GULFPORT FERTILIZER
GULFPORT, MS
HARRISON COUNTY
Work Plan and
Interim Corrective Action Plan

INTERIM CORRECTIVE ACTION PLAN

Former Gulfport Fertilizer Site
33rd Street
Gulfport, Mississippi

Presented on Behalf of:
Hancock Bank
2510 14th Street
Gulfport, MS 39501

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1.0 INTRODUCTION

Hancock Bank owns an approximately 145 acre, unimproved, vacant property in Gulfport, MS bounded on the south by 33rd Street, on the west by 34th Avenue, on the north by North Gulfport Subdivision and on the east by the railroad. The property is located in Section 33, Township 7 South, Range 11 West, City of Gulfport, Harrison County, Mississippi. The property consists of an approximately 33-acre tract (Former Gulfport Fertilizer Site) owned by Hancock Bank since the late 1970s on which the Gulfport Fertilizer Company operated a super-phosphate fertilizer operation from about 1914 – 1920. The remaining approximately 112 acre tract was acquired by Hancock Bank in late March 2005 from the Harreld Family Trust and is a vacant, undeveloped, heavily wooded property. Since Hurricane Katrina in August 2005, the southern portion of the Harreld Family Trust property has been cleared (along 33rd Street and partially along 34th Avenue). The remainder of the property has remained in heavy woods, although the woods were heavily damaged by Hurricane Katrina.

The Former Gulfport Fertilizer Site was found to have contamination in the soil and groundwater, probably as a result of the super-phosphate operations on the site. Beginning in September 1998, Butler Services of Mississippi, Inc. (Butler Services), on behalf of Hancock Bank, began a site characterization investigation to determine the nature and extent of contamination on the site. Butler Services collected 260 soil samples on the site from 0'-2' and 2'-4' below the ground surface (BGS). The collected soil samples were analyzed for arsenic and lead.

The results of the Butler Services investigation were presented in the *Site Characterization Report* for the site dated October 25, 1999. The report concluded that there were four (4) major source areas on the site where the arsenic and/or lead regulatory limits were exceeded in the site soils from 0'-4' BGS. The report recommended that additional soil samples be collected to determine the vertical extent of the arsenic and/or lead soil contamination. Installation of monitoring wells and collecting groundwater samples was also recommended in order to evaluate the extent of groundwater contamination at the site, if any.

After reviewing the *Site Characterization Report* for the subject site, the Mississippi Department of Environmental Quality (MDEQ) required that:

- the horizontal and vertical extent of soil contamination along the western boundary of the Former Gulfport Fertilizer site be determined;
- a minimum of six (6) monitoring wells be installed on the site; and
- all borings be advanced to a "laterally extensive low permeability confining layer underlying the surficial water bearing zone".

Butler Services prepared a work plan for this supplemental investigation – *Work Plan Off-Site/Source Area Soils and Groundwater Sampling* – addressing MDEQ's requirements.

Hancock Bank hired Covington and Associates Corporation (CAC) in late October 2001 to replace Butler Services in implementing the Work Plan for the supplemental site investigation. CAC advanced forty-three (43) on-site geoprobe borings and twenty-two (22) off-site geoprobe borings. Soil samples were collected at 2' intervals from 0' – 8' below the ground surface (BGS) and at 4' intervals from 8' BGS to 8'-16' BGS or the low permeability confining clay layer, whichever was less. The soil samples collected from the 0'-2' BGS and 2'-4' BGS soil intervals were analyzed to determine the arsenic and lead concentration in each soil interval. At those locations where the arsenic and/or lead concentration exceeded the site's regulatory limits (7.1 mg/kg for arsenic and 400 mg/kg for lead, assuming the site would be used for unrestricted – residential - purposes in the future), samples from subsequent soil intervals were analyzed until the arsenic and/or lead concentration were below the site's regulatory limits. Two-foot (2') stream sediment samples were taken from four (4) locations along the stream located west of the western boundary of the Former Gulfport Fertilizer Site. Each stream sediment sample was analyzed for arsenic and lead. Groundwater samples were taken from twelve (12) of the boring locations. "Unfiltered" and "filtered" groundwater samples were collected and analyzed for arsenic and lead.

The supplemental site investigation findings were presented in the *Supplemental Site Characterization Report* prepared by CAC and submitted to MDEQ on November 8, 2002. The supplemental site investigation determined:

- The low permeability confining clay layer is 20'-26.5' BGS.
- The horizontal and vertical extent of the arsenic soil concentrations exceeding the site's regulatory limit for arsenic in soil (7.1*9* mg/kg) has been adequately defined, except in a small area on the off-site property (the Harreld Family Trust property) at 0'-2' BGS and 2'-4' BGS. It is felt that the horizontal and vertical extent in these off-site areas is within 100' of the last boring location advanced.
- The majority of the soil exceeding the site's regulatory limit for arsenic in soil occurs in the 0'-6' BGS soil interval.
- The total arsenic concentrations found in soil samples at the site do not exceed arsenic's TCLP regulatory limit (5.0 mg/l). Therefore, the site soils are not considered to be hazardous for arsenic.
- The horizontal and vertical extent of the lead soil concentrations exceeding the site's regulatory limit for lead in soil at unrestricted (residential) sites (400 mg/kg) has been adequately defined, except in a small area on the off-site property (the Harreld Family Trust Property) at 0'-2' BGS. It is felt that the horizontal and vertical extent in these off-site areas is within 100' of the last boring location advanced.
- The majority of the soil exceeding the regulatory limit for lead in soil at restricted (residential) sites occurs in the 0'-2' BGS soil interval.
- Sub-surface soils exceeding 3,800 mg/kg total lead concentration will be considered hazardous for lead (TCLP lead > 5.0 mg/l).
- All collected stream sediment samples were below the site's regulatory limit for

arsenic in soil (7.1$\underline{9}$ mg/kg) and below the regulatory limit for lead in soil at unrestricted (residential) sites (400 mg/kg). It is concluded that the stream has not been impacted by previous site operations.

- All of the "unfiltered" (Total) groundwater samples collected exceeded MDEQ's Tier 1 TRG for arsenic in groundwater (0.010 mg/l) and for lead in groundwater (0.015 mg/l). It is felt that this is due to the presence of soil particles in the groundwater samples.
- Arsenic and lead analytical results for "filtered" (Dissolved) groundwater samples exceeded MDEQ's Tier 1 TRG in the northwest and west area of the site.

A naturally occurring radioactive material (NORM) survey was performed on the site by CAC. The survey included identifying "hot spot" areas (areas where field radioactive readings exceeded 20 uR/hr) on the site. Following NORM survey procedures, soil samples were collected in a 100-meter sampling area east of the fertilizer production concrete slab. The soil samples were collected from 0"-6" BGS and from 6"-12" BGS. The collected soil samples were analyzed to determine the concentration of Radium-226 and Radium-228 in the soil samples in pico-curies per gram (pCi/gm).

The NORM survey determined the following:

- The horizontal and vertical extent of two (2) areas of the site where NORM concentrations exceeded the NORM regulatory limit for transfer of property for unrestricted (residential) uses were identified and adequately defined.

In order to determine the extent of soil contamination off-site, on the adjacent Harreld Family Trust property, which is now part of the overall site, CAC proposed to perform a supplemental off-site soil investigation. MDEQ approved CAC's plan for collecting additional off-site soil borings on April 21, 2003. From April 2003 to November 2003, CAC advanced seventy (70) additional borings on the Harreld Family Trust property. On July 29, 2003, CAC submitted a *Supplemental Off-Site Characterization Report.* The report was revised and re-submitted on December 1, 2003.

The supplemental off-site soil investigation determined the following:

- The horizontal and vertical extent of the arsenic soil concentrations exceeding the site's regulatory limit for arsenic in off-site soil (7.1*9* mg/kg) has been defined.
- The majority of the off-site soil exceeding the site's regulatory limit for arsenic in soil occurs in the 0'-4' BGS soil intervals.
- The horizontal and vertical extent of the off-site lead soil concentrations exceeding the site's regulatory limit for lead in soil at unrestricted (residential) sites (400 mg/kg) has been defined.
- The off-site soil exceeding the regulatory limit for lead in soil at unrestricted (residential) sites occurs in the 0'-2' BGS soil interval, only.
- Off-site soils exceeding 3,800 mg/kg total lead concentration occurred at one location, only – OS-6, 0'-2' BGS – and will be considered hazardous for lead (TCLP lead > 5.0 mg/l), if excavated.

Figure 1 shows the horizontal extent of arsenic and lead contaminated soil identified on the site.

CAC collected groundwater samples from seven (7) monitoring wells located on the Former Gulfport Fertilizer site for eight consecutive quarters from June 19, 2002 (First Sampling Round) to March 4, 2004 (Eighth Sampling Round). Each groundwater sample was analyzed for lead and arsenic concentrations. pH readings of each groundwater sample were also collected. CAC presented conclusions about the groundwater on the Former Gulfport Fertilizer site in a letter report entitled "Historical Groundwater Monitoring Report" dated August 10, 2004.

The data presented in this "Historical Groundwater Monitoring Report" for the Gulfport Fertilizer site demonstrated the following:

- The groundwater flow direction at this site has consistently followed a north to northwesterly path.
- Total Arsenic concentrations in the groundwater consistently exceeded the Tier 1 TRG of 0.010 mg/L at MW-2, MW-4 and MW-6, with minor excursions reported at MW-1, MW-3 and MW-7.
- Arsenic-contaminated groundwater potentially migrated onto the adjacent Harreld Family Trust (off-site) property, which, at the time, was not owned by Hancock Bank.

- Total Lead concentrations in the groundwater consistently exceeded the Tier 1 TRG of 0.015 mg/L at MW-1.
- Lead-contaminated groundwater is confined to the Former Gulfport Fertilizer site.
- Total metals data generally suggests that arsenic and lead concentrations in the groundwater are influenced most by the associated metals concentrations in the soils, as opposed to the pH levels in the soil or groundwater.
- Soil analytical information presented in the November 8, 2002 *Supplemental Site Characterization Report* demonstrates that the arsenic in the soil is not highly mobile and does not leach into the groundwater.
- The soil TCLP data presented in the *Supplemental Site Characterization Report* does, however, support that lead may be leachable at high concentrations (above 3,800 mg/kg).

In order to estimate the extent of groundwater contamination on the Harreld Family Trust Property (off-site property), CAC advanced twelve (12) borings on the Harreld Family Trust Property on October 20 and 21, 2004. Groundwater samples were collected from each boring and analyzed for arsenic and lead. CAC estimated the extent of groundwater contamination based on the samples collected from the twelve (12) borings. Figure 2 shows the extent of groundwater contamination on Hancock Bank property based on previous groundwater studies performed by CAC.

Hancock Bank is seeking to market the property to potential purchasers. It is anticipated that the purchaser of the property will use the property for industrial purposes, only. In order to entice potential purchasers to the property, Hancock Bank is proposing to implement part of the anticipated Corrective Action Plan (CAP) activities. This Interim Corrective Action Plan presents the CAP activities and rationale for those activities Hancock Bank proposes to implement. As part of the purchase agreement with the potential purchaser, the potential purchaser will prepare and submit a Final Corrective Action Plan addressing the remaining CAP activities the potential purchaser will be responsible to implement. It is anticipated that the potential purchaser will submit the Final Corrective Action Plan to MDEQ for approval prior to purchasing the property.

1.1 Objectives and Rationale

Since it is anticipated that the property will be utilized for industrial purposes and that there will be controlled access to the property, this Interim Corrective Action Plan will present engineering and institutional controls, which will be implemented by Hancock Bank, in preparation of selling the property.

The engineering and institutional controls presented in this Interim Corrective Action Plan will protect human health and the environment since the soil contamination is confined to the site and has been shown not to be mobile - arsenic is not leachable at soil concentrations found on the site and concentrations of lead, which are leachable (above 3,800 mg/kg), will be removed from the site under this Interim Corrective Action Plan.

Additionally, a large portion of the soil contamination is located in a wetlands area, which will remain. The wetlands minimize the potential for contaminated soil migrating from the site.

The groundwater contamination is also confined to the site. Groundwater data collected during the site characterization investigations shows the groundwater concentrations to be stable, indicating that the soil is not a continuing source of contamination to the groundwater. It is anticipated that the engineering and institutional controls that will be presented in the Final Corrective Action Plan by a future purchaser of the property will provide long-term monitoring of the groundwater. Source removal presented in this Interim Corrective Action Plan and the anticipated capping of portions of the site by the future purchaser of the property that will be presented in the Final Corrective Action Plan will further insure that the groundwater contamination does not increase or migrate.

2.0 CONCEPTUAL DESIGN

The following engineering and institutional controls will be implemented in accordance with the Schedule presented in Section 4.0 of this Interim Corrective Action Plan.

2.1 Use Restrictions

It is anticipated that Use Restrictions will be placed on the property through a property deed restriction executed between the purchaser of the property and MDEQ. The proposed Use Restrictions will be presented in the Final Corrective Action Plan prepared by the potential purchaser and will be negotiated with MDEQ by the potential purchaser.

2.2 Security Fencing

It is anticipated that the future purchaser of the property, under the Final Corrective Action Plan, will place security fencing around the perimeter of the property. The Final Corrective Action Plan will present the specifications for the security fencing around the perimeter of the property.

If Hancock Bank does not have the property under contract to sell the property within thirty-six (36) months of approval of this Interim Corrective Action Plan, Hancock Bank will construct a 6-foot chain link fence around the contaminated portion of the property. Figure 3 shows an anticipated layout of both fences – the perimeter security fence by the

future purchaser and the "interim" security fence installed by Hancock Bank within thirty-six (36) months of approval of this Interim Corrective Action Plan, if the property has not been placed under contract to sell.

In order to prevent/limit access to the portion of the site where Naturally Occurring Radioactive Material (NORM) is present, a 6' security fencing with warning signs will be installed under this Interim Corrective Action Plan. This is being done to protect any future workers who might be on site. Figure 4 shows the anticipated layout of the security fence around the NORM-contaminated area.

2.3 Monitoring Well Installation

Seven (7) monitoring wells will be installed to monitor the groundwater contamination at the site. Figure 5 shows the proposed location of the seven (7) additional monitoring wells. Each well will be installed in accordance with the Work Plan Off-Site/Source Area Soils and Groundwater Sampling (the Work Plan) prepared by Butler Services of Mississippi, Inc. approved by MDEQ on January 31, 2002. Each well will be installed to a depth of 15' below ground surface (BGS) to conform to the depths of the existing monitoring wells installed on the site. Figure 6 is a Well Construction Diagram showing the construction of the proposed monitoring wells.

It is anticipated that the Final Corrective Action Plan submitted by the potential purchaser of the property will include a log-term groundwater monitoring plan that will include the

frequency of sampling the monitoring wells, the analysis to be conducted and contingencies to address migration of groundwater should the groundwater contamination move beyond the network of monitoring wells installed on the site or move off-site.

2.4 Excavation of Lead Contaminated Soil above 3,800 mg/kg

In order to eliminate a potential source of soil that could be contributing to the lead-contaminated groundwater at the site, all soil on the Former Gulfport Fertilizer Site having a lead concentration greater than 3,800 mg/kg, except those soils located within the wetlands, will be excavated and properly disposed at a permitted landfill. Any soil having a lead concentration greater than 3,800 mg/kg, that is located in identified wetlands areas on the previously designated Harreld Family Trust Property, will remain in place. Analysis of soil samples collected by CAC in 2002 and a statistical analysis of those results presented in CAC's Supplemental Site Characterization Report showed that lead contaminated soil having a concentration greater than 3,800 mg/kg exceeded 5.0 mg/l lead under the Toxicity Characteristic Leaching Procedures (TCLP) analysis. MDEQ, in its review of CAC's Supplemental Site Characterization Report, concurred with CAC's assessment.

Figure 7 shows the limits of soils exceeding 3,800 mg/kg. Section 7.0 of this Interim Corrective Action Plan presents sampling and monitoring procedures that will be followed to insure that all lead-contaminated soil above 3,800 mg/kg has been excavated.

2.5 On-Site NORM Contamination

Two areas of Naturally Occurring Radioactive Material (NORM) contaminated soil have been identified on the site (See Figure 4). Although the NORM contamination at this site is not regulated by the Mississippi State Department of Health (MSDH), Hancock Bank will take measures to identify the areas of NORM contamination and warn site personnel and contractors not to enter these areas. As shown on Figure 4, a 6-foot security fence will be installed around these areas. Signs will be placed on the fence warning persons about the presence of NORM contamination and telling site personnel and contractors to keep out. It is anticipated that the development plans prepared by the future purchaser of the property will include capping the area with pavement. The capping of this area will be addressed in the Final Corrective Action Plan.

It is anticipated that the Use Restriction that will be filed on the site will designate the locations of the NORM-contaminated soil as shown on Figure 4. This will be addressed in the Final Corrective Action Plan.

2.6 Capping of Arsenic/Lead Contaminated Soil

It is anticipated that the majority of the arsenic- and lead-contaminated soil will be capped with pavement or a building under the future purchaser's development plans. This capping will be addressed in the Final Corrective Action Plan. It is anticipated that the Mississippi Department of Environmental Quality will require the final cap, if pavement,

to be fairly impermeable and resistant to damage and degradation. Additionally, it is anticipated that the Final Corrective Action Plan will include long-term monitoring of the final cap to insure that the final cap meets the minimum performance requirements agreed to by MDEQ. *The final cap will be 6" of asphalt or concrete or a minimum of 10 inches of clean compacted soil, as specified by MDEQ in a letter dated January 18, 2008, and will be implemented under activities contained in the Final Corrective Action Plan.* Until the Final Corrective Action Plan is implemented or the future purchaser is ready to develop the areas where these soils are located, the soils will remain in place and will remain undisturbed, except in the area of the lead-contaminated soil exceeding 3,800 mg/kg, which will be excavated under this Interim Corrective Action Plan. Existing vegetative cover will remain in place.

2.7 Protection of Existing Wetlands

Wetlands are located on the portion of the site designated *as* the Harreld Family Trust Property, as well as a small wetlands area on the site designated the Former Gulfport Fertilizer property. It is anticipated that the limits of the wetlands will be marked during the implementation of the Final Corrective Action Plan. It is anticipated, under the Final Corrective Action Plan, that these areas will remain as wetlands. Additionally, it is anticipated that the Final Corrective Action Plan will include an Ecological Risk Assessment to determine if ecological receptors located in the on-site wetlands areas will be adversely impacted by allowing the soil and groundwater contamination to remain in

place. The scope of the Ecological Risk Assessment will be *for* the on-site wetlands areas, only.

Under the Interim Corrective Action Plan, paths sufficient for gaining access to monitoring well sites will be cleared. There will be no filling of the wetlands and, therefore, a permit is not required. The paths will be cleared to cause minimum damage to the wetlands.

2.8 Stormwater Run-off Controls

It is anticipated under the Final Corrective Action Plan, that the future purchaser will provide detention basins and other stormwater control measures in accordance with the City of Gulfport requirements and that the future purchaser will also be required to address the quality of the stormwater runoff leaving the site in accordance with the MDEQ Water Quality Criteria. This will be addressed in the Final Corrective Action Plan.

2.9 Health and Safety Issues

A Health and Safety Plan has been developed for construction workers and future workers on the site. Personnel implementing the Interim Corrective Action Plan will follow the Health and Safety Plan. The Health and Safety Plan is attached as Appendix A and includes air monitoring during excavation and construction activities and dermal

protection of workers during excavation and construction activities and normal site activities.

3.0 SYSTEM COMPONENTS

None of the proposed *Interim* Corrective Action Measures include system components.

4.0 SCHEDULE

The schedule for implementing the *Interim Corrective Action Plan* is shown below. The anticipated date for implementing each step of the *Interim Corrective Action Plan* is from the date *the Interim Corrective Action Plan* is approved by the MDEQ, unless otherwise noted.

Interim Correction Action Measure	**Group Responsible for Interim Corrective Action Measure**	**Completion after MDEQ Approval of Interim Corrective Action Plan (Calendar Days)**
Use Restriction	*Future Purchaser*	To be included in *Final Corrective Action Plan*
Perimeter Security Fence	*Future Purchaser*	*To be included in Final Corrective Action Plan*
6-foot Security Fence	Hancock Bank	*36 months, if property not under contract*
6-foot Security Fence around NORM-contaminated areas	Hancock Bank	45 days
Monitoring Well Installations	Hancock Bank	*November 1, 2007*
Excavation of Lead Contaminated Soil above 3,800 mg/kg	Hancock Bank	*120 days*
Capping of Arsenic/Lead Contaminated Soil	*Future Purchaser*	To be included in *Final Corrective Action Plan*
Protection of Existing Wetlands	*Future Purchaser*	To be included in *Final Corrective Action Plan*
Stormwater Run-off Controls	*Future Purchaser*	To be included in *Final Corrective Action Plan*
Health and Safety Plan	Hancock Bank	*Completed. See Appendix A*

5.0 REMEDIAL GOALS (RGs)

The remedial goals for this *Interim Corrective Action Plan* are background levels of arsenic naturally occurring in the soil in the area of the site and the Tier 1 Target Remedial Goals (TRGs) established by the MDEQ for lead in soil and arsenic and lead in groundwater. For soils the remedial goals (RGs) are:

Arsenic in soil – 7.1*9* mg/kg (background), and

Lead in soil – *1,700* mg/kg (restricted use).

Additionally, testing performed under the Site Characterization Study has shown that soils having a lead concentration greater than 3,800 mg/kg are potentially hazardous (TCLP > 5.0 mg/l). Under Section 2.4 of the Conceptual Design of this *Interim Corrective Action Plan*, soils having a concentration of 3,800 mg/kg of lead or greater and being located on the portion of the site designated Former Gulfport Fertilizer Site will be removed and disposed at a permitted landfill, except for soils located in the wetlands.

It is anticipated that the Conceptual Design of the Final Corrective Action Plan will institute engineering and institutional controls for soils on the site.

The RGs for groundwater are:

Arsenic in groundwater – 0.010 mg/l and

Lead in groundwater – 0.015 mg/l.

A groundwater study conducted during the Site Characterization investigation concluded that the contaminated groundwater is confined to the site and is not significantly increasing in concentration or horizontal extent. Additionally, there are no potable water supply wells on the site or *the surrounding area.* It is anticipated that, when *the future purchaser develops the site,* city water will be supplied to the site. Therefore, it is anticipated that the Conceptual Design of the *Final Corrective Action Plan* will propose long-term monitoring of the contaminated groundwater.

6.0 OPERATION AND MONITORING PLAN

Given the *Interim Corrective Action Plan* summarized in Section 2.0, an operation and monitoring plan (O&M) is not required since no operating systems are proposed. A Performance Monitoring Plan for corrective activities proposed under this *Interim Corrective Action Plan* is presented in Section 7.0. It is anticipated that under the *Final Corrective Action Plan*, a Compliance Monitoring Plan and a Contingency Plan will be presented.

7.0 PERFORMANCE MONITORING PLAN

In order to insure that the engineering and institutional controls proposed under this *Interim Corrective Action Plan* are effective in meeting the Remedial Goals (RGs) presented in Section 5.0, the following Performance Monitoring Plan will be implemented:

Monitoring Wells: All on-site monitoring wells will be sampled within fifteen (15) days of completing the installation of the seven (7) new monitoring wells presented under Section 2.3 of this *Interim Corrective Action Plan*, following sampling procedures established under the *Work Plan Off-Site/Source Area Soils and Groundwater Sampling*, approved by MDEQ. Within thirty (30) days after receipt of analytical data, a groundwater sampling report will be prepared and submitted to MDEQ.

Excavation of Lead-Contaminated Soil above 3,800 mg/kg:

- *Areas* of soil with a Lead concentration greater than 3,800 mg/kg *have* been identified during previous investigations. The *areas* to be excavated *are* primarily inhabited by grass and shrub vegetation. There will be little site preparation required, except re-establishing the limits of excavation as established during previous investigations. Any removed vegetation will be placed in the containment area where excavated soils will be stored.

- The *areas* to be excavated *are* in *areas* of the site where no utilities are located. Previous soil borings advanced in the *areas* during the characterization process have confirmed that no utilities are located in *these areas*. As a precaution, Mississippi One Call will be contacted prior to implementing this task of the Interim Corrective Action Plan.
- The work *areas* will be marked to notify unauthorized personnel not to enter the *areas*. If these measures are not sufficient, additional measures, such as employing a security guard during non-working hours, may be undertaken.
- Storm water control measures will be implemented to prevent storm water from entering the *areas* to be excavated. These measures will include berming and diversion ditches. Once excavation begins, any storm water collecting in the *excavations* will be pumped out by a vacuum truck, added to collected decontamination water and properly disposed.
- A bermed soil storage area, approximately 75' by 100' will be constructed, adjacent to, but outside the *areas* to be excavated. The area within the berm and the berms shall be overlaid with three (3) layers of 6-mil polyethylene sheeting. The joints in each layer of sheeting shall be lapped, at least 12" and secured with duct tape. The joints on each successive layer of polyethylene sheeting shall be offset at least 3'. The berms will either be constructed of soil, at least 2' high or hay bales.
- Excavation of the identified *areas* will begin at the furthest "limit of excavation" from the bermed soil storage area and proceed toward the bermed soil storage area. The excavation equipment will stay within the *areas* of contamination so as not to re-contaminate a previously excavated area. The excavated soil will be placed within the bermed soil storage area in 100 cubic yard stockpiles. Excavation will continue *until* all lead contaminated soil suspected to be above 3,800 mg/kg of lead within the "limits of excavation" as identified during previous investigations has been excavated and placed within the bermed soil storage area.
- Area air monitoring (background, both upwind and downwind) will be performed

during initial excavation activities. In addition, the construction workers most exposed to the soil during excavation will wear personnel monitoring pumps, in accordance with the Health and Safety Plan (Appendix A). Dust control measures during excavation will be implemented to keep the soil damp to prevent dust. The appropriate level of personnel protection for site workers will be chosen based on the area and personnel air monitoring data from the initial monitoring.

- Profile sampling and analysis will be performed on stockpiled, excavated material. Each profile sample from the stockpiled excavated soil will consist of ten (10) discrete grab samples collected from each of the soil stockpiles. The discrete samples collected will be placed in a properly decontaminated mixing bowl and then thoroughly mixed using EPA's "Quarter Method" to form one representative composite sample for each stockpile. The composite soil sample will be placed in an appropriate container. The container label will be marked with all of the necessary information regarding the sample, as prescribed in SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Test Methods, 3rd Edition (USEPA 1986). Collection of a sample initiates the Chain-of-Custody process. The completed chain-of-custody form will include information regarding the sample type, sampling location, date and time of collection, type of container, preservative, and the name of the person collecting the sample. All samples collected and labeled will then be transferred to a cooler, with ice to maintain 4° C. The samples will be shipped via Federal Express for next morning delivery to Environmental Science Corporation (ESC) in Mt. Juliet, Tennessee, for Total Characteristic Leaching Procedure (TCLP) analysis of the sample for lead.
- Analytical results of the composite sample collected from each stockpile will dictate whether the soils in the stockpile are "hazardous" (TCLP > 5.0 mg/l) or "non-hazardous" (TCLP < 5.0 mg/l). It is anticipated that the analytical results will show that the soils are "non-hazardous" (TCLP < 5.0 mg/l) and can be

disposed at a permitted "non-hazardous" landfill. *If the analytical results show the soils to be "hazardous" (TCLP > 5.0 mg/l), the soil will either be disposed at a permitted hazardous landfill or the soil will be treated to render the soil non-hazardous by mixing a sufficient quantity of Portland cement (probably 15% +/-) with the soil to result in a TCLP analysis less than 5.0 mg/l for lead. Soil that exceeds the lead TCLP limit (5.0 mg/l) will be treated on-site in situ or in a tank/container in accordance with RCRA regulations. The stockpiled material will not be delivered to the properly permitted landfill (hazardous or non-hazardous) until the sample results for each stockpile is received. Waste manifests of each shipment to the permitted landfill will be maintained. The excavated material will be placed in lined, dump trucks for delivery to the non-hazardous landfill. If the excavated material is found to be hazardous and is delivered to a hazardous landfill, the material will be stored in a hazardous container and transported to the hazardous landfill.*

- Once the initial "limits of excavation" have been excavated, confirmatory soil samples will be collected from the bottom and sidewalls of the excavation. These samples will be analyzed for total lead concentration to determine if the remaining, unexcavated soil is above or below 3,800 mg/kg. One composite soil sample will be collected from every 1,000 square feet of area in the bottom of the excavation and one composite soil sample will be collected for every 100 linear feet of sidewall excavation. Each sample will be a composite sample consisting of soil collected from ten (10) locations within the sampling area. Each soil

sample *will be collected within 2 inches of the unexcavated soil surface*. The soil collected from the ten (10) sampling locations within a sampling area will be mixed into a composite sample utilizing EPA's "Quarters Method" of mixing. If an analyzed sample shows a sampling area to be above 3,800 mg/kg, that area will be excavated and re-sampled until the remaining, unexcavated soil is less than 3,800 mg/kg.

- Once confirmatory sampling has shown all lead contaminated soil greater than 3,800 mg/kg has been excavated and once all excavated, stockpiled material has been shipped to the proper landfill for disposal, the bermed soil storage area will be removed. Each layer of polyethylene sheeting will be folded in, so as to prevent any soil or water from falling on the "clean" soil below the sheeting. The polyethylene sheeting will be placed in a lined, dump truck for delivery to a permitted non-hazardous landfill. Confirmatory samples shall be taken of the soil under the polyethylene sheeting following the procedures and frequency presented above. Any remaining, unexcavated soil found to be above 3,800 mg/kg of lead shall be excavated and disposed following procedures presented above.
- A decontamination area will be constructed using on-site soils with three layers of 6-mil polyethylene sheeting, following procedures presented above, so that contaminated water generated during the decontamination procedure can be collected for disposal. The decontamination water will be collected and pumped into an aboveground storage tank. The stored decontamination water will be characterized (e.g. sampled and analyzed) for total lead and total arsenic before disposal
- All equipment used during the procedures listed above that has come in contact

with lead-contaminated soil, will be decontaminated before leaving the site. The equipment will be steamed and washed and the rinseate will be collected and disposed at an appropriate treatment and/or disposal facility.

- The excavated area and confirmation sampling points will be surveyed.
- The excavated area will be backfilled with clean, on-site soil (soil with lead concentration less than 3,800 mg/kg). Twelve-inch (12") layers of backfill will be placed in the excavation and compacted to density of adjacent, unexcavated soils. The excavated area will be graded to prevent ponding of rainwater and to promote drainage.
- After the excavation area(s) are backfilled, the surface will be seeded with a drought resistant local native grass. Straw will be placed over exposed soils to prevent erosion, until the vegetation is re-established.
- Within *ninety (90)* days after completion of the corrective action plan activities, a report documenting the activities will be prepared and submitted to MDEQ.

Health and Safety Plan: Hancock Bank will hire an independent, third-party to insure that the Health and Safety Plan is being properly implemented during the Interim Corrective Action Plan activities. Documentation showing that the Health and Safety Plan has been properly implemented will be provided to MDEQ, upon completion of the project and will be *included with the final report which will be submitted within 90 days of the completion of the field activities outlined in the Interim Corrective Action Plan.*

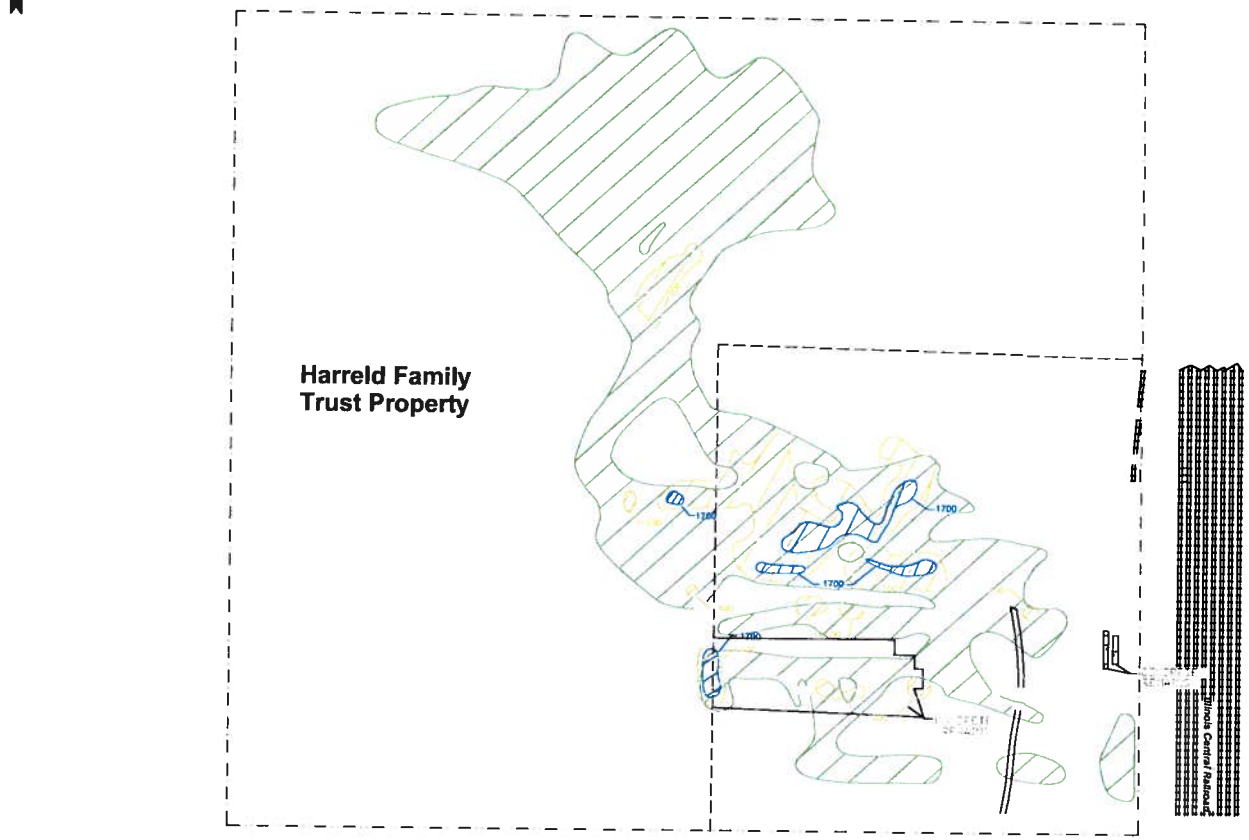
8.0 COMPLIANCE MONITORING PLAN

A Compliance Monitoring Plan will be submitted under the *Final Corrective Action Plan*.

9.0 CONTINGENCY PLAN

A Contingency Plan will be submitted under the *Final Corrective Action Plan.*

FIGURES



LEGEND:

- Limits of Soil Contamination (Arsenic > 7.19 mg/kg)
- Limits of Soil Contamination (Lead > 400 mg/kg)
- Limits of Soil Contamination (Lead > 1,700 mg/kg)

NOTES:

1.) Extent of soil contamination based on Site Characterization Studies performed on Former Gulfport Fertilizer Site and Harreld Family Trust Property.

