspection (SI) was completed on January 31, 1991. The site was listed for archive on January 31, 1992; however, an Expanded Site Inspection (ESI) and Integrated Assessment were listed as completed on February 1, 2000 (Ref. 7).

An Administrative Order on Consent (AOC) between EPA and the Potentially Responsible Party (PRP) was signed on September 4, 2001 (Refs. 4; 7). EPA subsequently submitted the Action Memorandum documenting approval of the proposed removal action (Ref. 5).

Administrative records were compiled on November 6, 2003. The PRP commenced the removal action on November 11, 2002 and had completed the activities by July 29, 2005 (Ref. 7). On December 22, 2003, EPA announced the availability of the Red Panther Administrative Record for public review (Ref. 8). The Administrative Record includes documents that form the basis for selection of the removal action. The site was removed from the archive list on November 7, 2005 (Ref. 7).

2.6 Previous Investigations

In 1984, MBPC conducted a sampling inspection at the site (Refs. 2; 3, pp. 3, 5). Environmental samples were collected around the property to determine and characterize any hazardous substances present. Two composite soil samples were collected from the off-site ditch along Normandy Street and Patton Street (Ref. 3, p. 5). One water sample was collected from where wastewater leaves the property and discharges into the off-site ditch. One subsurface composite soil sample was collected around the septic tank and drainage field. All samples were analyzed for pesticides and total arsenic. Results indicated elevated levels of several pesticides and arsenic in the soil and sediment samples (Ref. 3, p. 5).

In November 1985, due to the warehouse fire, a sample of contaminated runoff resulting from the firefighting effort was collected and analyzed for pesticides. No contaminants were detected (Ref. 3).

On February 22, 1990, MBPC submitted the Preliminary Assessment Reassessment (PAR) to EPA Region IV (Ref. 3). The original PA was conducted in June 1984, and follow-up sampling was performed in August 1984.

On January 31, 1991, Mississippi Department of Environmental Quality (MDEQ) Office of Pollution Control (MSOPC) submitted a Screening Site Inspection (SSI) Report (Ref. 6). The investigation was conducted November 12 through 13, 1990 (Refs. 13). A total of nine samples were collected during the SSI including one surface soil, three sediment samples, two subsurface soil samples, and three groundwater samples (Ref. 6, p. 10). Background samples were not collected for every matrix; therefore, appropriate comparison could not be established. Samples were analyzed for all compounds listed in the EPA Target Compound List (TCL). According to the 1991 SSI, sediment and soil (surface and subsurface) samples contained high levels of pesticides, metals, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs) (Ref. 6, p. 11). Groundwater samples contained high levels of metals only. Based on these results, MSOPC recommended further investigation on a medium-priority basis (Ref. 6, p. 12).

On January 30, 1992, MDEQ submitted a Site Investigation Prioritization (SIP) to EPA Region IV (Ref. 14). The SIP recommended that no further remedial action be planned (NFRAP) for Red Panther, based on the 1991 SSI report. The NFRAP recommendation was approved; however, a low waste quantity was assumed due to lack of data (Ref. 14).

In 1999, EPA tasked Tetra Tech EM, Inc. START to conduct surface and subsurface soil sampling of the drainage ditches to the east of the property, the former on-site leaching field and septic tank on the north side of the property, and the rail spur in front of the loading dock that runs along the west side of the property (Ref. 15). Samples were analyzed for RCRA metals and pesticides. The results from the sampling event indicated that the site was contaminated with arsenic, organochlorinated pesticides, and the degradation by-products including, but not limited to, aldrin, chlordane, dieldrin, 4,4'-DDT, endrin, endosulfan II, and toxaphene. The analytical results also revealed a wide concentration range for lead; however, lead concentrations were below the applicable limit for lead in residential soil (Ref. 15, p. 11).

In September 2001, the AOC between the PRP and EPA Region IV was finalized (Ref. 4). The AOC identified four constituents of concern (COCs) for surface soil criteria and three COCs for subsurface soil criteria. The surface COCs were identified as arsenic, toxaphene, dieldrin, and total chlorinated pesticides (Ref. 4, p. 6). The subsurface COCs were identified as arsenic, toxaphene, and dieldrin (Ref. 4, p. 7).

The PRP retained NewFields and URS Corporation (URS) to perform the work required as part of the AOC. The AOC required the work to be performed in two phases. Phase I consisted of the following components (Refs. 16, 17):

- Preparation of a Phase 1 Work Plan,
- Excavation of surface soils from drainage ditches between the Red Panther property boundaries and Route 49, and the disposal or temporary stockpiling of the excavated material,

- Characterization of on-site soils and the remaining ditch soils,
- Design of Phase II removal activities, and
- Preparation of a Phase II Work Plan detailing additional removal tasks necessary to complete the requirements of the AOC.

On March 18, 2003, URS submitted the Phase I Removal Action Report and the Phase 1 Soil Characterization Report (Refs. 16, 18). Based on the results, URS recommended addressing the soils exceeding performance standards in the Phase II Work Plan, and addressing disposal options for the stockpiled soils in Ditch 1 in the Phase II Work Plan (Ref. 16, p. 10). Both reports were approved by EPA in April 2003 (Ref. 17, p. 2). Details of the Phase I activities are summarized in Section 2.6.1 of this report.

Phase II of the removal action consisted of on-site soil removal activities (Ref. 17). On October 14, 2005, URS and Newfields submitted the Phase II Soil Removal Report for Red Panther (Ref. 17). The PRP Group requested a "No Further Action" and termination of the order based on the successful completion of the AOC requirements. The AOC requirements were completed by implementing the Phase I off-site ditch characterization and removal in 2002, the Phase I characterization of the on-site soils in 2002 and 2003, and the Phase II soil removal in 2005 (Ref. 17). Details of the Phase II activities are summarized in Section 2.6.2 of this report.

All PRP removal activities were overseen and documented by Weston Solutions, Inc (Weston) START-2 at the request of EPA. After completion of the removal activities, EPA tasked Weston to conduct an environmental assessment of the nearby 18th Street Neighborhood located just west of Red Panther. On December 22, 2005, Weston submitted a Final Removal Assessment Letter Report for the 18th Street Neighborhood site (Ref. 19). EPA currently plans to utilize the data generated from the 18th Street investigation and Red Panther to conduct an analysis of potential long term threat to human health and the environment. Details of the 18th Street Neighborhood investigation are discussed in Section 2.6.3 of this report.

2.6.1 Phase I Activities

On April 1, 2002, EPA approved the Phase I Work Plan submitted by the PRP (Ref. 20). Modifications to the Phase I Work Plan were submitted to EPA on August 24, 2002 (Ref. 21). The revised Phase I Work Plan was approved on September 4, 2002 (Ref. 17, p. 6). On November 12, 2002, Weston START-

2 mobilized to perform oversight of contractor and subcontractor activities at Red Panther (Ref. 2). URS was the primary contractor for the PRPs. URS retained HEPACO Incorporated (HEPACO) to carry out the planned site work (Ref. 16).

Contaminated soils in the drainage Ditches 1, 2, 3, and 4 in Area A, to the east side of the site, were removed (Ref. 16, p. 5). The soils from these ditches were analyzed for VOCs, Toxicity Characteristic Leachate Procedure (TCLP) SVOCs, TCLP metals, and TCLP pesticides for waste profiling. The 0 to 1 foot level of the soil excavated from Ditch 1, the top 2 feet of Ditches 2 and 3, and the top 2 feet of soil from Ditch 4 were profiled as non-hazardous waste (Ref. 16, p. 5). These soils were loaded directly into trucks for disposal in the Waste Management, Subtitle D Landfill, located in Robinson, Mississippi. The soils from the 1 to 2 foot level from Ditch 1 were profiled as hazardous waste and were stockpiled inside the concrete berm in Area B to be removed during the Phase II activities, since these soils exceeded TCLP criteria (Ref. 16, p. 6). During these activities, approximately 900 tons of soil was removed from four of the six ditches. Due to high levels of arsenic found in drainage Ditches 5 and 6, URS recommended that a chain link security fence be installed around the ditches to prevent public access, and the soil removal be addressed in the Phase II Work Plan (Ref. 16, p. 2).

During this removal activity, URS retained W.L. Burle Engineers, Inc., in Greenville, Mississippi, to conduct soil characterization sampling in Areas B, C, and D (Ref. 18, p. 4). Area B, located on the northern side of the site (including Ditches 5 and 6), was segregated into 20 grids for surface and subsurface soil sampling. A five-point composite surface sample was collected from each grid (Ref. 18, p. 5). Single point aliquots from each composite sample were also collected in the event that the analysis from the composite sample indicated that further analysis was required. Two borings were completed in each grid using direct push technology (DPT). Each of these soil borings was sampled at the 0 to 2 foot, 2 to 6 foot, and 6 to 10 foot bls intervals. These levels were used in determining the vertical extent of the contamination (Ref. 18, p. 5). The surface soil analytical results indicated the presence of arsenic (Ref. 18, p. 6). The highest concentrations of arsenic occurred in the grids located along the retaining wall at the northern property boundary and in Ditches 5 and 6. Generally, Area B surface soils were not impacted by chlorinated pesticides above the performance standards. The subsurface analytical results were similar to the surface soil composite data. The elevated concentrations of arsenic appeared to decrease with increasing depth (Ref. 18, p. 6).