SOUTHERN PORTION OF PROPERTY NOT SHOWN

200 100 0 100 200
SCALE IN FEET

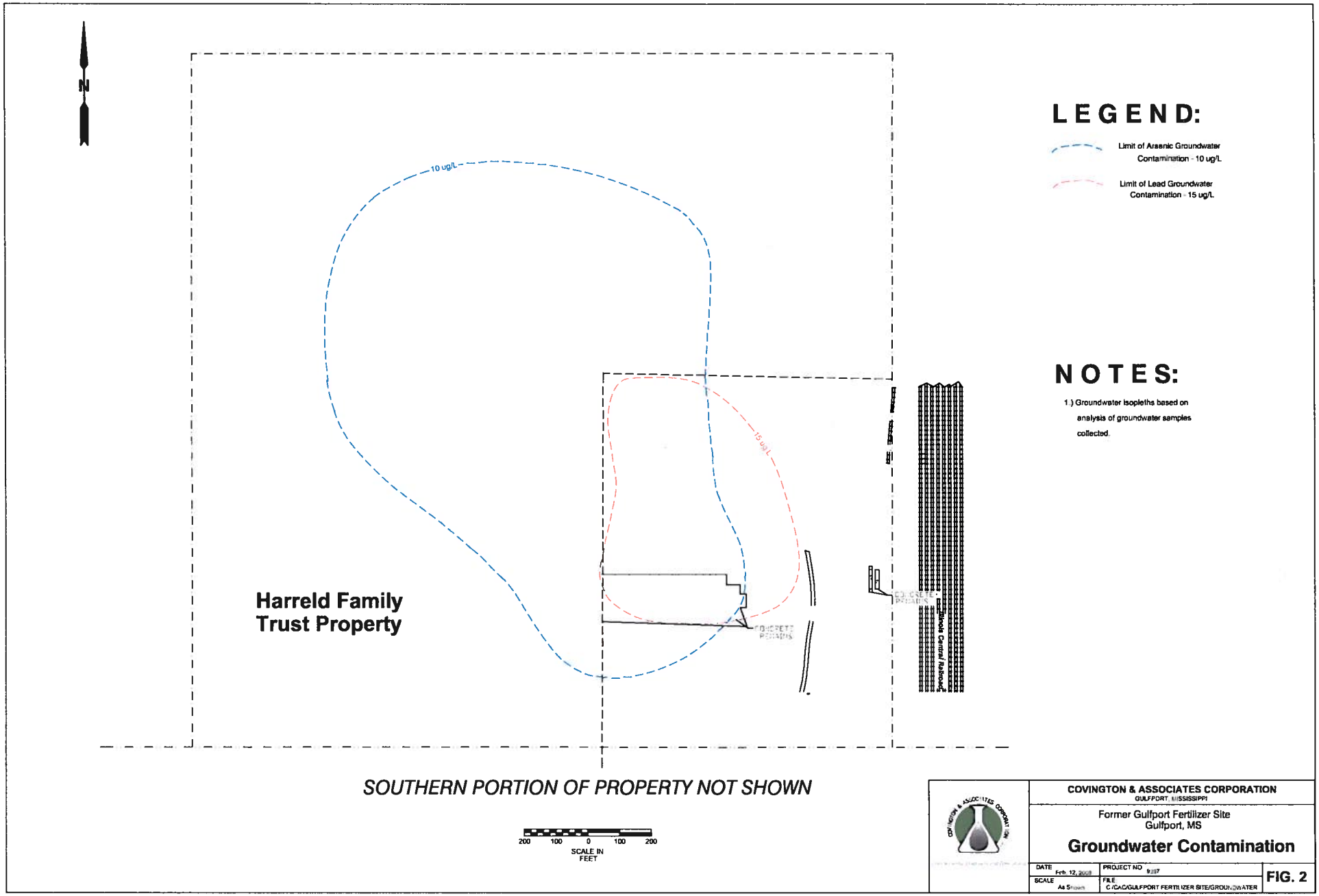
COVINGTON & ASSOCIATES CORPORATION
GULFPORT, MISSISSIPPI

Former Gulfport Fertilizer Site
Gulfport, MS

Soil Contamination

DATE Feb. 15, 2008	PROJECT NO. 9387
SCALE As Shown	FILE

FIG. 1



LEGEND:

Limit of Arsenic Groundwater Contamination - 10 ug/L

Limit of Lead Groundwater Contamination - 15 ug/L

NOTES:

1.) Groundwater isopleths based on analysis of groundwater samples collected.

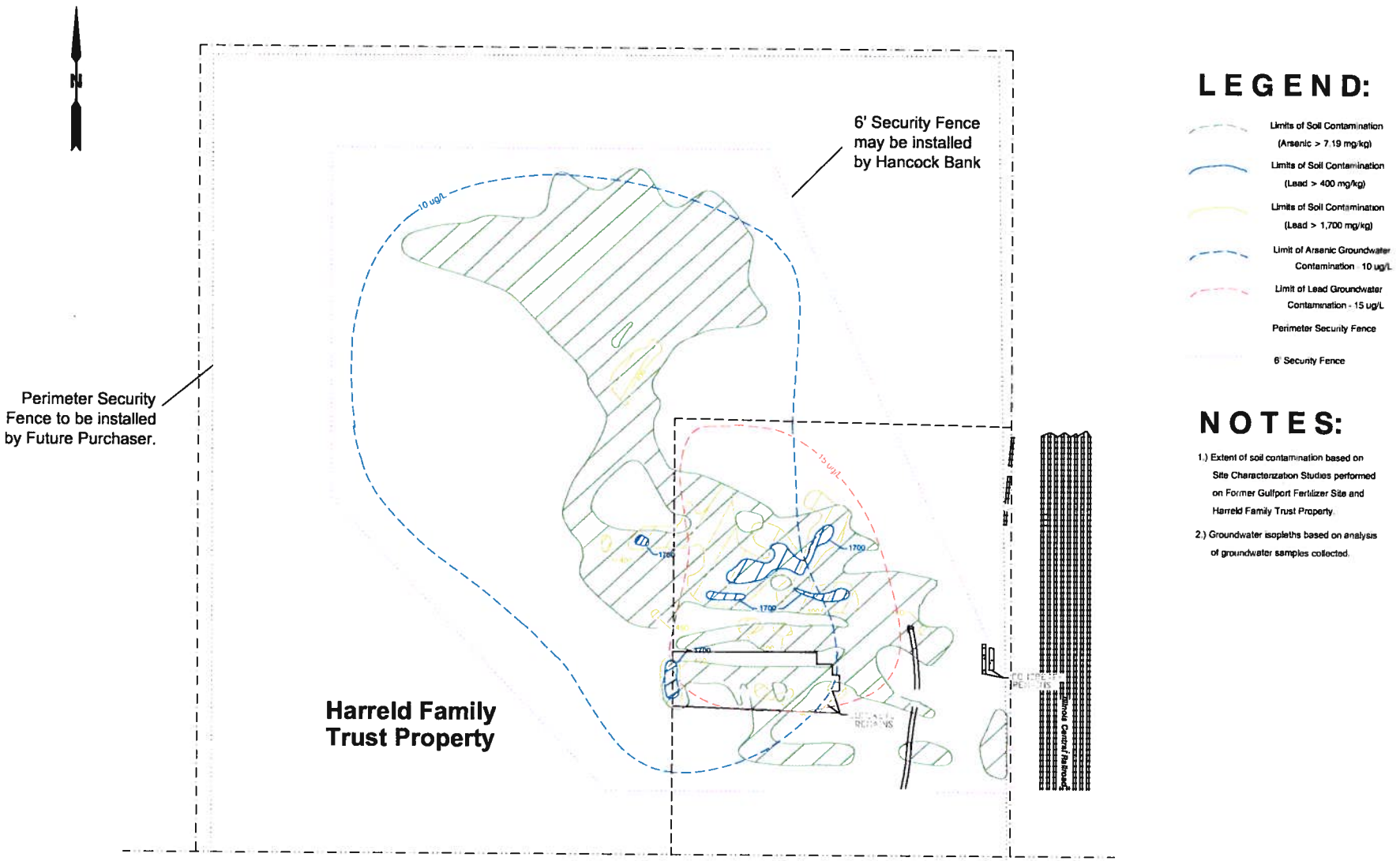
COVINGTON & ASSOCIATES CORPORATION
GULFPORT, MISSISSIPPI

Former Gulfport Fertilizer Site
Gulfport, MS

Groundwater Contamination

DATE: Feb. 12, 2008	PROJECT NO: 9287
SCALE: As Shown	FILE: C:/CAC/GULFPORT FERTILIZER SITE/GROUNDWATER

FIG. 2



LEGEND:

- Limits of Soil Contamination (Arsenic > 7.19 mg/kg)
- Limits of Soil Contamination (Lead > 400 mg/kg)
- Limits of Soil Contamination (Lead > 1,700 mg/kg)
- Limit of Arsenic Groundwater Contamination - 10 ug/L
- Limit of Lead Groundwater Contamination - 15 ug/L
- Perimeter Security Fence
- 6' Security Fence

NOTES:

1.) Extent of soil contamination based on Site Characterization Studies performed on Former Gulfport Fertilizer Site and Harreld Family Trust Property.

2.) Groundwater isopleths based on analysis of groundwater samples collected.

SOUTHERN PORTION OF PROPERTY NOT SHOWN

200 100 0 100 200
SCALE IN FEET

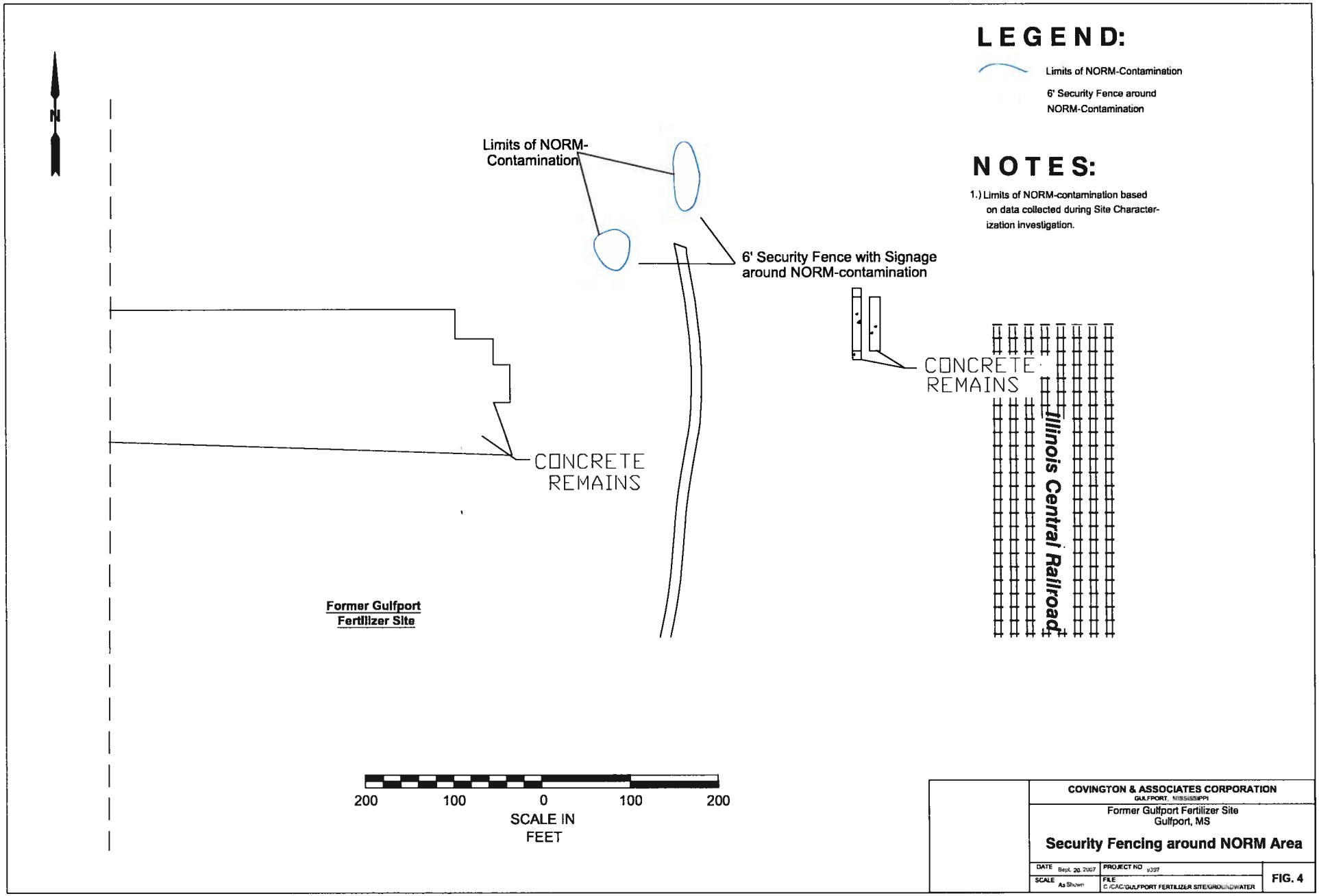
COVINGTON & ASSOCIATES CORPORATION
GULFPORT, MISSISSIPPI

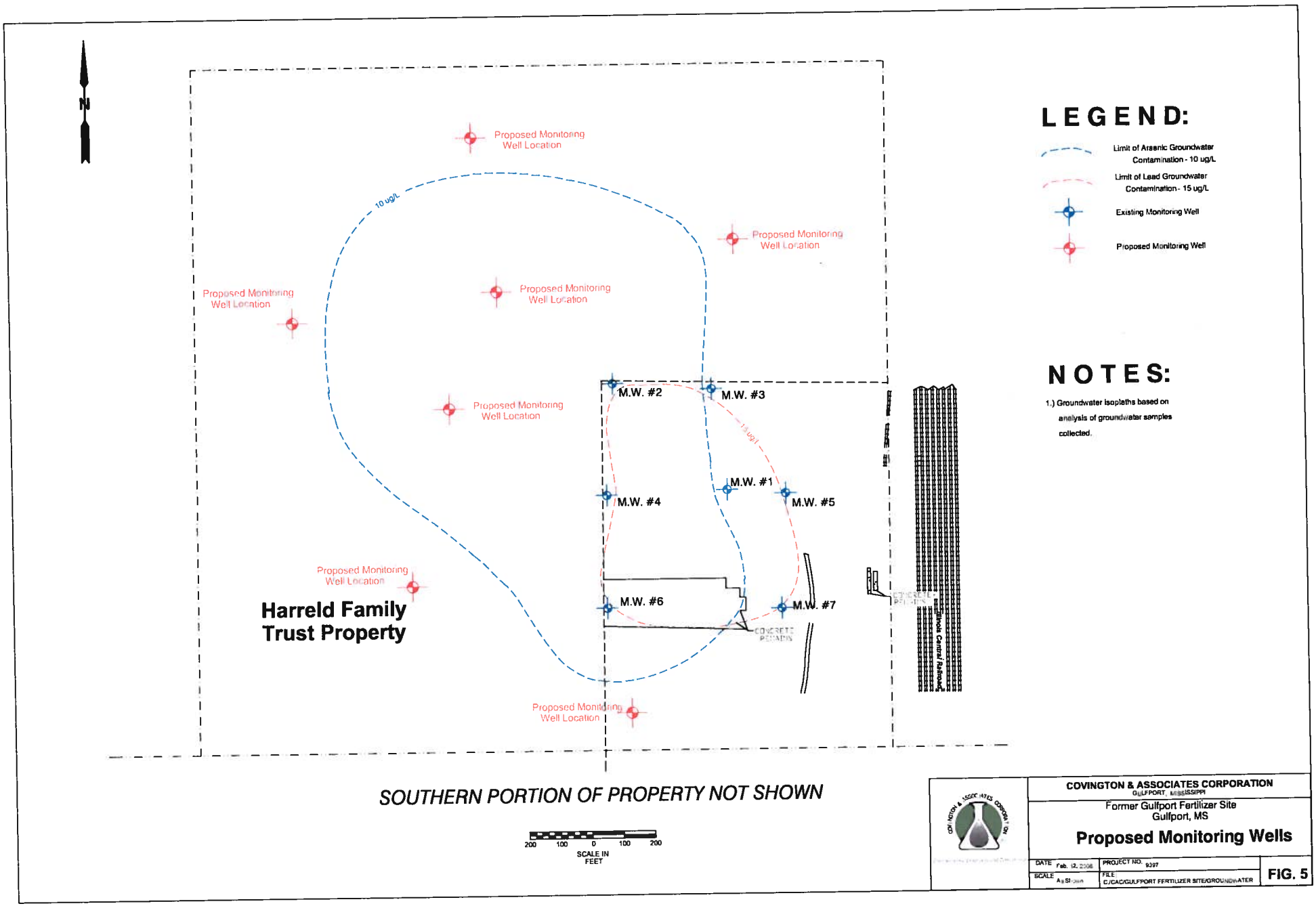
Former Gulfport Fertilizer Site
Gulfport, MS

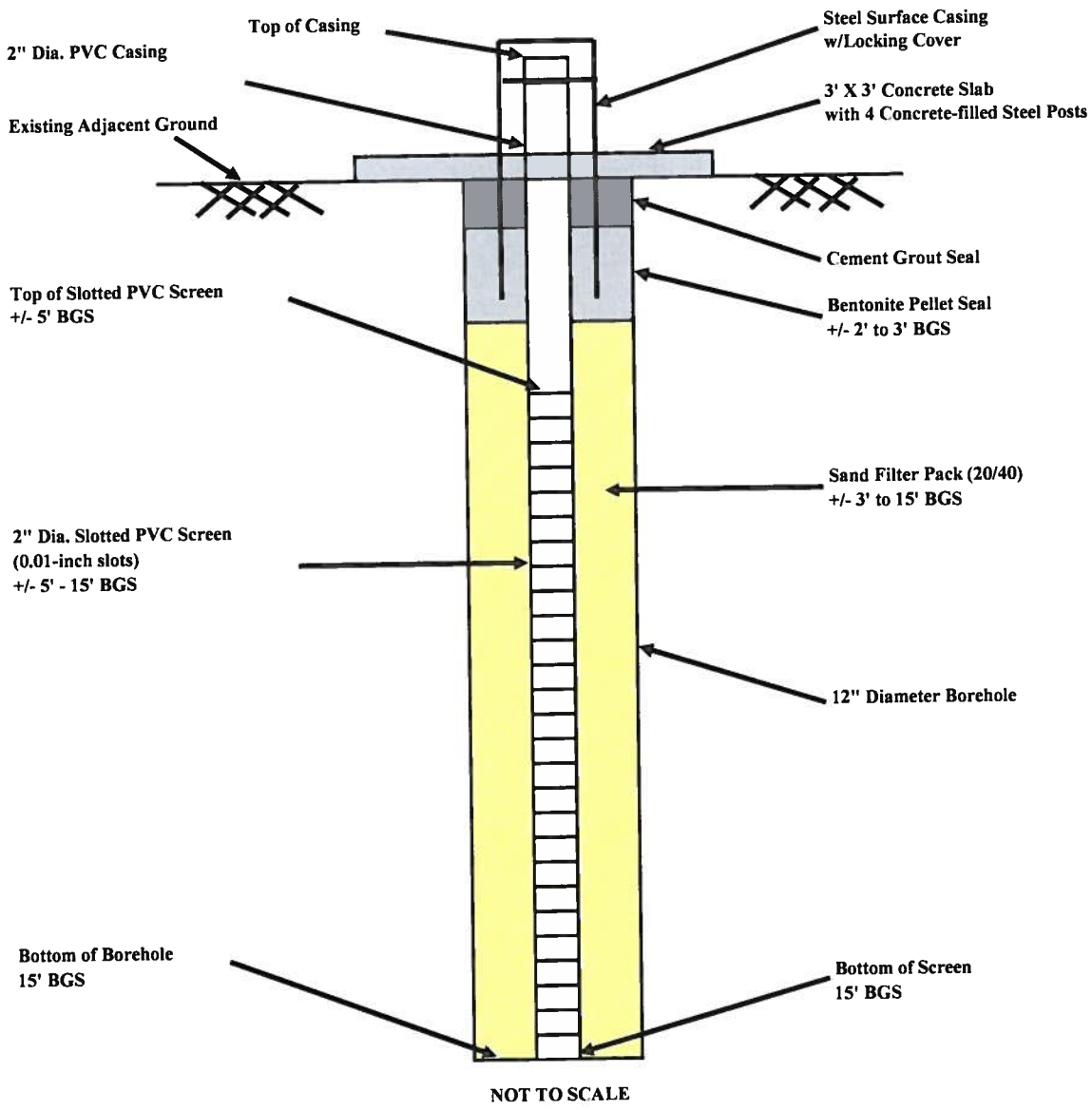
Security Fencing

DATE Feb. 15, 2008 | PROJECT NO. 9197
SCALE As Shown | FILE:

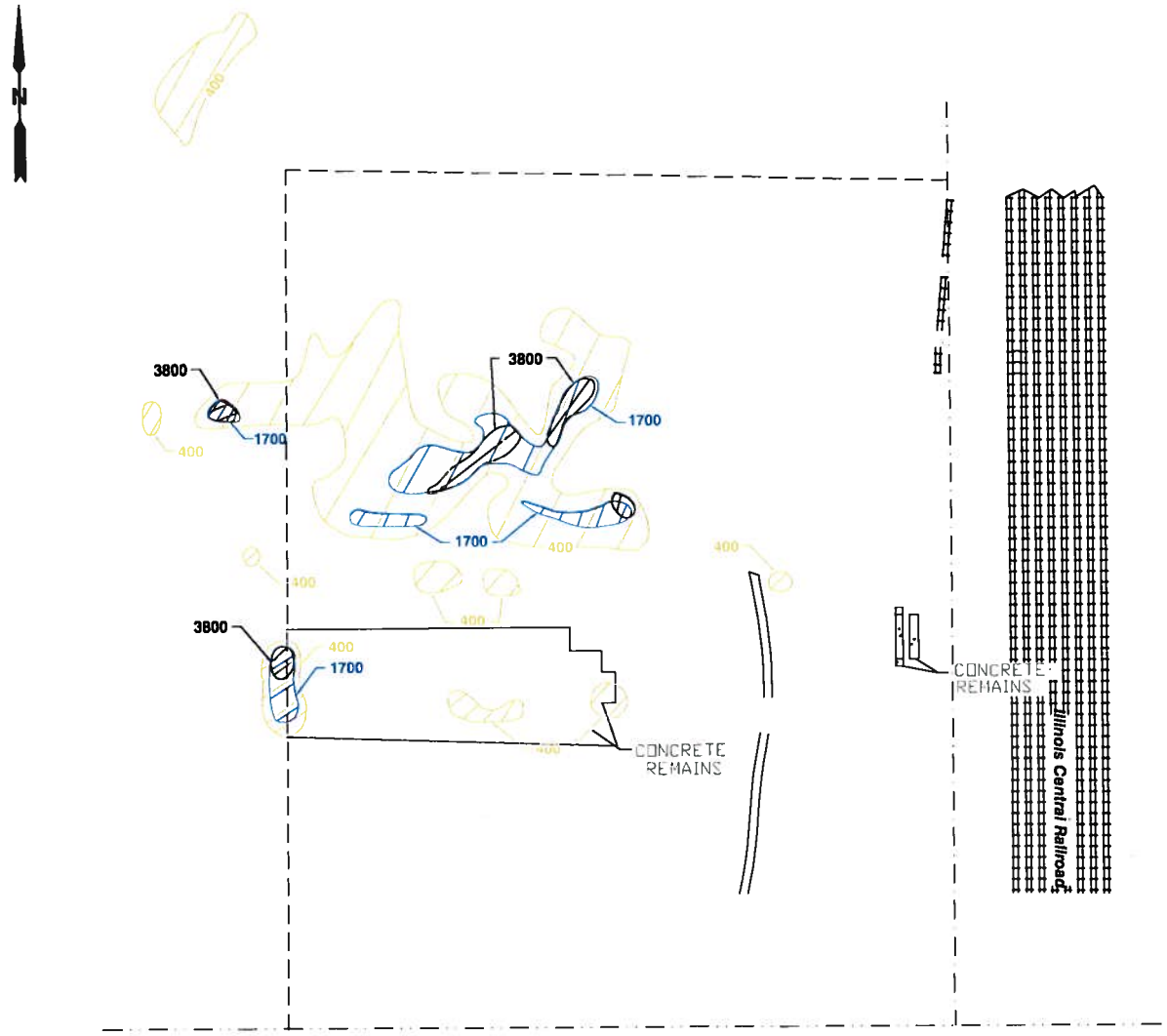
FIG. 3


LEGEND:
Limits of NORM-Contamination
6' Security Fence around NORM-Contamination
NOTES:
1.) Limits of NORM-contamination based on data collected during Site Characterization investigation.
N
Limits of NORM-Contamination
6' Security Fence with Signage around NORM-contamination
CONCRETE REMAINS
CONCRETE REMAINS
Illinois Central Railroad
Former Gulfport Fertilizer Site
200 100 0 100 200
SCALE IN FEET
COVINGTON & ASSOCIATES CORPORATION
GULFPORT, MISSISSIPPI
Former Gulfport Fertilizer Site
Gulfport, MS
Security Fencing around NORM Area
DATE Sept. 20, 2007
PROJECT NO 0327
SCALE As Shown
FILE C:/CAC/GULFPORT FERTILIZER SITE/GROUNDWATER
FIG. 4


N
Proposed Monitoring Well Location
Proposed Monitoring Well Location
Proposed Monitoring Well Location
Proposed Monitoring Well Location
Proposed Monitoring Well Location
Proposed Monitoring Well Location
Proposed Monitoring Well Location
10 ug/L
15 ug/L
M.W. #1
M.W. #2
M.W. #3
M.W. #4
M.W. #5
M.W. #6
M.W. #7
Harreld Family Trust Property
CONCRETE PEDESTAL
CONCRETE PEDESTAL
Illinois Central Railroad
SOUTHERN PORTION OF PROPERTY NOT SHOWN
200 100 0 100 200
SCALE IN FEET
LEGEND:
Limit of Arsenic Groundwater Contamination - 10 ug/L
Limit of Lead Groundwater Contamination - 15 ug/L
Existing Monitoring Well
Proposed Monitoring Well
NOTES:
1.) Groundwater isopleths based on analysis of groundwater samples collected.
COVINGTON & ASSOCIATES CORPORATION
GULFPORT, MISSISSIPPI
Former Gulfport Fertilizer Site
Gulfport, MS
Proposed Monitoring Wells
DATE Feb. 12, 2006
PROJECT NO. 9397
SCALE As Shown
FILE C:/CAC/GULFPORT FERTILIZER SITE/GROUNDWATER
FIG. 5



COVINGTON AND ASSOCIATES CORP. **Environmental Resource Consultants** **Biloxi, MS**	**WELL CONSTRUCTION DIAGRAM** **FORMER GULFPORT FERTILIZER SITE** **GULFPORT, MS**	**FIG. 6**



LEGEND:

Limits of Soil Contamination
(Lead > 400 mg/kg)

Limits of Lead Contamination
Above 1,700 mg/kg

Limits of Lead Contamination
Above 3,800 mg/kg

NOTES:

1.) Extent of soil contamination based on Site Characterization Studies performed on Former Gulfport Fertilizer Site and Harreld Family Trust Property.

SOUTHERN PORTION OF PROPERTY NOT SHOWN

200 100 0 100 200
SCALE IN FEET

COVINGTON & ASSOCIATES CORPORATION
GULFPORT, MISSISSIPPI

Former Gulfport Fertilizer Site
Gulfport, MS

Lead-Contaminated Soil

DATE Feb. 15, 2008 | PROJECT NO. 9397 | FIG. 7
SCALE As Shown | FILE

APPENDIX A
SITE HEALTH AND SAFETY PLAN

SITE SAFETY AND HEALTH PLAN

FOR

INTERIM CORRECTIVE ACTION PLAN ACTIVITIES

FORMER GULFPORT FERTILIZER SITE
GULFPORT, MS

BY

CONVINGTON & ASSOCIATES CORPORATION

February 2008

APPROVED: _____

PROJECT S&H SUPERVISOR

APPROVED: _____

PROJECT MANAGER

ACRONYMS AND INITIALISMS

ALARA	as low as reasonably achievable
ASESHP	area-specific environmental, safety, and health plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CRZ	contamination reduction zone
EPA	U.S. Environmental Protection Agency
ES&H Officer	Environmental, Safety, and Health Officer
FM	Factory Mutual Engineering Corp.
GFCI	ground fault circuit interrupters
HEPA	high-efficiency particulate air
HWP	hazardous work permits
IHS	industrial hygiene supervisor
LEL	lower explosive limit
NEC	National Electric Code
NESC	National Electric Safety Code
NIOSH	National Institute of Occupational Safety and Health
NPL	National Priorities List
NYDEC	New York Department of Environmental Conservation
OSHA	Occupational Safety and Health Administration
PAPR	powered air-purifying respirator
PEL	permissible exposure limit
PEHP	program environmental, safety, and health plan
PI	project instruction
PM	project manager
PP	project procedure
QA	quality assurance
QC	quality control
RCRA	Resource Conservation and Recovery Act
S&H	safety and health
SARA	Superfund Amendments and Reauthorization Act
SCBA	self-contained breathing apparatus
SSHR	Contractor's Safety and Health Representative
STEL	short-term exposure limit
TLV®	threshold limit value
UL	Underwriters Laboratories
VOC	volatile organic compound

UNITS OF MEASURE

µg	microgram
f/cc	fibers per cubic centimeter
ft	foot
gal	gallon
in.	inch
kg	kilogram
m	meter
ppm	parts per million

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1.0 INTRODUCTION

1.1 PURPOSE OF THE SAFETY AND HEALTH PLAN

The purpose of this document is to describe the mandatory requirements for the safety and health (S&H) process with which each entity must comply to meet the intent of Covington & Associates Corporation's requirements.

This S&H plan has been developed to provide the safety and health framework for all potential field activities. This plan will be revised as necessary as conditions change.

This plan complies with OSHA's 29 CFR 1910.120 standards for Hazardous Waste Operations and Emergency Response (HAZWOPER). All other applicable OSHA standards and Covington & Associates Corporation requirements will apply as necessary.

1.2 PROGRAM OVERVIEW

In support of the S&H Policy, the following principles have been developed to provide additional direction on accountability and on specific issues. These principles are:

- Everyone is accountable for conforming to the S&H Policy.
- All accidents are preventable; everyone will work diligently to prevent all incidents.
- The project will practice sound environmental, safety and health management.
- The project will comply with all applicable laws, regulations, and permits and will develop and employ more restrictive internal standards where necessary to conform to the S&H Policy.
- The project will report on activities.
- The project will audit operations and report findings.
- The project will sponsor activities to improve the environmental, safety, and health protection.

Covington & Associates Corporation's (CAC's) commitment to zero accidents shall be adopted by CAC's employees, contractors, subcontractors, and contracted service vendors utilized on project. The "Zero Accident Philosophy" includes the following criteria:

- Safety and health of the employee, contractors, subcontractors, visitor, and the public are first priority
- All accidents are preventable
- No unsafe act is tolerated or accepted

- Site management requires total compliance with safety and health regulations and requirements and enforces such requirements
- Managers, contractors, subcontractors and supervisors are proactive in safety and health
- Management of contractors and subcontractors are held responsible for safety and health and shall coach employees in the safety and health philosophy
- Safety and health are planned into all activities prior to execution
- Employees of contractors and subcontractors are trained and qualified commensurate with their responsibilities
- Resources are adequate to protect employees, contractors, subcontractors and the public
- Accidents are immediately reported, investigated, and followed by timely corrective actions

CAC, contractors and subcontractors will comply with the following standards and regulations and shall be fully and solely responsible for conducting all operations under the contract at all times in such a manner as to avoid the risk of bodily harm to persons and damage to property or the environment. CAC, contractors and subcontractors shall continually and diligently inspect all work, materials, and equipment to discover any conditions that might involve such risks and shall be solely responsible for discovery and correction of any such conditions.

- 29 CFR Part 1910
- 29 CFR Part 1926
- 40 CFR Part 50
- 40 CFR Part 264
- 40 CFR Part 270
- 46 CFR Part 197
- 49 CFR Part 172.700 series
- National Environmental Policy Act
- Resource Conservation and Recovery Requirements
- Safe Drinking Water Requirements
- Other relevant federal, state, or local laws or regulations

1.3 FIELD OPERATIONS

Field activities shall be done in accordance with this plan and any applicable safety procedures.

Field Activities

The following activities will be conducted under this plan:

- Mobilization/Staging of Equipment
- Site Preparation, including work areas, decontamination areas and soil storage areas
- Excavation, Stockpiling, Transportation, and Disposal of Lead Contaminated Soil
- Backfill and Compaction

- Demobilization, including decontamination of equipment

1.4 ORGANIZATION AND RESPONSIBILITIES

1.4.1 ENVIRONMENTAL, SAFETY, AND HEALTH ORGANIZATION AND RESPONSIBILITIES

Safety and health personnel and their responsibilities are defined in the following subsections.

PROJECT MANAGER
John Szabo will be designated as the Project Manager (PM). The PM is responsible for all work activities and is responsible for ensuring a safe and healthy work environment. The PM will also ensure that adequate budget; manpower, equipment, and procedures are provided to implement onsite work. The PM will ensure that the S&H Supervisor or designee reviews and approves work plans, contractor and subcontractor packages, budgets, and project instructions.

SITE SUPERVISOR
Anthony Damiano, Wendell Larson or Todd Hairston will be designated as the Safety and Health (S&H) Supervisors. The S&H Supervisors will ensure that all work is carried out according to the S&H requirements. These individuals are responsible for coordination, guidance, and motivation of the onsite field staff (CAC), contractors, subcontractors and site visitors. These individuals will coordinate with the PM.

The S&H Supervisors will:

- Perform the appropriate Safety Hazard Assessment(s) for all phases of its work, including any work conducted by contractors or subcontractors.
- Enforce the necessary level of hazard control.
- Ensure that the project meets the mandatory requirements of this document.
- Ensure that contractual and regulatory S&H obligations applicable to the work are met.
- Conduct appropriate self-assessments to confirm on-going compliance with contractual S&H obligations.
- Provide a general S&H Orientation and policies, principles, and standards.
- Monitor the field activities for compliance.
- Perform self-audits during execution of the work. Copies of self-audits and implemented corrective actions shall be provided upon request.
- Provide necessary personnel monitoring, as required.
- Require specific S&H precautions prior to site entry by personnel and visitors.
- Require any personnel to obtain immediate medical attention, if warranted.
- Restrict access to the site or to a portion thereof based on hazard.

- Order the immediate evacuation of personnel from any area.
- Stop work when the safety, health, and well being of site personnel or the public is jeopardized.

1.5 SAFETY AND HEALTH EXPECTATIONS

1.5.1 CONDUCT OF PERSONNEL

While on the site (Former Gulfport Fertilizer property), employees, contractors, subcontractors and visitors shall not engage in any dangerous, illegal, or outrageous conduct, including but not limited to the following:

- Violating safety rules or common safety practices, or causing a safety threat to anyone else.
- Creating or contributing to any unsafe or unsanitary condition.
- Unnecessarily distracting the attention of anyone who is working or participating in a non-work related activity that interferes with job.
- Using abusive language.
- Threatening, intimidating, harassing, coercing, or interfering with others.
- Discriminating by talk or action against groups or individuals on the basis of race, color, sex, age, religion, disability, veteran's status, pregnancy, or national origin.
- Immoral conduct or indecency, sexual harassment, or possessing or displaying offensive verbal, visual, or physical material or objects of any kind.
- Fighting or instigating a fight.
- Theft, abuse, or deliberate destruction of property, tools, or equipment of anyone else.
- Gambling of any type.
- Possessing or consuming any intoxicating beverage or illegal substance on the premises.
- Reporting for work in an unfit condition, including being under the influence of intoxicants or controlled substances, or misuse of any prescription drug.
- Refusing to submit to drug and/or alcohol testing when properly directed by Site Supervisor or supervisor of contractor or subcontractor. Test results showing the presence of alcohol or illegal drugs in any amount will be grounds for dismissal.
- Possessing firearms or other weapons on premises.
- Making false or malicious statements concerning anyone else, CAC, any contractor or subcontractor, or any products of CAC, contractor or subcontractor.
- Falsifying records or making untrue statements that may result in the falsification of records.
- Misusing or removing from premises, without permission, employee lists, blueprints, records, or confidential information of any nature, in any form.

- Soliciting, collecting contributions, or distributing written or printed matter without permission Site Supervisor or Project Manager.
- Posting or removing notices, signs or writing in any form on bulletin boards or property without specific permission of Site Supervisor or Project Manager.
- Possessing or using televisions, radios, VCRs, or cameras for personal use on premises without permission.
- Horseplay or throwing materials on premises or not giving attention to job during working hours.
- Failure to obey Site Supervisor or supervisor or contractor or subcontractor or other forms of insubordination.
- Frequent tardiness or absences from work.
- Leaving job or work area during working hours without permission.
- Any action or behavior illegal under local, state, or federal law.
- Smoking in areas not designated for smoking.

1.5.2 SUBSTANCE ABUSE

Covington & Associates Corporation, contractors and subcontractors will monitor their respective employees prior to their entry to the job site and also in the course of their work. Those found to be under the influence of alcohol or drugs will be removed from the premises and will be denied future admittance. Employees may be required to submit to drug and/or alcohol testing in compliance with Covington & Associates Corporation policy and governmental regulations. Test results showing the presence of alcohol or illegal drugs in any amount will be grounds for dismissal.

2.0 SITE DESCRIPTION AND HISTORY

The site is located one 33rd Street, Gulfport, Mississippi. Site investigations have revealed areas of lead and arsenic contaminated soil on the site. The approved Interim Corrective Action Plan is to excavate lead-contaminated soils above 3,800 mg/kg lead and backfill with clean soil.