Area C consisted of the railroad spur on the western side of the site (Ref. 18, p. 7). There were five sets of DPT borings completed along the railroad spur. Each pair consisted of one DPT boring on the north

side and one on the south side of the track. Each of these borings was sampled at the 0 to 2 foot, 2 to 6 foot, and 6 to10 foot bls intervals. These levels were used in determining the vertical extent of the contamination. The analytical data indicated that these soils along the railroad spur adjacent to the tank farm contained arsenic (Ref. 18, p. 8). Reportedly, arsenic dry products were off-loaded from railroad cars in this area. Total chlorinated pesticides, dieldrin, and toxaphene were detected further to the south along the railroad spur at the location of DPT-CP3. Reportedly, the railcar off-loading of liquid pesticides occurred in this area of the spur. The area around CP3 also receives storm water drainage from the roofs of several buildings and along the railroad tracks (Ref. 18, p. 8).

Area D was located on the southern side of the site (Ref. 18, p. 8). Area D was segregated into 11 grids. A five-point composite surface sample was collected from each grid. Single aliquots from each composite sample were collected in the event that the analysis from the composite sample indicated further analysis was required. Two DPT boring were completed in each grid. Each of these soil borings was sampled at the 0 to 2 foot, 2 to 6 foot, and 6 to 10 foot bls intervals. These levels were used in determining the vertical extent of the contamination. The surface soil analytical results indicated the surface soils contained chlorinated pesticides. The arsenic concentrations detected in the surface soils in Area D were significantly less than those detected in Area B and Area C. The DPT soil sample analytical data indicated that the pesticide concentrations occurred mainly in the surficial soils (0 to 2 foot) and decreased significantly in concentration in the 2 to 6 foot and 6 to 10 foot intervals (Ref. 18, p. 8).

2.6.2 Phase II Activities

Phase II of the AOC consisted of the removal of soils impacted above the performance standards. Phase II was divided into two stages consisting of an Interim Removal and the Removal Action (Refs. 2, 17). In October 2004, URS, Newfields, and HEPACO mobilized to Red Panther to begin the Interim Removal, and to prepare the site for the Phase II Soil Removal. The Interim Removal addressed the following items:

- The contents of eight ASTs ranging in size from 200 gallons (trailer mounted tank) up to 15,000 gallons in the Area B tank farm were cleaned out, the contents disposed off site, and the tanks cut up and the metal recycled (32.64 tons). The tanks contained various amounts of solids and/or liquids impacted with arsenic and/or pesticides. The contents of the tanks were shipped to Waste Management's treatment facility in Emelle, Alabama.
- The rail line (approximately 700 feet) and portions of the loading dock (approximately 117 tons) in Area C were removed so the soils impacted above the performance standards could be removed during the Phase II Soil Removal.

10

- The non-hazardous contents of a silo in Area D were removed and the silo dismantled for scrap metal.
- Ditch 1 soils (approximately 60 tons) that were stockpiled on site during the November 2002 offsite ditch removal were shipped off site to the Waste Management Sulphur, Louisiana Subtitle C facility for bioremediation. The soils were classified as a characteristic hazardous waste for toxaphene and endrin.

In March 2005, the Phase II Soil Removal was initiated (Ref. 17). The following is a summary of the items addressed during the removal:

- A total of 1,180 tons of non-hazardous concrete was demolished during the removal and shipped off site to the Waste Management Tunica Subtitle D landfill located in Robinson, Mississippi. The hazardous concrete (32 tons) was disposed of as hazardous debris at the Waste Management facility in Emelle, Alabama.
- In Area B, a total of 5,341.27 tons of arsenic impacted soils were removed and shipped to the Emelle, Alabama facility for stabilization. Another 200 tons of pesticide impacted soils were excavated from a portion of Area B and stockpiled in Area D with the hazardous pesticide soils. Approximately 4,800 tons of non-hazardous soils of the site wide total 14,396.70 tons were excavated from Area B and shipped off site to the Tunica Subtitle D landfill. All surface soils (0 to 2 feet) in Area B were excavated and replaced with clean backfill. The final subsurface confirmation sample results for Area B were 248.5 milligrams per kilogram (mg/kg) of arsenic, 5.4 mg/kg of toxaphene, and 0.6 mg/kg of dieldrin, which meet the performance standards outlined in the AOC.
- In Area C, a total of 1,903.73 tons of hazardous pesticide impacted soils were removed and shipped to the Onyx facility in Port Arthur, Texas for incineration. In addition to the hazardous pesticide soils, approximately 2,500 tons of non-hazardous soils of the site wide total of 14,396.70 were excavated from Area C and shipped off site to the Tunica Subtitle D landfill. All surface soils in Area C were excavated and replaced with clean backfill. The final subsurface confirmation sample results for Area C were 131.7 mg/kg of arsenic, 102.8 mg/kg of toxaphene, and 7.1 mg/kg of dieldrin, which meets the performance standards.
- In Area D, an estimated 6,550 tons of non-hazardous soils of the site wide 14,396.70 tons were excavated and shipped to Tunica Subtitle D landfill. All surface soils in Area D were excavated and replaced with clean backfill. The final subsurface confirmation sample results were 11.7 mg/kg of arsenic, 92.1 mg/kg of toxaphene, and 8.4 mg/kg of dieldrin, which met the performance standards.
- The off-site ditches (Area A) were re-sampled on June 20 and 21, 2005 to determine if the soils had been re-impacted above the surface soil performance standards since the 2002 off-site ditch removal. Based on the analytical results, it was determined the surface soils (0 to 2 feet) required removal from Ditches 1, 3, and 4. In Ditch 1, the 65-foot segment that required additional excavation form the 2002 removal was excavated to a depth of 6 feet bls. Approximately 550 tons of non-hazardous soils were excavated from the ditches and transported off site for disposal at the Tunica D Subtitle D landfill. The final subsurface confirmation sample results were 14.2 mg/kg of arsenic, 6.4 mg/kg of toxaphene, 0.8 mg/kg of dieldrin, and 4.7 mg/kg of total chlorinated pesticides, which met the performance standards.

- During the removal, approximately 160,000 gallons of storm water was pumped from areas being excavated or backfilled during the removal. The storm water was contained, treated, sampled, and discharged to the City of Clarksdale Publicly Owned Treatment Works (POTW). The water was treated using a treatment system consisting of a pretreatment frac tank, micron filtration, followed by liquid phased carbon absorption. A permit for the discharge was not required under Mississippi regulations if the amount discharged on a daily basis did not exceed 20,000 gallons. All discharges met the City of Clarksdale discharge requirements.
- Dust control measures were implemented during the removal activities on an as needed basis and consisted of wetting the haul routes with a water truck equipped with a spray bar. All the air monitoring data indicated the respirable dust action levels of 0.25 milligrams per cubic meter were not exceeded during the removal activities.
- Following the soil excavation activities, the site was restored to the pre-removal conditions. The site was graded and covered with gravel and secured by a new 6-foot chain link security fence.

2.6.3 18th Street Neighborhood

The 18th Street Neighborhood is a residential area located to the west of Red Panther (Ref. 1). The site consists of single family dwellings on approximately 0.25 acre lots. The area of interest included properties on 14th, 15th, 16th, 17th, 18th, 19th, and West Tallahatchie Streets (Ref. 19).

On August 9, 2005, Weston began collecting samples for EPA at the 18th Street Neighborhood (Ref. 19, p. 4). A total of 31 composite samples including a background (SN-01-SS) were collected from residential yards. The background sample from the B.F. McLaurin Park was collected as a reference point to determine what direct impact Red Panther might have had on the soils in the neighborhood. On August 10, 2005, four active municipal groundwater supply wells were sampled (Ref. 19, p. 5). Of these four wells, two were shallow wells (approximately 600 feet deep) and two were deep wells (approximately 1,000 feet deep). Weston was also tasked with collecting three sediment samples from the Sunflower River because a storm water drain runs directly from Red Panther, under the 18th Street Neighborhood, to the Sunflower River. However, after investigating the river bank for access points to collect the samples, EPA decided that there were no suitable places to safely obtain the sediment samples.

All samples were analyzed for pesticides, aluminum, arsenic, and iron (Ref. 19). Of the 30 residences sampled, 26 soil samples were elevated above background concentrations for pesticides. Dieldrin was elevated above the EPA Preliminary Remediation Goal (PRG) value of 0.03 mg/kg in 11 of the samples. Toxaphene was above the EPA Preliminary Remediation Goal (PRG) value of 0.44 mg/kg in four

samples. No pesticides were detected in the groundwater samples. No metals were detected at elevated concentrations in any samples.

Weston concluded that the standard quantization limit (SQL) for pesticides in the data analysis was an extremely low value and that pesticides are typically present at some levels in agricultural areas such as Coahoma County (Ref. 19, p. 6).

2.7 Source Areas

The sources previously identified and documented at Red Panther include contaminated soils and on-site tank contents (Refs. 16, 17, 18). Red Panther is approximately 6.5 acres in size. Since numerous buildings and other structures occupy the majority of the site, it is assumed that no more than half the site (3.25 acres) was subject to contaminated soils. Soil sampling conducted in the Phase I and Phase II investigations also support this assumption. In addition, eight ASTs were present on site. The contents of these tanks, as documented in manifests, consisted of 150,000 pounds of arsenic contaminated sludge and 83,000 pounds of arsenic and pesticide contaminated sludge. The total estimated volume of arsenic and pesticide contaminated tank sludge was 233,000 pounds (Ref. 17).

Source contaminants include, but are not limited to, the following: arsenic, dieldrin, toxaphene, endrin, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, heptachlor, heptachlor epoxide, alpha-chlordane, gamma-chlordane, gamma-BHC (lindane), methoxychlor, and endosulfan II (Refs. 6, 16, 17, 18). These contaminants were documented to exist in association with historical operations on site. Further, pesticides and arsenic were detected in samples collected on site.

Due to removal activities conducted by the PRP, all sources have been removed from Red Panther; however, because EPA was involved with the site prior to the removal activities, the sources are available to be considered for the purposes of HRS.

3.0 PRELIMINARY HRS CONCERNS

This section discusses source and target information to be used to calculate the HRS score for the site. Sections 3.1 through 3.4 present HRS concerns for the groundwater, surface water, soil, and air pathways.

3.1 Groundwater Migration Pathway

The groundwater migration pathway is of primary concern at Red Panther because all drinking water in the study area comes from groundwater sources. According to MDEQ, a major municipal drinking water supplier in the area is the City of Clarksdale, which operates 10 wells ranging from approximately 600 to 1,300 feet deep (Ref. 23). Eight of the wells draw water from the Sparta Aquifer, and two wells draw water from the Meridian-Upper Wilcox Aquifer. The City of Clarksdale maintains 7,353 connections per well, serving a total population of 20,809 and resulting in an average population per well of 2,081. Clarksdale Public Utilities (CPU) maintains one well, located within 4 miles from Red Panther (Refs. 1, 23). The well draws water from the Meridian-Upper Wilcox Aquifer. CPU maintains 10,432 connections for this well, serving a total population of 29,523. The Town of Lyon maintains one well within 2 to 3 miles from the site. The well also draws water from the Meridian-Upper Wilcox Aquifer. The Town of Lyon maintains 183 connections to this well, serving a population of 518 people. All municipal wells in the area are located within Wellhead Protection Areas (Ref. 23).

Private wells exist within a 4 mile radius of Red Panther (Refs. 1, 23). One documented private well is located within a 4 mile radius of the site. The well draws water from the Meridian-Upper Wilcox Aquifer from approximately 1,200 feet. The population served by private wells was calculated by multiplying the total number of houses served by private wells within each radial ring by 2.83, the average number of people per household based on the 2000 U.S. Census (Ref. 24). Numerous irrigation wells are also documented to exist within 4 miles of Red Panther (Ref. 23). These wells draw water from the Mississippi River Valley Alluvial Aquifer at approximately 94 to 164 feet.

3.2 Surface Water Migration Pathway

The surface water migration pathway at Red Panther is of minimal concern. Surface water runoff from the facility follows one of two pathways. The first pathway drains runoff into the ditch along Leflore Avenue and Patton Street, east of the facility, which then flows into a second ditch along Highway 49, intersecting an intermittent stream approximately 22,400 feet southeast of the facility (Ref. 6). The intermittent stream flows in a westerly direction for approximately 4,000 feet before entering the Sunflower River. The second pathway to the Sunflower River is via storm drains located on the west side of the facility along East Tallahatchie Avenue. The storm drains flow directly into the Sunflower River approximately 3,000 feet west of the facility, bypassing the city POTW plant. In both cases, the 15-mile Target Distance Limit (TDL) terminates in the Sunflower River (Ref. 1).

...)

The Sunflower River is the major inland water body of the Mississippi Delta. It runs south from the Moon Lake area in Coahoma County, 207 miles south to the confluence of the Yazoo River and Steele Bayou approximately 10 miles north of Vicksburg, Mississippi (Refs. 25; 26, p. 3). Its waters are used for commercial and recreational fishing, dilution of permitted effluents from municipal waste treatment plants, irrigation water supply, and general recreation. Buffalofish and catfish are generally fished in the Sunflower River waters (Ref. 27). Wetlands exist on the Sunflower River; however, none are present within the 15-mile TDL (Ref. 29). The average flow rate of the river was reported at 59.55 cubic feet per second (Ref. 30).

Three federally listed endangered species have been identified as inhabitants of concern in the area (Ref. 31). The fat pocketbook (*Potamilus capax*), a mussel, is listed as a statewide endangered species. This species has been found in the lower Mississippi River and may occur in side channels. The least tern (*Sterna antillarum*), a bird, and the pallid sturgeon (*Scaphirhynchus albus*), a fish, are listed as endangered species in Coahoma County. The endangered pondberry (*Lindera melissifolia*), one of the world's rarest shrubs, is found on the river's banks (Ref. 25). There are no listed reptiles/amphibians or mammals.

No surface water samples have been collected from the Sunflower River in relation to Red Panther.

3.3 Soil Exposure Pathway

No source currently exists at Red Panther due to the removal activities; however, the soil exposure pathway is of potential concern at Red Panther because elevated levels of pesticides were present in residential soil samples collected from the 18th Street Neighborhood, located just west of the site (Ref. 19). Elevated pesticide concentrations above background were detected in 26 of 30 residential soil samples. Dieldrin and toxaphene were also above EPA PRGs in numerous samples. Metals were analyzed for, but none were detected at elevated concentrations.

Residential neighborhoods are located less than 0.25 mile to the west of the site (Ref. 1). The population is distributed as follows: 0 to 0.25-mile, 660 persons; 0.25 to 0.5-mile, 2,268 persons; and, 0.5 to 1-mile, 8,212 persons (Ref. 32). Four schools, Booker T. Washington Elementary, W.A. Higgins Junior High School, Myrtle Hall III Elementary School, and Myrtle Hall 4 Elementary School, are within 1 mile of the

site (Ref. 33). The nearest school, Booker T. Washington Elementary, is located approximately 0.3 mile to the west.

A fence currently surrounds the Red Panther property (Refs. 2, pp. 1, 7; 17, p. 23). No known terrestrialsensitive environments exist on site.

3.4 Air Migration Pathway

The air migration pathway is of minimal concern at Red Panther and was not evaluated. No air samples have been collected from the facility.

4.0 PROPOSED SAMPLING PLAN

The purpose of this SI is to collect environmental samples to determine whether contaminant migration has occurred as a result of both current and historic site activities. At the direction of the EPA, the SI will focus on collecting groundwater samples to determine whether migration to the groundwater pathway has occurred.

All sampling and field quality assurance and quality control (QA/QC) procedures for SI field activities will be conducted in accordance with the EPA EISOPQAM (Ref. 2). Samples will be submitted to EPA CLP laboratories for full routine analytical services parameters in accordance with the CLP Statement of Work (SOW) for Organics Analysis (OLM04.3) and Inorganics Analysis (ILM05.2) (Ref. 3). Laboratory QA/QC procedures will be conducted in accordance with the EPA EISOPQAM and National Functional Guidelines and Data Validation Standard Operating Procedures (SOP) for CLP Routine Analytical Services, Version 2.1 (Refs. 2, 3).

Collection of 13 environmental samples is currently planned during the SI. Section 4.1 provides details. Figures 3 and 4 located in Appendix A illustrate the proposed sampling locations, and Tables 1 through 3 located in Appendix B identify sample numbers, types, and rationale for each sampling location. Table 5 presents the appropriate sample containers and preservatives to be used per sample type. Approximately 11 additional QA/QC samples including blanks, spikes, and duplicates will be collected as required in the EPA EISOPQAM. All samples will be preserved and immediately be placed on ice in accordance with the EPA EISOPQAM (Ref. 2).

4.1 Groundwater Sampling

TN&A will collect 9 groundwater samples from the Mississippi River Valley Alluvial Aquifer from temporary monitoring wells. The temporary monitoring wells will be installed during the investigation using a Geoprobe[®] 6000 series direct push rig. One groundwater sample will be collected from the eastern portion of the site to establish background conditions. Samples will be collected from the perimeter of the property and at locations documented as areas of concern. Groundwater flows west-southwest toward the Big Sunflower River that is located approximately 0.35 mile west of the site. It is estimated that the groundwater samples will be collected from approximately 25 to 30 feet below ground surface (bgs).

The temporary well groundwater samples will be collected using a bladder or peristaltic pump, depending on the groundwater levels during the investigation. Groundwater parameters will be documented as stable prior to sample collection. The samples will be placed into the appropriate containers, preserved, and placed on ice in accordance with the EPA EISOPQAM. All purge water will be contained in a properly labeled 55-gallon drum and stored in a secured area on site until proper disposal can be determined.

TN&A will collect groundwater samples from four municipal wells located within 4 miles of the property. The two municipal wells of concern are located approximately 0.25 mile from the site. One well, located to the southwest of Red Panther, is screened in the Meridian-Upper Wilcox Aquifer. The background well to be sampled for comparison to this well is located in the Town of Lyon, which is also screened in the Meridian-Upper Wilcox Aquifer. The second well of concern is located immediately south of the site and is screened in the Sparta Aquifer. The background well to be sampled for comparison to this northeast of the site and is screened in the Sparta Aquifer. The background well to be sampled for comparison to this well is located approximately 1.5 miles northeast of the site and is screened in the Sparta Aquifer. The municipal well groundwater samples will be placed into the appropriate containers, preserved, and placed on ice in accordance with the EPA EISOPQAM.

TN&A will also visually assess the property and obtain Global Positioning System (GPS) coordinates of all sampling locations. The location of the samples may change based on the conditions encountered during the field event (i.e. Geoprobe[®] accessibility).

5.0 FIELD WORK SUMMARY

TN&A anticipates performing field activities during the week of September 10, 2007. EPA is responsible for acquiring site access, and complete ownership information has already been provided to EPA (Ref. 9). EPA reserves the right to conduct oversight during field activities. If access has not been obtained to certain properties or additional locations are identified and EPA is not present during field activities, then TN&A will attempt to gain access for sampling as necessary.

TN&A will conduct sampling activities after the sampling plan has been approved by EPA and access to the site has been obtained. Field activities will be conducted and quality assurance samples will be collected, in accordance with procedures documented in the EPA EISOPQAM. The proposed TN&A health and safety protocol to be followed during the investigation is described in the site Health and Safety Plan (HASP), which will be submitted under separate cover.