3.0 HAZARD ANALYSIS

The physical hazards associated with the project include eye injury, cuts, noise, falling, slipping, tripping, back injury and heat stress. Specific physical hazards are discussed in the following sections.

3.1 NOISE

Working can subject workers to noise exposures in excess of allowable limits. Non-essential personnel who do not need to be next to loud equipment will remain away from such sources to lower the risk of noise-induced hearing loss. Additionally, considerations will be taken to keep the noise level to a minimum. The S&H Supervisor will ensure noise levels remain below those specified in 29 CFR 1910.95.

Personnel who operate or must work next to noisy equipment will be required to wear hearing protection (earplugs or muffs) to reduce their exposure to excessive noise. Specifically, persons who enter areas with noise in excess of 85-dB (A) will use protection. Workers exposed to noise levels at or above 85 dB (A) will be enrolled in a hearing conservation program.

3.2 FALLING, SLIPPING, AND TRIPPING

Work zone surfaces will be maintained in a neat and orderly state. The Project Manager and S&H Supervisor and contractor or subcontractor supervisor will inspect and ensure that the work areas are neat and orderly. Pedestrian traffic will avoid areas where materials are stored on the ground. Tools and materials will not be left randomly on surfaces when not in direct use. Hoses and cables will be grouped, routed to minimize hazards or clearly marked with hazard flags if those hoses and cables will remain in place for more than one shift.

3.3 MANUAL LIFTING TECHNIQUES

Before any manual material handling tasks, personnel will be trained to lift with the force of the load suspended on their legs and not on their backs. An adequate number of personnel or an appropriate mechanical device will be used to safely lift or handle heavy equipment. When heavy objects must be lifted manually, workers will keep the load close to their bodies and will avoid any twisting or turning motions to minimize stress on the lower back. The S&H Supervisor or contractor or subcontractor supervisor may provide lifting orientation and specific back stretching and warm-up exercises to help minimize the potential for back injuries. The S&H Supervisor or contractor or subcontractor supervisor will encourage use of these exercises by all field personnel at the start of each shift.

3.4 HEAT STRESS

Heat stress is known to become a significant risk factor for personnel wearing protective clothing and equipment, especially when ambient temperatures and humidity are elevated. Personnel will

be made aware of the symptoms of heat stress so they can recognize it and seek treatment immediately.

3.5 EQUIPMENT GUARD

Engineering controls, administrative procedures, and equipment-guarding techniques will be implemented to prevent injuries from excavation hazards. Additionally, PPE will be issued when engineering controls alone cannot reduce exposure hazards to acceptable levels.

The overall risks presented by construction equipment associated with treatment, cleaning, decontamination, excavation, and vehicle operation are normally greater than those presented by potential exposure to chemicals. Compliance with all safety rules and procedures will be of paramount importance.

3.6. ELECTRICAL HAZARDS.

For general electrical safety, the S&H Supervisor and the contractor and subcontractor supervisors will ensure that all on-site personnel comply with OSHA requirements for electrical branch circuits. Use of electrical extension cords will not be expected throughout the work.

3.7 CHEMICAL HANDLING

The S&H Supervisor will evaluate the need for special chemical handling procedures during the chemical use review process (i.e., review of material safety data sheets). Engineering controls and/or PPE will be required to protect against exposure. Chemical handling is not anticipated during this project.

3.8 EXCAVATION

Any excavation over 4 foot deep will require sloping, trench box or trench shields if any personnel are required to enter the space. Open trenches or excavations will be surrounded with orange construction barricade fencing and multi strands of barricade tape. No excavation will be conducted on site unless approval from the Project Manager is obtained prior to commencement.

4.0 CHEMICAL HAZARDS

This section describes the toxicological (health) hazards associated with exposure to organic and inorganic chemicals that may be encountered. Detailed information on chemicals potentially expected to be present at the site is provided in the S&H Plan or Activity Hazards Analysis. The chemicals that may be encountered on this project include, but is not limited to, the following:

- Lead in soil
- Arsenic in soil
- Diesel

Specific chemicals commonly encountered at the site area are discussed in the following sections. Without proper controls, exposures can occur principally by dust inhalation, skin contact, or ingestion.

4.1 FLAMMABILITY

Fire or explosion can occur from working with flammable tanks, drums, or pipes without proper safeguards. Accordingly, monitoring will be conducted to identify locations where sparks generated by equipment could trigger fires or explosions.

4.2 CARCINOGENS

Additional information on the above chemicals is found on the following Table 4.1 Chemical Hazards. Carcinogens are any chemicals or products capable of causing or inducing cancer or leukemia in humans. Carcinogens are classified, for program purposes, based on OSHA, American Conference of Governmental Industrial Hygienists (ACGIH), the Environmental Protection Agency (EPA), International Agency for Research on Cancer, Cancer Disease Center, or National Toxic Pollutant classifications into the following recognized or confirmed human carcinogens:

Class I – known human carcinogens
Class II – suspected carcinogens (causes cancer in animals)

Table 4.1
CHEMICAL HAZARDS

Chemical Name	OSHA PEL	Concentration Present		Health Hazards/ Target Organs	Symptoms Of Overexposure
		Soil	Water		
Lead	0.5 mg/m^3	<20,000 mg/kg	<0.042 mg/l	Inhalation & Irritant Eye Contact Irritant	Headache, Nausea, Dizziness & Blurred Vision
Arsenic	10 ug/m^3	<1,400 mg/kg	<0.100 mg/l	Eye & Throat Irritant Acute Exposure	Headache, Nausea, Dizziness & Blurred Vision
Gasoline	300 ppm	N/A	N/A	Eye & Throat Irritant	Headache, Nausea, Dizziness & Blurred Vision
Diesel	None	N/A	N/A	Skin Irritant & Central Nervous System Depressant	Headache, Nausea, Dizziness, Un-coordination & Vomiting

5.0 BIOLOGICAL HAZARDS

Dangerous wildlife that may be encountered at the site includes insects, poisonous snakes, and rodents. Before work begins, the S&H Supervisor and supervisor for contractor and subcontractor will inspect the work area for dangerous wildlife and instruct workers on the best strategy to avoid contact. Workers will be trained to identify dangerous wildlife and in the general precautions to be followed. The S&H Supervisor will screen the area for biological hazards during the initial site visit and will discuss any problems with field personnel during the pre-work review. The most common hazards anticipated are discussed below.

5.1 INSECTS

Stinging insects may be found where work will be performed. CAC, the contractor and subcontractors will provide an appropriate repellent against mosquitoes and other nuisance insects for their workers. Workers will be instructed to report the presence of large numbers of bees or other stinging insects at the work site. The S&H Supervisor, contractor and/or subcontractors will determine whether removal of the insect nests is required for work to proceed.

Bees present a potential hazard, especially for those individuals sensitized to bites or stings. Before initial assignment on this project, personnel with known allergic responses to insect stings or bites will be identified, and field supervisors will be made aware of this condition. These personnel will also carry an antidote kit, if so advised by their physician. The S&H Supervisor or contractor or subcontractor will confirm that the antidote kit is accessible for their workers and will notify the emergency medical service providers in the event of any incident.

Protection against insects may be employed, such as protective clothing, repellents, extermination, and training in recognition and identification of harmful insects.

5.2 TICKS

Ticks transmit many diverse etiologic agents. Diseases transmitted by ticks include Lyme disease, Rocky Mountain spotted fever, and other viral and rickettsial diseases.

Ticks are normally found in wooded and bushy areas. When walking through tall brush areas, coworkers should periodically check themselves and each other for the presence of ticks. It is essential to remove the entire tick as soon as it is found. Ticks burrow into the skin; if the head of the tick cannot be removed, medical treatment will be obtained. If severe signs of infection or fever develop, the patience should seek prompt medical care. Follow-up surveillance may continue at the discretion of the examining physician.

5.3 VERMIN AND POISONOUS SNAKES

Rats, mice, squirrel, non-poisonous snakes and rabbits are carriers of disease. Where vermin are identified in the work area, the S&H Supervisor will be immediately notified. Bites will be reported immediately and medical care obtained. Disease can be transmitted through broken skin, contact with conjunctivae, ingestion of contaminated food or water, or inhalation of aerosols. Prevention is through environmental hygiene practices that deter rodents from colonizing the work environment.

Workers will be advised of the hazard if vermin are present in the work area and will be required to immediately report any bite to the S&H Supervisor.

Poisonous snakes (timber rattlesnakes, water moccasins, coral snakes, copperheads, etc.) may be present in the work area, particularly in brush and debris. Workers will approach these areas with caution and, if a snake is identified, will not approach.

Workers will be advised of the hazard of poisonous snakes and will be required to immediately report any bite to the S&H Supervisor or contractor or subcontractor supervisor. CAC, the contractor and subcontractor shall have a snake bite kit on-site at all times.

5.4 INFECTIOUS BLOODBORNE PATHOGENS

First aid and other emergency response personnel will be informed of preventative measures for protection in compliance with OSHA'S "Blood borne Pathogens."

6.0 SITE CONTROL

6.1 GENERAL REQUIREMENTS

The S&H Supervisor and Project Manager will implement a Site Control Program in accordance with CACs requirements and OSHA's standards found in 29 CFR 1910.120.

6.2 SITE WORK AUTHORIZATION

No work will proceed without authority from CAC's Project Manager.

6.3 HAZARDOUS WORK PERMITS

6.3.1 GENERAL

Hazardous work permits (HWPs) are required for site tasks that present an unusual safety and health problem (e.g., entry into confined spaces, work in high airborne contamination, and work in flammable atmospheres). A careful review of the potential hazard is to be completed by the Safety and Health Officer.

Normally, the HWP will address:

- Medical surveillance
- Personnel exposure monitoring program
- Respiratory protection
- Personnel protective equipment and clothing
- Compliance with rules regarding prohibited activities
- Hygiene facilities and practices
- Employee information and training
- Documentation.

6.3.2 APPLICABILITY

An approved and active HWP will be required prior to any work activity that could result in serious injury, illness, or death. HWPs shall be required whenever the following conditions may be present:

- Chemical exposures
- Oxygen deficiency
- Electrical hazards
- Fire and explosion
- Physical hazards
- Extreme temperatures
- Excessive noise

- Biological hazards
- Waste treatment
- Other work determined to require an HWP by the Safety and Health Officer

The S&H Officer will determine when the HWP will be implemented based on the degree of hazard. Generally, the only exceptions to requiring an HWP for the above conditions are:

- Surveys and sample collection in support of establishing and monitoring restricted work areas
- Emergency responses when serious impacts could result if time were taken for HWP preparation and approval.

6.3.3 SPECIFICATION OF CONTROL CONDITIONS

The S&H Officer will include the following information on the HWP form:

- The next sequential HWP number
- Hazardous conditions and maximum doses expected at the work location
- Recent chemical and/or biological surveys and their results
- Additional chemical and/or biological surveys, if needed
- Protective apparel and equipment required because of chemical, biological, or physical hazards (e.g., confined space with lack of oxygen)
- Special instructions required, such as watchmen for confined space entry
- Expiration date
- Names and signatures of workers involved in work activity covered by an HWP.

6.4 CONTROLLED AREA DESIGNATION AND ACCESS

Typically, site activities use a barrier (e.g., fence or tape) to delineate the construction/contaminated area from other parts of the site. The entire site is remote and is not frequented by the public. These zones also include a small decontamination corridor. A separate vehicle entrance may be established if necessary. A decontamination station for personnel will be established at the entrance of each contamination reduction zone. Additional stations may be established at each access-control point.

6.4.1 ACCESS CONTROLS/CONTAMINATION

Access to controlled areas where exposure to hazardous materials above guidelines is possible will be accomplished through a program that controls the activities and movements of people and equipment at the project site. Included in this program are controls for chemical, biological, and

construction safety hazards. If contaminants are encountered, the following procedures may be used:

- Maintain an authorized personnel list
- Maintain an access-control register at the controlled area boundary to record the number and identity of individuals in the area
- Require personnel to sign the access-control log before they enter and leave the controlled areas
- Require personnel and equipment to enter the site through the access-control point.
- Require personnel decontamination stations to be provided and maintained where contact with removable contamination is possible.

High concentrations of airborne contaminants (lead and arsenic in dust) are anticipated at this site. Due to the remoteness of the site and the protective vegetation (heavy woods between the site and off-site areas), it is anticipated that the public will not be effected by this dust. Workers will, however, be warned to protect food and water from dust in the immediate vicinity of the work area. Additionally, workers will be required to wear protective clothing (tyvek suits and respirators), until area and personnel air monitoring has shown that the concentrations of airborne contaminants (lead and arsenic) are below OSHA Permissible Exposure Limits (PELs).

6.4.2 ACCESS CONTROL/CONSTRUCTION HAZARDS

An exclusion zone will be established around each work area before intrusive work begins. The exclusion zone will be posted and physically barricaded, if the S&H Supervisor so requires, based on site conditions. The site access control points are typically posted as follow:

DANGER
Controlled Area
Authorized Personnel Only

7.0 SITE COMMUNICATION

The buddy system will be used during work in exclusion zones and remote locations. The primary means of communication for workers out of visual range will be two-way radios.

8.0 DECONTAMINATION

8.1 PERSONNEL DECONTAMINATION

A two-station decontamination system will typically be established for personnel exiting exclusion zones. Personnel will always wash hands and exposed skin areas upon removing protective clothing or leaving controlled work areas.

8.2 EQUIPMENT DECONTAMINATION

Small equipment will be decontaminated at the site using the three-wash system. Large equipment will be wrapped before transport to the decontamination area.

8.3 APPAREL DECONTAMINATION

Specific procedures for apparel decontamination may be established in the Constructor/Subcontractor S&H Plan. The following standard practices will be followed:

- The S&H Supervisor will establish a minimum of one safety apparel decontamination station at the site.
- Soap/detergent, rinse water, towels, wash pans, and brushes for scrubbing boots will be available.
- Wastes generated from decontamination will be properly disposed in accordance with EPT procedures.
- Outer protective clothing will be removed and placed in plastic bags for disposal or retained for future use, depending on the contamination potential.

8.4 PERSONNEL DECONTAMINATION AND PERSONAL HYGIENE

Site personnel may be subject to potential skin or eye irritation. An eye wash station and an appropriate method for decontaminating the skin will be available in areas where eye and skin contamination may result from contact with corrosive or toxic chemicals. Portable eye wash bottles will be available at each location where corrosive chemicals may be present.

Water from portable showers, hoses, or other sources for washing/rinsing will be available at locations near where skin contamination may occur. Toilet and hand washing facilities will also be available onsite but away from the contaminated areas for sanitary and hygienic purposes. Whenever the work area has been determined to be chemically or biologically contaminated, each employee will be required to wash prior to eating, drinking, smoking, or chewing. These activities will only be permitted in designated areas outside the work area.

A temporary decontamination station will be set up at the edge of the restricted zone. A contamination reduction corridor will lead from the station to the exclusion zone. Entrance to

the exclusion zone will be controlled so that all foot traffic enters and exits through the decontamination station. The station will be stocked with needed personnel protective equipment.

Personnel leaving the exclusion zone will remove gross contamination before exiting by scraping mud off boots, etc. At the head of the contamination reduction corridor, personnel will wash boots and gloves. Three tubs will be provided: one with soapy water and two with rinse water. Contaminated water will be transferred to the on-site storage/treatment area.

Entering the decontamination station, personnel will remove outer boots, outer gloves, and protective coveralls. Soiled coveralls will be deposited in a trash container lined with a plastic garbage bag. The trash container will be emptied daily or as required. If respirators are worn, they will be removed. Finally, inner gloves will be removed and discarded in the trash container.

9.0 VISITOR REQUIREMENTS

Visitors will follow the directions of the S&H Supervisor regarding decontamination of personnel and equipment brought inside controlled areas. Equipment will be wrapped and taped to the maximum practicable extent, as directed by the S&H Supervisor, to minimize the need for decontamination.

10.0 FIRST AID AND MEDICAL SURVEILLANCE

10.1 GENERAL

Emergency planning and notification is discussed in Appendix A. A 5-gal supply of emergency deluge water will be available and reserved for emergency use. Each contractor shall maintain at each work location standby first-aid kits and at least two eyewash bottles (1-qt capacity each) available for immediate use. The S&H Supervisor will verify weekly that the first-aid supplies are available.

10.2 FIRST AID

Qualified personnel may use the first-aid kits to administer first aid to any workers who are injured. When responding to serious personnel injuries, the emergency coordinator or the S&H Supervisor will achieve contact by land line or cell phone for activation of emergency response by local fire, medical, or police services.

Severely injured personnel will be transported to the hospital by ambulance service. Life-saving care will be provided immediately, without consideration of decontamination requirements. In the presence of strong acid or caustics, caregivers will don appropriate protection.

A full medical examination shall be required should exposure symptoms be exhibited. .

10.3 EXPOSURE CONTROL FOR BLOODBORNE PATHOGENS

All site personnel shall follow OSHA's "Blood borne Pathogens" standards. All personnel should be aware of the potential for transmission of disease from contact with body fluids. Assume all body fluids are potentially infectious and use appropriate precautions. Controls to be considered are:

- Use the victim's hand to control initial bleeding
- Use available protective gear (gloves, etc.) to prevent contact with body fluids
- Promptly wash after contact with body fluids
- Use rescue breather for CPR.

10.4 MEDICAL SURVEILLANCE

Contractor and subcontractor personnel shall follow the BSII Core Process "Medical Surveillance" and requirements found in OSHA standards 29 CFR 1910.120. A qualified physician will examine personnel. The physician will perform medical examinations specified in this section and review the medical examination results to determine whether each worker is medically qualified to perform the proposed hazardous work. If the contractor and subcontractor personnel have up-to-date medical surveillance in accordance with OSHA Standard 29 CFR 1910.120, provided documentation of up-to-date medical surveillance is provided S&H

Supervisor prior to personnel entering restricted areas. The S&H Supervisor or S&H Representative will determine the need for subsequent medical examinations.

The purposes of the medical surveillance program are: (1) to assess the individual's health prior to handling hazardous materials, (2) to determine the individual's suitability for work assignments requiring the use of personal protection clothing and equipment, and (3) to monitor for evidence of changes in the individual's medical indicators that could be related to the work. This assessment will address expected conditions that would predispose the employee to illness upon exposure to hazardous substances or from the physical demands of using PPE, such as respirators and protective clothing. A physician's statement, certifying that the employee is physiologically fit to work in a restricted area and wear a negative-pressure respirator, will be received before the employee starts work.

10.4.1 BASELINE AND ANNUAL HEALTH ASSESSMENT

The baseline and annual health assessment will include the following:

- A complete medical and occupational history
- Physical examination
- Urinalysis
- Chemistry panel (SMAC)
- Pulmonary function testing (FEV and FVC)
- Audiometry and visual screening
- Chest x-ray (PA) and/or electrocardiogram when determined to be necessary by the physician
- Serum PCB

10.4.2 TERMINATION EXAMINATION

Upon termination of employment, personnel who have worked continuously at the project site for more than 6 months will be required to undergo an examination equivalent to the baseline health assessment. All personnel who terminate employment within a 6-month period will undergo an examination based upon their exposure at the site. Specific examination tests will be determined by the physician and the Project Manager.

10.4.3 SUPPLEMENTAL EXAMINATION

Any worker receiving a potentially harmful level of exposure to hazardous chemical/biological material will undergo a supplemental examination if deemed appropriate by the examining or consulting physician.

10.4.4 PHYSICIAN'S EVALUATION

The occupational medical physician will determine any medical limitations of site workers. The provider will submit a physician's statement to the S&H Supervisor for all site employees and to the contractor for its employees.

11.0 HAZARD MONITORING PROGRAM

11.1 GENERAL

Hazard monitoring will be performed at the site, as described in the following sections. The S&H Supervisor will assure that hazards are monitored and assure the implementation of all necessary controls to minimize the hazards.

11.2 MONITORING STRAGEGY

Personnel and area monitoring strategies have been devised to ensure the identification of areas and work activities for which engineering controls and/or respiratory protection are required. Monitoring will be conducted to confirm that the levels of protection provided by the respiratory protection program and by engineering controls are adequate to protect the worker, the environment, and the public.

Respiratory protection will be mandatory for tasks involving potential for significant airborne exposure(s) unless monitoring results indicate that protection is not required. Breathing zone samples will be analyzed by a method approved by the National Institute of Occupational Safety and Health (NIOSH).

11.3 MONITORING EQUIPMENT

The S&H Supervisor will ensure that an adequate supply of monitoring equipment is available before work begins. The S&H Supervisor will ensure that the instruments are used only by persons with training and experience in the care, calibration, operation, and limitation of the equipment. Work involving potential exposure to hazardous materials will not be performed unless properly maintained and calibrated monitoring equipment is being used to monitor the work area and the personnel in the work area.

To help evaluate potential health hazards at the site, the S&H Supervisor may use the following monitoring equipment:

- High Volume Air Sampling Pump: The instrument will have a Rotometer to measure air flow.
- Personnel Air Sampling Pump: The instrument will be calibrated to manufacturer's recommendations for air flow recommended by NIOSH.

A copy of instrument calibration records will be maintained on site for all instrument calibrations. Calibration data will be recorded on field data collection forms. Air sampling pumps flow rates will be recorded to ensure accuracy in determining sampled air volumes.

11.4 RESPONSES TO ABNORMAL CONDITIONS OBSERVED BY MONITORING

The S&H Supervisor has the authority to investigate and implement protective measures necessary to protect the health and wellbeing of site personnel and the community.

11.4.1 DUST CONTROL/FUGITIVE EMISSIONS

S&H Supervisor may require contractor/subcontractors to modify excavation and soil handling procedures to reduce/minimize dust and fugitive emissions. This may include wetting soil or modifying procedures.

12.0 PERSONAL PROTECTIVE EQUIPMENT (PPE) PROGRAM

12.1 GENERAL

PPE consists of three components: standard safety equipment required on the site, special PPE (e.g., fall protection, water safety), and respiratory protective equipment.

Standard safety equipment is described in 29 CFR 1910.120 Appendix A. In addition, all project and contractor personnel entering the site will comply with all task-specific safety requirements. The protective apparel and equipment requirements for personnel working in restricted areas will be determined by the S&H Officer and will be based on four levels of protection (Levels A through D). Equipment used will be listed in the "NIOSH Certified Equipment List." The level of protection will be based on the type of hazardous material, its concentration and toxicity, and the potential for exposure through inhalation, ingestion, skin absorption, direct contact, splash, or impact. The levels of protection are described below.

12.2 LEVELS OF PROTECTION

The Contractor and Subcontractor S&H Plans will establish the proposed initial PPE ensemble for tasks with exposure potential. The various types of PPE and definitions of the standard ensembles available are discussed in BSII Core Process. The levels of protection are:

- **Level A**: maximum available protection for the respiratory tract, skin, and eyes. Positive pressure, pressure-demand SCBA and a totally encapsulating, chemically resistant suit is required. Normally, the SCBA unit is worn in side the suit to decrease the chance of contamination and possible damage to the unit. An intrinsically safe, two-way radio must be worn in side the suit. Covington & Associates Corporation does not anticipate that this level of protection will be required for this site.
- **Level B**: maximum respiratory protection but a lesser degree of skin protection. This is the minimum level recommended when the contaminant(s) are unknown or when toxic airborne concentrations of known contaminants exceed the protection factor of the full face piece, air purifying respirator, or when there is an oxygen-deficient atmosphere. Positive pressure, pressure-demand SCBA or supplied air respirator with escape capability will be worn. Breathing air will at least meet the requirements for Grade D breathing air. Protective clothing will include polyethylene or Saranex®, hooded, disposable coveralls; chemical resistance boots; and nitrile or vinyl gloves. Covington & Associates Corporation does not anticipate that this level of protection will be required at this site.
- **Level C**: for use when toxic substances and/or concentrations are known and criteria for using air-purifying respirators can be met. This level of protection includes half- face piece, air-purifying respirators and appropriate disposable coveralls. Chemical-resistant gloves and boots, along with hard hats, will be required. Covington & Associates Corporation anticipates that this level of protection will be initially required at this site, until air monitoring results show that a lesser degree of PPE (Level D) can be substituted.

- **Level D**: the minimum level recommended when a respirator is not required but skin protection must be controlled. Typically this level will include chemical-resistant boots, disposable Tyvek®, and gloves, along with hard hat and safety glasses. Covington & Associates Corporation anticipates that this level of protection will be required once air monitoring results show that Level C PPE is not required.
- **Construction attire**: is the minimal protection level when respiratory or skin protection is not required. Normally, all that is needed is a basic work uniform (i.e., work clothes, work boots, safety glasses, and hard hat). Optional equipment may include work gloves, rubber boots, and a rain suit. Covington & Associates Corporation anticipates that this level of protection may be allowed in areas other than restricted work areas.

PPE can reduce the possibility of contact with hazardous materials, but it should be used in conjunction with proper site entry protocols and other safety considerations. No single combination of protective apparel and equipment is capable of protecting against all hazards. The use of protective apparel and equipment is not capable of protecting against all hazards. The use of protective apparel and equipment can create significant work hazards (e.g., heat stress, physical and psychological stress, and impaired vision, mobility, and communications). For any given situation, apparel and equipment should be selected to provide a level of protection commensurate with the degree of hazard. Overprotection, as well as under-protection, can be hazardous and should be avoided.

Protective apparel and equipment should be selected using the following criteria:

- Permeability, degradability, and penetrability by specific agents expected on the site
- Heat/cold (thermal effects)
- Durability
- Flexibility
- Ease of decontamination
- Compatibility with other equipment
- Duration of use
- Special conditions (fire, explosion, electrical, solar radiation, and confined space)

NOTE: The S&H Officer may authorize downgrade or upgrade from the initial proposed level of protection based on actual site conditions.

12.3 PROTECTIVE CLOTHING/EQUIPMENT

Typically, Level C protection will initially be worn in the restricted work areas. Level C protection will generally include the following protective clothing and equipment unless otherwise approved by the S&H Officer:

- Sturdy leather work shoes
- Hard hat

- Eye protection (e.g., safety glasses, goggles, and/or face shield)
- Disposable Regular Tyvek® suit
- Nitrile or vinyl glove inside a more durable glove
- Half-face, negative pressure respirator, until ambient air monitoring indicates a respirator is not needed
- Noise protection as required by monitoring.

Specific clothing will be identified based on the permeability of the contaminants and the potential degradation of the clothing.

Note: Levels D, C and B protection will require all connecting parts (e.g., wrist, ankles) to be taped unless determined unnecessary by the S&H Supervisor.

12.4 HAND PROTECTION

To protect hands and arms from chemical contamination, chemically resistant gloves will be used as integral, attached, or separate items from other protective clothing. Disposable gloves should be used whenever possible, to reduce decontamination needs.

- Cotton inner liner gloves are used to absorb perspiration and are optional.
- Neoprene or rubber gloves are to be used whenever (1) aqueous conditions exist, (2) non-permeable chemicals such as inorganic acids, caustics, and heavy metals are encountered, and (3) heavy-duty wear is required.

12.5 BODY CLOTHING

Various types of protective clothing are designed to prevent contamination of the body. At the Gulfport Fertilizer site, disposable Tyvek construction attire will be used for most work; however, the following clothing typically will be available onsite:

- Rain suits for protection against the elements.

12.5.1 REGULAR TYVEK®

Tyvek® will be used on the Gulfport Fertilizer site.

12.5.2 POLYETHYLENE TYVEK®

Polyethylene-coated Tyvek® will be used where hydrocarbons are present in soil, liquid, or air. It may be used for acids of a pH greater than or equal to 2 or bases of pH less than or equal to 9 ($5 \geq pH \geq 9$). These conditions are not anticipated to be encountered during this project.

12.5.3 SARANEX® TYVEK®

Saranex® Tyvek® will be used when highly toxic chemicals, such as benzene, vinyl chloride, and acrylonitrile, are encountered. These conditions are not anticipated to be encountered during this project.

12.5.4 RAIN SUITS

Rain suits may be used outside of chemically contaminated areas.

12.6 FOOT PROTECTION

Sturdy work shoes or boots will be worn to protect feet from contact with chemicals, compression, crushing, or puncture. Shoe covers, made of a variety of materials, protect boots from contamination and protect feet from chemicals. Shoe covers may be disposable. Foot covers must include one or more of the following:

- Sturdy work boots worn with protective rubber overshoes
- Sturdy chemically protective boots
- Disposable polyvinyl chloride booty over sturdy work shoes.

Over boots shall be worn where hydrocarbon contaminated water may come into contact with shoes. These conditions are not anticipated to be encountered during this project.

12.7 EYE AND FACE PROTECTION

Employees will wear approved eye protection (e.g., glasses, goggles, face shield) whenever there is potential for exposure to the following:

- Flying objects
- Dust
- Chemicals
- Harmful rays (e.g., welding, ultra-violet radiation).

Face shield and chemical splash-proof goggles will be worn when face and eyes are vulnerable to acidic or caustic material, or as directed by the S&H Supervisor. This protection is mandatory when working with acids and caustics ($5 \geq pH \geq 9$). Contact lenses will not be worn in restricted areas.

12.8 HEAD PROTECTION

Safety helmets (hard hats) protect the head from impact. Helmet liners, hoods, and protective hair coverings protect the head from chemical splashes and entanglement of hair in machinery or

equipment. Industrial safety hard hats will be worn by all workers at all times while onsite, except in designated areas.

13.0 RESPIRATORY PROTECTION

13.1 GENERAL

Use of respiratory protection, if necessary, will be in accordance with 29 CFR 1910.134. Respirators will be selected from program-approved devices based on an assessment of the nature and extent of hazardous atmospheres that are anticipated during field activity. The initial respirator assignment for each operation is provided in the S&H Plans and Activity Hazards Analysis and on the HWP. Respiratory protection is anticipated to be required during the initial stages of the project, until and unless air monitoring sampling shows that respiratory protection is not required.

13.2 MEDICAL SURVEILLANCE

Workers who are required to use respiratory protection will be fully qualified in accordance with 29 CFR 1910.134 before beginning work.

13.3 FIT TESTING

All respiratory protection program participants will receive an annual fit test in accordance with 29 CFR 1910.134.

13.4 RESPIRATOR CLEANING, MAINTENANCE, SANITATION, AND STORAGE

Routine cleaning during fieldwork will be accomplished at the respirator cleaning station located adjacent to the access-control point or other designated areas. All necessary supplies will be provided for workers to clean and sanitize their respirators. (Note: Decontamination does not constitute respirator cleaning but is always performed before cleaning). Supplies provided by the Contractor and Subcontractors for its employees will include:

- Moist treated wipes
- Cleaning/sanitizing solution
- Cleaning solution basins
- Soft-bristle scrub brushes
- Rinse basins
- Drying area
- Clean storage bags (zip-lock type).

Respirators that are used either occasionally or daily will be cleaned, sanitized, inspected, assembled, and maintained ready for use daily. Each respirator will be stored in a clean and sanitary container. Parts that require inspection include the valves, valve covers, nosepiece, straps, eyepiece, face-piece and its snaps, cylinders, and canisters. The individual responsible for the cleaning, inspection, maintenance, sanitation, and storage of respirators will be trained in the proper methods and procedures.

Each respirator user will store his/her respirator in a clean, sealed plastic bag when it is not in use, unless it has been determined that the respirator is contaminated or is returned at the end of its use. If a respirator becomes chemically contaminated, it will be replaced with a clean and sanitized respirator. The respirator wearer will inspect the replacement respirator for defective parts and leaks.

13.5 SPECIAL TRAINING

Special training is required for the use of Type C (airline supplied) respirator and SCBA. Personnel will demonstrate training as evidenced by a copy of the training certificate or a letter or certificate from their employer stating that they are trained in the use of this equipment.

Each respirator user will be issued a respirator for exclusive personal use and will be trained in its use, care, and maintenance in accordance with 29 CFR 1910.134. Each respirator user will be instructed to inspect his/her respirator before each use, after each use, and after cleaning.

13.6 RESPIRATOR SELECTION

The S&H Supervisor will select respiratory protection based on whether:

- The estimated contaminant concentration is in the range requiring respiratory protection as determined by monitoring information.
- The PEL, threshold limit value, short-term exposure limit, or ceiling value may be exceeded.
- The contaminant is a gas, vapor, mist, dust, or fume.
- The contaminant concentration could be termed immediately dangerous to life or health.
- The warning properties (e.g., irritation, odor) of the chemical contaminants are not detectable.

NIOSH approves respirators using test certification numbers; only NIOSH-approved equipment, components, and replacement parts will be accepted. In addition, respirators are approved as a system. Cartridges, canisters, filters, air lines, corrective lens holders, adapters, and regulators cannot be interchanged among different brands of equipment or even among equipment of a given manufacturer unless specifically approved. No disposable respirators will be used.

The various types of respirators and their specific uses are described in the following sections.

13.7 HALF-FACE, NEGATIVE-PRESSURE RESPIRATOR

A HALF-face, negative-pressure respirator will be used under the following conditions.

- Ambient air concentrations of known contaminants in the breathing zone exceed the PEL but are less than 10 times the PEL (a new PEL will be calculated for multiple contaminants based on synergistic effects).

- Specific tasks where this respirator has been approved by the S&H Supervisor.

13.8 GENERAL CONSIDERATIONS AND LIMITATIONS FOR RESPIRATOR USE

The following criteria will be followed.

- **Oxygen deficient atmospheres**: Atmosphere-supplying respirators will be used in environments immediately dangerous to life or health (atmospheres containing less than 19.5% oxygen at sea level). These conditions are not anticipated to be encountered during this project.
- **Eye irritation**: When working in contaminated environments or where there is potential for eye irritation, a full-face unit will be used.
- **Nuisance dust**: Any approved filter respirator can be used for nuisance dusts.
- **Warning properties of contaminant**: Chemical cartridge respirators will not be used for exposures to air contaminants that cannot be easily detected by odor or irritations. For example, cartridge respirators will not be used to protect against methyl chloride or hydrogen sulfide. The former is odorless, and the latter, while foul smelling at low concentrations, will paralyze the olfactory nerve system at high concentrations, thereby rendering odor detection unreliable.
- Chemical cartridge respirators will not be used for protection against gases or vapors that are not effectively stopped (i.e., carbon monoxide). Do not use chemical cartridge respirators in the presence of the following materials:
  - Arsine Phosphorus
  - Carbon monoxide
  - Hydrogen cyanide
  - Hydrogen fluoride
  - Hydrogen sulfide
  - Methanol
- Airline or supplied-air, positive-pressure, pressure-demand respirators or special-use respirators will be used for protection against materials in the above list.
- Chemical cartridges will be used only for those contaminants and concentrations for which they are certified.

14.0 TRAINING REQUIREMENTS

14.1 GENERAL

Personnel working at a site must recognize and understand the potential risks to safety and health associated with the work at that site. Workers involved in remedial action must be thoroughly familiar with programs and procedures and must be trained to work safely in controlled areas

14.2 GENERAL SITE WORKERS

All site workers that may be exposed to hazardous conditions will be trained to work in compliance with 29 CFR 1910.120. Each site worker conducting activities inside a chemically restricted area will receive 40 hours of hazardous waste site training and 3 days of supervised on-the-job training. Site workers who do not enter restricted work areas and who have minimal exposure potential will receive a minimum of 24 hours of hazardous waste site training. Employees will not engage in field activities associated with hazardous materials until they have been trained to a level commensurate with their job function and responsibilities and with the degree of anticipated hazard, including site-specific hazards.

General laborers, technicians, and other personnel will attend training sessions that apply to their individual jobs and responsibilities, as well as training sessions that provide an overview of the site hazards and the means to control those hazards. Their training will include classroom instruction in the following subject areas, depending upon their individual jobs:

- Hazardous chemical notification
- Details of the safety and health plan
- Employee rights and responsibilities
- Safe work practices
- Nature of anticipated hazards
- Handling emergencies and accidents
- Rules and regulations for vehicle use
- Safe use of field equipment
- Handling, storage, and transportation of hazardous materials
- Use, care, and limitations of personal protective clothing and equipment
- Safe sampling techniques.

Retraining will be required annually, or more frequently if significant changes occur in conditions affecting the safety and health of the workers. As a minimum, retraining will consist of 8 hours of discussion about the same topics discussed in the 40-hour or 24-hour training course.

14.3 ORIENTATION

Orientation attendees shall include all Contractor and Subcontractor employees. No work may be performed prior to attending an orientation by the S&H Supervisor.

The S&H Supervisor shall present the orientation. The orientation shall be specific for the project location and may be in the form of overheads, videos, or other prepared material. Information on S&H aspects of the job or task, Site Conditions, emergency procedures, permit requirements, traffic patterns, adjacent operating production equipment, and waste disposal shall all be included in the orientation.