6.0 DISPOSAL OF INVESTIGATION-DERIVED WASTES

Investigation-derived wastes (IDW) will generally consist of soil cuttings, purge water, and personal protective equipment (PPE) including disposable latex gloves and boot covers. Drums containing soil cuttings and purge water will be sampled and sent to a laboratory for analysis. Sample results will determine whether the IDW should be disposed as hazardous materials. PPE are used mainly to prevent cross contamination, provide personnel protection, and provide sanitary conditions during sampling activities. If contact with concentrated wastes occurs, PPE will be secured in a 55-gallon drum on site, until sample analytical results are received. If, in the best professional judgment of the Field Team Leader, PPE can be rendered non-hazardous, it will be double-bagged and deposited in an industrial waste container, as directed in the IDW Management Guidance Manual.

If analytical data reveal contamination levels that require special handling, wastes will be profiled and disposed of by a licensed transportation and disposal facility. Up to three months will be required to profile drum contents, contract a disposal firm, and remove the drums from the site.

REFERENCES

- U.S. Geological Survey (USGS). 7.5-minute Series Topographic Quadrangle Maps of Mississippi: Friars Point, 1978; Coahoma, 1965; Jonestown, 1969; Sherard, 1968; Clarksdale, 1968; Sabino, 1981; Duncan, 1986; Mattson, 1969; Tutwiler, 1968.
- 2. Weston Solutions, Inc. (Weston). Final Removal Action Letter Report, Revision 1: Red Panther Chemical Company. Prepared for the U.S. Environmental Protection Agency (EPA) Region 4. December 27, 2005.
- 3. Mississippi Office of Pollution Control (MSOPC). A Preliminary Assessment Reassessment (PAR) Report for Red Panther Chemical Company. February 22, 1990.
- 4. U.S. Environmental Protection Agency (USEPA). Administrative Order on Consent for Removal Action. Signed July 2001.
- 5. USEPA. Action Memorandum. Subject: Request for an Enforcement Removal Action at the Red Panther Site, Clarksdale, Mississippi. Signed September 6, 2001.
- 6. MSOPC. Screening Site Inspection Report. January 31, 1991.
- 7. USEPA Envirofacts Warehouse. Envirofacts query results for "MSD000272385". Internet address: <u>http://www.epa.gov/enviro/html/multisystem_query_java.html</u>. Accessed January 1, 2006.
- 8. USEPA. Environmental News. Subject: EPA Announces The Availability Of The Administrative Record For The Red Panther Chemical Site, Clarksdale, Mississippi. December 22, 2003.
- 9. Weatherbase. Weatherbase: Historical Weather for Clarksdale, Mississippi. Internet address: http://www.weatherbase.com/weather. Accessed January 20, 2006.
- 10. USGS. Water For Industrial And Agricultural Development In Coahoma, De Soto, Panola, Quitman, Tate, and Tunica Counties, Mississippi. 1976.
- 11. USGS. Characterization of Aquifers Designated As Potential Drinking-Water Sources In Mississippi. Date unknown.
- 12. USGS. Ground Water Atlas of the United States: Arkansas, Louisiana, Mississippi. Subject: Mississippi Embayment Aquifer System. Internet address: <u>http://capp.water.usgs.gov/gwa</u>. Accessed March 31, 2006.
- 13. MSOPC. Logbook Notes from Site Screening Inspection. November 1990.

REFERENCES (continued)

- 14. Mississippi Department of Environmental Quality. Site Investigation Prioritization. January 30, 1992.
- 15. Tetra Tech EM, Inc. Letter Report. Submitted to USEPA Region 4. September 2, 1999.
- 16. URS Corporation (URS). *Phase I Removal Action Report*. Submitted to Red Panther PRP Group. March 18, 2003.
- 17. URS. Phase II Final Design Sampling Draft Report. Submitted to Red Panther PRP Group. August 5, 2004.
- 18. URS. *Phase I Soil Characterization Report*. Submitted to Red Panther PRP Group. March 18, 2003.
- 19. Weston. Final Removal Assessment Letter Removal Report: 18th Street Neighborhood. Submitted to USEPA Region 4. December 22, 2005.
- USEPA. Email from Kathleen Wright to Bob Mowrey (Alston & Bird, LLC) and Tony Moore (USEPA). Email forwarded from Tony Moore to Katrina Jones (USEPA). Subject: Red Panther-Approval of Work Plan. April 1, 2002.
- 21. Newfields. Letter to Katrina Jones (USEPA). Subject: Submittal of Data and Modifications to Phase I Work Plan Ditch Excavation and Site Characterization. August 24, 2002.
- 22. USEPA. Quick Reference Fact Sheet. The Revised Hazard Ranking System: Evaluating Sites After Waste Removals. October 1991.
- 23. T N & Associates, Inc. (TN&A). Project Note. Subject: Groundwater Well Information for City of Clarksdale, MS. February 10, 2006.
- 24. U.S. Census Bureau. Census 2000 Demographic Profile for Coahoma County, Mississippi. Internet address: <u>http://factfinder.census.gov</u>. Accessed February 1, 2006.
- 25. American Rivers. America's Most Endangered Rivers of 2002. Internet address: http://www.americanrivers.org.
- 26. U.S. Department of Agriculture (USDA). Mississippi Delta Comprehensive, Multipurpose Water Resource Plan, Study Phase Summary.
- 27. Mississippi State University, Department of Wildlife and Fisheries. Fisheries Dynamics In The Yazoo River Basin.

REFERENCES (continued)

- U.S. Army Corps of Engineers. Yazoo Backwater Reformulation Frequently Asked Questions. Internet address: <u>http://www.mvk.usace.army.mil</u>. Accessed February 13, 2006.
- 29. U.S. Fish and Wildlife (USFW). Map of Wetland Inventory. Internet address: http://www.fws.gov.
- 30. USGS. Calendar Year Streamflow Statistics for the Nation: Big Sunflower River at Clarksdale, MS. Internet address: <u>http://nwis.waterdata.usgs.gov</u>. Accessed February 3, 2006.
- 31. USFW. Endangered and Threatened Species of Mississippi. Internet address: <u>http://www.fws.gov</u>. Accessed February 1, 2006.
- 32. U.S. Census Bureau. Landview V 2000 Census Data. Accessed February 1, 2006.

APPENDIX A

•

FIGURES



RED PANTHER FICURE







APPENDIX B

.

2

TABLES

TABLE 1 MUNICIPAL WELL SAMPLE LOCATIONS **RED PANTHER CHEMICAL COMPANY**

Sample Number	Location	Rationale
RP-MW-01	Background; Town of Lyon municipal well screened in the Meridian-Upper Wilcox Aquifer	Establish background conditions for comparison to RP-MW-02
RP-MW-02	Southwest of the site; Clarksdale Utilities municipal well screened in the Meridian-Upper Wilcox Aquifer	Determine presence or absence of hazardous constituents
RP-MW-03	Background; Clarksdale Utilities municipal well screened in the Sparta Aquifer	Establish background conditions for comparison to RP-MW-04
RP-MW-04	South of the site; Clarksdale Utilities municipal well screened in the Sparta Aquifer	Determine presence or absence of hazardous constituents

Notes: RP

•

÷

Red Panther Municipal Well MW

TABLE 2 **TEMPORARY WELL SAMPLE LOCATIONS RED PANTHER CHEMICAL COMPANY**

Sample Number	Location	Rationale
RP-TW-01	Background; To be determined in the field	Establish background conditions for comparison to other on-site samples
RP-TW-02	Northern portion of site; Located near Product Storage Building and Liquid Blending Facility	Determine presence or absence of hazardous constituents
RP-TW-03	West of Liquid Blending Facility; Northern portion of site	Determine presence or absence of hazardous constituents
RP-TW-04	East of Product Storage Building; Adjacent to Ditch 1	Determine presence or absence of hazardous constituents
RP-TW-05	West of former drum storage area; Adjacent to railroad spur	Determine presence or absence of hazardous constituents
RP-TW-06	West of Liquid Blending Facility and Storage Building; Southern portion of site	Determine presence or absence of hazardous constituents
RP-TW-07	Former drum waste storage tank area	Determine presence or absence of hazardous constituents
RP-TW-08	Southernmost corner of site; Near southern ditch	Determine presence or absence of hazardous constituents
RP-TW-09	East of Warehouse; Near southern ditch	Determine presence or absence of hazardous constituents

Notes: RP TW

۰

.

Red Panther Temporary Well

(0)

TABLE 3 QUALITY ASSURANCE/QUALITY CONTROL SAMPLES **RED PANTHER CHEMCIAL COMPANY**

Sample Number	Location	Rationale
RP-MW-05	Duplicate municipal well sample	Verify that laboratory can duplicate results
RP-TW-10	Duplicate temporary well sample	Verify that laboratory can duplicate results
RP-DS-01	Drum Sample of 1DW (Purge water and/or decon water)	Determine how IDW should be disposed of
RP-TB-01	Trip Blank (Day 1)	
RP-TB-02	Trip Blank (Day 2)	Determine if unknown site conditions
RP-TB-03	Trip Blank (Day 3)	or sample handling procedures are
RP-TB-04	Trip Blank (Day 4)	influencing sample results
RP-TB-05	Trip Blank (Day 5)	
RP-MB-01	Metals Blank	Determine if unknown site conditions or sample handling procedures are influencing sample results
RP-PB-01	Preservative Blank	Verify that preservative is not influencing sample results
RP-RB-01	Rinsate Blank	Verify that decontamination procedures adequately clean equipment

Notes:

,

.

RP

MW

TW

Red Panther Municipal Well Temporary Well Investigation-Derived Waste Preservative Blank IDW

PB

ТΒ RB

Trip Blank Rinsate Blank Drum Sample DS

MB Metals Blank

TABLE 4 ANALYTICAL METHODOLOGY, SAMPLE CONTAINERS, AND PRESERVATIVES RED PANTHER CHEMICAL COMPANY

Matrix	Analysis	EPA Method	Sample Container	Preservative
	VOC		Three 40-mL vials with septa	HCl; Cool to 4 °C
Water	SVOC Pesticides/PCB Metals Cyanide	CLP	Two 1-Liter Amber jar Two 1-Liter Amber jar One 1-Liter poly jar One 1-Liter poly jar	Cool to 4 °C Cool to 4 °C HNO3; Cool to 4 °C NaOH; Cool to 4 °C

Notes:

٩.

Volatile Organic Compounds Semivolatile Organic Compounds Polychlorinated Biphenyl VOC SVOC

PCB

Contract Laboratory Program

CLP ℃ Degree Celsius

HCL Hydrochloric Acid

HNO3 Nitric Acid

mL Milliliter

NaOH Sodium hydroxide





"Limari Krebs" <LKrebs@tnainc.com> 08/15/2007 08:53 AM To <robert_huckaby@deq.state.ms.us>

cc <webster.donna@epa.gov>, "Allyson Warrington" <awarrington@tnainc.com>

bcc

Subject TNA-05-003-0004_Red Panther SAP

Dear Mr. Huckaby:

....

Per Ms. Donna Webster's request at the EPA, I am forwarding to you an electronic copy of the Red Panther Site Sampling and Analysis Plan (SAP) Rev. 0 including the figures and tables. Please let me know if you are unable to view the attachments.

Regards,

Limari F. Krebs		
Senior Scientist, START Region IV		
T N & Associates, Inc.		
1220 Kennestone Cir. • Ste. D • Marietta, Georgia 3	0066	
Office: 678-355-5550 ext. 5703 • Cell: 404-729-5542	2 • Fax: 678-355-5545	
Email: <u>Lkrebs@tnainc.com</u> • Web: <u>www.tnainc.com</u>		
<u></u>	and the second se	
Red Panther Figure 4.pdf Red Panther SSP Tables.pdf	Red Panther SSP_Final.pdf	Red Panther Figure 1.pdf

4ka

Red Panther Figure 2.pdf Red Panther Figure 3.pdf







Webster.Donna@epamail.ep a.gov 08/15/2007 09:11 AM To Robert_Huckaby@deq.state.ms.us

cc bcc

Subject Re: Fw: Red Panther Chemical Company: Site Sampling Plan Submittal

I will be out of town all next week. How does COB the 24th sound, so I can get her comments on the 27th?

You should have the whole document now - I talked to Limari Krebs of TN&A and she said the file wasn't terribly large. Let me know if it failed to get through to you.

Thanks!

Donna K. Webster Remedial Project Manager Superfund Site Evaluation Section US EPA, Region 4 (404) 562 - 8870

> Robert_Huckaby@d eq.state.ms.us

08/14/2007 11:56 AM

То

CC

Donna Webster/R4/USEPA/US@EPA

. .

Subject Re: Fw: Red Panther Chemical Company: Site Sampling Plan Submittal

Donna,

Sure, putting those files on their FTP site should be fine. How long do you anticipate your review taking? Just trying to get an idea about how long I have.

Thanks Robert

Webster.Donna@epa

mail.epa.gov



08/13/2007 11:59

AΜ

Robert_Huckaby@deq.state.ms.us

CC

To

Subject

Fw: Red Panther Chemical Company: Site Sampling Plan Submittal

Robert,

Here is the SI workplan for Red Panther. I will talk to Allyson about sending you the figures and tables as well. She may be able to just load it onto the TN & A FTP site if that works for you.

Donna K. Webster Remedial Project Manager Superfund Site Evaluation Section US EPA, Region 4 (404) 562 - 8870 ----- Forwarded by Donna Webster/R4/USEPA/US on 08/13/2007 12:58 PM

"Allyson Warrington" ≺awarrington0tna		То
inc.com>	Donna Webster/R4/USEPA/US@EPA	
		CC
08/10/2007 03:58	"Greg Kowalski"	
PM	<pre><gkowalski@tnainc.com>, Darryl</gkowalski@tnainc.com></pre>	
	Walker/R4/USEPA/USGEPA Katrin	2
	Waiker/R4/OBBIR/OBEBR, Ratiin	a
	Jones/R4/USEPA/US@EPA	
	Subj	ect
	Red Panther Chemical Company:	
	Site Sampling Plan Submittal	



Good Afternoon:

Attached is the Site Sampling Plan (Revision 0) for the Red Panther Chemical Company, TDD No. TNA-05-003-0004. Due to the size, all figures and tables will be delivered on Monday via FedEx with the hardcopy report.

If you have any questions or comments, feel free to contact me at 678-355-5550 ext. 5709.

Sincerely,

Allyson Warrington

T N & Associates, Inc. Environmental Scientist/START Site Assessment Coordinator 1220 Kennestone Circle, Suite D Marietta, GA 30066 Phone: 678-355-5550 ext. 5709 Fax: 678-355-5545 (See attached file: Red Panther SSP_Final.pdf)(See attached file: Red Panther SSP_Final.pdf)(See attached file: Red Panther SSP_Final.pdf)

-

Red Panther SSP_Final.pdf







"Allyson Warrington" <awarrington@tnainc.com> 08/08/2007 09:14 AM To <Robert_Huckaby@deq.state.ms.us>

cc bcc

Subject Red Panther

Good Morning!

Thank you very much for the map and database printout. It will be really helpful in my groundwater study at the site. I will keep you informed on our plans with EPA.

Sincerely,

Allyson Warrington

T N & Associates, Inc. Environmental Scientist/START Site Assessment Coordinator 1220 Kennestone Circle, Suite D Marietta, GA 30066 Phone: 678-355-5550 ext. 5709 Fax: 678-355-5545





Robert Huckaby/HW/OPC/DEQ 08/07/2007 02:49 PM To "Allyson Warrington" <awarrington@tnainc.com>@INETDEQ

°cc bcc

Subject Re: Water Info (Red Panther)

Allyson,

Yes, the information is relatively the same but in a different format. I only printed out the Municipal Wells on the map and accompanying report. The map shows the 4- mile radius buffers the HRS specifies (0 to 1/4 mile; 1/4 to 1/2 mile; 1/2 to 1 mile, 1 to 2 miles, etc.). Hopefully is will be of some help to you. I gave it to Fed Ex this afternoon so you may have it tomorrow.

Robert

"Allyson Warrington" <awarrington@tnainc.com>



"Allyson Warrington" <awarrington@tnainc.com> 08/07/2007 10:50 AM

To <Robert_Huckaby@deq.state.ms.us> cc Subject Water Info (Red Panther)

Hey Robert,

This is the main spreadsheet that we obtained from the State and used in our target calculation. Page 5 (bottom) was the most important to us. Is this similar to what you have?

Allyson Warrington

T N & Associates, Inc. Environmental Scientist/START Site Assessment Coordinator 1220 Kennestone Circle, Suite D Marietta, GA 30066 Phone: 678-355-5550 ext. 5709 Fax: 678-355-5545



Water info Coaoma Co MSDEQ revised.xls





"Allyson Warrington" <awarrington@tnainc.com> 08/07/2007 09:54 AM

cc bcc

Subject RE: Red Panther Chemical Co.

To <Robert_Huckaby@deq.state.ms.us>

Great! Thanks for the information. I'm going to attempt to get a Geoprobe to the site in the next month or so to install temporary wells for collection of groundwater samples. I know we've all been in a drought, so I'm hoping that the Geoprobe will able us to reach water in the Sparta Aquifer (surficial aquifer). What do you think? The information we have on groundwater levels (80's) is really outdated. I'm assuming we'll have to collect the water samples with a bladder pump since the groundwater will likely be greater than 25 feet bls.

----Original Message----From: Robert_Huckaby@deq.state.ms.us [mailto:Robert_Huckaby@deq.state.ms.us] Sent: Tuesday, August 07, 2007 10:55 AM To: Allyson Warrington Subject: RE: Red Panther Chemical Co.

Allyson,

No, we don't have any reports from Weston in the late 90's. We do however have a "Draft Expanded Site Inspection Report" prepared by Tetra Tech in 1999. In this report there is a "Previous Releases and Investigations" section. There is no mention of any work performed by Weston in the 1990's in this section.

They do mention the three monitoring wells that were installed in 1989 though. This "Draft ESI Report" says that two of the three wells were abandoned but one well was still present in 1999. However, this well had no protective concrete pad. With all the gravel that has been brought in and spread across the site, the chances of finding this well are slim to none.

Hope this answers your question. If you need anything else, please let me know.

Robert

"Allyson

Warrington"

<awarrington@tnai

nc.com>

<Robert Huckaby@deg.state.ms.us>

To





08/06/2007 03:34

PM

Subject

"Stacy Kowalski"

<SKowalski@tnainc.com>

RE: Red Panther Chemical Co.

Hi Robert,

After speaking with my colleagues who previously worked for Weston Solutions, they recalled collecting groundwater samples back in the late 90s. Do you happen to have a report generated by Weston Solutions (formerly Roy F. Weston) around 1997?

Thank you, Allyson

-----Original Message-----From: Robert_Huckaby@deq.state.ms.us [mailto:Robert_Huckaby@deq.state.ms.us] Sent: Friday, July 27, 2007 10:56 AM To: Allyson Warrington Subject: RE: Red Panther Chemical Co.