14.4 SAFETY MEETINGS

Safety meetings will be conducted to reemphasize the salient points of the S&H program and existing site conditions and to inform team members of changing site conditions. These meetings will be conducted weekly by each on-site employer, or more frequently if needed, to ensure proper safety and health of personnel in the performance of regular work activities and in emergency situations. Contractors, if they choose, may attend meetings conducted by Covington & Associates Corporation. Safety meetings will be documented on the appropriate training form.

14.5 VISITORS

All visitors to the site, even if escorted, must receive a briefing on safety. These visitors will not be permitted in the restricted work areas unless they have been respirator-trained, fit-tested, and medically approved. Visitors not complying with the above requirements will not enter the restricted work areas; however, they may observe site conditions from a safe distance.

15.0 HAZARD COMMUNICATION

The S&H Supervisor will provide all personnel with site specific training and documentation advising them of the potential hazardous materials in the workplace. A list of such materials will be posted at the work site and copies of appropriate material safety data sheets will be available to site workers upon request. The project will comply with 29 CFR1910.1200.

16.0 FORBIDDEN PRACTICES

The forbidden practices listed below are applicable to all restricted areas. In addition, no worker may engage in any activity for which the consequences of his actions are unclear without the approval of the S&H Supervisor. If such activities become necessary to complete any phase of the work, the necessary safety and health requirements and an approved HWP will be prepared by the S&H Supervisor.

The following practices will be strictly forbidden during any work in restricted access areas.

- Horseplay
- Fighting
- Eating
- Drinking
- Smoking
- Chewing gum, tobacco, or any other substances
- Use of facial cosmetics
- Wearing contact lenses
- Unnecessary sitting or kneeling on contaminated surfaces
- Placing equipment on contaminated surfaces (when practicable)
- Climbing on or over obstacles
- Starting or maintaining an open flame of any type unless authorized by the H&S Supervisor
- Entering the work site with safety equipment that has not been determined to be in proper working condition immediately prior to entry
- Entry of the work site, under any circumstances, by any employee or visitor without prior approval.

In addition to the forbidden practices, the S&H Supervisor may impose other prohibitions that may be required for safe operations.

17.0 AS LOW AS REASONABLY ACHIEVABLE POLICY

Covington & Associates Corporation's policy is to maintain exposures to hazardous chemical at levels that are as low as reasonably achievable (ALARA). ALARA is achieved through proper training of employees, adequate work procedures, adequate engineering controls, good personal hygiene practices, and, when required, use of protective equipment. Each individual working in a restricted area is required to adhere to established ALARA rules, regulations, and concepts.

18.0 THE BUDDY SYSTEM

The buddy system is a safety practice in which each individual is concerned with the health and well-being of co-workers. The buddy system will be implemented during all onsite activities and will be incorporated whenever workers may be isolated or as determined by the S&H Supervisor. Two-way radio communication should be established when deemed necessary by the S&H Supervisor. The following standard hand signals will be used in case of failure of other communication.

Hand Signal	Meaning
Hand gripping throat	Out of air, can't breathe
Grip partner's wrist or both hands around waist	Leave area immediately
Hands on top of head	Need assistance
Thumbs up	OK, I am all right, I understand
Thumbs down	No, Negative

19.0 GENERAL SITE SAFETY REQUIREMENTS

Frequent and regular S&H inspections will be conducted at each work site. The S&H Supervisor and contractor and subcontractor supervisors will conduct a daily inspection of the workplace, document on standard forms, and track deficiencies until corrected. The contractor and subcontractor supervisors should also participate in a weekly inspection. In addition to the daily inspections performed by the field team, the program S&H mangers or designees will perform audits to ensure compliance with program requirements. Audits will be similarly documented and deficiencies tracked until documented closure.

Hazards, due to normal site activities, can be reduced by using common sense and following the safe practices listed below.

- All equipment and tools will be used only by authorized personnel familiar with its use.
- Safety devices on equipment will be left intact and used as designed.
- Equipment and tools will be kept clean and in good repair and used only for their intended purpose.
- Good housekeeping practices will be followed.
- Use of chemicals will be limited to authorized personnel familiar with their use and associated hazards.

19.1 LADDERS

Ladders and scaffolds, if needed to conduct the work required for this project, will be used in accordance with the following.

- Manufactured ladders will be constructed of heavy-duty grade; Type II minimum, conforming to applicable ANSI standards.
- Ladders will not be spliced together to make a longer ladder.
- Straight ladders for access will extend at least 3 ft above the landing.
- The base of straight ladders will be set back a safe distance from the vertical; approximately one-fourth the working height of the ladder.
- Stepladders will be fully opened to permit the spreader to lock. Stepladders will not be closed and leaned against an object for access.
- Metal ladders or other conductive ladders will not be used for electrical work or in areas where they could contact energized wiring.
- "Job-made" ladders will be constructed in accordance with OSHA 1926.450(b) (DOL 1989f).

19.2 HOUSEKEEPING

Housekeeping procedures contained herein pertain to uncontaminated trash, debris, and rubbish. Drilling waste or chemically contaminated materials must be handled in accordance with applicable regulatory requirements.

The following housekeeping rules will apply at the jobsite, as applicable.

- Have a daily clean-up plan.
- Work areas must be kept clean and free from trash and debris. Trash containers must be located throughout the jobsite.
- Excess scrap material and rubbish must be removed from the work area.
- Maintain unobstructed passageways.
- Obtain Covington & Associates Corporation approval of storage areas.
- Immediately remove or bend over any protruding nails.
- Remove loose overhead materials.
- Maintain hoses and cords so not to create tripping hazards.
- All surplus materials must be returned to a designated area of the site at the completion of a job.
- Tools and materials must be put in tool boxes or returned to the tool room after use to avoid creation of a hazard for others.
- Oily rags must be placed in approved non-combustible metal containers.
- Toilets, wash-up facilities, and drinking fountains must be kept clean and sanitary; problems must be reported to the supervisor.
- PPE will be returned to the designated area at the end of the work period and will be placed in designated receptacles.
- Eating, drinking, use of tobacco products, chewing gum, etc., is permitted only in designated break areas. These activities are not permitted in change or shower areas, toilet facilities, etc.

19.3 FIRE PREVENTION AND PROTECTION

Fire Prevention

The following rules will be enforced to prevent fires:

- Smoking will be prohibited at or in the vicinity of operations that may present a fire hazard. "No Smoking" or "Open Flame" markings will be conspicuously posted.

- Flammable and/or combustible liquids must be handled only in approved; properly labeled metal safety cans equipped with flash arrestors and self-closing lids.
- Transfer of flammable liquids from one container to another will be done only when the containers are electrically interconnected (bonded).
- The motors of all equipment being fueled will be shut off during the fueling operations.
- Flammable/combustible liquids stored in metal drums will be equipped with self-closing safety faucets, vent bung fittings, and drip pans. Such containers will be stored outside buildings in an area approved by the SSHR and the Plant Fire Marshall whenever working within an operating facility. Such metal drums will be properly grounded.

Fire Protection

The following measures will be used to protect against fires:

- All construction equipment (cranes, bulldozers, track hoes, etc.) will be equipped with a fire extinguisher of 10 ABC units or higher.
- All vehicles will be equipped with a fire extinguisher of 5 ABC units or higher.
- Temporary offices will be equipped with a fire extinguisher of 10 ABC units or higher.

At least one portable fire extinguisher of 20 ABC units will be located not less than 25 ft or more than 75 ft from any flammable liquid storage area.

EMERGENCY CONTACTS

Covington & Associates Corporation

Project Manager: John Szabo	(228) 396-0486 (228) 216-1158
S&H Supervisors: Anthony Damiano	(228) 396-0486 (228) 861-2402
Wendell Larson	(228) 396-0486 (228) 216-7981
Todd Hairston	(228) 396-0486 (228) 216-7983

Response Teams

US EPA Environmental Response Team	908/548-8730
US Coast Guard Environmental Response Team	800/424-8802

Site Emergency Numbers

Ambulance	911
Fire Department	911

Offsite Emergency Numbers

Gulfport Police Department	228-868-5959 or 911
Gulfport Fire Department	228-863-5953 or 911
Mississippi State Police	228-539-4881 or 911
Harrison County Sheriff	228-89-3000 or 911

Medical Emergency

Memorial Hospital Gulfport, MS	228-867-4000

Health Emergency

Poison Control Center	(800) 222-1222
ToxLine	(301) 496-1131

CHEMTREC (24hr)	1-800-424-9300

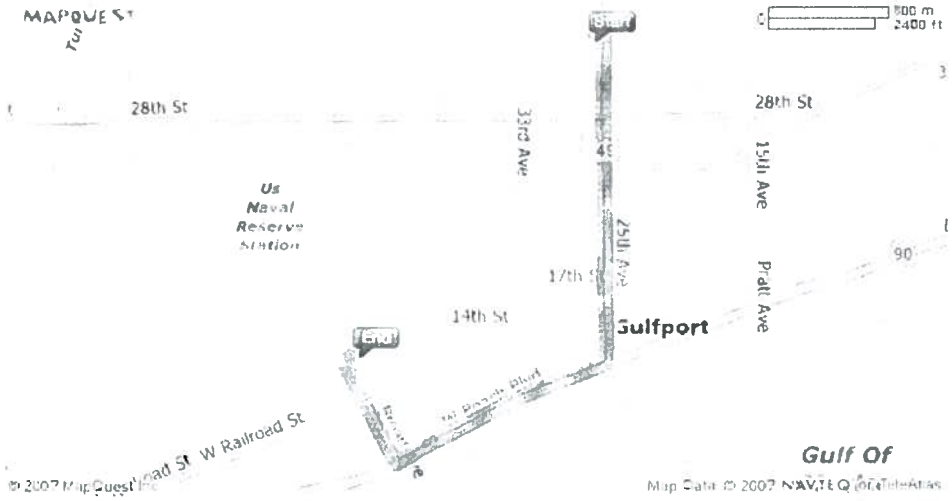
MAPQUEST

Start: [2500-2599] 33rd St
Gulfport, MS 39501, US

End: Memorial Hospital At Gulfport:
228-867-4000
4500 13th St, Gulfport, MS
39501, US

Notes:
Only text visible within note field will print.

Directions	Distance
Total Est. Time: 8 minutes **Total Est. Distance:** 3.70 miles	
START **1:** Start out going EAST on 33RD ST toward US-49 S.	<0.1 miles
49 **2:** Turn RIGHT onto US-49 S.	1.6 miles
90 **3:** Turn RIGHT onto W BEACH BLVD / US-90 W.	1.2 miles
4: Turn RIGHT onto BROAD AVE.	0.6 miles
5: Turn RIGHT onto 13TH ST.	0.1 miles
END **6:** End at **Memorial Hospital At Gulfport:** 4500 13th St, Gulfport, MS 39501, US	
Total Est. Time: 8 minutes **Total Est. Distance:** 3.70 miles	



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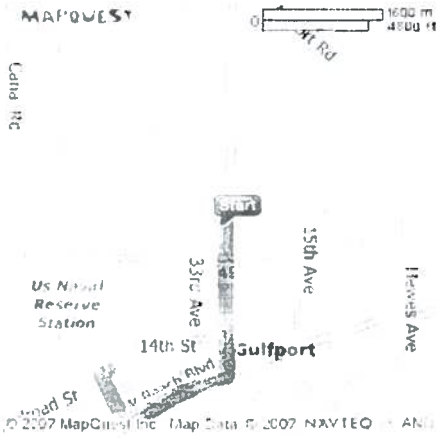
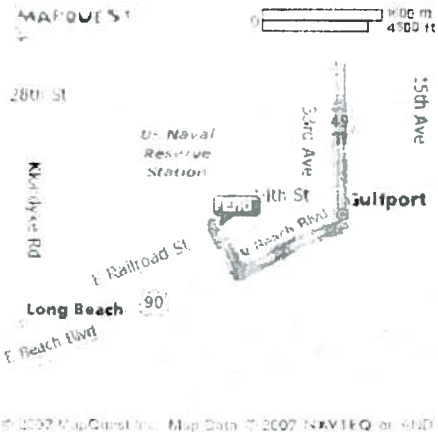




ATTACHMENT 1

Job Safety Analysis

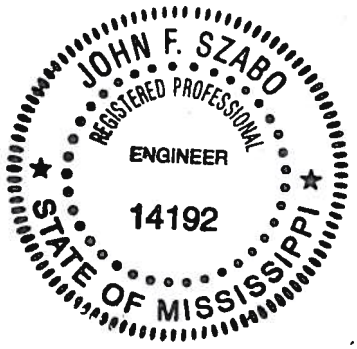
Work Activity	HAZARD	Reason
Site Preparation	Heavy Equipment; slip, trip, fall hazards	This phase will require the utilization of equipment that can pose risks.
Soil Excavation	Cave in and falling underground utilities; excessive noise; pinch points, airborne objects, and overhead hazards; contact with contaminated soil and groundwater; spreading of site contaminants; inhalation of site contaminants.	Follow required excavation safety procedure under guidance of competent person obtain utility clearance before breaking ground; wear appropriate PPE and hearing protection; perform equipment and personnel protective equipment
Backfill and Compaction	excessive noise; pinch points, overhead hazards	Heavy equipment

INTERIM
CORRECTIVE ACTION PLAN

Former Gulfport Fertilizer Site
33rd Street
Gulfport, Mississippi

Presented on Behalf of:
Hancock Bank
2510 14th Street
Gulfport, MS 39501

September 28, 2007



John F. Szabo, P.E./Project Manager

Prepared by:
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Appendix A – SITE SAFETY & HEALTH PLAN

1.0 INTRODUCTION

Hancock Bank owns an approximately 145 acre, unimproved, vacant property in Gulfport, MS bounded on the south by 33rd Street, on the west by 34th Avenue, on the north by North Gulfport Subdivision and on the east by the railroad. The property is located in Section 33, Township 7 South, Range 11 West, City of Gulfport, Harrison County, Mississippi. The property consists of an approximately 33-acre tract (Former Gulfport Fertilizer Site) owned by Hancock Bank since the late 1970s on which the Gulfport Fertilizer Company operated a super-phosphate fertilizer operation from about 1914 – 1920. The remaining approximately 112 acre tract was acquired by Hancock Bank in late March 2005 from the Harreld Family Trust and is a vacant, undeveloped, heavily wooded property. *Since Hurricane Katrina in August 2005, the southern portion of the Harreld Family Trust property has been cleared (along 33rd Street and partially along 34th Avenue). The remainder of the property has remai[illegible] heavy woods, although the woods were heavily damaged by Hurri[illegible]*

They have bought the adjacent property (formerly off site)

The Former Gulfport Fertilizer Site [illegible] and groundwater, *probably as a result [illegible] ite.* Beginning in September 1998, Butler Se[illegible] behalf of Hancock Bank, began a site ch[illegible] nature and extent of contamination on the site. [illegible]mples

on the site from 0'-2' and 2'-4' below the ground surface (BGS). The collected soil samples were analyzed for arsenic and lead.

The results of the Butler Services investigation were presented in the *Site Characterization Report* for the site dated October 25, 1999. The report concluded that there were four (4) major source areas on the site where the arsenic and/or lead regulatory limits were exceeded in the site soils from 0'-4' BGS. The report recommended that additional soil samples be collected to determine the vertical extent of the arsenic and/or lead soil contamination. Installation of monitoring wells and collecting groundwater samples was also recommended in order to evaluate the extent of groundwater contamination at the site, if any.

After reviewing the *Site Characterization Report* for the subject site, the Mississippi Department of Environmental Quality (MDEQ) required that:

- the horizontal and vertical extent of soil contamination along the western boundary of the Former Gulfport Fertilizer site be determined;
- a minimum of six (6) monitoring wells be installed on the site; and
- all borings be advanced to a "laterally extensive low permeability confining layer underlying the surficial water bearing zone".

Butler Services prepared a work plan for this supplemental investigation – *Work Plan*

Off-Site/Source Area Soils and Groundwater Sampling – addressing MDEQ's requirements.

Hancock Bank hired Covington and Associates Corporation (CAC) in late October 2001 to replace Butler Services in implementing the Work Plan for the supplemental site investigation. CAC advanced forty-three (43) on-site geoprobe borings and twenty-two (22) off-site geoprobe borings. Soil samples were collected at 2' intervals from 0' – 8' below the ground surface (BGS) and at 4' intervals from 8' BGS to 8'-16' BGS or the low permeability confining clay layer, *whichever was less.* The soil samples collected from the 0'-2' BGS and 2'-4' BGS soil intervals were analyzed to determine the arsenic and lead concentration in each soil interval. At those locations where the arsenic and/or lead concentration exceeded the site's regulatory limits (7.18 mg/kg for arsenic and 400 mg/kg for lead, assuming the site would be used for unrestricted – residential - purposes in the future), samples from subsequent soil intervals were analyzed until the arsenic and/or lead concentration were below the site's regulatory limits. Two-foot (2') stream sediment samples were taken from four (4) locations along the stream located west of the western boundary of the Former Gulfport Fertilizer Site. Each stream sediment sample was analyzed for arsenic and lead. Groundwater samples were taken from twelve (12) of the boring locations. "Unfiltered" and "filtered" groundwater samples were collected and analyzed for arsenic and lead.

The supplemental site investigation findings were presented in the *Supplemental Site Characterization Report* prepared by CAC and submitted to MDEQ on November 8, 2002. The supplemental site investigation determined:

- The low permeability confining clay layer is 20'-26.5' BGS.
- The horizontal and vertical extent of the arsenic soil concentrations exceeding the site's regulatory limit for arsenic in soil (7.18 mg/kg) has been adequately defined, except in a small area on the off-site property *(the Harreld Family Trust property)* at 0'-2' BGS and 2'-4' BGS. It is felt that the horizontal and vertical extent in these off-site areas is within 100' of the last boring location advanced.
- The majority of the soil exceeding the site's regulatory limit for arsenic in soil occurs in the 0'-6' BGS soil interval.
- The total arsenic concentrations found in soil samples at the site do not exceed arsenic's TCLP regulatory limit (5.0 mg/l). Therefore, the site soils are not considered to be hazardous for arsenic.
- The horizontal and vertical extent of the lead soil concentrations exceeding the site's regulatory limit for lead in soil at unrestricted (residential) sites (400 mg/kg) has been adequately defined, except in a small area on the off-site property *(the Harreld Family Trust Property)* at 0'-2' BGS. It is felt that the horizontal and vertical extent in these off-site areas is within 100' of the last boring location advanced.
- The majority of the soil exceeding the regulatory limit for lead in soil at restricted

(residential) sites occurs in the 0'-2' BGS soil interval.

- Sub-surface soils exceeding 3,800 mg/kg total lead concentration will be considered hazardous for lead (TCLP lead > 5.0 mg/l).
- All collected stream sediment samples were below the site's regulatory limit for arsenic in soil (7.18 mg/kg) and below the regulatory limit for lead in soil at unrestricted (residential) sites (400 mg/kg). It is concluded that the stream has not been impacted by previous site operations.
- All of the "unfiltered" (Total) groundwater samples collected exceeded MDEQ's Tier 1 TRG for arsenic in groundwater (0.010 mg/l) and for lead in groundwater (0.015 mg/l). It is felt that this is due to the presence of soil particles in the groundwater samples.
- Arsenic and lead analytical results for "filtered" (Dissolved) groundwater samples exceeded MDEQ's Tier 1 TRG in the northwest and west area of the site.

A naturally occurring radioactive material (NORM) survey was performed on the site by CAC. The survey included identifying "hot spot" areas (areas where field radioactive readings exceeded 20 uR/hr) on the site. Following NORM survey procedures, soil samples were collected in a 100-meter sampling area east of the fertilizer production concrete slab. The soil samples were collected from 0"-6" BGS and from 6"-12" BGS. The collected soil samples were analyzed to determine the concentration of Radium-226 and Radium-228 in the soil samples in pico-curies per gram (pCi/gm).

The NORM survey determined the following:

- The horizontal and vertical extent of two (2) areas of the site where NORM concentrations exceeded the NORM regulatory limit for transfer of property for unrestricted (residential) uses were identified and adequately defined.

In order to determine the extent of soil contamination off-site, on the adjacent Harreld Family Trust property, which is now part of the overall site, CAC proposed to perform a supplemental off-site soil investigation. MDEQ approved CAC's plan for collecting additional off-site soil borings on April 21, 2003. From April 2003 to November 2003, CAC advanced seventy (70) additional borings on the Harreld Family Trust property. On July 29, 2003, CAC submitted a *Supplemental Off-Site Characterization Report.* The report was revised and re-submitted on December 1, 2003.

The supplemental off-site soil investigation determined the following:

- The horizontal and vertical extent of the arsenic soil concentrations exceeding the site's regulatory limit for arsenic in off-site soil (7.18 mg/kg) has been defined.
- The majority of the off-site soil exceeding the site's regulatory limit for arsenic in soil occurs in the 0'-4' BGS soil intervals.
- The horizontal and vertical extent of the off-site lead soil concentrations exceeding the site's regulatory limit for lead in soil at unrestricted (residential) sites (400 mg/kg) has been defined.

- The off-site soil exceeding the regulatory limit for lead in soil at unrestricted (residential) sites occurs in the 0'-2' BGS soil interval, only.
- Off-site soils exceeding 3,800 mg/kg total lead concentration occurred at one location, only – OS-6, 0'-2' BGS – and will be considered hazardous for lead (TCLP lead > 5.0 mg/l), if excavated.

Figure 1 shows the horizontal extent of arsenic and lead contaminated soil identified on the site.

CAC collected groundwater samples from seven (7) monitoring wells located on the Former Gulfport Fertilizer site for eight consecutive quarters from June 19, 2002 (First Sampling Round) to March 4, 2004 (Eighth Sampling Round). Each groundwater sample was analyzed for lead and arsenic concentrations. pH readings of each groundwater sample were also collected. CAC presented conclusions about the groundwater on the Former Gulfport Fertilizer site in a letter report entitled "Historical Groundwater Monitoring Report" dated August 10, 2004.

The data presented in this "Historical Groundwater Monitoring Report" for the Gulfport Fertilizer site demonstrated the following:

- The groundwater flow direction at this site has consistently followed a north to northwesterly path.
- Total Arsenic concentrations in the groundwater consistently exceeded the Tier 1

TRG of 0.010 mg/L at MW-2, MW-4 and MW-6, with minor excursions reported at MW-1, MW-3 and MW-7.

- Arsenic-contaminated groundwater potentially migrated onto the adjacent Harreld Family Trust (off-site) property, which, at the time, was not owned by Hancock Bank.
- Total Lead concentrations in the groundwater consistently exceeded the Tier 1 TRG of 0.015 mg/L at MW-1.
- Lead-contaminated groundwater is confined to the Former Gulfport Fertilizer site.
- Total metals data generally suggests that arsenic and lead concentrations in the groundwater are influenced most by the associated metals concentrations in the soils, as opposed to the pH levels in the soil or groundwater.
- Soil analytical information presented in the November 8, 2002 *Supplemental Site Characterization Report* demonstrates that the arsenic in the soil is not highly mobile and does not leach into the groundwater.
- The soil TCLP data presented in the *Supplemental Site Characterization Report* does, however, support that lead *may be* leachable at high concentrations (above 3,800 mg/kg).

In order to estimate the extent of groundwater contamination on the Harreld Family Trust Property (off-site property), CAC advanced twelve (12) borings on the Harreld Family Trust Property on October 20 and 21, 2004. Groundwater samples were collected from

each boring and analyzed for arsenic and lead. CAC estimated the extent of groundwater contamination based on the samples collected from the twelve (12) borings.

Figure 2 shows the extent of groundwater contamination on Hancock Bank property based on previous groundwater studies performed by CAC.

Hancock Bank is seeking to market the property to potential purchasers. It is anticipated that the purchaser of the property will use the property for industrial purposes, only. In order to entice potential purchasers to the property, Hancock Bank is proposing to implement part of the anticipated Corrective Action Plan (CAP) activities. This Interim Corrective Action Plan presents the CAP activities and rationale for those activities Hancock Bank proposes to implement. As part of the purchase agreement with the potential purchaser, the potential purchaser will prepare and submit a Final Corrective Action Plan addressing the remaining CAP activities the potential purchaser will be responsible to implement. It is anticipated that the potential purchaser will submit the Final Corrective Action Plan to MDEQ for approval prior to purchasing the property.

1.1 Objectives and Rationale

Since *it is anticipated that* the property will be utilized for industrial purposes *and that there will be* controlled access to the property, this *Interim Corrective Action Plan* will present engineering and institutional controls, which will be implemented by Hancock

Bank, *in preparation of selling the property.*

The engineering and institutional controls presented in this *Interim Corrective Action Plan* will protect human health and the environment since the soil contamination is confined to the site and has been shown not to be mobile - arsenic is not leachable at soil concentrations found on the site and concentrations of lead, which are leachable (above 3,800 mg/kg), will be removed from the site under this *Interim Corrective Action Plan.* Additionally, a large portion of the soil contamination is located in a wetlands area, which will remain. The wetlands minimize the potential for contaminated soil migrating from the site.

The groundwater contamination is also confined to the site. Groundwater data collected during the site characterization investigations shows the groundwater concentrations to be stable, indicating that the soil is not a continuing source of contamination to the groundwater. *It is anticipated that* the engineering and institutional controls that will be presented in the *Final Corrective Action Plan by a future purchaser of the property* will provide long-term monitoring of the groundwater. Source removal presented in this *Interim Corrective Action Plan* and the anticipated capping of portions of the site *by the future purchaser of the property* that will be presented in the *Final Corrective Action Plan* will further insure that the groundwater contamination does not increase *or migrate*.

2.0 CONCEPTUAL DESIGN

The following engineering and institutional controls will be implemented in accordance with the Schedule presented in Section 4.0 of this *Interim Corrective Action Plan.*

2.1 Use Restrictions

It is anticipated that Use Restrictions will be placed on the property *through a property deed restriction executed between the purchaser of the property and MDEQ.* The proposed Use Restrictions will be presented in the *Final Corrective Action Plan prepared by the potential purchaser and will be negotiated with MDEQ by the potential purchaser.*

2.2 Security Fencing

It is anticipated *that the future purchaser of the property,* under the *Final Corrective Action Plan, will place security fencing around the perimeter of the property.* The *Final Corrective Action Plan* will present the *specifications* for the security fencing around the perimeter of the property.

If Hancock Bank does not have the property under contract to sell the property within thirty-six (36) months of approval of this Interim Corrective Action Plan, Hancock Bank

will construct a 6-foot chain link fence around the contaminated portion of the property. Figure 3 shows an anticipated layout of both fences – *the perimeter security fence by the future purchaser* and the "interim" security fence installed by Hancock Bank *within thirty-six (36) months of approval of this Interim Corrective Action Plan, if the property has not been placed under contract to sell.*

In order to prevent/limit access to the portion of the site where Naturally Occurring Radioactive Material (NORM) is present, a 6' security fencing with warning signs will be installed *under this Interim Corrective Action Plan.* This is being done to protect any future workers who might be on site. Figure 4 shows the anticipated layout of the security fence around the NORM-contaminated area.

2.3 Monitoring Well Installation

Seven (7) monitoring wells will be installed to monitor the groundwater contamination at the site. Figure 5 shows the proposed location of the seven (7) additional monitoring wells. Each well will be installed in accordance with the *Work Plan Off-Site/Source Area Soils and Groundwater Sampling* (the Work Plan) prepared by Butler Services of Mississippi, Inc. approved by MDEQ on January 31, 2002. Each well will be installed to a depth of 15' below ground surface (BGS) to conform to the depths of the existing monitoring wells installed on the site. Figure 6 is a Well Construction Diagram showing

the construction of the proposed monitoring wells.

It is anticipated that the Final Corrective Action Plan submitted by the potential purchaser of the property will include a log-term groundwater monitoring plan that will include the frequency of sampling the monitoring wells, the analysis to be conducted and contingencies to address migration of groundwater should the groundwater contamination move beyond the network of monitoring wells installed on the site or move off-site.

2.4 Excavation of Lead Contaminated Soil above 3,800 mg/kg

In order to eliminate a potential source of soil that could be contributing to the lead-contaminated groundwater at the site, all soil on the Former Gulfport Fertilizer Site having a lead concentration greater than 3,800 mg/kg, *except those soils located within the wetlands,* will be excavated and properly disposed at a permitted landfill. Any soil having a lead concentration greater than 3,800 mg/kg, that is located in identified wetlands areas on the previously designated Harreld Family Trust Property, will remain in place. Analysis of soil samples collected by CAC in 2002 and a statistical analysis of those results presented in CAC's *Supplemental Site Characterization Report* showed that lead contaminated soil having a concentration greater than 3,800 mg/kg exceeded 5.0 mg/l lead under the Toxicity Characteristic Leaching Procedures (TCLP) analysis.

MDEQ, in its review of CAC's *Supplemental Site Characterization Report*, concurred with CAC's assessment.

Figure 7 shows the limits of soils exceeding 3,800 mg/kg. Section 7.0 of this *Interim Corrective Action Plan* presents sampling and monitoring procedures that will be followed to insure that all lead-contaminated soil above 3,800 mg/kg has been excavated.

2.5 On-Site NORM Contamination

Two areas of Naturally Occurring Radioactive Material (NORM) contaminated soil have been identified on the site (See Figure 4). *Although the NORM contamination at this site is not regulated by the Mississippi State Department of Health (MSDH), Hancock Bank will take measures to identify the areas of NORM contamination and warn site personnel and contractors not to enter these areas.* As shown on Figure 4, a 6-foot security fence will be installed around these areas. Signs will be placed on the fence warning persons about the presence of NORM contamination and telling *site personnel and contractors* to keep out. It is anticipated that the development plans prepared by the *future purchaser of the property* will include capping the area with pavement. *The capping of this area will be addressed in the Final Corrective Action Plan.*

It is anticipated that the Use Restriction that will be filed on the site will designate the

locations of the NORM-contaminated soil as shown on Figure 4. This will be addressed in the *Final Corrective Action Plan.*

2.6 Capping of Arsenic/Lead Contaminated Soil

It is anticipated that the majority of the arsenic- and lead-contaminated soil will be capped with pavement or a building under the *future purchaser's* development plans. This capping will be addressed in the *Final Corrective Action Plan. It is anticipated that the Mississippi Department of Environmental Quality will require the final cap, if pavement, to be fairly impermeable and resistant to damage and degradation. Additionally, it is anticipated that the Final Corrective Action Plan will include long-term monitoring of the final cap to insure that the final cap meets the minimum performance requirements agreed to by MDEQ.* Until the *Final Corrective Action Plan* is implemented or the *future purchaser* is ready to develop the areas where these soils are located, the soils will remain in place and will remain undisturbed, except in the area of the lead-contaminated soil exceeding 3,800 mg/kg, which will be excavated under this *Interim Corrective Action Plan.* Existing vegetative cover will remain in place.

2.7 Protection of Existing Wetlands

Wetlands are located on the portion of the site designated *the* Harreld Family Trust

Property, as well as a small wetlands area on the site designated the Former Gulfport Fertilizer property. It is anticipated that the limits of the wetlands will be marked during the implementation of the *Final Corrective Action Plan.* It is anticipated, under the *Final Corrective Action Plan*, that these areas will remain as wetlands. *Additionally, it is anticipated that the Final Corrective Action Plan will include an Ecological Risk Assessment to determine if ecological receptors located in the on-site wetlands areas will be adversely impacted by allowing the soil and groundwater contamination to remain in place. The scope of the Ecological Risk Assessment will be the on-site wetlands areas, only.*

Under the *Interim Corrective Action Plan*, paths sufficient for gaining access to monitoring well sites will be cleared. There will be no filling of the wetlands and, therefore, a permit is not required. The paths will be cleared to cause minimum damage to the wetlands.

2.8 Stormwater Run-off Controls

It is anticipated under the *Final Corrective Action Plan*, that *the future purchaser will* provide detention basins and other stormwater control measures in accordance with the City of Gulfport requirements and that the *future purchaser* will also be required to address the quality of the stormwater runoff leaving the site *in accordance with the*

MDEQ Water Quality Criteria. This will be addressed in the *Final Corrective Action Plan.*

2.9 Health and Safety Issues

A Health and Safety Plan has been developed for construction workers and future *workers* on the site. *Personnel implementing the Interim Corrective Action Plan will follow the Health and Safety Plan.* The Health and Safety Plan *is attached as Appendix A, and includes air* monitoring during excavation and construction activities and dermal protection of workers during excavation and construction activities and normal site activities.

3.0 SYSTEM COMPONENTS

None of the proposed Corrective Action Measures include system components.

4.0 SCHEDULE

The schedule for implementing the *Interim Corrective Action Plan* is shown below. The anticipated date for implementing each step of the *Interim Corrective Action Plan* is from the date *the Interim Corrective Action Plan* is approved by the MDEQ, *unless otherwise noted.*

Interim Correction Action Measure	**Group Responsible for Interim Corrective Action Measure**	**Completion after MDEQ Approval of Interim Corrective Action Plan (Calendar Days)**
Use Restriction	*Future Purchaser*	To be included in *Final Corrective Action Plan*
Perimeter Security Fence	*Future Purchaser*	*To be included in Final Corrective Action Plan*
6-foot Security Fence	Hancock Bank	*36 months, if property not under contract*
6-foot Security Fence around NORM-contaminated areas	Hancock Bank	45 days
Monitoring Well Installations	Hancock Bank	*November 1, 2007*
Excavation of Lead Contaminated Soil above 3,800 mg/kg	Hancock Bank	*120 days*
Capping of Arsenic/Lead Contaminated Soil	*Future Purchaser*	To be included in *Final Corrective Action Plan*
Protection of Existing Wetlands	*Future Purchaser*	To be included in *Final Corrective Action Plan*
Stormwater Run-off Controls	*Future Purchaser*	To be included in *Final Corrective Action Plan*
Health and Safety Plan	Hancock Bank	*Completed. See Appendix A*

5.0 REMEDIAL GOALS (RGs)

The remedial goals for this *Interim Corrective Action Plan* are background levels of arsenic naturally occurring in the soil in the area of the site and the Tier 1 Target Remedial Goals (TRGs) established by the MDEQ for lead in soil and arsenic and lead in groundwater. For soils the remedial goals (RGs) are:

Arsenic in soil – 7.18 mg/kg (background), and

Lead in soil – *1,700* mg/kg (restricted use).

Additionally, testing performed under the Site Characterization Study has shown that soils having a lead concentration greater than 3,800 mg/kg are potentially hazardous (TCLP > 5.0 mg/l). Under Section 2.4 of the Conceptual Design of this *Interim Corrective Action Plan*, soils having a concentration of 3,800 mg/kg of lead or greater and being located on the portion of the site designated Former Gulfport Fertilizer Site will be removed and disposed at a permitted landfill, *except for soils located in the wetlands.*

It is anticipated that the Conceptual Design of the *Final Corrective Action Plan will institute* engineering and institutional controls for soils on the site.

The RGs for groundwater are:

Arsenic in groundwater – 0.010 mg/l and

Lead in groundwater – 0.015 mg/l.

A groundwater study conducted during the Site Characterization investigation concluded that the contaminated groundwater is confined to the site and is not significantly increasing in concentration or horizontal extent. Additionally, there are no potable water supply wells on the site or *the surrounding area.* It is anticipated that, when *the future purchaser develops the site,* city water will be supplied to the site. Therefore, it is anticipated that the Conceptual Design of the *Final Corrective Action Plan* will propose long-term monitoring of the contaminated groundwater.

6.0 OPERATION AND MONITORING PLAN

Given the *Interim Corrective Action Plan* summarized in Section 2.0, an operation and monitoring plan (O&M) is not required since no operating systems are proposed. A Performance Monitoring Plan for corrective activities proposed under this *Interim Corrective Action Plan* is presented in Section 7.0. It is anticipated that under the *Final Corrective Action Plan*, a Compliance Monitoring Plan and a Contingency Plan will be presented.

7.0 PERFORMANCE MONITORING PLAN

In order to insure that the engineering and institutional controls proposed under this *Interim Corrective Action Plan* are effective in meeting the Remedial Goals (RGs) presented in Section 5.0, the following Performance Monitoring Plan will be implemented:

Monitoring Wells: All on-site monitoring wells will be sampled within fifteen (15) days of completing the installation of the seven (7) new monitoring wells presented under Section 2.3 of this *Interim Corrective Action Plan*, following sampling procedures established under the *Work Plan Off-Site/Source Area Soils and Groundwater Sampling*, approved by MDEQ. Within thirty (30) days after receipt of analytical data, a groundwater sampling report will be prepared and submitted *to MDEQ*.

Excavation of Lead-Contaminated Soil above 3,800 mg/kg:

- *The area of soil with a Lead concentration greater than 3,800 mg/kg has been identified during previous investigations. The area to be excavated is primarily inhabited by grass and shrub vegetation. There will be little site preparation required, except re-establishing the limits of excavation as established during previous investigations. Any removed vegetation will be placed in the containment area where excavated soils will be stored.*

- *The area to be excavated is in an area of the site where no utilities are located. Previous soil borings advanced in the area during the characterization process have confirmed that no utilities are located in this area. As a precaution, Mississippi One Call will be contacted prior to implementing this task of the Interim Corrective Action Plan.*
- *The work area will be marked to notify unauthorized personnel not to enter the area. If these measures are not sufficient, additional measures, such as employing a security guard during non-working hours, may be undertaken.*
- *Storm water control measures will be implemented to prevent storm water from entering the area to be excavated. These measures will include berming and diversion ditches. Once excavation begins, any storm water collecting in the excavation will be pumped out by a vacuum truck, added to collected decontamination water and properly disposed.*
- *A bermed soil storage area, approximately 75' by 100' will be constructed, adjacent to, but outside the area to be excavated. The area within the berm and the berms shall be overlaid with three (3) layers of 6-mil polyethylene sheeting. The joints in each layer of sheeting shall be lapped, at least 12" and secured with duct tape. The joints on each successive layer of polyethylene sheeting shall be offset at least 3'. The berms will either be constructed of soil, at least 2' high or hay bales.*
- *Excavation of the identified area will begin at the furthest "limit of excavation" from the bermed soil storage area and proceed toward the bermed soil storage area. The excavation equipment will stay within the area of contamination so as not to re-contaminate a previously excavated area. The excavated soil will be placed within the bermed soil storage area in 100 cubic yard stockpiles. Excavation will continue all lead contaminated soil suspected to be above 3,800 mg/kg of lead within the "limits of excavation" as identified during previous investigations has been excavated and placed within the bermed soil storage area.*

- *Area air monitoring (background, both upwind and downwind) will be performed during initial excavation activities. In addition, the construction workers most exposed to the soil during excavation will wear personnel monitoring pumps, in accordance with the Health and Safety Plan (Appendix A). Dust control measures during excavation will be implemented to keep the soil damp to prevent dust. The appropriate level of personnel protection for site workers will be chosen based on the area and personnel air monitoring data from the initial monitoring.*
- *Profile sampling and analysis will be performed on stockpiled, excavated material. Each profile sample from the stockpiled excavated soil will consist of ten (10) discrete grab samples collected from each of the soil stockpiles. The discrete samples collected will be placed in a properly decontaminated mixing bowl and then thoroughly mixed using EPA's "Quarter Method" to form one representative composite sample for each stockpile. The composite soil sample will be placed in an appropriate container. The container label will be marked with all of the necessary information regarding the sample, as prescribed in SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Test Methods, 3rd Edition (USEPA 1986). Collection of a sample initiates the Chain-of-Custody process. The completed chain-of-custody form will include information regarding the sample type, sampling location, date and time of collection, type of container, preservative, and the name of the person collecting the sample. All samples collected and labeled will then be transferred to a cooler, with ice to maintain 4° C. The samples will be shipped via Federal Express for next morning delivery to Environmental Science Corporation (ESC) in Mt. Juliet, Tennessee, for Total Characteristic Leaching Procedure (TCLP) analysis of the sample for lead.*
- *Analytical results of the composite sample collected from each stockpile will dictate whether the soils in the stockpile are "hazardous" (TCLP > 5.0 mg/l) or*

"non-hazardous" (TCLP < 5.0 mg/l). It is anticipated that the analytical results will show that the soils are "non-hazardous" (TCLP < 5.0 mg/l) and can be disposed at a permitted "non-hazardous" landfill. If the analytical results show the soils to be "hazardous" (TCLP > 5.0 mg/l), the soil will either be disposed at a permitted hazardous landfill or the soil will be treated to render the soil non-hazardous by mixing a sufficient quantity of Portland cement with the soil to result in a TCLP analysis less than 5.0 mg/l for lead. The stockpiled material will not be delivered to the properly permitted landfill (hazardous or non-hazardous) until the sample results for each stockpile is received. Waste manifests of each shipment to the permitted landfill will be maintained. The excavated material will be placed in lined, dump trucks for delivery to the non-hazardous landfill. If the excavated material is found to be hazardous and is delivered to a hazardous landfill, the material will be stored in a hazardous container and transported to the hazardous landfill.

- *Once the initial "limits of excavation" have been excavated, confirmatory soil samples will be collected from the bottom and sidewalls of the excavation. These samples will be analyzed for total lead concentration to determine if the remaining, unexcavated soil is above or below 3,800 mg/kg. One composite soil sample will be collected from every 1,000 square feet of area in the bottom of the excavation and one composite soil sample will be collected for every 100 linear feet of sidewall excavation. Each sample will be a composite sample consisting of*

soil collected from ten (10) locations within the sampling area. Each soil sample will be collected from the upper 0" – 6" of the unexcavated soil. The soil collected from the ten (10) sampling locations within a sampling area will be mixed into a composite sample utilizing EPA's "Quarters Method" of mixing. If an analyzed sample shows a sampling area to be above 3,800 mg/kg, that area will be excavated and re-sampled until the remaining, unexcavated soil is less than 3,800 mg/kg.

- *Once confirmatory sampling has shown all lead contaminated soil greater than 3,800 mg/kg has been excavated and once all excavated, stockpiled material has been shipped to the proper landfill for disposal, the bermed soil storage area will be removed. Each layer of polyethylene sheeting will be folded in, so as to prevent any soil or water from falling on the "clean" soil below the sheeting. The polyethylene sheeting will be placed in a lined, dump truck for delivery to a permitted non-hazardous landfill. Confirmatory samples shall be taken of the soil under the polyethylene sheeting following the procedures and frequency presented above. Any remaining, unexcavated soil found to be above 3,800 mg/kg of lead shall be excavated and disposed following procedures presented above.*
- *A decontamination area will be constructed using on-site soils with a three layers of 6-mil polyethylene sheeting, following procedures presented above, so that contaminated water generated during the decontamination procedure can be collected for disposal. The decontamination water will be collected and pumped into an aboveground storage tank. The stored decontamination water will be*

characterized (e.g. sampled and analyzed) for total lead and total arsenic before disposal

- *All equipment used during the procedures listed above that has come in contact with lead-contaminated soil, will be decontaminated before leaving the site. The equipment will be steamed and washed and the rinseate will be collected and disposed at an appropriate treatment and/or disposal facility.*
- *The excavated area and confirmation sampling points will be surveyed.*
- *The excavated area will be backfilled with clean, on-site soil (soil with lead concentration less than 3,800 mg/kg). Twelve-inch (12") layers of backfill will be placed in the excavation and compacted to density of adjacent, unexcavated soils. The excavated area will be graded to prevent ponding of rainwater and to promote drainage.*
- *After the excavation area(s) are backfilled, the surface will be seeded with a drought resistant local native grass. Straw will be placed over exposed soils to prevent erosion, until the vegetation is re-established.*
- *Within sixty (60) days after completion of the corrective action plan activities, a report documenting the activities will be prepared and submitted to MDEQ.*

Health and Safety Plan: *Hancock Bank* will hire an independent, third-party to insure that the Health and Safety Plan is being properly implemented during *the Interim Corrective Action Plan activities*. Documentation showing that the Health and Safety Plan has been properly implemented will be provided *MDEQ, upon completion of the project and will be included with the final report.*

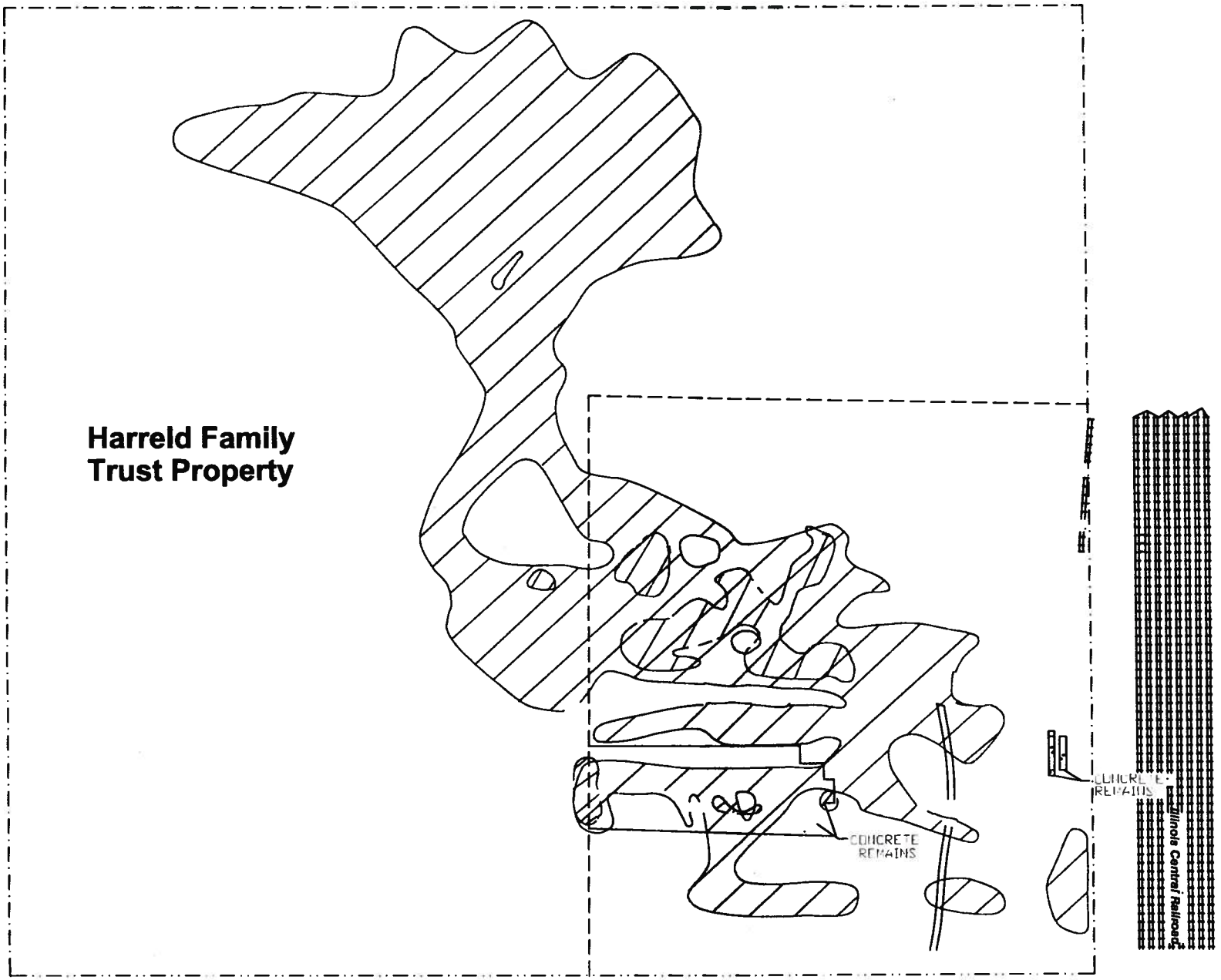
8.0 COMPLIANCE MONITORING PLAN

A Compliance Monitoring Plan will be submitted under the *Final Corrective Action Plan.*

9.0 CONTINGENCY PLAN

A Contingency Plan will be submitted under the *Final Corrective Action Plan.*

FIGURES



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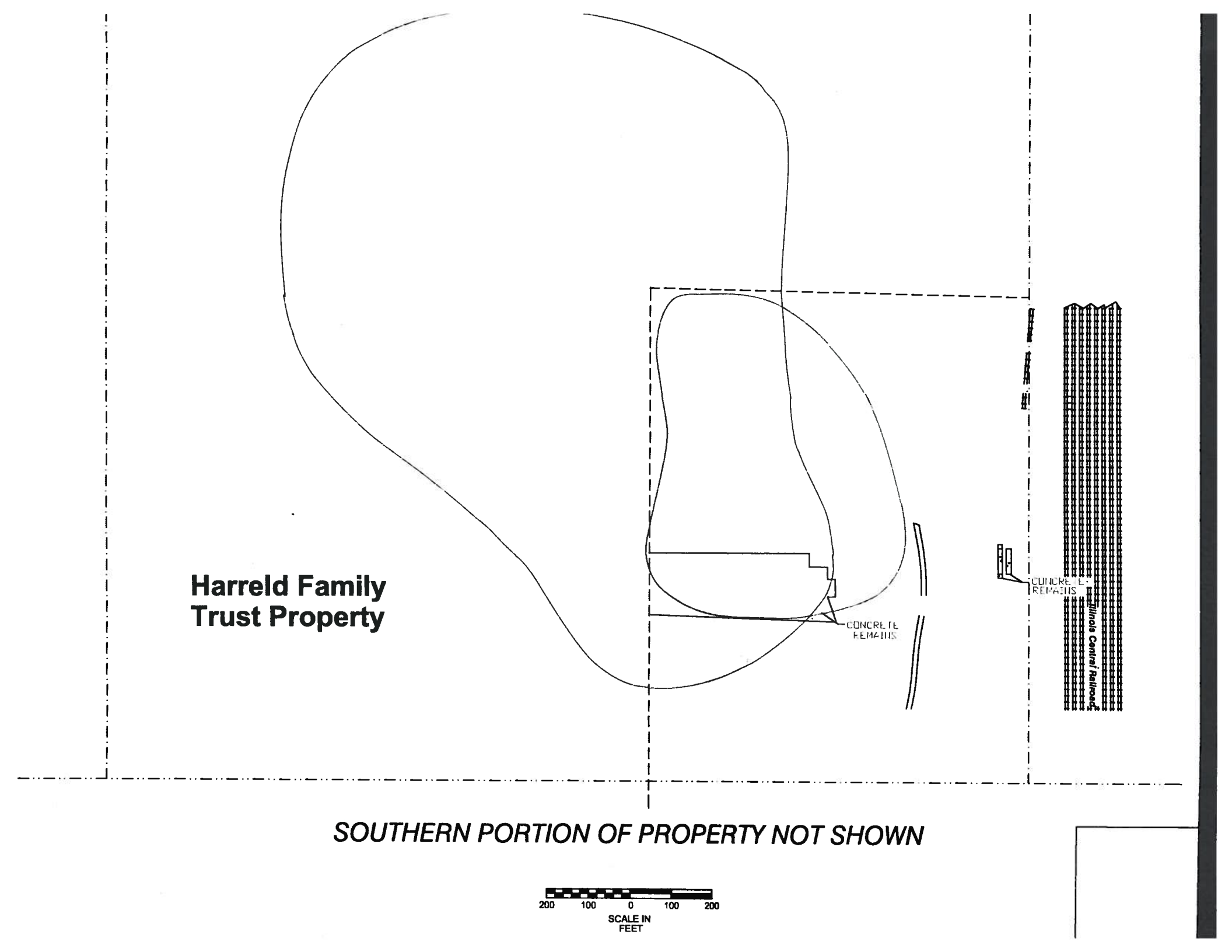
Harreld Family
Trust Property
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Illinois Central Railroad
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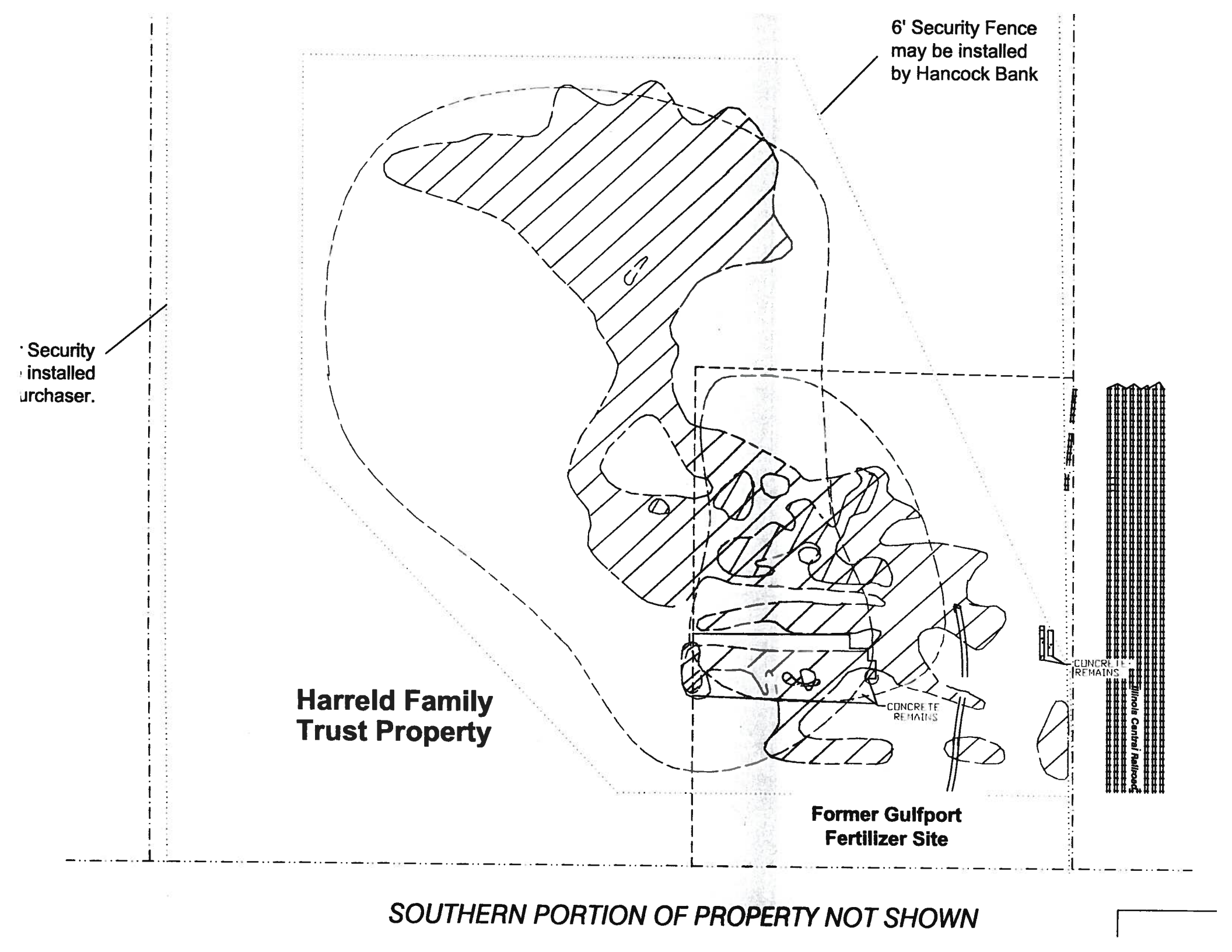
6' Security Fence
may be installed
by Hancock Bank
· Security
· installed
urchaser.
Harreld Family
Trust Property
CONCRETE
REMAINS
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Illinois Central Railroad
Former Gulfport
Fertilizer Site
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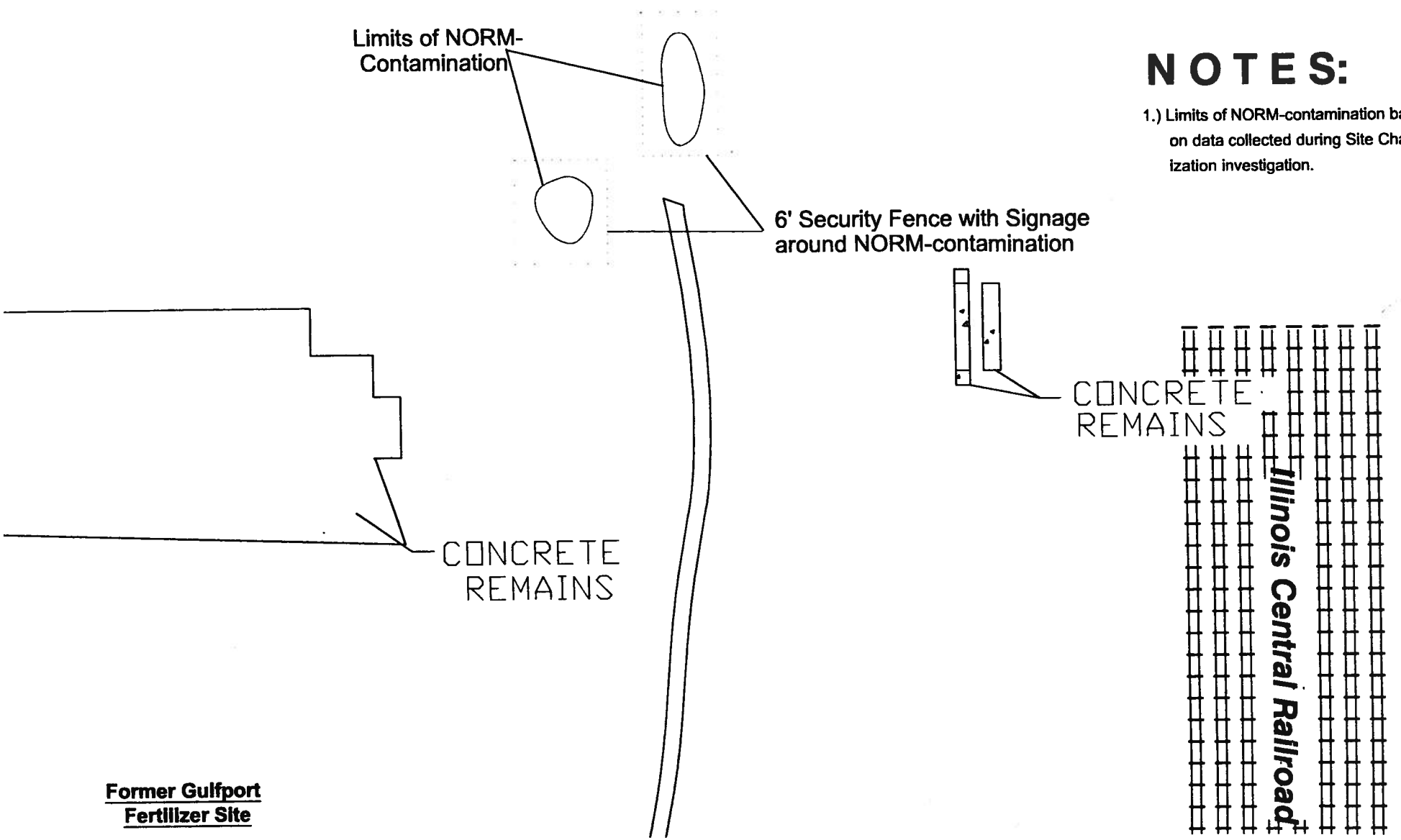

NOTES:

1.) Limits of NORM-contamination based on data collected during Site Characterization investigation.

Former Gulfport Fertilizer Site

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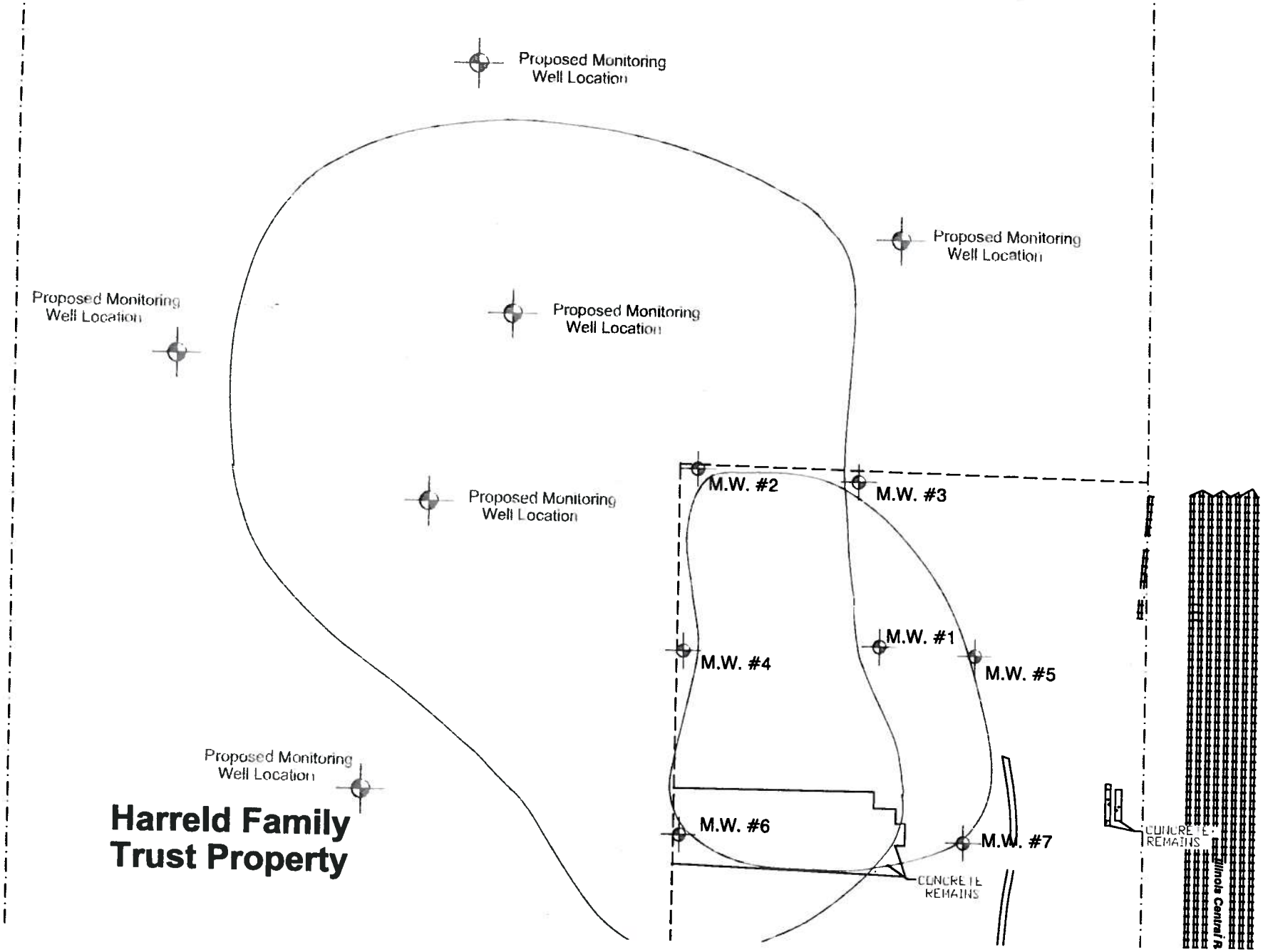
Proposed Monitoring Well Location
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M.W. #4
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M.W. #6
M.W. #7
CONCRETE REMAINS
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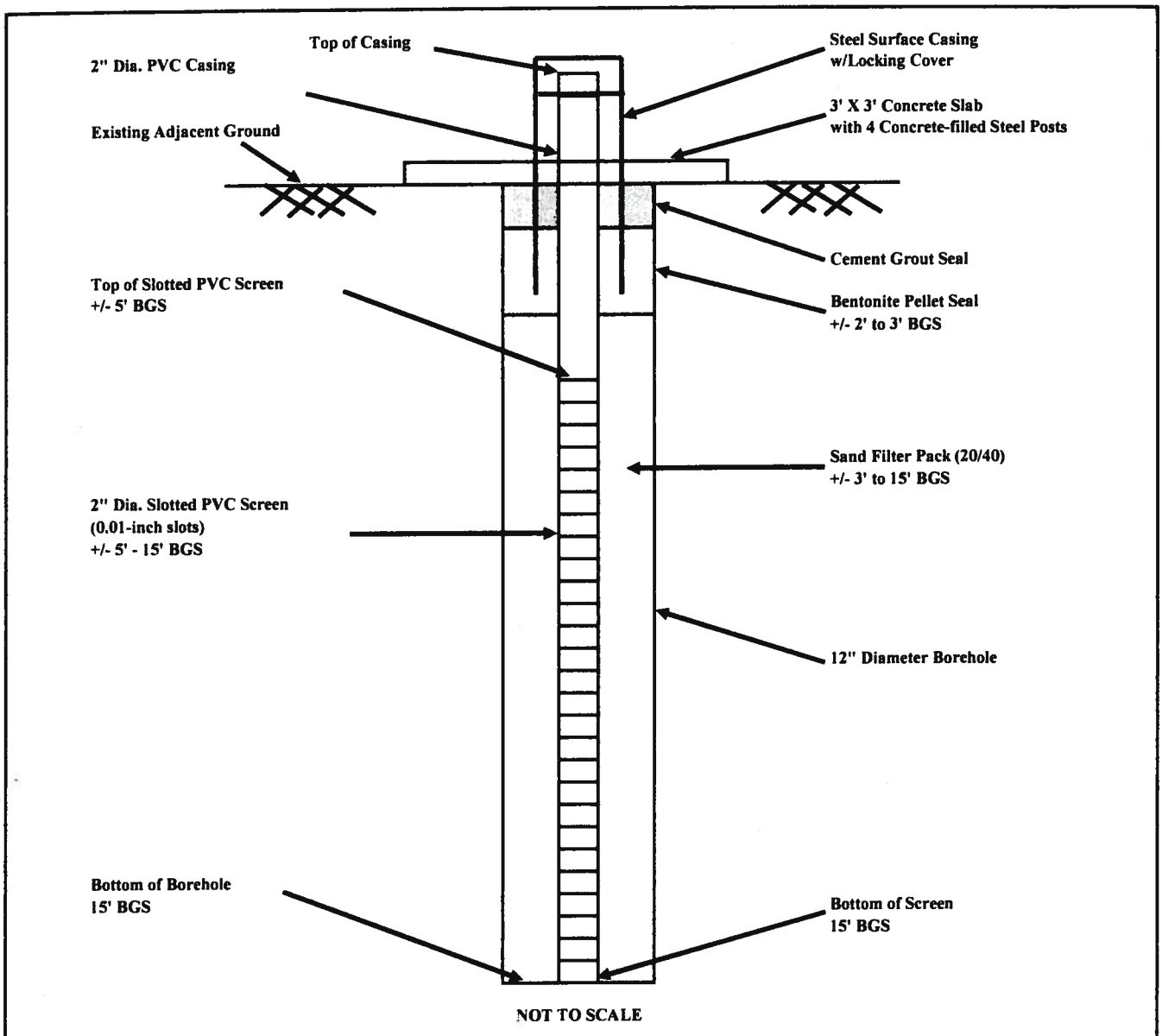
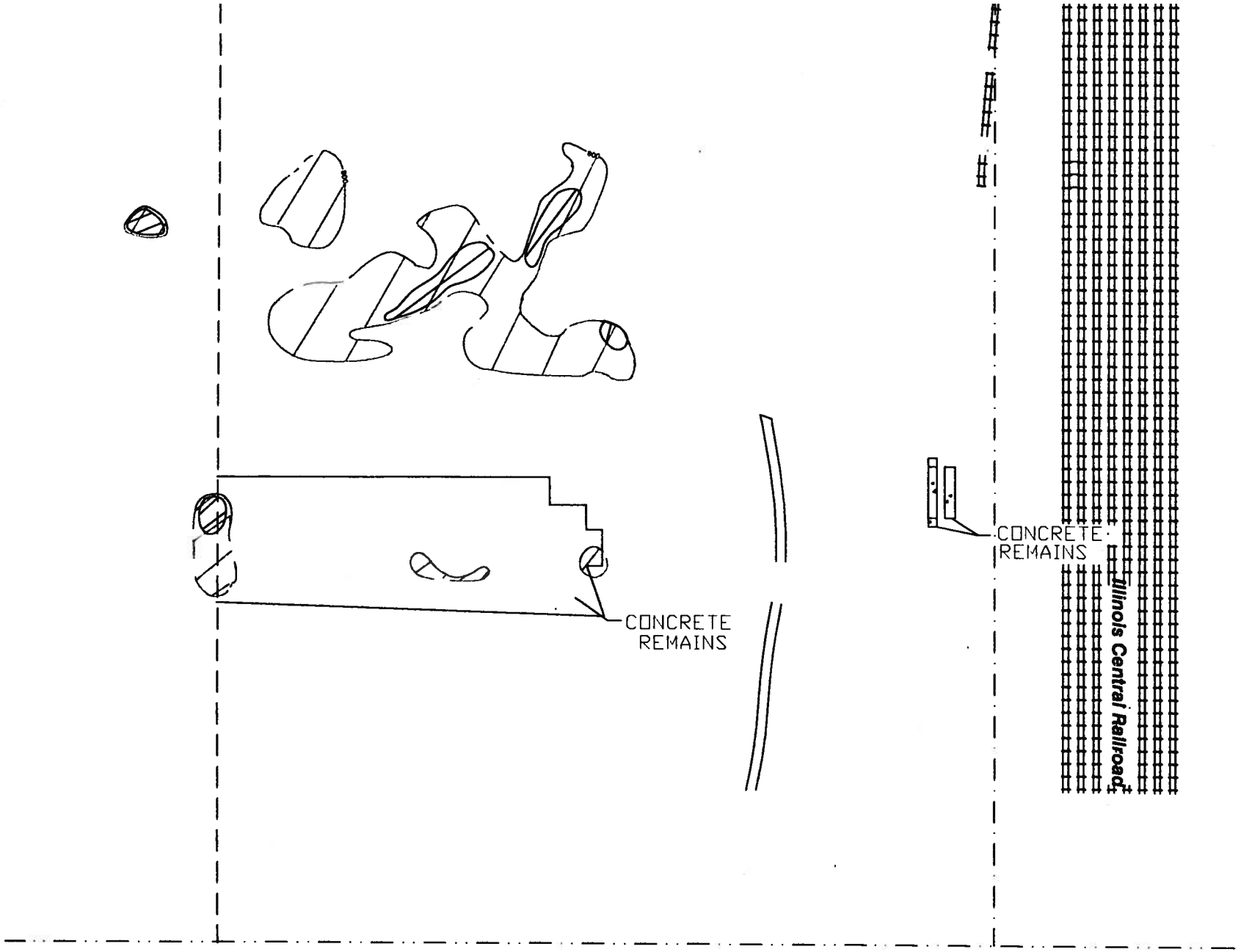


COVINGTON AND ASSOCIATES CORP. **Environmental Resource Consultants** **Biloxi, MS**	**WELL CONSTRUCTION DIAGRAM** **FORMER GULFPORT FERTILIZER SITE** **GULFPORT, MS**	**FIG. 6**



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SCALE IN

APPENDIX A
SITE HEALTH AND SAFETY PLAN

SITE SAFETY AND HEALTH PLAN

FOR

INTERIM CORRECTIVE ACTION PLAN ACTIVITIES

FORMER GULFPORT FERTILIZER SITE
GULFPORT, MS

BY

CONVINGTON & ASSOCIATES CORPORATION

September 2007

APPROVED: _____
PROJECT S&H SUPERVISOR

APPROVED: _____
PROJECT MANAGER

ACRONYMS AND INITIALISMS

ALARA	as low as reasonably achievable
ASESHP	area-specific environmental, safety, and health plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CRZ	contamination reduction zone
EPA	U.S. Environmental Protection Agency
ES&H Officer	Environmental, Safety, and Health Officer
FM	Factory Mutual Engineering Corp.
GFCI	ground fault circuit interrupters
HEPA	high-efficiency particulate air
HWP	hazardous work permits
IHS	industrial hygiene supervisor
LEL	lower explosive limit
NEC	National Electric Code
NESC	National Electric Safety Code
NIOSH	National Institute of Occupational Safety and Health
NPL	National Priorities List
NYDEC	New York Department of Environmental Conservation
OSHA	Occupational Safety and Health Administration
PAPR	powered air-purifying respirator
PEL	permissible exposure limit
PEHP	program environmental, safety, and health plan
PI	project instruction
PM	project manager
PP	project procedure
QA	quality assurance
QC	quality control
RCRA	Resource Conservation and Recovery Act
S&H	safety and health
SARA	Superfund Amendments and Reauthorization Act
SCBA	self-contained breathing apparatus
SSHR	Contractor's Safety and Health Representative
STEL	short-term exposure limit
TLV®	threshold limit value
UL	Underwriters Laboratories
VOC	volatile organic compound

UNITS OF MEASURE

µg	microgram
f/cc	fibers per cubic centimeter
ft	foot
gal	gallon
in.	inch
kg	kilogram
m	meter
ppm	parts per million

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1.0 INTRODUCTION

1.1 PURPOSE OF THE SAFETY AND HEALTH PLAN

The purpose of this document is to describe the mandatory requirements for the safety and health (S&H) process with which each entity must comply to meet the intent of Covington & Associates Corporation's requirements.