Allyson,

To my knowledge, no, not anymore. I have walked that site several times and never encountered any of these wells. We do have a figure that shows the former location of these wells. Well #3 was in the area that was excavated during the removal actions, but this well was never ecountered. I would have to assume that they have been abandoned, but we have no record of that (at least that I could find).

Robert

CC





"Allyson

Warrington"

<awarrington@tnai

nc.com>

AM

<Robert_Huckaby@deq.state.ms.us>

CC

To

07/27/2007 09:00

Subject

RE: Red Panther Chemical Co.

Robert,

Do you know if there are any permanent wells on the site?

Allyson

-----Original Message-----From: Robert_Huckaby@deq.state.ms.us [mailto:Robert_Huckaby@deq.state.ms.us] Sent: Friday, July 27, 2007 8:49 AM To: Allyson Warrington Cc: Webster.Donna@epamail.epa.gov Subject: Re: Red Panther Chemical Co.

Allyson,

The following is an excerpt from a report developed by Memphis Enviornmental Center in the late 1980's that summarizes work that was performed at the Red Panther facility.

"To investigate the groundwater underlying the Red Panther facility, one exploratory boring and three monitoring wells were installed. The exploratory boring was completed first to a depth of sixty feet. This was done to give some indication fo the site geology and aid in the selection of screening depths for the monitoring wells. The boring indicated at that

location there is approximately 16 feet of silty clay overlying approximately 34 feet of very tight clay. At approximately the 50 foot depth, a sandy clay was encoutered until the boring was terminated at 60 feet." "Results of the exploratory boring and well installations indicated that across the site there exists 25 to 50 feet of clay overlying a sandy clav water bearing strata. Based on the limited number of water level measurements, the groundwater depth appears to range from 20 to 30 feet." Allyson, it appears that the three monitoring were screened as follows: MW #1 screened from 30 feet to 40 feet bls. MW #2 screened from 38 feet to 48 feet bls. MW #3 screened from 25 feet to 35 feet bls. Hopefully this helps. If you need more info, please let me know.

Robert

	"Allyson	
	Warrington"	
T.o.	<awarrington@tnai< td=""><td></td></awarrington@tnai<>	
10	nc.com>	<robert_huckaby@deq.state.ms.us></robert_huckaby@deq.state.ms.us>
сс		
	07/26/2007 08:20	<webster.donna@epamail.epa.gov></webster.donna@epamail.epa.gov>
Subject	AM	
Subject		Red Panther Chemical Co.

Good Morning, Robert:

I hope that you received my phone message late yesterday. In order to complete the Sampling Plan for Red Panther, I need current water level

information directly underneath the site. Can you locate this
information
for me? I need to determine whether or not we can use a Geoprobe to
install temporary monitoring wells or if a larger drill rig is
necessary.
I also need to determine the purging equipment for sampling
(peristaltic,
bladder, grundfos, etc.).

Thank you very much,

Allyson Warrington

T N & Associates, Inc. Environmental Scientist/START Site Assessment Coordinator 1220 Kennestone Circle, Suite D Marietta, GA 30066 Phone: 678-355-5550 ext. 5709 Fax: 678-355-5545





Robert Huckaby/HW/OPC/DEQ 07/27/2007 09:56 AM To "Allyson Warrington" <awarrington@tnainc.com>@INETDEQ

cc bcc

Subject RE: Red Panther Chemical Co.

Allyson,

To my knowledge, no, not anymore. I have walked that site several times and never encountered any of these wells. We do have a figure that shows the former location of these wells. Well #3 was in the area that was excavated during the removal actions, but this well was never ecountered. I would have to assume that they have been abandoned, but we have no record of that (at least that I could find).

Robert

"Allyson Warrington" <awarrington@tnainc.com>



"Allyson Warrington" <awarrington@tnainc.com> 07/27/2007 09:00 AM

To <Robert_Huckaby@deq.state.ms.us>

CC

Subject RE: Red Panther Chemical Co.

Robert,

Do you know if there are any permanent wells on the site?

Allyson

----Original Message----From: Robert_Huckaby@deq.state.ms.us [mailto:Robert_Huckaby@deq.state.ms.us] Sent: Friday, July 27, 2007 8:49 AM To: Allyson Warrington Cc: Webster.Donna@epamail.epa.gov Subject: Re: Red Panther Chemical Co.

Allyson,

The following is an excerpt from a report developed by Memphis Enviornmental Center in the late 1980's that summarizes work that was performed at the Red Panther facility.

"To investigate the groundwater underlying the Red Panther facility, one exploratory boring and three monitoring wells were installed. The exploratory boring was completed first to a depth of sixty feet. This was done to give some indication fo the site geology and aid in the selection of screening depths for the monitoring wells. The boring indicated at that location there is approximately 16 feet of silty clay overlying approximately 34 feet of very tight clay. At approximately the 50 foot depth, a sandy clay was encoutered until the boring was terminated at 60 feet."
"Results of the exploratory boring and well installations indicated that
across the site there exists 25 to 50 feet of clay overlying a sandy
clay
water bearing strata. Based on the limited number of water level
measurements, the groundwater depth appears to range from 20 to 30
feet."
Allyson, it appears that the three monitoring were screened as follows:
MW
#1 screened from 30 feet to 40 feet bls. MW #2 screened from 38 feet to
48
feet bls. MW #3 screened from 25 feet to 35 feet bls.

Hopefully this helps. If you need more info, please let me know.

Robert

"Allyson

nc.com>

AΜ

Warrington"

<awarrington@tnai

То

cc

07/26/2007 08:20

<Robert Huckaby@deq.state.ms.us>

<Webster.Donna@epamail.epa.gov>

Subject

Red Panther Chemical Co.

Good Morning, Robert:

I hope that you received my phone message late yesterday. In order to complete the Sampling Plan for Red Panther, I need current water level information directly underneath the site. Can you locate this information for me? I need to determine whether or not we can use a Geoprobe to install temporary monitoring wells or if a larger drill rig is necessary. I also need to determine the purging equipment for sampling (peristaltic, bladder, grundfos, etc.).

Thank you very much,

Allyson Warrington

T N & Associates, Inc. Environmental Scientist/START Site Assessment Coordinator 1220 Kennestone Circle, Suite D Marietta, GA 30066 Phone: 678-355-5550 ext. 5709 Fax: 678-355-5545





Webster.Donna@epamail.ep a.gov 04/17/2007 08:06 AM To Robert_Huckaby@deq.state.ms.us

cc Phillip_Weathersby@deq.state.ms.us

bcc

Subject Fw: Red Panther

Robert,

I wanted to give you a heads up that Red Panther will be started by the contractor soon. I will make sure you are included in the sampling plan review.

Donna K. Webster Remedial Project Manager Superfund Site Evaluation Section US EPA, Region 4 (404) 562 - 8870 ----- Forwarded by Donna Webster/R4/USEPA/US on 04/17/2007 09:04 AM

Donna Webster/R4/USEPA	
/US	То
	Katrina Jones/R4/USEPA/US
04/12/2007 11:08	CC
AM	Ralph Howard/R4/USEPA/US@EPA
	Subject
	Red Panther

Katrina,

I need to task a Site Inspection under the START contract for the Red Panther site in Clarksdale, MS.

I would prefer T.N. & A. conducted the work, because they did the Reassessment and are familiar with site conditions and history.

The SI should be for the CLINS under Small Site Inspection (1-30 samples).

If you have any questions, please give me a call.

Thank you!

Donna K. Webster Remedial Project Manager Superfund Site Evaluation Section US EPA, Region 4 (404) 562 - 8870





Robert Huckaby/HW/OPC/DEQ 02/12/2007 04:15 PM To webster.donna@epa.gov

cc Phillip Weathersby/HW/OPC/DEQ@DEQ

bcc

Subject Red Panther SI

Donna,

Spoke with Phillip about the upcoming Red Panther SI. Just so everyone is on the same page, Phillip and I understand that this SI will only address the Groundwater Migration Pathway. No other pathways (surface water or offsite soils) will be addressed. Furthermore, we understand that this upcoming SI will be the last sampling investigation performed under the PA/SI program unless this site is placed on the NPL:

MDEQ supports the SI being tasked to an EPA contractor, as long as MDEQ can review and provide comment on the workplan.

Thanks for your help,

Robert



Robert Huckaby/HW/OPC/DEQ 01/25/2007 02:17 PM

- To Webster.Donna@epamail.epa.gov@INETDEQ
- cc Howard.Ralph@epamail.epa.gov, Phillip_Weathersby@deq.state.ms.us bcc

Subject Re: Red Panther

Donna,

From a cursory review of the revised scoresheets everything appears to be acceptable. Since using the Sparta Sand in scoring changes the calculations, it is requested by the MDEQ that a 2nd Site Investigation be performed to complete the Groundwater pathway. Also, it is requested that the work plan for this SI be completed by contracors. However, the MDEQ would like to be able to review and comment on this work plan before it is finalized and implemented.

Thanks Robert Webster.Donna@epamail.epa.gov



Webster.Donna@epamail.ep a.gov

- 01/25/2007 07:28 AM
- To Robert_Huckaby@deq.state.ms.us

cc Phillip_Weathersby@deq.state.ms.us, Howard.Ralph@epamail.epa.gov Subject Red Panther

Robert,

I wanted to make sure you received the revised scoresheets for Red Panther. You can replace the pages, but be careful - I noticed that C-5 and C-11 need to be the originals (one of them is the drawing of the SW pathway). She did not correct the typo on pg. 11 of the scoresheets, but it never affected the calculation. I didn't check for the other typo. As long as the aquifer scoring is correct, I'm okay.

Please let me know:

Thanks,

Donna K. Webster Remedial Project Manager Superfund Site Evaluation Section US EPA, Region 4 (404) 562 - 8870





Howard.Ralph@epamail.epa. gov 01/11/2007 12:38 PM To Robert_Huckaby@deq.state.ms.us

cc Phillip_Weathersby@deq.state.ms.us

bcc

Subject Fwd: Red Panther Revisions

----- Forwarded by Ralph Howard/R4/USEPA/US on 01/11/2007 01:38 PM -----

Stacy Kowalski <skowalski@tnain< th=""><th></th></skowalski@tnain<>	
c.com>	То
	webster.donna@epa.gov
01/11/2007 11:03	cc
AM	Allyson Warrington
	<awarrington@tnainc.com>, Greg</awarrington@tnainc.com>
	Kowalski <gkowalski@tnainc.com>,</gkowalski@tnainc.com>
	Ralph Howard/R4/USEPA/US@EPA
	Subject
	Red Panther Revisions

Donna,

Attached are the revisions to the Red Panther scoresheets and confidential pages that were discussed during our call with MDEQ on Wednesday, January 10. I have only attached the pages that include changes.

Replace pages C-1 through 18 and the last page (page C-61) in the SI Worksheets

Disregard the old copy of the Confidential Pages (including HRS Scoresheets) and replace them with this attached copy.

Please forward these changes on to MDEQ and let me know if you (or MDEQ) have any questions regarding the revisions.

Stacy Kowalski Project Geologist TN & Associates, Inc. (See attached file: Red Panther 1-18 Final rv. 1.doc)(See attached file: Page C-61 rv.1.doc)(See attached file: Red Panther ConfdPgs.doc)

Red Panther 1-18_Final rv. 1.doc Page C-61 rv.1.doc Red Panther ConfdPgs.doc

Memorandum

To: Red Panther Chemical File

- CC: Phillip Weathersby, Chief, CERCLA
- From: Robert Huckaby
- Date: January 10, 2007
- **Re:** Red Panther Facility Clarksdale, MS

On this date the MDEQ, EPA and a representative from TN&A had a conference call to discuss the Red Panther facility in Clarksdale, MS. In early 2006, TN&A prepared a Reassessment Report for this facility. In June 2006, MDEQ submitted to EPA correspondence which consisted of comments and questions regarding this Reassessment Report. This conference call was in regards to the MDEQ comment and question correspondence.

(The topics below are addressed in the order as they were discussed during the conference call)

- Topic #1: A Hazardous Waste Quotient (HWQ) of 100 was used in scoring the Soil Exposure Pathway, not 10.
- Topic #2: 3 was used as the value for Targets in the Surface Water Overland/Flood Migration Pathway calculation.
- Topic #3: TN&A explained that considering parts of the 18th Street neighborhood as part of the source area because of the Level I and Level II contamination detected would very likely decrease the overall score of the site.
- Topic #4: A major concern of the MDEQ in this Reassessment was that the 1985 fish kill was not considered an observed release in scoring the Surface Water Migration Pathway. TN&A explained that because insufficient data from the fish kill existed (i.e., tissue samples), this incident could not be used as an observed release.
- Topic #5: MDEQ questioned why only the Meridian-Upper Wilcox aquifer was used in the scoring of the Groundwater Migration pathway when several public supply wells are screened in the Sparta aquifer. Also, the MDEQ indicated that in the Reassessment Report it was stated that the Sparta and the Alluvium aquifers were more than likely hydraulically connected. The MDEQ also stated in this conference call that monitoring wells were installed at this facility in 1989. These wells were screened in the Alluvium Aquifer and one of the samples from these wells detected elevated levels of certain pesticides. TN&A stated that they would take this information and rescore the Groundwater Migration Pathway.

OUTCOME OF CONFERENCE CALL

It was agreed by all parties that TN&A would rescore the facility using the Sparta Aquifer in the Groundwater Migration Pathway and submit the amended Reassessment Report and HRS Scoring Package. Also, they would include recommendations for future activities in this report.



FILE COPY

STATE OF MISSISSIPPI HALEY BARBOUR GOVERNOR MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY CHARLES H. CHISOLM, ENECUTIVE DIRECTOR

June 20, 2006

Ms. Donna Webster Remedial Project Manager U.S. Environmental Protection Agency 61 Forsyth Street S.W. Atlanta, GA 30303

RE: Red Panther Chemical Company Clarksdale, Coahoma County, MS Reassessment Report EPA I.D. #MSD000272385

Dear Ms. Webster:

The Mississippi Department of Environmental Quality (MDEQ) has reviewed the above referenced report and has the following comments.

Groundwater Migration Pathway

 Using the values assigned to "Containment", "Net Precipitation", "Depth to Aquifer" and "Travel Time", the "Potential to Release" value was calculated to be 500. However, page C-15, Item #2 of the <u>Site Inspection Worksheet</u> states "If sampling data do not support a release to the aquifer, and the site is karst terrain or the depth to aquifer is 70 feet or less, assign a score of 500; otherwise, assign a score of 340." Please give further explanation of the 340 default value that was used to calculate the Groundwater Migration Pathway score.

Surface Water Migration Pathway

- 1. If the 1985 fish kill is considered an "observed release based on direct observation" then according to Sections 2.4.2.2 and 2.5 on page 51592 of 40 CFR Part 300, the hazardous waste quantity (HWQ) for this pathway should be 100 instead of 1.
- 3. Again, if the 1985 fish kill is considered an "observed release based on direct observation" then according to Section 4.1.3.3.1, page 52620 of 40 CFR Part 300, a value of 20 instead of 2 should have been assigned to "Food Chain Individual" (line 16, Page 8 of the HRS Scoresheet).
- 4. Line 25, Page 9 of the HRS Scoresheet should be 3 instead of 1.45.





Ms. Donna Webster June 20, 2006 Page 2

Soil Exposure Pathway

- 1. It appears that in scoring this pathway, the "source" was assumed to be onsite within the now present chain link fence. However, the 18th Street sampling event indicated that Level I and Level II contamination exists offsite in a residential neighborhood. The "Resident Individual" and "Resident Population" values would be altered if the contaminated soil in the residential neighborhood was considered part of the "source area".
- Page 4 of the "Hazard Ranking System Score" narrative states that a HWQ of 10 was used in the Soil Exposure Pathway. However, line 3, page 10, of the HRS Scoresheet indicates a HWQ of 100.

We appreciate your cooperation and assistance in this matter. If you have any comments, please contact me at (601) 961-5360.

Sincerely,

Robert H Huckaly

Robert H. Huckaby, P.E. CERCLA Section

cc: Ralph Howard, EPA Phillip Weathersby, CERCLA Chief



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 4 ATLANTA FEDERAL CENTER Fik

61 FORSYTH STREET ATLANTA, GEORGIA 30303-8960

JUN 1 6 2008

4 WD-ERRB

Mr. Jerry Banks, Chief Hazardous Waste Division Mississippi Department of Environmental Quality P.O. Box 10385 Jackson, MS 39289-0385

Subject: 18th Street Assessment Site, Clarksdale, Coahoma County, Mississippi

Dear Mr. Banks:

The U.S. Environmental Protection Agency's Emergency Response and Removal Branch (ERRB) conducted a Removal Site Evaluation (RSE) at the above referenced site for potential removal action eligibility under the National Contingency Plan (NCP).

Based on the information collected during the RSE, the On Scene Coordinator (OSC) recommends this site be given a **no further action** for removal eligibility under EPA's Superfund Removal Program. (See attached RSE memo)

This determination does not preclude any other investigation or response action by other parties which may still be appropriate for this site. Should site conditions change or additional information become available, ERRB will re-evaluate this site as necessary.

Should you have any questions concerning ERRB's determination, please contact Steve Spurlin, OSC at (731) 394-8996, or Jim McGuire, Chief of Removal Operations Section, at (404) 562-8911.

Sincerel Shane Hitchcock, Chief

A. Shane Hitchcock, Chief Emergency Response & Removal Branch

Enclosure

cc: Jennifer Wendell, Site Evaluation Section Tony Moore, Cost Recovery Section

U.S. ENVIRONMENTAL PROTECTION AGENCY REMOVAL ASSESSMENT POLLUTION REPORT

DATE: May 19, 2006

- SUBJECT: 18th Street Assessment Site Clarksdale, Coahoma Co., MS
- FROM: Steve Spurlin, OSC USEPA Region 4
- TO: Jim McGuire Terry Tanner Project File

I. SITE INFORMATION

The 18th Street Assessment Site consists of residential properties located near the Red Panther Superfund Site, Clarksdale, MS. A Superfund removal action has recently been completed at the Red Panther Site to address pesticide contamination at this former pesticide storage and formulation facility. Due to the pre-removal levels of pesticides detected at the facility, their past presence in off-site drainage ditches, and information provided by local residents about potential impact to their properties from past plant operations, EPA decided to conduct surface soil sampling on residential properties near the facility.

II. SITE ASSESSMENT

In August 2005, EPA, assisted by the START contractor, collected 31 surface soils samples from residential properties near the Red Panther Site. Also, to assist the EPA Site Evaluation program in their reassessment at the Red Panther Site, background samples and municipal well samples were collected. Sample analysis was coordinated through the EPA Athens lab. No pesticides were detected in the city well samples. Residential soil sample results indicted very low levels of pesticides. The results were reviewed by an EPA risk assessor, and determined to be below any removal action levels. All sample data has been provided to the EPA Remedial Site Evaluation program.