This S&H plan has been developed to provide the safety and health framework for all potential field activities. This plan will be revised as necessary as conditions change.

This plan complies with OSHA's 29 CFR 1910.120 standards for Hazardous Waste Operations and Emergency Response (HAZWOPER). All other applicable OSHA standards and Covington & Associates Corporation requirements will apply as necessary.

1.2 PROGRAM OVERVIEW

In support of the S&H Policy, the following principles have been developed to provide additional direction on accountability and on specific issues. These principles are:

- Everyone is accountable for conforming to the S&H Policy.
- All accidents are preventable; everyone will work diligently to prevent all incidents.
- The project will practice sound environmental, safety and health management.
- The project will comply with all applicable laws, regulations, and permits and will develop and employ more restrictive internal standards where necessary to conform to the S&H Policy.
- The project will report on activities.
- The project will audit operations and report findings.
- The project will sponsor activities to improve the environmental, safety, and health protection.

Covington & Associates Corporation's (CAC's) commitment to zero accidents shall be adopted by CAC's employees, contractors, subcontractors, and contracted service vendors utilized on project. The "Zero Accident Philosophy" includes the following criteria:

- Safety and health of the employee, contractors, subcontractors, visitor, and the public are first priority
- All accidents are preventable
- No unsafe act is tolerated or accepted

- Site management requires total compliance with safety and health regulations and requirements and enforces such requirements
- Managers, contractors, subcontractors and supervisors are proactive in safety and health
- Management of contractors and subcontractors are held responsible for safety and health and shall coach employees in the safety and health philosophy
- Safety and health are planned into all activities prior to execution
- Employees of contractors and subcontractors are trained and qualified commensurate with their responsibilities
- Resources are adequate to protect employees, contractors, subcontractors and the public
- Accidents are immediately reported, investigated, and followed by timely corrective actions

CAC, contractors and subcontractors will comply with the following standards and regulations and shall be fully and solely responsible for conducting all operations under the contract at all times in such a manner as to avoid the risk of bodily harm to persons and damage to property or the environment. CAC, contractors and subcontractors shall continually and diligently inspect all work, materials, and equipment to discover any conditions that might involve such risks and shall be solely responsible for discovery and correction of any such conditions.

- 29 CFR Part 1910
- 29 CFR Part 1926
- 40 CFR Part 50
- 40 CFR Part 264
- 40 CFR Part 270
- 46 CFR Part 197
- 49 CFR Part 172.700 series
- National Environmental Policy Act
- Resource Conservation and Recovery Requirements
- Safe Drinking Water Requirements
- Other relevant federal, state, or local laws or regulations

1.3 FIELD OPERATIONS

Field activities shall be done in accordance with this plan and any applicable safety procedures.

Field Activities
The following activities will be conducted under this plan:

- Mobilization/Staging of Equipment
- Site Preparation, including work areas, decontamination areas and soil storage areas
- Excavation, Stockpiling, Transportation, and Disposal of Lead Contaminated Soil
- Backfill and Compaction

- Demobilization, including decontamination of equipment

1.4 ORGANIZATION AND RESPONSIBILITIES

1.4.1 ENVIRONMENTAL, SAFETY, AND HEALTH ORGANIZATION AND RESPONSIBILITIES

Safety and health personnel and their responsibilities are defined in the following subsections.

PROJECT MANAGER
John Szabo will be designated as the Project Manager (PM). The PM is responsible for all work activities and is responsible for ensuring a safe and healthy work environment. The PM will also ensure that adequate budget; manpower, equipment, and procedures are provided to implement onsite work. The PM will ensure that the S&H Supervisor or designee reviews and approves work plans, contractor and subcontractor packages, budgets, and project instructions.

SITE SUPERVISOR
Anthony Damiano, Wendell Larson or Todd Hairston will be designated as the Safety and Health (S&H) Supervisors. The S&H Supervisors will ensure that all work is carried out according to the S&H requirements. These individuals are responsible for coordination, guidance, and motivation of the onsite field staff (CAC), contractors, subcontractors and site visitors. These individuals will coordinate with the PM.

The S&H Supervisors will:

- Perform the appropriate Safety Hazard Assessment(s) for all phases of its work, including any work conducted by contractors or subcontractors.
- Enforce the necessary level of hazard control.
- Ensure that the project meets the mandatory requirements of this document.
- Ensure that contractual and regulatory S&H obligations applicable to the work are met.
- Conduct appropriate self-assessments to confirm on-going compliance with contractual S&H obligations.
- Provide a general S&H Orientation and policies, principles, and standards.
- Monitor the field activities for compliance.
- Perform self-audits during execution of the work. Copies of self-audits and implemented corrective actions shall be provided upon request.
- Provide necessary personnel monitoring, as required.
- Require specific S&H precautions prior to site entry by personnel and visitors.
- Require any personnel to obtain immediate medical attention, if warranted.
- Restrict access to the site or to a portion thereof based on hazard.

- Order the immediate evacuation of personnel from any area.
- Stop work when the safety, health, and well being of site personnel or the public is jeopardized.

1.5 SAFETY AND HEALTH EXPECTATIONS

1.5.1 CONDUCT OF PERSONNEL

While on the site (Former Gulfport Fertilizer property), employees, contractors, subcontractors and visitors shall not engage in any dangerous, illegal, or outrageous conduct, including but not limited to the following:

- Violating safety rules or common safety practices, or causing a safety threat to anyone else.
- Creating or contributing to any unsafe or unsanitary condition.
- Unnecessarily distracting the attention of anyone who is working or participating in a non-work related activity that interferes with job.
- Using abusive language.
- Threatening, intimidating, harassing, coercing, or interfering with others.
- Discriminating by talk or action against groups or individuals on the basis of race, color, sex, age, religion, disability, veteran's status, pregnancy, or national origin.
- Immoral conduct or indecency, sexual harassment, or possessing or displaying offensive verbal, visual, or physical material or objects of any kind.
- Fighting or instigating a fight.
- Theft, abuse, or deliberate destruction of property, tools, or equipment of anyone else.
- Gambling of any type.
- Possessing or consuming any intoxicating beverage or illegal substance on the premises.
- Reporting for work in an unfit condition, including being under the influence of intoxicants or controlled substances, or misuse of any prescription drug.
- Refusing to submit to drug and/or alcohol testing when properly directed by Site Supervisor or supervisor of contractor or subcontractor. Test results showing the presence of alcohol or illegal drugs in any amount will be grounds for dismissal.
- Possessing firearms or other weapons on premises.
- Making false or malicious statements concerning anyone else, CAC, any contractor or subcontractor, or any products of CAC, contractor or subcontractor.
- Falsifying records or making untrue statements that may result in the falsification of records.
- Misusing or removing from premises, without permission, employee lists, blueprints, records, or confidential information of any nature, in any form.

- Soliciting, collecting contributions, or distributing written or printed matter without permission Site Supervisor or Project Manager.
- Posting or removing notices, signs or writing in any form on bulletin boards or property without specific permission of Site Supervisor or Project Manager.
- Possessing or using televisions, radios, VCRs, or cameras for personal use on premises without permission.
- Horseplay or throwing materials on premises or not giving attention to job during working hours.
- Failure to obey Site Supervisor or supervisor or contractor or subcontractor or other forms of insubordination.
- Frequent tardiness or absences from work.
- Leaving job or work area during working hours without permission.
- Any action or behavior illegal under local, state, or federal law.
- Smoking in areas not designated for smoking.

1.5.2 SUBSTANCE ABUSE

Covington & Associates Corporation, contractors and subcontractors will monitor their respective employees prior to their entry to the job site and also in the course of their work. Those found to be under the influence of alcohol or drugs will be removed from the premises and will be denied future admittance. Employees may be required to submit to drug and/or alcohol testing in compliance with Covington & Associates Corporation policy and governmental regulations. Test results showing the presence of alcohol or illegal drugs in any amount will be grounds for dismissal.

2.0 SITE DESCRIPTION AND HISTORY

The site is located one 33rd Street, Gulfport, Mississippi. Site investigations have revealed areas of lead and arsenic contaminated soil on the site. The approved Interim Corrective Action Plan is to excavate lead-contaminated soils above 3,800 mg/kg lead and backfill with clean soil.

3.0 HAZARD ANALYSIS

The physical hazards associated with the project include eye injury, cuts, noise, falling, slipping, tripping, back injury and heat stress. Specific physical hazards are discussed in the following sections.

3.1 NOISE

Working can subject workers to noise exposures in excess of allowable limits. Non-essential personnel who do not need to be next to loud equipment will remain away from such sources to lower the risk of noise-induced hearing loss. Additionally, considerations will be taken to keep the noise level to a minimum. The S&H Supervisor will ensure noise levels remain below those specified in 29 CFR 1910.95.

Personnel who operate or must work next to noisy equipment will be required to wear hearing protection (earplugs or muffs) to reduce their exposure to excessive noise. Specifically, persons who enter areas with noise in excess of 85-dB (A) will use protection. Workers exposed to noise levels at or above 85 dB (A) will be enrolled in a hearing conservation program.

3.2 FALLING, SLIPPING, AND TRIPPING

Work zone surfaces will be maintained in a neat and orderly state. The Project Manager and S&H Supervisor and contractor or subcontractor supervisor will inspect and ensure that the work areas are neat and orderly. Pedestrian traffic will avoid areas where materials are stored on the ground. Tools and materials will not be left randomly on surfaces when not in direct use. Hoses and cables will be grouped, routed to minimize hazards or clearly marked with hazard flags if those hoses and cables will remain in place for more than one shift.

3.3 MANUAL LIFTING TECHNIQUES

Before any manual material handling tasks, personnel will be trained to lift with the force of the load suspended on their legs and not on their backs. An adequate number of personnel or an appropriate mechanical device will be used to safely lift or handle heavy equipment. When heavy objects must be lifted manually, workers will keep the load close to their bodies and will avoid any twisting or turning motions to minimize stress on the lower back. The S&H Supervisor or contractor or subcontractor supervisor may provide lifting orientation and specific back stretching and warm-up exercises to help minimize the potential for back injuries. The S&H Supervisor or contractor or subcontractor supervisor will encourage use of these exercises by all field personnel at the start of each shift.

3.4 HEAT STRESS

Heat stress is known to become a significant risk factor for personnel wearing protective clothing and equipment, especially when ambient temperatures and humidity are elevated. Personnel will

be made aware of the symptoms of heat stress so they can recognize it and seek treatment immediately.

3.5 EQUIPMENT GUARD

Engineering controls, administrative procedures, and equipment-guarding techniques will be implemented to prevent injuries from excavation hazards. Additionally, PPE will be issued when engineering controls alone cannot reduce exposure hazards to acceptable levels.

The overall risks presented by construction equipment associated with treatment, cleaning, decontamination, excavation, and vehicle operation are normally greater than those presented by potential exposure to chemicals. Compliance with all safety rules and procedures will be of paramount importance.

3.6. ELECTRICAL HAZARDS.

For general electrical safety, the S&H Supervisor and the contractor and subcontractor supervisors will ensure that all on-site personnel comply with OSHA requirements for electrical branch circuits. Use of electrical extension cords will not be expected throughout the work.

3.7 CHEMICAL HANDLING

The S&H Supervisor will evaluate the need for special chemical handling procedures during the chemical use review process (i.e., review of material safety data sheets). Engineering controls and/or PPE will be required to protect against exposure. Chemical handling is not anticipated during this project.

3.8 EXCAVATION

Any excavation over 4 foot deep will require sloping, trench box or trench shields if any personnel are required to enter the space. Open trenches or excavations will be surrounded with orange construction barricade fencing and multi strands of barricade tape. No excavation will be conducted on site unless approval from the Project Manager is obtained prior to commencement.

4.0 CHEMICAL HAZARDS

This section describes the toxicological (health) hazards associated with exposure to organic and inorganic chemicals that may be encountered. Detailed information on chemicals potentially expected to be present at the site is provided in the S&H Plan or Activity Hazards Analysis. The chemicals that may be encountered on this project include, but is not limited to, the following:

- Lead in soil
- Arsenic in soil
- Diesel

Specific chemicals commonly encountered at the site area are discussed in the following sections. Without proper controls, exposures can occur principally by dust inhalation, skin contact, or ingestion.

4.1 FLAMMABILITY

Fire or explosion can occur from working with flammable tanks, drums, or pipes without proper safeguards. Accordingly, monitoring will be conducted to identify locations where sparks generated by equipment could trigger fires or explosions.

4.2 CARCINOGENS

Additional information on the above chemicals is found on the following Table 4.1 Chemical Hazards. Carcinogens are any chemicals or products capable of causing or inducing cancer or leukemia in humans. Carcinogens are classified, for program purposes, based on OSHA, American Conference of Governmental Industrial Hygienists (ACGIH), the Environmental Protection Agency (EPA), International Agency for Research on Cancer, Cancer Disease Center, or National Toxic Pollutant classifications into the following recognized or confirmed human carcinogens:

Class I – known human carcinogens
Class II – suspected carcinogens (causes cancer in animals)

Table 4.1
CHEMICAL HAZARDS

Chemical Name	OSHA PEL	Concentration Present Soil	Water	Health Hazards/ Target Organs	Symptoms Of Overexposure
Lead	0.5 mg/m^3	<20,000 mg/kg	<0.042 mg/l	Inhalation & Irritant Eye Contact Irritant	Headache, Nausea, Dizziness & Blurred Vision
Arsenic	10 ug/m^3	<1,400 mg/kg	<0.100 mg/l	Eye & Throat Irritant Acute Exposure	Headache, Nausea, Dizziness & Blurred Vision
Gasoline	300 ppm	N/A	N/A	Eye & Throat Irritant	Headache, Nausea, Dizziness & Blurred Vision
Diesel	None	N/A	N/A	Skin Irritant & Central Nervous System Depressant	Headache, Nausea, Dizziness, Un-coordination & Vomiting

5.0 BIOLOGICAL HAZARDS

Dangerous wildlife that may be encountered at the site includes insects, poisonous snakes, and rodents. Before work begins, the S&H Supervisor and supervisor for contractor and subcontractor will inspect the work area for dangerous wildlife and instruct workers on the best strategy to avoid contact. Workers will be trained to identify dangerous wildlife and in the general precautions to be followed. The S&H Supervisor will screen the area for biological hazards during the initial site visit and will discuss any problems with field personnel during the pre-work review. The most common hazards anticipated are discussed below.

5.1 INSECTS

Stinging insects may be found where work will be performed. CAC, the contractor and subcontractors will provide an appropriate repellent against mosquitoes and other nuisance insects for their workers. Workers will be instructed to report the presence of large numbers of bees or other stinging insects at the work site. The S&H Supervisor, contractor and/or subcontractors will determine whether removal of the insect nests is required for work to proceed.

Bees present a potential hazard, especially for those individuals sensitized to bites or stings. Before initial assignment on this project, personnel with known allergic responses to insect stings or bites will be identified, and field supervisors will be made aware of this condition. These personnel will also carry an antidote kit, if so advised by their physician. The S&H Supervisor or contractor or subcontractor will confirm that the antidote kit is accessible for their workers and will notify the emergency medical service providers in the event of any incident.

Protection against insects may be employed, such as protective clothing, repellents, extermination, and training in recognition and identification of harmful insects.

5.2 TICKS

Ticks transmit many diverse etiologic agents. Diseases transmitted by ticks include Lyme disease, Rocky Mountain spotted fever, and other viral and rickettsial diseases.

Ticks are normally found in wooded and bushy areas. When walking through tall brush areas, coworkers should periodically check themselves and each other for the presence of ticks. It is essential to remove the entire tick as soon as it is found. Ticks burrow into the skin; if the head of the tick cannot be removed, medical treatment will be obtained. If severe signs of infection or fever develop, the patience should seek prompt medical care. Follow-up surveillance may continue at the discretion of the examining physician.

5.3 VERMIN AND POISONOUS SNAKES

Rats, mice, squirrel, non-poisonous snakes and rabbits are carriers of disease. Where vermin are identified in the work area, the S&H Supervisor will be immediately notified. Bites will be reported immediately and medical care obtained. Disease can be transmitted through broken skin, contact with conjunctivae, ingestion of contaminated food or water, or inhalation of aerosols. Prevention is through environmental hygiene practices that deter rodents from colonizing the work environment.

Workers will be advised of the hazard if vermin are present in the work area and will be required to immediately report any bite to the S&H Supervisor.

Poisonous snakes (timber rattlesnakes, water moccasins, coral snakes, copperheads, etc.) may be present in the work area, particularly in brush and debris. Workers will approach these areas with caution and, if a snake is identified, will not approach.

Workers will be advised of the hazard of poisonous snakes and will be required to immediately report any bite to the S&H Supervisor or contractor or subcontractor supervisor. CAC, the contractor and subcontractor shall have a snake bite kit on-site at all times.

5.4 INFECTIOUS BLOODBORNE PATHOGENS

First aid and other emergency response personnel will be informed of preventative measures for protection in compliance with OSHA'S "Blood borne Pathogens."

6.0 SITE CONTROL

6.1 GENERAL REQUIREMENTS

The S&H Supervisor and Project Manager will implement a Site Control Program in accordance with CACs requirements and OSHA's standards found in 29 CFR 1910.120.

6.2 SITE WORK AUTHORIZATION

No work will proceed without authority from CAC's Project Manager.

6.3 HAZARDOUS WORK PERMITS

6.3.1 GENERAL

Hazardous work permits (HWPs) are required for site tasks that present an unusual safety and health problem (e.g., entry into confined spaces, work in high airborne contamination, and work in flammable atmospheres). A careful review of the potential hazard is to be completed by the Safety and Health Officer.

Normally, the HWP will address:

- Medical surveillance
- Personnel exposure monitoring program
- Respiratory protection
- Personnel protective equipment and clothing
- Compliance with rules regarding prohibited activities
- Hygiene facilities and practices
- Employee information and training
- Documentation.

6.3.2 APPLICABILITY

An approved and active HWP will be required prior to any work activity that could result in serious injury, illness, or death. HWPs shall be required whenever the following conditions may be present:

- Chemical exposures
- Oxygen deficiency
- Electrical hazards
- Fire and explosion
- Physical hazards
- Extreme temperatures
- Excessive noise

- Biological hazards
- Waste treatment
- Other work determined to require an HWP by the Safety and Health Officer

The S&H Officer will determine when the HWP will be implemented based on the degree of hazard. Generally, the only exceptions to requiring an HWP for the above conditions are:

- Surveys and sample collection in support of establishing and monitoring restricted work areas
- Emergency responses when serious impacts could result if time were taken for HWP preparation and approval.

6.3.3 SPECIFICATION OF CONTROL CONDITIONS

The S&H Officer will include the following information on the HWP form:

- The next sequential HWP number
- Hazardous conditions and maximum doses expected at the work location
- Recent chemical and/or biological surveys and their results
- Additional chemical and/or biological surveys, if needed
- Protective apparel and equipment required because of chemical, biological, or physical hazards (e.g., confined space with lack of oxygen)
- Special instructions required, such as watchmen for confined space entry
- Expiration date
- Names and signatures of workers involved in work activity covered by an HWP.

6.4 CONTROLLED AREA DESIGNATION AND ACCESS

Typically, site activities use a barrier (e.g., fence or tape) to delineate the construction/contaminated area from other parts of the site. The entire site is remote and is not frequented by the public. These zones also include a small decontamination corridor. A separate vehicle entrance may be established if necessary. A decontamination station for personnel will be established at the entrance of each contamination reduction zone. Additional stations may be established at each access-control point.

6.4.1 ACCESS CONTROLS/CONTAMINATION

Access to controlled areas where exposure to hazardous materials above guidelines is possible will be accomplished through a program that controls the activities and movements of people and equipment at the project site. Included in this program are controls for chemical, biological, and

construction safety hazards. If contaminants are encountered, the following procedures may be used:

- Maintain an authorized personnel list
- Maintain an access-control register at the controlled area boundary to record the number and identity of individuals in the area
- Require personnel to sign the access-control log before they enter and leave the controlled areas
- Require personnel and equipment to enter the site through the access-control point.
- Require personnel decontamination stations to be provided and maintained where contact with removable contamination is possible.

High concentrations of airborne contaminants (lead and arsenic in dust) are anticipated at this site. Due to the remoteness of the site and the protective vegetation (heavy woods between the site and off-site areas), it is anticipated that the public will not be effected by this dust. Workers will, however, be warned to protect food and water from dust in the immediate vicinity of the work area. Additionally, workers will be required to wear protective clothing (tyvek suits and respirators), until area and personnel air monitoring has shown that the concentrations of airborne contaminants (lead and arsenic) are below OSHA Permissible Exposure Limits (PELs).

6.4.2 ACCESS CONTROL/CONSTRUCTION HAZARDS

An exclusion zone will be established around each work area before intrusive work begins. The exclusion zone will be posted and physically barricaded, if the S&H Supervisor so requires, based on site conditions. The site access control points are typically posted as follow:

DANGER
Controlled Area
Authorized Personnel Only

7.0 SITE COMMUNICATION

The buddy system will be used during work in exclusion zones and remote locations. The primary means of communication for workers out of visual range will be two-way radios.

8.0 DECONTAMINATION

8.1 PERSONNEL DECONTAMINATION

A two-station decontamination system will typically be established for personnel exiting exclusion zones. Personnel will always wash hands and exposed skin areas upon removing protective clothing or leaving controlled work areas.

8.2 EQUIPMENT DECONTAMINATION

Small equipment will be decontaminated at the site using the three-wash system. Large equipment will be wrapped before transport to the decontamination area.

8.3 APPAREL DECONTAMINATION

Specific procedures for apparel decontamination may be established in the Constructor/Subcontractor S&H Plan. The following standard practices will be followed:

- The S&H Supervisor will establish a minimum of one safety apparel decontamination station at the site.
- Soap/detergent, rinse water, towels, wash pans, and brushes for scrubbing boots will be available.
- Wastes generated from decontamination will be properly disposed in accordance with EPT procedures.
- Outer protective clothing will be removed and placed in plastic bags for disposal or retained for future use, depending on the contamination potential.

8.4 PERSONNEL DECONTAMINATION AND PERSONAL HYGIENE

Site personnel may be subject to potential skin or eye irritation. An eye wash station and an appropriate method for decontaminating the skin will be available in areas where eye and skin contamination may result from contact with corrosive or toxic chemicals. Portable eye wash bottles will be available at each location where corrosive chemicals may be present.

Water from portable showers, hoses, or other sources for washing/rinsing will be available at locations near where skin contamination may occur. Toilet and hand washing facilities will also be available onsite but away from the contaminated areas for sanitary and hygienic purposes. Whenever the work area has been determined to be chemically or biologically contaminated, each employee will be required to wash prior to eating, drinking, smoking, or chewing. These activities will only be permitted in designated areas outside the work area.

A temporary decontamination station will be set up at the edge of the restricted zone. A contamination reduction corridor will lead from the station to the exclusion zone. Entrance to

the exclusion zone will be controlled so that all foot traffic enters and exits through the decontamination station. The station will be stocked with needed personnel protective equipment.

Personnel leaving the exclusion zone will remove gross contamination before exiting by scraping mud off boots, etc. At the head of the contamination reduction corridor, personnel will wash boots and gloves. Three tubs will be provided: one with soapy water and two with rinse water. Contaminated water will be transferred to the on-site storage/treatment area.

Entering the decontamination station, personnel will remove outer boots, outer gloves, and protective coveralls. Soiled coveralls will be deposited in a trash container lined with a plastic garbage bag. The trash container will be emptied daily or as required. If respirators are worn, they will be removed. Finally, inner gloves will be removed and discarded in the trash container.

9.0 VISITOR REQUIREMENTS

Visitors will follow the directions of the S&H Supervisor regarding decontamination of personnel and equipment brought inside controlled areas. Equipment will be wrapped and taped to the maximum practicable extent, as directed by the S&H Supervisor, to minimize the need for decontamination.

10.0 FIRST AID AND MEDICAL SURVEILLANCE

10.1 GENERAL

Emergency planning and notification is discussed in Appendix A. A 5-gal supply of emergency deluge water will be available and reserved for emergency use. Each contractor shall maintain at each work location standby first-aid kits and at least two eyewash bottles (1-qt capacity each) available for immediate use. The S&H Supervisor will verify weekly that the first-aid supplies are available.

10.2 FIRST AID

Qualified personnel may use the first-aid kits to administer first aid to any workers who are injured. When responding to serious personnel injuries, the emergency coordinator or the S&H Supervisor will achieve contact by land line or cell phone for activation of emergency response by local fire, medical, or police services.

Severely injured personnel will be transported to the hospital by ambulance service. Life-saving care will be provided immediately, without consideration of decontamination requirements. In the presence of strong acid or caustics, caregivers will don appropriate protection.

A full medical examination shall be required should exposure symptoms be exhibited. .

10.3 EXPOSURE CONTROL FOR BLOODBORNE PATHOGENS

All site personnel shall follow OSHA's "Blood borne Pathogens" standards. All personnel should be aware of the potential for transmission of disease from contact with body fluids. Assume all body fluids are potentially infectious and use appropriate precautions. Controls to be considered are:

- Use the victim's hand to control initial bleeding
- Use available protective gear (gloves, etc.) to prevent contact with body fluids
- Promptly wash after contact with body fluids
- Use rescue breather for CPR.

10.4 MEDICAL SURVEILLANCE

Contractor and subcontractor personnel shall follow the BSII Core Process "Medical Surveillance" and requirements found in OSHA standards 29 CFR 1910.120. A qualified physician will examine personnel. The physician will perform medical examinations specified in this section and review the medical examination results to determine whether each worker is medically qualified to perform the proposed hazardous work. If the contractor and subcontractor personnel have up-to-date medical surveillance in accordance with OSHA Standard 29 CFR 1910.120, provided documentation of up-to-date medical surveillance is provided S&H

Supervisor prior to personnel entering restricted areas. The S&H Supervisor or S&H Representative will determine the need for subsequent medical examinations.

The purposes of the medical surveillance program are: (1) to assess the individual's health prior to handling hazardous materials, (2) to determine the individual's suitability for work assignments requiring the use of personal protection clothing and equipment, and (3) to monitor for evidence of changes in the individual's medical indicators that could be related to the work. This assessment will address expected conditions that would predispose the employee to illness upon exposure to hazardous substances or from the physical demands of using PPE, such as respirators and protective clothing. A physician's statement, certifying that the employee is physiologically fit to work in a restricted area and wear a negative-pressure respirator, will be received before the employee starts work.

10.4.1 BASELINE AND ANNUAL HEALTH ASSESSMENT

The baseline and annual health assessment will include the following:

- A complete medical and occupational history
- Physical examination
- Urinalysis
- Chemistry panel (SMAC)
- Pulmonary function testing (FEV and FVC)
- Audiometry and visual screening
- Chest x-ray (PA) and/or electrocardiogram when determined to be necessary by the physician
- Serum PCB

10.4.2 TERMINATION EXAMINATION

Upon termination of employment, personnel who have worked continuously at the project site for more than 6 months will be required to undergo an examination equivalent to the baseline health assessment. All personnel who terminate employment within a 6-month period will undergo an examination based upon their exposure at the site. Specific examination tests will be determined by the physician and the Project Manager.

10.4.3 SUPPLEMENTAL EXAMINATION

Any worker receiving a potentially harmful level of exposure to hazardous chemical/biological material will undergo a supplemental examination if deemed appropriate by the examining or consulting physician.

10.4.4 PHYSICIAN'S EVALUATION

The occupational medical physician will determine any medical limitations of site workers. The provider will submit a physician's statement to the S&H Supervisor for all site employees and to the contractor for its employees.

11.0 HAZARD MONITORING PROGRAM

11.1 GENERAL

Hazard monitoring will be performed at the site, as described in the following sections. The S&H Supervisor will assure that hazards are monitored and assure the implementation of all necessary controls to minimize the hazards.

11.2 MONITORING STRAGEGY

Personnel and area monitoring strategies have been devised to ensure the identification of areas and work activities for which engineering controls and/or respiratory protection are required. Monitoring will be conducted to confirm that the levels of protection provided by the respiratory protection program and by engineering controls are adequate to protect the worker, the environment, and the public.

Respiratory protection will be mandatory for tasks involving potential for significant airborne exposure(s) unless monitoring results indicate that protection is not required. Breathing zone samples will be analyzed by a method approved by the National Institute of Occupational Safety and Health (NIOSH).

11.3 MONITORING EQUIPMENT

The S&H Supervisor will ensure that an adequate supply of monitoring equipment is available before work begins. The S&H Supervisor will ensure that the instruments are used only by persons with training and experience in the care, calibration, operation, and limitation of the equipment. Work involving potential exposure to hazardous materials will not be performed unless properly maintained and calibrated monitoring equipment is being used to monitor the work area and the personnel in the work area.

To help evaluate potential health hazards at the site, the S&H Supervisor may use the following monitoring equipment:

- High Volume Air Sampling Pump: The instrument will have a Rotometer to measure air flow.
- Personnel Air Sampling Pump: The instrument will be calibrated to manufacturer's recommendations for air flow recommended by NIOSH.

A copy of instrument calibration records will be maintained on site for all instrument calibrations. Calibration data will be recorded on field data collection forms. Air sampling pumps flow rates will be recorded to ensure accuracy in determining sampled air volumes.

11.4 RESPONSES TO ABNORMAL CONDITIONS OBSERVED BY MONITORING

The S&H Supervisor has the authority to investigate and implement protective measures necessary to protect the health and wellbeing of site personnel and the community.

11.4.1 DUST CONTROL/FUGITIVE EMISSIONS

S&H Supervisor may require contractor/subcontractors to modify excavation and soil handling procedures to reduce/minimize dust and fugitive emissions. This may include wetting soil or modifying procedures.

12.0 PERSONAL PROTECTIVE EQUIPMENT (PPE) PROGRAM

12.1 GENERAL

PPE consists of three components: standard safety equipment required on the site, special PPE (e.g., fall protection, water safety), and respiratory protective equipment.

Standard safety equipment is described in 29 CFR 1910.120 Appendix A. In addition, all project and contractor personnel entering the site will comply with all task-specific safety requirements. The protective apparel and equipment requirements for personnel working in restricted areas will be determined by the S&H Officer and will be based on four levels of protection (Levels A through D). Equipment used will be listed in the "NIOSH Certified Equipment List." The level of protection will be based on the type of hazardous material, its concentration and toxicity, and the potential for exposure through inhalation, ingestion, skin absorption, direct contact, splash, or impact. The levels of protection are described below.

12.2 LEVELS OF PROTECTION

The Contractor and Subcontractor S&H Plans will establish the proposed initial PPE ensemble for tasks with exposure potential. The various types of PPE and definitions of the standard ensembles available are discussed in BSII Core Process. The levels of protection are:

- **Level A**: maximum available protection for the respiratory tract, skin, and eyes. Positive pressure, pressure-demand SCBA and a totally encapsulating, chemically resistant suit is required. Normally, the SCBA unit is worn in side the suit to decrease the chance of contamination and possible damage to the unit. An intrinsically safe, two-way radio must be worn in side the suit. Covington & Associates Corporation does not anticipate that this level of protection will be required for this site.
- **Level B**: maximum respiratory protection but a lesser degree of skin protection. This is the minimum level recommended when the contaminant(s) are unknown or when toxic airborne concentrations of known contaminants exceed the protection factor of the full face piece, air purifying respirator, or when there is an oxygen-deficient atmosphere. Positive pressure, pressure-demand SCBA or supplied air respirator with escape capability will be worn. Breathing air will at least meet the requirements for Grade D breathing air. Protective clothing will include polyethylene or Saranex®, hooded, disposable coveralls; chemical resistance boots; and nitrile or vinyl gloves. Covington & Associates Corporation does not anticipate that this level of protection will be required at this site.
- **Level C**: for use when toxic substances and/or concentrations are known and criteria for using air-purifying respirators can be met. This level of protection includes half- face piece, air-purifying respirators and appropriate disposable coveralls. Chemical-resistant gloves and boots, along with hard hats, will be required. Covington & Associates Corporation anticipates that this level of protection will be initially required at this site, until air monitoring results show that a lesser degree of PPE (Level D) can be substituted.

- **Level D**: the minimum level recommended when a respirator is not required but skin protection must be controlled. Typically this level will include chemical-resistant boots, disposable Tyvek®, and gloves, along with hard hat and safety glasses. Covington & Associates Corporation anticipates that this level of protection will be required once air monitoring results show that Level C PPE is not required.
- **Construction attire**: is the minimal protection level when respiratory or skin protection is not required. Normally, all that is needed is a basic work uniform (i.e., work clothes, work boots, safety glasses, and hard hat). Optional equipment may include work gloves, rubber boots, and a rain suit. Covington & Associates Corporation anticipates that this level of protection may be allowed in areas other than restricted work areas.

PPE can reduce the possibility of contact with hazardous materials, but it should be used in conjunction with proper site entry protocols and other safety considerations. No single combination of protective apparel and equipment is capable of protecting against all hazards. The use of protective apparel and equipment is not capable of protecting against all hazards. The use of protective apparel and equipment can create significant work hazards (e.g., heat stress, physical and psychological stress, and impaired vision, mobility, and communications). For any given situation, apparel and equipment should be selected to provide a level of protection commensurate with the degree of hazard. Overprotection, as well as under-protection, can be hazardous and should be avoided.

Protective apparel and equipment should be selected using the following criteria:

- Permeability, degradability, and penetrability by specific agents expected on the site
- Heat/cold (thermal effects)
- Durability
- Flexibility
- Ease of decontamination
- Compatibility with other equipment
- Duration of use
- Special conditions (fire, explosion, electrical, solar radiation, and confined space)

NOTE: The S&H Officer may authorize downgrade or upgrade from the initial proposed level of protection based on actual site conditions.

12.3 PROTECTIVE CLOTHING/EQUIPMENT

Typically, Level C protection will initially be worn in the restricted work areas. Level C protection will generally include the following protective clothing and equipment unless otherwise approved by the S&H Officer:

- Sturdy leather work shoes
- Hard hat

- Eye protection (e.g., safety glasses, goggles, and/or face shield)
- Disposable Regular Tyvek® suit
- Nitrile or vinyl glove inside a more durable glove
- Half-face, negative pressure respirator, until ambient air monitoring indicates a respirator is not needed
- Noise protection as required by monitoring.

Specific clothing will be identified based on the permeability of the contaminants and the potential degradation of the clothing.

Note: Levels D, C and B protection will require all connecting parts (e.g., wrist, ankles) to be taped unless determined unnecessary by the S&H Supervisor.

12.4 HAND PROTECTION

To protect hands and arms from chemical contamination, chemically resistant gloves will be used as integral, attached, or separate items from other protective clothing. Disposable gloves should be used whenever possible, to reduce decontamination needs.

- Cotton inner liner gloves are used to absorb perspiration and are optional.
- Neoprene or rubber gloves are to be used whenever (1) aqueous conditions exist, (2) non-permeable chemicals such as inorganic acids, caustics, and heavy metals are encountered, and (3) heavy-duty wear is required.

12.5 BODY CLOTHING

Various types of protective clothing are designed to prevent contamination of the body. At the Gulfport Fertilizer site, disposable Tyvek construction attire will be used for most work; however, the following clothing typically will be available onsite:

- Rain suits for protection against the elements.

12.5.1 REGULAR TYVEK®

Tyvek® will be used on the Gulfport Fertilizer site.

12.5.2 POLYETHYLENE TYVEK®

Polyethylene-coated Tyvek® will be used where hydrocarbons are present in soil, liquid, or air. It may be used for acids of a pH greater than or equal to 2 or bases of pH less than or equal to 9 ($5 \geq pH \geq 9$). These conditions are not anticipated to be encountered during this project.

12.5.3 SARANEX® TYVEK®

Saranex® Tyvek® will be used when highly toxic chemicals, such as benzene, vinyl chloride, and acrylonitrile, are encountered. These conditions are not anticipated to be encountered during this project.

12.5.4 RAIN SUITS

Rain suits may be used outside of chemically contaminated areas.

12.6 FOOT PROTECTION

Sturdy work shoes or boots will be worn to protect feet from contact with chemicals, compression, crushing, or puncture. Shoe covers, made of a variety of materials, protect boots from contamination and protect feet from chemicals. Shoe covers may be disposable. Foot covers must include one or more of the following:

- Sturdy work boots worn with protective rubber overshoes
- Sturdy chemically protective boots
- Disposable polyvinyl chloride booty over sturdy work shoes.

Over boots shall be worn where hydrocarbon contaminated water may come into contact with shoes. These conditions are not anticipated to be encountered during this project.

12.7 EYE AND FACE PROTECTION

Employees will wear approved eye protection (e.g., glasses, goggles, face shield) whenever there is potential for exposure to the following:

- Flying objects
- Dust
- Chemicals
- Harmful rays (e.g., welding, ultra-violet radiation).

Face shield and chemical splash-proof goggles will be worn when face and eyes are vulnerable to acidic or caustic material, or as directed by the S&H Supervisor. This protection is mandatory when working with acids and caustics ($5 \geq pH \geq 9$). Contact lenses will not be worn in restricted areas.

12.8 HEAD PROTECTION

Safety helmets (hard hats) protect the head from impact. Helmet liners, hoods, and protective hair coverings protect the head from chemical splashes and entanglement of hair in machinery or

equipment. Industrial safety hard hats will be worn by all workers at all times while onsite, except in designated areas.

13.0 RESPIRATORY PROTECTION

13.1 GENERAL

Use of respiratory protection, if necessary, will be in accordance with 29 CFR 1910.134. Respirators will be selected from program-approved devices based on an assessment of the nature and extent of hazardous atmospheres that are anticipated during field activity. The initial respirator assignment for each operation is provided in the S&H Plans and Activity Hazards Analysis and on the HWP. Respiratory protection is anticipated to be required during the initial stages of the project, until and unless air monitoring sampling shows that respiratory protection is not required.

13.2 MEDICAL SURVEILLANCE

Workers who are required to use respiratory protection will be fully qualified in accordance with 29 CFR 1910.134 before beginning work.

13.3 FIT TESTING

All respiratory protection program participants will receive an annual fit test in accordance with 29 CFR 1910.134.

13.4 RESPIRATOR CLEANING, MAINTENANCE, SANITATION, AND STORAGE

Routine cleaning during fieldwork will be accomplished at the respirator cleaning station located adjacent to the access-control point or other designated areas. All necessary supplies will be provided for workers to clean and sanitize their respirators. (Note: Decontamination does not constitute respirator cleaning but is always performed before cleaning). Supplies provided by the Contractor and Subcontractors for its employees will include:

- Moist treated wipes
- Cleaning/sanitizing solution
- Cleaning solution basins
- Soft-bristle scrub brushes
- Rinse basins
- Drying area
- Clean storage bags (zip-lock type).

Respirators that are used either occasionally or daily will be cleaned, sanitized, inspected, assembled, and maintained ready for use daily. Each respirator will be stored in a clean and sanitary container. Parts that require inspection include the valves, valve covers, nosepiece, straps, eyepiece, face-piece and its snaps, cylinders, and canisters. The individual responsible for the cleaning, inspection, maintenance, sanitation, and storage of respirators will be trained in the proper methods and procedures.

Each respirator user will store his/her respirator in a clean, sealed plastic bag when it is not in use, unless it has been determined that the respirator is contaminated or is returned at the end of its use. If a respirator becomes chemically contaminated, it will be replaced with a clean and sanitized respirator. The respirator wearer will inspect the replacement respirator for defective parts and leaks.

13.5 SPECIAL TRAINING

Special training is required for the use of Type C (airline supplied) respirator and SCBA. Personnel will demonstrate training as evidenced by a copy of the training certificate or a letter or certificate from their employer stating that they are trained in the use of this equipment.

Each respirator user will be issued a respirator for exclusive personal use and will be trained in its use, care, and maintenance in accordance with 29 CFR 1910.134. Each respirator user will be instructed to inspect his/her respirator before each use, after each use, and after cleaning.

13.6 RESPIRATOR SELECTION

The S&H Supervisor will select respiratory protection based on whether:

- The estimated contaminant concentration is in the range requiring respiratory protection as determined by monitoring information.
- The PEL, threshold limit value, short-term exposure limit, or ceiling value may be exceeded.
- The contaminant is a gas, vapor, mist, dust, or fume.
- The contaminant concentration could be termed immediately dangerous to life or health.
- The warning properties (e.g., irritation, odor) of the chemical contaminants are not detectable.

NIOSH approves respirators using test certification numbers; only NIOSH-approved equipment, components, and replacement parts will be accepted. In addition, respirators are approved as a system. Cartridges, canisters, filters, air lines, corrective lens holders, adapters, and regulators cannot be interchanged among different brands of equipment or even among equipment of a given manufacturer unless specifically approved. No disposable respirators will be used.

The various types of respirators and their specific uses are described in the following sections.

13.7 HALF-FACE, NEGATIVE-PRESSURE RESPIRATOR

A HALF-face, negative-pressure respirator will be used under the following conditions.

- Ambient air concentrations of known contaminants in the breathing zone exceed the PEL bu are less than 10 times the PEL (a new PEL will be calculated for multiple contaminants based on synergistic effects).

- Specific tasks where this respirator has been approved by the S&H Supervisor.

13.8 GENERAL CONSIDERATIONS AND LIMITATIONS FOR RESPIRATOR USE

The following criteria will be followed.

- **Oxygen deficient atmospheres**: Atmosphere-supplying respirators will be used in environments immediately dangerous to life or health (atmospheres containing less than 19.5% oxygen at sea level). These conditions are not anticipated to be encountered during this project.
- **Eye irritation**: When working in contaminated environments or where there is potential for eye irritation, a full-face unit will be used.
- **Nuisance dust**: Any approved filter respirator can be used for nuisance dusts.
- **Warning properties of contaminant**: Chemical cartridge respirators will not be used for exposures to air contaminants that cannot be easily detected by odor or irritations. For example, cartridge respirators will not be used to protect against methyl chloride or hydrogen sulfide. The former is odorless, and the latter, while foul smelling at low concentrations, will paralyze the olfactory nerve system at high concentrations, thereby rendering odor detection unreliable.
- Chemical cartridge respirators will not be used for protection against gases or vapors that are not effectively stopped (i.e., carbon monoxide). Do not use chemical cartridge respirators in the presence of the following materials:
  - Arsine Phosphorus
  - Carbon monoxide
  - Hydrogen cyanide
  - Hydrogen fluoride
  - Hydrogen sulfide
  - Methanol
- Airline or supplied-air, positive-pressure, pressure-demand respirators or special-use respirators will be used for protection against materials in the above list.
- Chemical cartridges will be used only for those contaminants and concentrations for which they are certified.

14.0 TRAINING REQUIREMENTS

14.1 GENERAL

Personnel working at a site must recognize and understand the potential risks to safety and health associated with the work at that site. Workers involved in remedial action must be thoroughly familiar with programs and procedures and must be trained to work safely in controlled areas

14.2 GENERAL SITE WORKERS

All site workers that may be exposed to hazardous conditions will be trained to work in compliance with 29 CFR 1910.120. Each site worker conducting activities inside a chemically restricted area will receive 40 hours of hazardous waste site training and 3 days of supervised on-the-job training. Site workers who do not enter restricted work areas and who have minimal exposure potential will receive a minimum of 24 hours of hazardous waste site training. Employees will not engage in field activities associated with hazardous materials until they have been trained to a level commensurate with their job function and responsibilities and with the degree of anticipated hazard, including site-specific hazards.

General laborers, technicians, and other personnel will attend training sessions that apply to their individual jobs and responsibilities, as well as training sessions that provide an overview of the site hazards and the means to control those hazards. Their training will include classroom instruction in the following subject areas, depending upon their individual jobs:

- Hazardous chemical notification
- Details of the safety and health plan
- Employee rights and responsibilities
- Safe work practices
- Nature of anticipated hazards
- Handling emergencies and accidents
- Rules and regulations for vehicle use
- Safe use of field equipment
- Handling, storage, and transportation of hazardous materials
- Use, care, and limitations of personal protective clothing and equipment
- Safe sampling techniques.

Retraining will be required annually, or more frequently if significant changes occur in conditions affecting the safety and health of the workers. As a minimum, retraining will consist of 8 hours of discussion about the same topics discussed in the 40-hour or 24-hour training course.

14.3 ORIENTATION

Orientation attendees shall include all Contractor and Subcontractor employees. No work may be performed prior to attending an orientation by the S&H Supervisor.

The S&H Supervisor shall present the orientation. The orientation shall be specific for the project location and may be in the form of overheads, videos, or other prepared material. Information on S&H aspects of the job or task, Site Conditions, emergency procedures, permit requirements, traffic patterns, adjacent operating production equipment, and waste disposal shall all be included in the orientation.

14.4 SAFETY MEETINGS

Safety meetings will be conducted to reemphasize the salient points of the S&H program and existing site conditions and to inform team members of changing site conditions. These meetings will be conducted weekly by each on-site employer, or more frequently if needed, to ensure proper safety and health of personnel in the performance of regular work activities and in emergency situations. Contractors, if they choose, may attend meetings conducted by Covington & Associates Corporation. Safety meetings will be documented on the appropriate training form.

14.5 VISITORS

All visitors to the site, even if escorted, must receive a briefing on safety. These visitors will not be permitted in the restricted work areas unless they have been respirator-trained, fit-tested, and medically approved. Visitors not complying with the above requirements will not enter the restricted work areas; however, they may observe site conditions from a safe distance.

15.0 HAZARD COMMUNICATION

The S&H Supervisor will provide all personnel with site specific training and documentation advising them of the potential hazardous materials in the workplace. A list of such materials will be posted at the work site and copies of appropriate material safety data sheets will be available to site workers upon request. The project will comply with 29 CFR1910.1200.

16.0 FORBIDDEN PRACTICES

The forbidden practices listed below are applicable to all restricted areas. In addition, no worker may engage in any activity for which the consequences of his actions are unclear without the approval of the S&H Supervisor. If such activities become necessary to complete any phase of the work, the necessary safety and health requirements and an approved HWP will be prepared by the S&H Supervisor.

The following practices will be strictly forbidden during any work in restricted access areas.

- Horseplay
- Fighting
- Eating
- Drinking
- Smoking
- Chewing gum, tobacco, or any other substances
- Use of facial cosmetics
- Wearing contact lenses
- Unnecessary sitting or kneeling on contaminated surfaces
- Placing equipment on contaminated surfaces (when practicable)
- Climbing on or over obstacles
- Starting or maintaining an open flame of any type unless authorized by the H&S Supervisor
- Entering the work site with safety equipment that has not been determined to be in proper working condition immediately prior to entry
- Entry of the work site, under any circumstances, by any employee or visitor without prior approval.

In addition to the forbidden practices, the S&H Supervisor may impose other prohibitions that may be required for safe operations.

17.0 AS LOW AS REASONABLY ACHIEVABLE POLICY

Covington & Associates Corporation's policy is to maintain exposures to hazardous chemical at levels that are as low as reasonably achievable (ALARA). ALARA is achieved through proper training of employees, adequate work procedures, adequate engineering controls, good personal hygiene practices, and, when required, use of protective equipment. Each individual working in a restricted area is required to adhere to established ALARA rules, regulations, and concepts.

18.0 THE BUDDY SYSTEM

The buddy system is a safety practice in which each individual is concerned with the health and well-being of co-workers. The buddy system will be implemented during all onsite activities and will be incorporated whenever workers may be isolated or as determined by the S&H Supervisor. Two-way radio communication should be established when deemed necessary by the S&H Supervisor. The following standard hand signals will be used in case of failure of other communication.

Hand Signal	Meaning
Hand gripping throat	Out of air, can't breathe
Grip partner's wrist or both hands around waist	Leave area immediately
Hands on top of head	Need assistance
Thumbs up	OK, I am all right, I understand
Thumbs down	No, Negative

19.0 GENERAL SITE SAFETY REQUIREMENTS

Frequent and regular S&H inspections will be conducted at each work site. The S&H Supervisor and contractor and subcontractor supervisors will conduct a daily inspection of the workplace, document on standard forms, and track deficiencies until corrected. The contractor and subcontractor supervisors should also participate in a weekly inspection. In addition to the daily inspections performed by the field team, the program S&H mangers or designees will perform audits to ensure compliance with program requirements. Audits will be similarly documented and deficiencies tracked until documented closure.

Hazards, due to normal site activities, can be reduced by using common sense and following the safe practices listed below.

- All equipment and tools will be used only by authorized personnel familiar with its use.
- Safety devices on equipment will be left intact and used as designed.
- Equipment and tools will be kept clean and in good repair and used only for their intended purpose.
- Good housekeeping practices will be followed.
- Use of chemicals will be limited to authorized personnel familiar with their use and associated hazards.

19.1 LADDERS

Ladders and scaffolds, if needed to conduct the work required for this project, will be used in accordance with the following.

- Manufactured ladders will be constructed of heavy-duty grade; Type II minimum, conforming to applicable ANSI standards.
- Ladders will not be spliced together to make a longer ladder.
- Straight ladders for access will extend at least 3 ft above the landing.
- The base of straight ladders will be set back a safe distance from the vertical; approximately one-fourth the working height of the ladder.
- Stepladders will be fully opened to permit the spreader to lock. Stepladders will not be closed and leaned against an object for access.
- Metal ladders or other conductive ladders will not be used for electrical work or in areas where they could contact energized wiring.
- "Job-made" ladders will be constructed in accordance with OSHA 1926.450(b) (DOL 1989f).

19.2 HOUSEKEEPING

Housekeeping procedures contained herein pertain to uncontaminated trash, debris, and rubbish. Drilling waste or chemically contaminated materials must be handled in accordance with applicable regulatory requirements.

The following housekeeping rules will apply at the jobsite, as applicable.

- Have a daily clean-up plan.
- Work areas must be kept clean and free from trash and debris. Trash containers must be located throughout the jobsite.
- Excess scrap material and rubbish must be removed from the work area.
- Maintain unobstructed passageways.
- Obtain Covington & Associates Corporation approval of storage areas.
- Immediately remove or bend over any protruding nails.
- Remove loose overhead materials.
- Maintain hoses and cords so not to create tripping hazards.
- All surplus materials must be returned to a designated area of the site at the completion of a job.
- Tools and materials must be put in tool boxes or returned to the tool room after use to avoid creation of a hazard for others.
- Oily rags must be placed in approved non-combustible metal containers.
- Toilets, wash-up facilities, and drinking fountains must be kept clean and sanitary; problems must be reported to the supervisor.
- PPE will be returned to the designated area at the end of the work period and will be placed in designated receptacles.
- Eating, drinking, use of tobacco products, chewing gum, etc., is permitted only in designated break areas. These activities are not permitted in change or shower areas, toilet facilities, etc.

19.3 FIRE PREVENTION AND PROTECTION

Fire Prevention

The following rules will be enforced to prevent fires:

- Smoking will be prohibited at or in the vicinity of operations that may present a fire hazard. "No Smoking" or "Open Flame" markings will be conspicuously posted.

- Flammable and/or combustible liquids must be handled only in approved; properly labeled metal safety cans equipped with flash arrestors and self-closing lids.
- Transfer of flammable liquids from one container to another will be done only when the containers are electrically interconnected (bonded).
- The motors of all equipment being fueled will be shut off during the fueling operations.
- Flammable/combustible liquids stored in metal drums will be equipped with self-closing safety faucets, vent bung fittings, and drip pans. Such containers will be stored outside buildings in an area approved by the SSHR and the Plant Fire Marshall whenever working within an operating facility. Such metal drums will be properly grounded.

Fire Protection

The following measures will be used to protect against fires:

- All construction equipment (cranes, bulldozers, track hoes, etc.) will be equipped with a fire extinguisher of 10 ABC units or higher.
- All vehicles will be equipped with a fire extinguisher of 5 ABC units or higher.
- Temporary offices will be equipped with a fire extinguisher of 10 ABC units or higher.

At least one portable fire extinguisher of 20 ABC units will be located not less than 25 ft or more than 75 ft from any flammable liquid storage area.

EMERGENCY CONTACTS

Covington & Associates Corporation

Project Manager: John Szabo	(228) 396-0486 (228) 216-1158
S&H Supervisors: Anthony Damiano	(228) 396-0486 (228) 861-2402
Wendell Larson	(228) 396-0486 (228) 216-7981
Todd Hairston	(228) 396-0486 (228) 216-7983

Response Teams

US EPA Environmental Response Team	908/548-8730
US Coast Guard Environmental Response Team	800/424-8802

Site Emergency Numbers

Ambulance	911
Fire Department	911

Offsite Emergency Numbers

Gulfport Police Department	911
Gulfport Fire Department	911
Mississippi State Police	911
Harrison County Sheriff	911

Medical Emergency 911

Health Emergency

Poison Control Center	(800) 222-1222
ToxLine	(301) 496-1131
CHEMTREC (24hr)	1-800-424-9300

ATTACHMENT 1

Job Safety Analysis

Work Activity	HAZARD	Reason
Site Preparation	Heavy Equipment; slip, trip, fall hazards	This phase will require the utilization of equipment that can pose risks.
Soil Excavation	Cave in and falling underground utilities; excessive noise; pinch points, airborne objects, and overhead hazards; contact with contaminated soil and groundwater; spreading of site contaminants; inhalation of site contaminants.	Follow required excavation safety procedure under guidance of competent person obtain utility clearance before breaking ground; wear appropriate PPE and hearing protection; perform equipment and personnel protective equipment
Backfill and Compaction	excessive noise; pinch points, overhead hazards	Heavy equipment

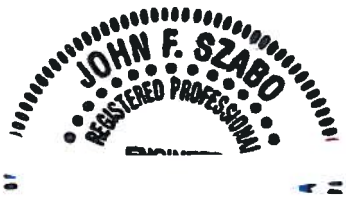
COVINGTON AND ASSOCIATES
Environmental Engineers and Consultants

INTERIM CORRECTIVE ACTION PLAN

Former Gulfport Fertilizer Site
33rd Street
Gulfport, Mississippi

Presented on Behalf of:
Hancock Bank
2510 14th Street
Gulfport, MS 39501

May 30, 2005



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1.0 INTRODUCTION

Hancock Bank owns an approximately 145 acre, unimproved, vacant property in Gulfport, MS bounded on the south by 33rd Street, on the west by 34th Avenue, on the north by North Gulfport Subdivision and on the east by the railroad. The property is located in Section 33, Township 7 South, Range 11 West, City of Gulfport, Harrison County, Mississippi. The property consists of an approximately 33 acre tract (Former Gulfport Fertilizer Site) owned by Hancock Bank since the late 1970s on which the Gulfport Fertilizer Company had a super-phosphate fertilizer operation from about 1914 – 1920 The remaining approximately 112 acre tract was acquired by Hancock Bank in late March 2005 from the Harreld Family Trust and is a vacant, undeveloped, heavily wooded property

The Former Gulfport Fertilizer Site was found to have contamination in the soil and groundwater. Beginning in September 1998, Butler Services of Mississippi, Inc. (Butler Services), on behalf of Hancock Bank, began a site characterization investigation to determine the nature and extent of contamination on the site. Butler Services collected 260 soil samples from the site from 0'-2' and 2'-4' below the ground surface (BGS). The collected soil samples were analyzed for arsenic and lead.

The results of the Butler Services investigation were presented in the *Site Characterization Report* for the site dated October 25, 1999. The report concluded that

there were four (4) major source areas on the site where the arsenic and/or lead regulatory limits were exceeded in the site soils from 0'-4' BGS. The report recommended that additional soil samples be collected to determine the vertical extent of the arsenic and/or lead soil contamination. Installation of monitoring wells and collecting groundwater samples was also recommended in order to evaluate the extent of groundwater contamination at the site, if any.

After reviewing the *Site Characterization Report* for the subject site, the Mississippi Department of Environmental Quality (MDEQ) required that:

- the horizontal and vertical extent of soil contamination along the western boundary of the Former Gulfport Fertilizer site be determined,
- a minimum of six (6) monitoring wells be installed on the site; and
- all borings be advanced to a "laterally extensive low permeability confining layer underlying the surficial water bearing zone".

Butler Services prepared a work plan for this supplemental investigation – *Work Plan Off-Site/Source Area Soils and Groundwater Sampling* – addressing MDEQ's requirements.

Hancock Bank hired Covington and Associates Corporation (CAC) in late October 2001 to replace Butler Services in implementing the Work Plan for the supplemental site

investigation. CAC advanced forty-three (43) on-site geoprobe borings and twenty-two (22) off-site geoprobe borings. Soil samples were collected at 2' intervals from 0' – 8' below the ground surface (BGS) and at 4' intervals from 8' BGS to 8'-16' BGS or the low permeability confining clay layer. The soil samples collected from the 0'-2' BGS and 2'-4' BGS soil intervals were analyzed to determine the arsenic and lead concentration in each soil interval. At those locations where the arsenic and/or lead concentration exceeded the site's regulatory limits (7.18 mg/kg for arsenic and 400 mg/kg for lead, assuming the site would be used for unrestricted – residential - purposes in the future), samples from subsequent soil intervals were analyzed until the arsenic and/or lead concentration were below the site's regulatory limits. Two-foot (2') stream sediment samples were taken from four (4) locations along the stream located west of the western boundary of the Former Gulfport Fertilizer Site. Each stream sediment sample was analyzed for arsenic and lead. Groundwater samples were taken from twelve (12) of the boring locations "Unfiltered" and "filtered" groundwater samples were collected and analyzed for arsenic and lead.

The supplemental site investigation findings were presented in the *Supplemental Site Characterization Report* prepared by CAC and submitted to MDEQ on November 8, 2002. The supplemental site investigation determined:

- The low permeability confining clay layer is 20'-26. 5' BGS.
- The horizontal and vertical extent of the arsenic soil concentrations exceeding the

site's regulatory limit for arsenic in soil (7.18 mg/kg) has been adequately defined, except in a small area on the off-site property at 0'-2' BGS and 2'-4' BGS. It is felt that the horizontal and vertical extent in these off-site areas is within 100' of the last boring location advanced.

- The majority of the soil exceeding the site's regulatory limit for arsenic in soil occurs in the 0'-6' BGS soil interval.
- The total arsenic concentrations found in soil samples at the site do not exceed arsenic's TCLP regulatory limit (5.0 mg/l). Therefore, the site soils are not considered to be hazardous for arsenic.
- The horizontal and vertical extent of the lead soil concentrations exceeding the site's regulatory limit for lead in soil at unrestricted (residential) sites (400 mg/kg) has been adequately defined, except in a small area on the off-site property at 0'-2' BGS. It is felt that the horizontal and vertical extent in these off-site areas is within 100' of the last boring location advanced.
- The majority of the soil exceeding the regulatory limit for lead in soil at restricted (residential) sites occurs in the 0'-2' BGS soil interval.
- Sub-surface soils exceeding 3,800 mg/kg total lead concentration will be considered hazardous for lead (TCLP lead > 5.0 mg/l).
- All collected stream sediment samples were below the site's regulatory limit for arsenic in soil (7.18 mg/kg) and below the regulatory limit for lead in soil at unrestricted (residential) sites (400 mg/kg). It is concluded that the stream has not

been impacted by previous site operations.

- All of the "unfiltered" (Total) groundwater samples collected exceeded MDEQ's Tier 1 TRG for arsenic in groundwater (0.010 mg/l) and for lead in groundwater (0.015 mg/l). It is felt that this is due to the presence of soil particles in the groundwater samples.
- Arsenic and lead analytical results for "filtered" (Dissolved) groundwater samples exceeded MDEQ's Tier 1 TRG in the northwest and west area of the site.

A naturally occurring radioactive material (NORM) survey was performed on the site by CAC. The survey included identifying "hot spot" areas (areas where field radioactive readings exceeded 20 uR/hr) on the site. Following NORM survey procedures, soil samples were collected in a 100-meter sampling area east of the fertilizer production concrete slab. The soil samples were collected from 0"-6" BGS and from 6"-12" BGS. The collected soil samples were analyzed to determine the concentration of Radium-226 and Radium-228 in the soil samples in pico-curies per gram (pCi/gm).

The NORM survey determined the following:

- The horizontal and vertical extent of the two (2) areas of the site where NORM concentrations exceeding the NORM regulatory limit for transfer of property for unrestricted (residential) uses were identified and adequately defined.

In order to determine the extent of soil contamination off-site, on the adjacent Harreld Family Trust property, which is now part of the overall site, CAC proposed to perform a supplemental off-site soil investigation. MDEQ approved CAC's plan for collecting additional off-site soil borings on April 21, 2003. From April 2003 to November 2003, CAC advanced seventy (70) additional borings on the Harreld Family Trust property. On July 29, 2003, CAC submitted a *Supplemental Off-Site Characterization Report.* The report was revised and re-submitted on December 1, 2003.

The supplemental off-site soil investigation determined the following:

- The horizontal and vertical extent of the arsenic soil concentrations exceeding the site's regulatory limit for arsenic in off-site soil (7.18 mg/kg) has been defined.
- The majority of the off-site soil exceeding the site's regulatory limit for arsenic in soil occurs in the 0'-4' BGS soil intervals.
- The horizontal and vertical extent of the off-site lead soil concentrations exceeding the site's regulatory limit for lead in soil at unrestricted (residential) sites (400 mg/kg) has been defined.
- The off-site soil exceeding the regulatory limit for lead in soil at unrestricted (residential) sites occurs in the 0'-2' BGS soil interval, only.
- Off-site soils exceeding 3,800 mg/kg total lead concentration occurred at one location, only – OS-6, 0'-2' BGS – and will be considered hazardous for lead (TCLP lead > 5.0 mg/l), if excavated.

Figure 1 shows the horizontal extent of arsenic and lead contaminated soil identified on the site.

CAC collected groundwater samples from seven (7) monitoring wells located on the Former Gulfport Fertilizer site for eight consecutive quarters from June 19, 2002 (First Sampling Round) to March 4, 2004 (Eighth Sampling Round). Each groundwater sample was analyzed for lead and arsenic concentrations. pH readings of each groundwater sample were also collected. CAC presented conclusions about the groundwater on the Former Gulfport Fertilizer site in a letter report entitled "Historical Groundwater Monitoring Report" dated August 10, 2004.

The data presented in this "Historical Groundwater Monitoring Report" for the Gulfport Fertilizer site demonstrated the following:

- The groundwater flow direction at this site has consistently followed a north to northwesterly path.
- Total Arsenic concentrations in the groundwater consistently exceeded the Tier 1 TRG of 0.010 mg/L at MW-2, MW-4 and MW-6, with minor excursions reported at MW-1, MW-3 and MW-7.
- Arsenic-contaminated groundwater potentially migrated onto the adjacent Harreld Family Trust (off-site) property, which, at the time, was not owned by Hancock Bank.

- Total Lead concentrations in the groundwater consistently exceeded the Tier 1 TRG of 0.015 mg/L at MW-1.
- Lead-contaminated groundwater is confined to the Former Gulfport Fertilizer site.
- Total metals data generally suggests that arsenic and lead concentrations in the groundwater are influenced most by the associated metals concentrations in the soils, as opposed to the pH levels in the soil or groundwater.
- Soil analytical information presented in the November 8, 2002 *Supplemental Site Characterization Report* demonstrates that the arsenic in the soil is not highly mobile and does not leach into the groundwater.
- The soil TCLP data presented in the *Supplemental Site Characterization Report* does, however, support that lead is leachable at high concentrations (above 3,800 mg/kg).

In order to estimate the extent of groundwater contamination on the Harreld Family Trust Property (off-site property), CAC advanced twelve (12) borings on the Harreld Family Trust Property on October 20 and 21, 2004. Groundwater samples were collected from each boring and analyzed for arsenic and lead. CAC estimated the extent of groundwater contamination based on the samples collected from the twelve (12) borings.

Figure 2 shows the extent of groundwater contamination on Hancock Bank property based on previous groundwater studies performed by CAC.

Hancock Bank has a potential purchaser of the property – Mississippi State Port Authority. The property will be used for industrial purposes, only – storage, marshalling yard, loading and unloading operations, and other activities which support the operation of the port.

As part of the purchase agreement, Hancock Bank agrees to be responsible for implementing part of the overall Corrective Action Plan (CAP) activities. This *Interim Corrective Action Plan* presents the CAP activities and rationale for those activities Hancock Bank will be responsible. Upon finalizing the purchase agreement, the *Final Corrective Action Plan* showing all CAP activities – those Hancock Bank is responsible for and those the Mississippi State Port Authority is responsible for – will be submitted to MDEQ for approval. If the Mississippi State Port Authority does not purchase the subject site, Hancock Bank will submit the *Final Corrective Action Plan.*

1.1 Objectives and Rationale

Since the property will be utilized for industrial purposes with controlled access to the property, this *Interim Corrective Action Plan* will present engineering and institutional controls which will be implemented by Hancock Bank.

The engineering and institution controls presented in this *Interim Corrective Action Plan*

will protect human health and the environment since the soil contamination is confined to the site and has been shown not to be mobile - arsenic is not leachable at soil concentrations found on the site and concentrations of lead, which are leachable (above 3,800 mg/kg), will be removed from the site under this *Interim Corrective Action Plan*. Additionally, a large portion of the soil contamination is located in a wetlands area which will remain. The wetlands minimize the potential for contaminated soil migrating from the site.

The groundwater contamination is also confined to the site. Groundwater data collected during the site characterization investigations shows the groundwater concentrations to be stable, indicating that the soil is not a continuing source of contamination to the groundwater. The engineering and institutional controls that will be presented in the *Final Corrective Action Plan* will provide long-term monitoring of the groundwater. Source removal presented in this *Interim Corrective Action Plan* and capping of portions of the site that will be presented in the *Final Corrective Action Plan* will further insure that the groundwater contamination does not increase.

2.0 CONCEPTUAL DESIGN

The following engineering and institutional controls will be implemented in accordance with the Schedule presented in Section 4.0 of this *Interim Corrective Action Plan.*

2.1 Use Restrictions

Use Restrictions will be placed on the property once the property is purchased by the Mississippi State Port Authority. The proposed Use Restrictions will be presented in the *Final Corrective Action Plan.*

2.2 Security Fencing

It is anticipated, under the *Final Corrective Action Plan*, that security fencing will be placed around the perimeter of the property, since the Port Authority is required, under Homeland Security Requirements, to construct a very secure fence around its operations. The *Final Corrective Action Plan* will present the requirements for the security fencing around the perimeter of the property.

If the Port Authority does <u>not</u> purchase the property or receive funding to install the security fencing within eighteen (18) months from the date of the property transfer,

Hancock Bank will construct a 6-foot chain link fence around the contaminated portion of the property. Figure 3 shows an anticipated layout of both fences – the Homeland Security Fence by the Port Authority and the "interim" security fence installed by Hancock Bank within eighteen (18) months of the anticipated sale of the property.

In order to prevent/limit access to the portion of the site where Naturally Occurring Radioactive Material (NORM) is present, a 6' security fencing with warning signs will be installed prior to any activities on the site. This is being done to protect any future workers who might be on site. Figure 4 shows the anticipated layout of the security fence around the NORM-contaminated area.

2.3 Monitoring Well Installation

Seven (7) monitoring wells will be installed to monitor the groundwater contamination at the site. Figure 5 shows the proposed location of the seven (7) additional monitoring wells. Each well will be installed in accordance with the *Work Plan Off-Site/Source Area Soils and Groundwater Sampling* (the Work Plan) prepared by Butler Services of Mississippi, Inc. approved by MDEQ on January 31, 2002. Each well will be installed to a depth of 15' below ground surface (BGS) to conform to the depths of the existing monitoring wells installed on the site. Figure 6 is a Well Construction Diagram showing the construction of the proposed monitoring wells.

2.4 Excavation of Lead Contaminated Soil above 3,800 mg/kg

In order to eliminate a potential source of soil that could be contributing to the lead-contaminated groundwater at the site, all soil on the Former Gulfport Fertilizer Site having a lead concentration greater than 3,800 mg/kg will be excavated and properly disposed at a permitted landfill. Any soil having a lead concentration greater than 3,800 mg/kg, that is located in identified wetlands areas on the previously designated Harreld Family Trust Property, will remain in place. Analysis of soil samples collected by CAC in 2002 and a statistical analysis of those results presented in CAC's *Supplemental Site Characterization Report* showed that lead contaminated soil having a concentration greater than 3,800 mg/kg exceeded 5.0 mg/l lead under the Toxicity Characteristic Leaching Procedures (TCLP) analysis. MDEQ, in its review of CAC's *Supplemental Site Characterization Report*, concurred with CAC's assessment.

Figure 7 shows the limits of soils exceeding 3,800 mg/kg. Section 7.0 of this *Interim Corrective Action Plan* presents sampling and monitoring procedures that will be followed to insure that all lead-contaminated soil above 3,800 mg/kg has been excavated.

2.5 On-Site NORM Contamination

Two areas of Naturally Occurring Radioactive Material (NORM) contaminated soil has

been identified on the site (See Figure 4). As shown on Figure 4, a 6-foot security fence will be installed around these areas. Signs will be placed on the fence warning persons about the presence of NORM contamination and telling them to keep out. It is anticipated that the development plans prepared by the Port Authority in the future will include capping the area with pavement if this area of the site is included in the Port's development plans. This will be addressed in the *Final Corrective Action Plan.*

It is anticipated that the Use Restriction that will be filed on the site will designate the locations of the NORM-contaminated soil as shown on Figure 4. This will be addressed in the *Final Corrective Action Plan.*

2.6 Capping of Arsenic/Lead Contaminated Soil

It is anticipated that the majority of the arsenic- and lead-contaminated soil will be capped with pavement or a building under the Port Authority's development plans. This capping will be addressed in the *Final Corrective Action Plan*. Until the *Final Corrective Action Plan* is implemented or the Port Authority is ready to develop the areas where these soils are located, the soils will remain in place and will remain undisturbed, except in the area of lead-contaminated soil exceeding 3,800 mg/kg, which will be excavated under this *Interim Corrective Action Plan.* Existing vegetative cover will remain in place.

2.7 Protection of Existing Wetlands

Wetlands are located on the portion of the site designated Harreld Family Trust Property, as well as a small area of wetlands portion of the site designated the Former Gulfport Fertilizer property. It is anticipated that the limits of the wetlands will be marked during the implementation of the *Final Corrective Action Plan*. It is anticipated, under the *Final Corrective Action Plan*, that these areas will remain as wetlands. Under the *Interim Corrective Action Plan*, paths sufficient for gaining access to monitoring well sites will be cleared. There will be no filling of the wetlands and, therefore, a permit is not required. The paths will be cleared to cause minimum damage to the wetlands.

2.8 Stormwater Run-off Controls

It is anticipated under the *Final Corrective Action Plan*, that the Port Authority will be required to provide detention basins and other stormwater control measures in accordance with the City of Gulfport requirements and that the Port Authority will also be required to address the quality of the stormwater runoff leaving the site. This will be addressed in the *Final Corrective Action Plan*.

2.9 Health and Safety Issues

A Health and Safety Plan will be developed for construction workers and future employees of the Port Authority, if the Port Authority purchases the site, working on the site. The Health and Safety Plan will include personnel implementing the *Interim Corrective Action Plan*. The Health and Safety Plan will include air monitoring during excavation and construction activities and dermal protection of workers during excavation and construction activities and normal site activities.

3.0 SYSTEM COMPONENTS

None of the proposed Corrective Action Measures include system components.

4.0 SCHEDULE

The schedule for implementing the *Interim Corrective Action Plan* is shown below. The anticipated date for implementing each step of the *Interim Corrective Action Plan* is from the date *the Interim Corrective Action Plan* is approved by the MDEQ.

Interim Correction Action Measure	**Group Responsible for Interim Corrective Action Measure**	**Completion after MDEQ Approval of Interim Corrective Action Plan (Calendar Days)**
Use Restriction	Hancock Bank/Port Authority	To be included in *Final Corrective Action Plan*
Homeland Security Fence	Port Authority	550 (18 months) after purchase of property
6-foot Security Fence	Hancock Bank, if property not purchased by Port Authority	594 (45 days after 18 months expires)
6-foot Security Fence around NORM-contaminated areas	Hancock Bank	45
Monitoring Well Installations	Hancock Bank	60
Excavation of Lead Contaminated Soil above 3,800 mg/kg	Hancock Bank	60
Capping of Arsenic/Lead Contaminated Soil	Port Authority	To be included in *Final Corrective Action Plan*
Protection of Existing Wetlands	Port Authority	To be included in *Final Corrective Action Plan*
Stormwater Run-off Controls	Port Authority	To be included in *Final Corrective Action Plan*
Health and Safety Plan	Hancock Bank	30

5.0 REMEDIAL GOALS (RGs)

The remedial goals for this *Interim Corrective Action Plan* are background levels of arsenic naturally occurring in the soil in the area of the site and the Tier 1 Target Remedial Goals (TRGs) established by the MDEQ for lead in soil and arsenic and lead in groundwater. For soils the remedial goals (RGs) are:

Arsenic in soil – 7.18 mg/kg (background), and

Lead in soil – 800 mg/kg (restricted use)

Additionally, testing performed under the Site Characterization Study has shown that soils having a lead concentration greater than 3,800 mg/kg are potentially hazardous (TCLP > 5.0 mg/l). Under Section 2.4 of the Conceptual Design of this *Interim Corrective Action Plan*, soils having a concentration of 3,800 mg/kg of lead or greater and being located on the portion of the site designated Former Gulfport Fertilizer Site will be removed and disposed at a permitted landfill.