III. RECOMMENDATION

The levels of hazardous substances detected in the soils are below EPA removal action levels and pose no short term risks; therefore, I recommend this site be given a No further Action designation as it relates to the EPA Removal program.

program. Concon 5/2c/06





Robert Huckaby/HW/OPC/DEQ 01/04/2006 10:03 AM To Gloria Tatum/FS/OPC/DEQ@DEQ

cc Phillip Weathersby/HW/OPC/DEQ@DEQ

bcc

Subject Red Panther - Clarksdale, MS



Pope Letter.doc

Attached is a copy of the letter received from Ms. Maxstean Pope and Appolone Brooks. Both Ms. Pope and Ms. Brooks sent independent letters however they are identical in wording. Ms. Pope's phone number is (662) 624-5498. We currently do not have a phone number for Ms. Brooks. The MDEQ just received a copy of the sampling report from the soil sampling that was performed throughout the neighborhood. We got it over the holidays and it is a pretty extensive report so it is going to take a week or two to review it. Let me know what the next step is.

Thanks,

Robert

TO: Steve Spurlin, EPA On-Scene Coordinator, Region 4 Sherryl Carbonara, EPA Community Involvement Coordinator, Region 4 Robert Huckaby, State of MS Dept. of Environmental Quality

FROM: Maxstean Pope ///(f)

DATE: December 27, 2005

RE: Follow-up on Request to finalize claim for payment

Our request to file and finalize our request for payment has continued to be ignored. We feel that your method of trying to resolve the problem of the effects the Red Panther Chemical Company had on the individuals living in that area is appalling.

When we contacted Sherryl in May 2004, she specifically stated the names of persons that had been paid because of the effects that chemicals had caused them. The names of these persons were people we know personally. She also stated that she would get us the necessary information to be paid. She stated she would send us the information and give us names of other contacts, as well. At one point, Sherryl questioned whether the right people had been paid. She stated that it was not too late for us to file a claim for payment.

We later contacted Robert Huckaby (name given to us by Sherryl Carbonara) and he agreed with Sherryl that people had been paid. Although he stated that, the City of Clarksdale Governmental Officials was responsible for furnishing the names of the people that had been paid. He also stated that we could get paid, but he had to go to Meridian, MS on that day but when he return, he would assist us with the necessary steps to file and finalize our claim for payment.

We request that you move imperiously to bring fairness, justice and equity to this entire situation.

Thank you for your consideration.

TO: Steve Spurlin, EPA On-Scene Coordinator, Region 4 Sherryl Carbonara, EPA Community Involvement Coordinator, Region 4 Robert Huckaby, State of MS Dept. of Environmental Quality

FROM: Appolone Brooks / Rh

DATE: December 27, 2005

RE: Follow-up on Request to finalize claim for payment

Our request to file and finalize our request for payment has continued to be ignored. We feel that your method of trying to resolve the problem of the effects the Red Panther Chemical Company had on the individuals living in that area is appalling.

When we contacted Sherryl in May 2004, she specifically stated the names of persons that had been paid because of the effects that chemicals had caused them. The names of these persons were people we know personally. She also stated that she would get us the necessary information to be paid. She stated she would send us the information and give us names of other contacts, as well. At one point, Sherryl questioned whether the right people had been paid. She stated that it was not too late for us to file a claim for payment.

We later contacted Robert Huckaby (name given to us by Sherryl Carbonara) and he agreed with Sherryl that people had been paid. Although he stated that, the City of Clarksdale Governmental Officials was responsible for furnishing the names of the people that had been paid. He also stated that we could get paid, but he had to go to Meridian, MS on that day but when he return, he would assist us with the necessary steps to file and finalize our claim for payment.

We request that you move imperiously to bring fairness, justice and equity to this entire situation.

Thank you for your consideration.





Spurlin.Steve@epamail.epa.g ov 11/01/2005 05:59 PM To Robert_Huckaby@deq.state.ms.us

cc Gloria_Tatum@deq.state.ms.us, Phillip_Weathersby@deq.state.ms.us bcc

Subject Re: Red Panther - Clarksdale, MS

Robert, Sherryl assures me she provided the disk and health info to Ms Brooks and Pope. I don't believe we sampled either of their properties, so we can't give them the data until we give the property owners the data. The hurricane has delayed that process. Nothing much showed up, but I do need to try to get the info to the parties. We hoped to have a face-to-face to discuss the data--again this is a scheduling prob. I guess we need to send them a follow-up letter to explain the status.

> Robert_Huckaby@d eq.state.ms.us

> 11/01/2005 02:32 PM

	То
Steve Spurlin/R4/USEPA/US@	EPA
-	CC
Phillip_Weathersby@deq.sta	te.ms.u
s, Gloria_Tatum@deq.state.	ms.us
	Subject
Red Panther - Clarksdale,	MS

Steve,

We have received a second request for information from Appolone Brooks and Maxstean Pope. The information they specifically requested are the results of the recent soil sampling done along 18th Street, a disk that Sheryl was supposed to provide to them and information the health specialist was going to present at the August 9, 2005 meeting. I know you are extremely busy with the Hurricane but when you get time can you contact me so we can discuss their request and how we can help disseminate this information. My work number is 601-961-5360 and my cell phone number is 601-953-9347. Thanks

Robert



 \bigcirc



October 13, 2005

Mr. Steve Spurlin On Scene Coordinator United States Environmental Protection Agency Region IV Ed Jones Federal Building 109 South Highland Ave. B-13 Jackson, Tennessee 38301

Re: Phase II Soil Removal Report Red Panther Site <u>Clarksdale, Mississippi</u>

Dear Mr. Spurlin:

Enclosed please find one hard copy and one electronic copy of the Phase II Soil Removal Report. This report documents the completion of the Phase II requirements outlined in the 2001 AOC between EPA and the Performing Potentially Responsible Parties (PRP) for the Red Panther site in Clarksdale, Mississippi.

The Red Panther PRP Group requests a "No Further Action" and termination of the order based on the successful completion of the AOC requirements. The AOC requirements were completed by implementing the Phase I offsite ditch characterization and removal in 2002, the Phase I characterization of the onsite soils in 2002/2003, and the Phase II Soil Removal in 2005. With the submittal of this closure report the scope of work at the Red Panther site is now complete. As such, we request EPA provide a site closure certification letter (Certificate of Completion) with a recommendation of "No Further Action" as described in item XIX Notice Of Completion of the AOC.

-000-

If you need additional bound copies of this report, have any questions, or need additional information, please contact me at (678) 808-8915.

Yours very truly, URS Corporation

Mrale/nl

Brent B. Jacobs, P.G. Project Coordinator

URS Corporation 400 Northpark Town Center 1000 Abernathy Road, NE Suite 900 Atlanta, GA 30328 Tel: 678.808.8800 Fax: 678.808.8400

hap be

Warner Golden, P.E. Technical Director





Robert Huckaby/HW/OPC/DEQ 11/01/2005 02:32 PM

- To spurlin.steve@epa.gov
- cc Phillip Weathersby/HW/OPC/DEQ@DEQ, Gloria Tatum/FS/OPC/DEQ@DEQ

bcc

Subject Red Panther - Clarksdale, MS

Steve,

We have received a second request for information from Appolone Brooks and Maxstean Pope. The information they specifically requested are the results of the recent soil sampling done along 18th Street, a disk that Sheryl was supposed to provide to them and information the health specialist was going to present at the August 9, 2005 meeting. I know you are extremely busy with the Hurricane but when you get time can you contact me so we can discuss their request and how we can help disseminate this information. My work number is 601-961-5360 and my cell phone number is 601-953-9347. Thanks

Robert





STATE OF MISSISSIPPI HALEY BARBOUR

GOVERNOR

FILE COPY

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

October 31, 2004

Ms. Maxstean Pope 140 18th Street Clarksdale, MS 38614

Dear Ms. Pope:

The Mississippi Department of Environmental Quality (MDEQ) has received your requests for certain information regarding the former Red Panther facility in Clarksdale, MS. Presently, Steve Spurlin and Sherryl Carbonara of the Environmental Protection Agency (EPA) are on the Mississippi Gulf Coast performing work related to the Hurricane Katrina relief efforts. The MDEQ will pursue trying to attain this information.

Your continued patience in this matter is greatly appreciated.

Sincerely,

Robert H. Huckaby, P.E. Groundwater Assessment & Remediation Division

cc: Phillip Weathersby, MDEQ Gloria Tatum, MDEQ

OFFICE OF POLLUTION CONTROL POST OFFICE BOX 10385 • JACKSON, MISSISSIPPI 39289-0385 • TEL: (601) 961-5171 • FAX: (601) 354-6612 • www.deq.state.ms.us AN EQUAL OPPORTUNITY EMPLOYER





FILE COPY

STATE OF MISSISSIPPI Haley Barbour Governor MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY Charles H. Chisolm, Executive Director

October 31, 2004

Ms. Appolone Brooks 513 6th Street Clarksdale, MS 38614

Dear Ms. Brooks:

The Mississippi Department of Environmental Quality (MDEQ) has received your requests for certain information regarding the former Red Panther facility in Clarksdale, MS. Presently, Steve Spurlin and Sherryl Carbonara of the Environmental Protection Agency (EPA) are on the Mississippi Gulf Coast performing work related to the Hurricane Katrina relief efforts. The MDEQ will pursue trying to attain this information.

Your continued patience in this matter is greatly appreciated.

Sincerely,

Kobert H. Huckaby, P.E.

Robert H. Huckaby, P.E. Groundwater Assessment & Remediation Division

cc: Phillip Weathersby, MDEQ Gloria Tatum, MDEQ