It is anticipated that the Conceptual Design of the *Final Corrective Action Plan* contemplates instituting engineering and institutional controls for soils on the site.

The RGs for groundwater are:

Arsenic in groundwater – 0.010 mg/l and

Lead in groundwater – 0.015 mg/l.

A groundwater study conducted during the Site Characterization investigation concluded that the contaminated groundwater is confined to the site and is not significantly increasing in concentration or horizontal extent. Additionally, there are no potable water supply wells on the site or the nearby surrounding area. It is anticipated that, when the site is developed by the Port Authority, city water will be supplied to the site. Therefore, it is anticipated that the Conceptual Design of the *Final Corrective Action Plan* will propose long-term monitoring of the contaminated groundwater.

6.0 OPERATION AND MONITORING PLAN

Given the proposed *Interim Corrective Action Plan* presented in Section 2.0, an operation and monitoring plan (O&M) is not required since no operating systems are proposed. A Performance Monitoring Plan for corrective activities proposed under this *Interim Corrective Action Plan* is presented in Section 7.0. It is anticipated that under the *Final Corrective Action Plan*, a Compliance Monitoring Plan and a Contingency Plan will be presented.

7.0 PERFORMANCE MONITORING PLAN

In order to insure that the engineering and institutional controls proposed under this *Interim Corrective Action Plan* are effective in meeting the Remedial Goals (RGs) presented in Section 5.0, the following Performance Monitoring Plan will be implemented:

- All on-site monitoring wells will be sampled within fifteen (15) days of completing the installation of the seven (7) new monitoring wells presented under Section 2.3 of this *Interim Corrective Action Plan*, following sampling procedures established under the *Work Plan Off-Site/Source Area Soils and Groundwater Sampling*, approved by MDEQ. Within thirty (30) days after receipt of analytical data, a groundwater sampling report will be prepared and submitted to the Owner and MDEQ.
- The excavation of soils having a lead concentration greater than 3,800 mg/kg will be monitored by an independent, third party. The initial limit of excavation will be based on data collected during the Site Characterization investigation. Once the initial limits of excavation are achieved, confirmatory soil samples will be collected from the bottom and sidewalls of the excavation. These samples will be analyzed for total lead concentration to determine if the remaining, unexcavated soil is above or below 3,800 mg/kg. One sample will be collected from every 1,000 square feet of area in the bottom of the excavation and one sample will be

collected for every 100 linear feet of sidewall excavation. Each sample will be a composite sample consisting of soil collected from ten (10) locations within the sampling area. Each soil sample will be collected from the upper 0" – 6" of the unexcavated soil. The soil collected from the ten (10) sampling locations within a sampling area will be mixed into a composite sample utilizing EPA's "Quarters Method" of mixing. If an analyzed sample shows a sampling area to be above 3,800 mg/kg, that area will be excavated and re-sampled until the remaining, unexcavated soil is less than 3,800 mg/kg. Excavated material will be stockpiled in a containment area and sampled to determine whether it is a hazardous or non-hazardous material. One (1) composite sample per 100 cubic yards of material will be collected and analyzed utilizing the Toxicity Characteristic Leaching Procedures (TCLP). Each composite sample will consist of soil samples collected from ten (10) different locations within the 100 cubic yard stockpile of material. Once the nature of the excavated material is determined, it will be delivered to a properly permitted landfill for disposal. Waste manifests of each shipment to the permitted landfill will be maintained. Within thirty (30) days after completion of excavation and receipt of all sampling results, a report documenting the excavation activities will be prepared and submitted to the Owner and MDEQ.

- The Owner will hire an independent, third-party to insure that the Health and Safety Plan is being properly implemented during site activities. Documentation showing that the Health and Safety Plan has been properly implemented will be

provided the Owner and MDEQ.

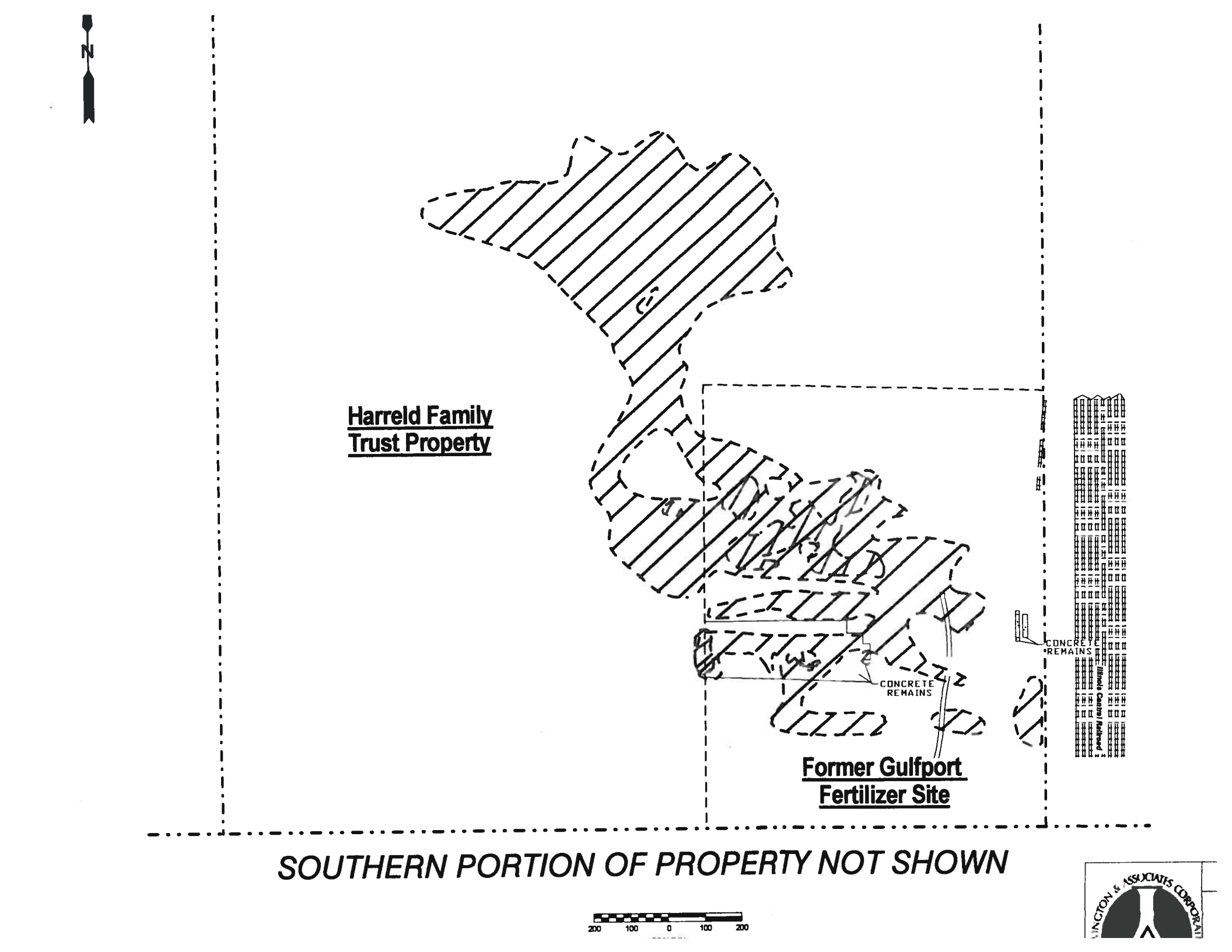
8.0 COMPLIANCE MONITORING PLAN

A Compliance Monitoring Plan will be submitted under the *Final Corrective Action Plan*.

9.0 CONTINGENCY PLAN

A Contingency Plan will be submitted under the *Final Corrective Action Plan.*

FIGURES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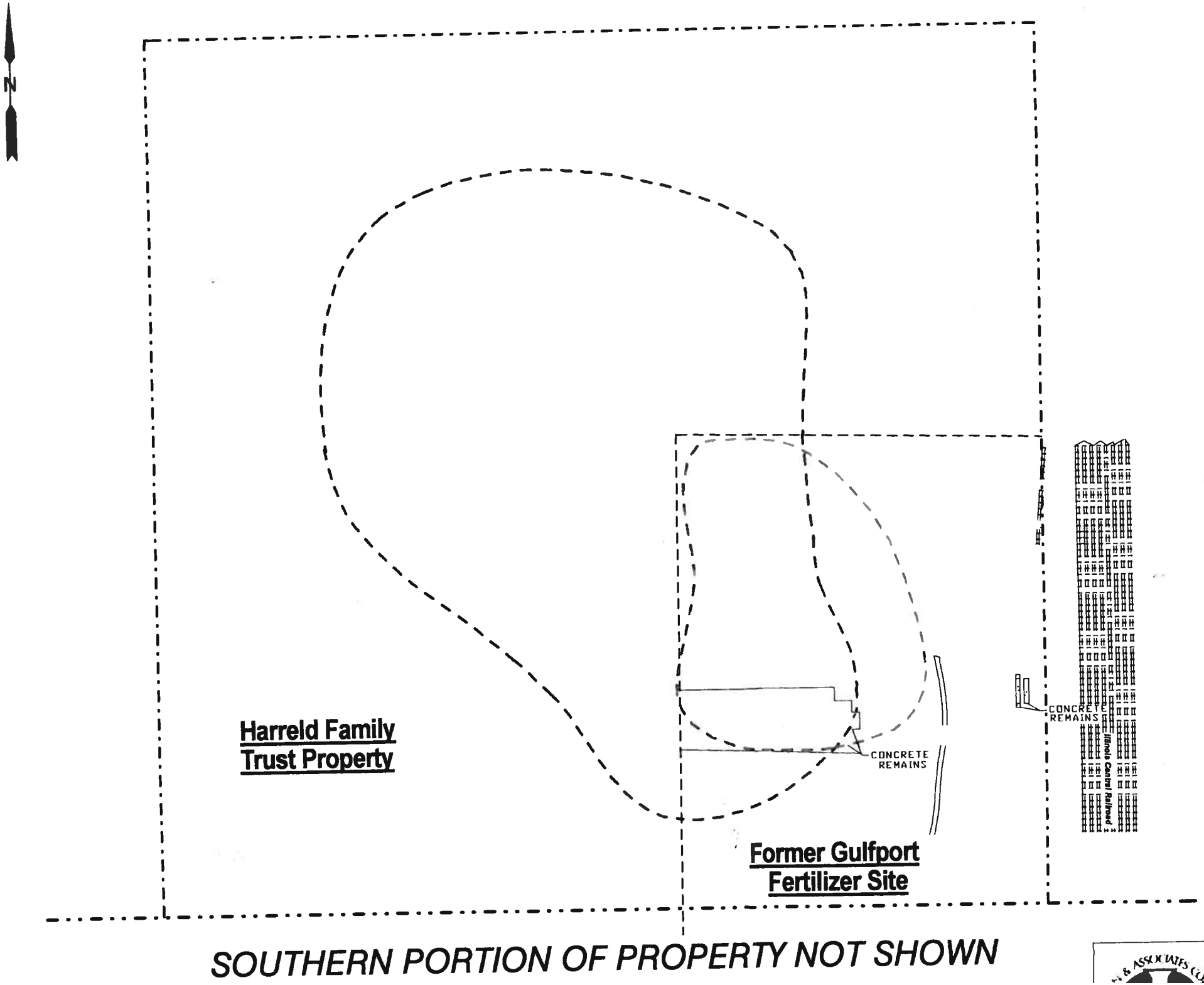
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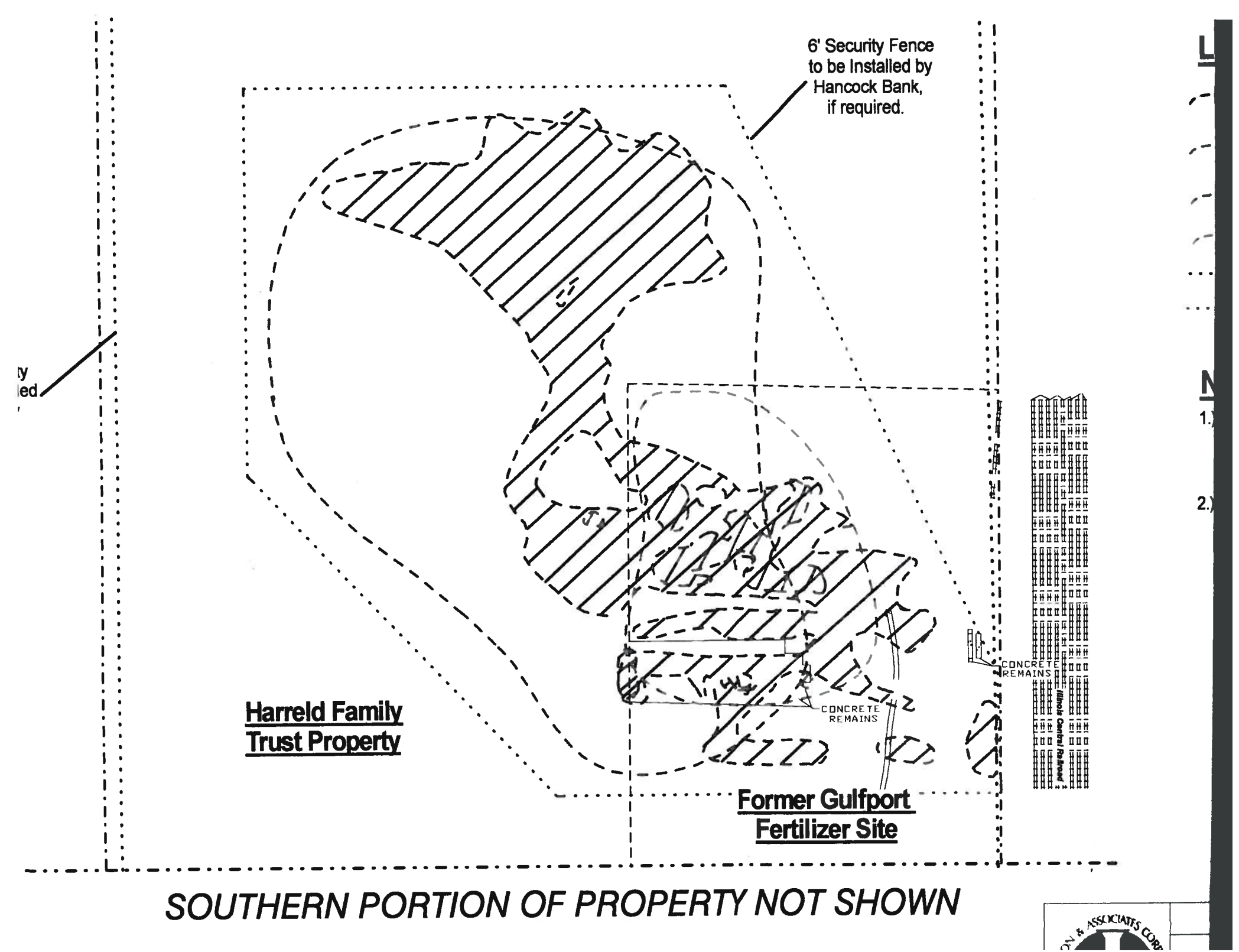
6' Security Fence
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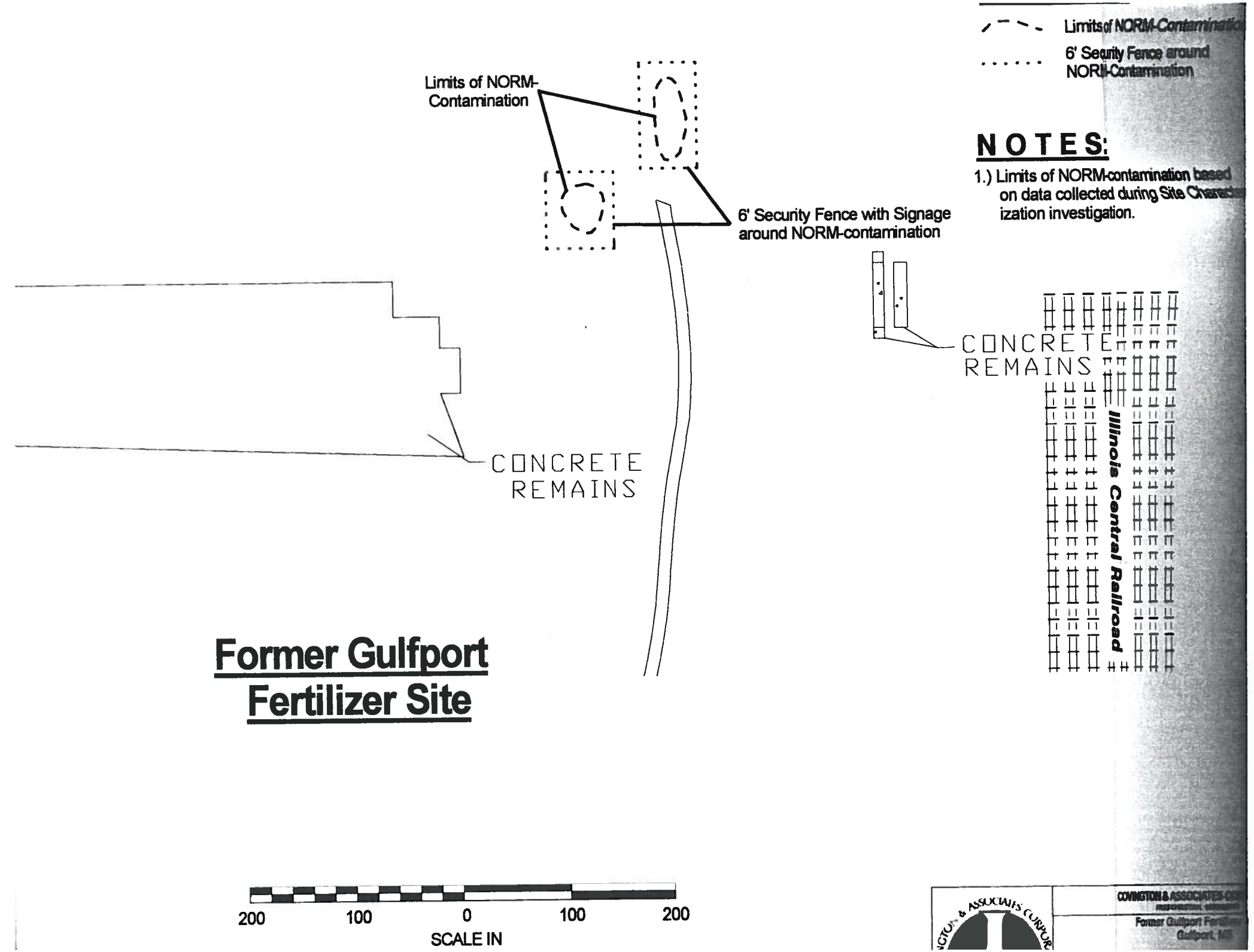
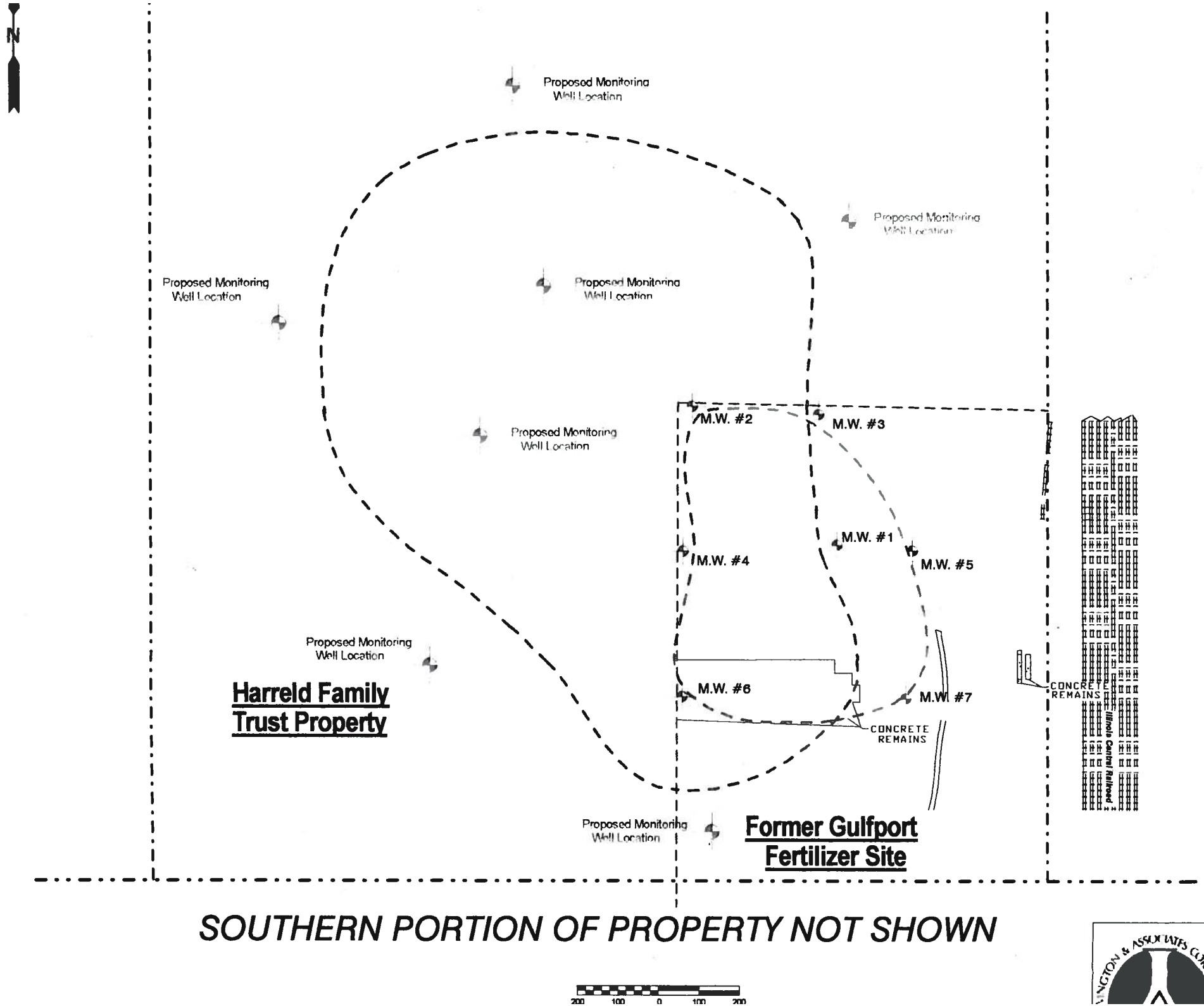


NOTES:

1.) Limits of NORM-contamination based on data collected during Site Characterization investigation.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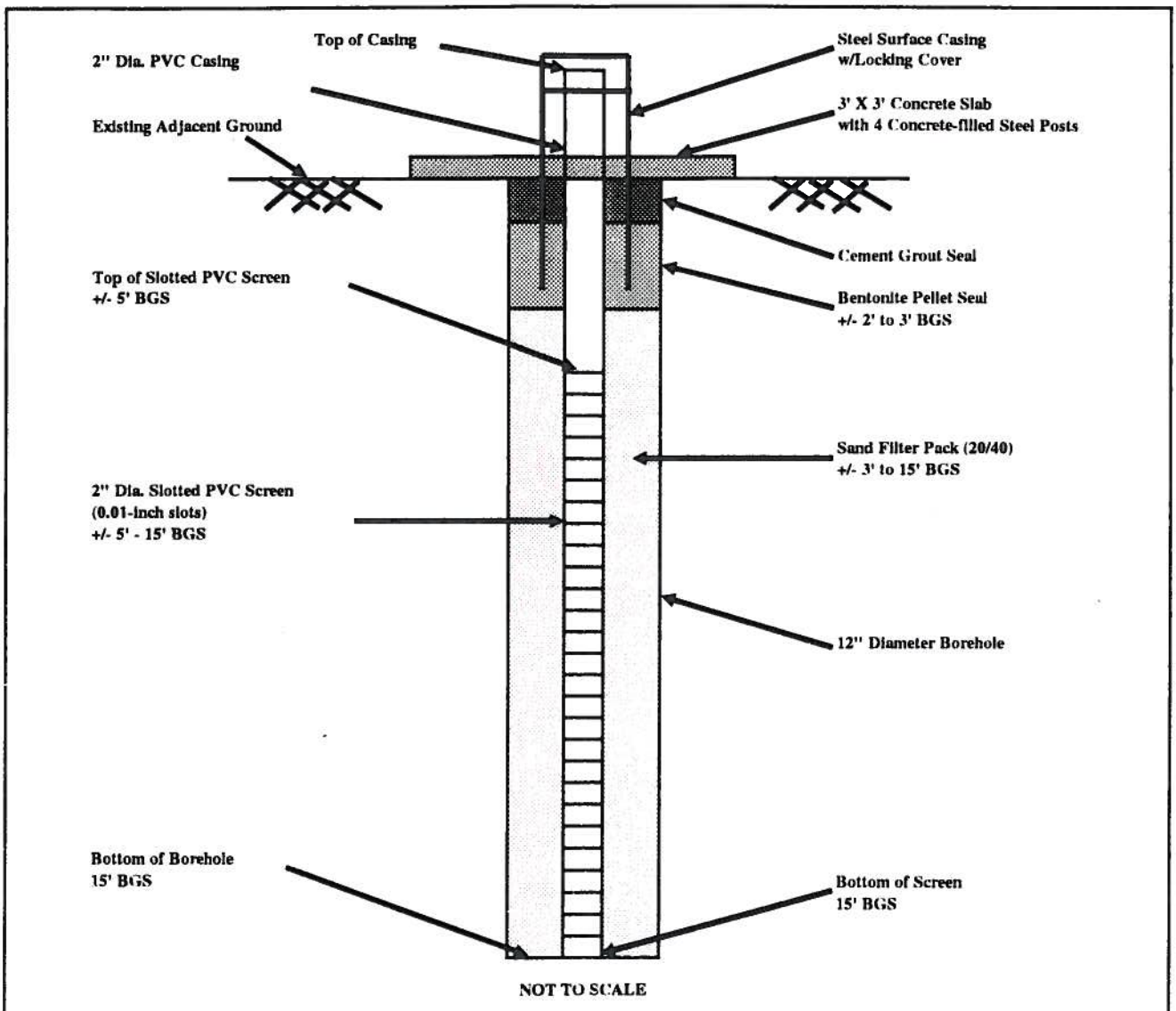
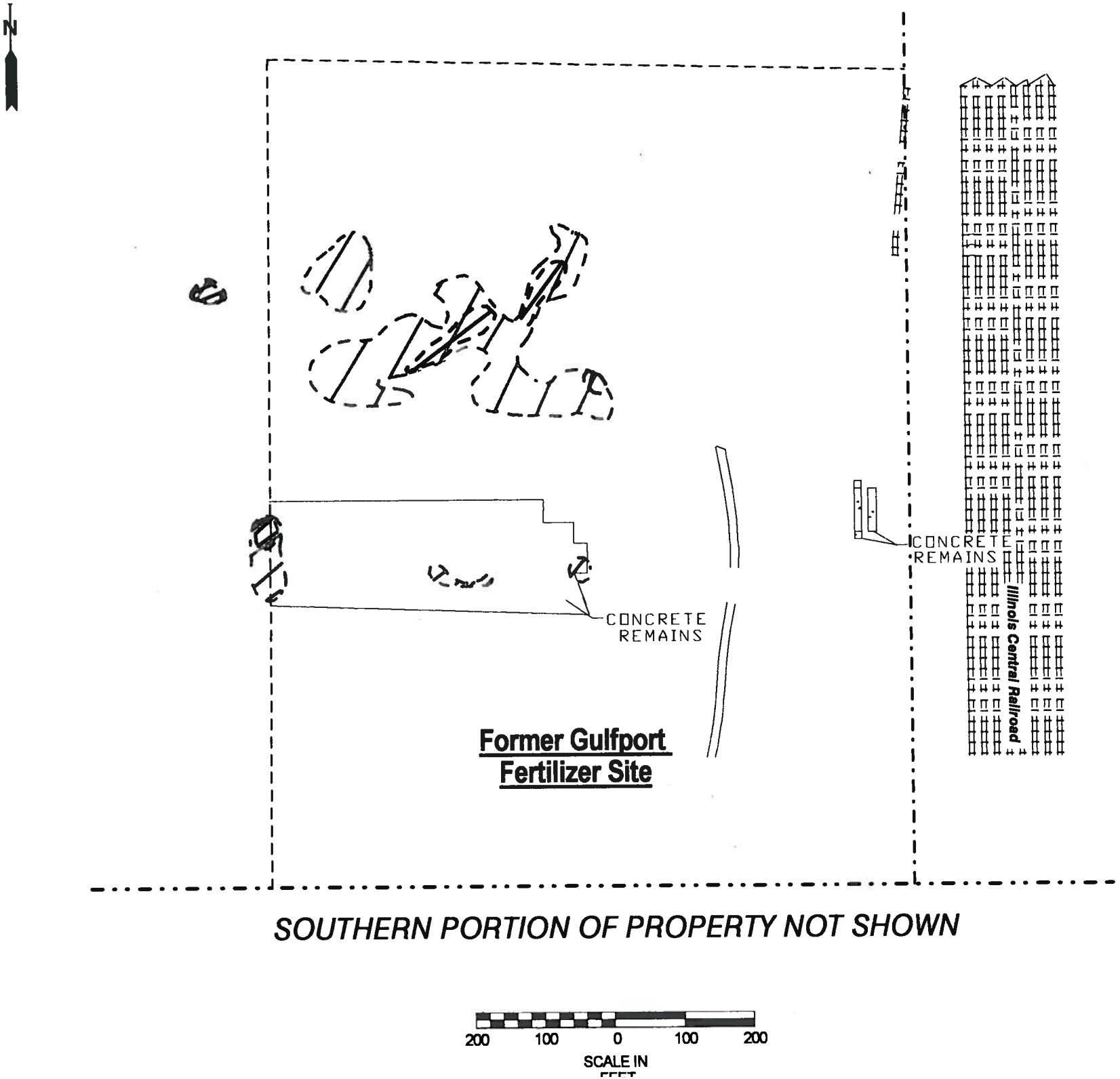


COVINGTON AND ASSOCIATES CORP. **Environmental Resource Consultants** **Pass Christian, MS**	**WELL CONSTRUCTION DIAGRAM** **FORMER GULFPORT FERTILIZER SITE** **GULFPORT, MS**	**FIG. 6**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HEALTH AND SAFETY PLAN

Subsurface Investigation

Gulfport Fertilizer Plant Site
33rd Street, Gulfport, MS

FILE COPY

Prepared by
BUTLER SERVICES OF MISSISSIPPI, Inc.
Pascagoula, MS

December 2000
Amended November 12, 2001

HEALTH AND SAFETY PLAN

Subsurface Investigation
Gulfport Fertilizer Plant Site
33rd Street, Gulfport, MS

This Health and Safety Plan outlines the basic safety requirements for the site/assessment work to be performed at the above site. The plan addresses the expected potential hazards that may be encountered on this project. If changes in site or working conditions occur as the activities progress, addenda to this plan will be provided.

The provisions set forth in this plan will apply to all employees and subcontractors of Butler Services of Mississippi that will be working on this project. The subcontractors may request to increase the safety requirements what is described herein with a written request to and approval from the Butler Services Safety Officer.

AUTHORITY FOR SAFETY

The Butler Site Safety Officer (SSO) will be responsible for implementing the requirements of the site safety plan. Mr. Denton Bates will be designated SSO for this project.

The SSO is responsible for addressing the following items:

- Implementing the provisions of the HASP.
- Dissemination of information contained in the plan to all on-site personnel involved in the project through a daily safety meeting.
- Ensure all onsite workers have proof of OSHA 40-Hour Health and Safety Training.
- Review on-site safety supplies and equipment inventory.
- Procedures for reporting accidents or incidents.

The SSO has the authority to suspend work at any time he finds nonconformance to the plan or discovers that the provisions of the plan are inadequate for worker safety.

MEDICAL SURVEILLANCE

Butler personnel and it's subcontractors engaged in project activities must be participants in a medical surveillance program and must be cleared by the examining physician to wear respiratory protection and protective clothing, if necessary, for working with hazardous substances. All applicable State and Federal occupational safety requirements are to be observed.

HAZARD ASSESSMENT

Chemical hazards

The constituents of concern that may be encountered on the site are lead and arsenic in the soil and groundwater. These contaminants are the result of the manufacture of phosphate fertilizer at the site.

When the fertilizer plant was in operation the type of phosphate commonly manufactured at that time was normal super-phosphate. Normal super-phosphate is manufactured by introducing sulfuric acid to phosphate rock (tri-calcium-phosphate). Typically, the phosphorous pentoxide, referred to as P205, and calcium oxide content of the rock used in production at the time the plant was operating was about 33% and 48%, respectively. The remainder of the constituents in the phosphate rock consisted of lead and arsenic as well as a low percentage of other compounds such as aluminum, iron, carbon dioxide, fluorine and miscellaneous trace elements.

The typical exposure pathways include inhalation, ingestion and dermal absorption. Ingestion is the primary exposure pathways of concern. Level "D" protection consisting of hard hats, steel toed boots, long trousers, long sleeve shirts and protective gloves will be mandatory on site.

Table 1
Anticipated Contaminants

CONTAMINATE CONCENTRATION	HIGHEST OBSERVED ppm or mg/m^3	L/TLV ppm or mg/m^3	IDLH
Lead	Soil 11,000 ppm		
Arsenic	Soil 702 ppm		

See MSDA in attachment A for SYSTEM/EFFECTS OF ACUTE EXPOSURE

Controls and procedures of this plan will be used to keep exposures below the lowest recommended limit.

Naturally Occurring Radioactive Materials (NORM)

During the initial Phase I and limited Phase II environmental assessment of the subject property by Covington & Associates, Inc., elevated levels of naturally occurring radioactive material (NORM) was recorded at the site. While the levels recorded are questionable given the location and existing conditions at the site, an independent NORM survey will be conducted prior to Butler Services initiating any further field activities.

The work plan for conducting the NORM survey have been submitted under separate cover for MDEQ review and approval. Results of the NORM survey have been provided by the consulant and are included in the Site Health and Safety Plan as attachment C. The consultants recommendation is "Delineated areas of the site, which exceed regulatory limits, will be marked and fenced to preclude unauthorized investigation personnel from entering the area. If additional sampling results in a change in the delineated area, the marking and fencing will be changed to reflect the newly delineated area".

Physical Hazards

The work area shall be secured and the area restricted during the soil and groundwater subsurface investigation.

The location of underground utilities shall be marked prior to the initiation of subsurface activities at the site. Mississippi one-call (1-800-227-6477) has been contacted to cause to have the utility

companies mark utility locations at the site, Verification No. 99071214410706. Known utilities at the site include a buried underground utility cable along the railroad right-of-way on the eastern boundary of the site.

Cold Stress

It is anticipated this project will take place during the winter season and prevention of cold stress is a concern. Butler Services would check the weather forecast several days prior to starting field activities and cancel the scheduled project if weather conditions (temperature,wind chill factors and humidity) were in the range to be a threat to workers. To prevent cold stress, workers should select clothing that is loose fitting and should wear several layers of rather than one heavy garment. Clothing should be loose fitting, dry and clean , snug but not constricting. Use clothes that can easily be changed to match changes in exposure and exercise conditions. Workers should be able to remove and adjust clothing to fit conditions and be comfortable and provide ventilation so water vapor from sweat can escape. It is also recommended to have periods of changing activity, work-rest, making frequent adjustments.The SSO Should also closely monitor all workers should changes in their condition require further action.

If there is a delay in proceeding with the work resulting in the extension of field activities into the summer season, then the work should be scheduled during the cooler parts of the day. The following protocols are to be used to counter summer heat stress:

- Water should be made available at the site to allow workers to replace body fluids. Liquids for electrolyte replenishment will be available at the discretion of the SSO.
- Cool vests will be made available. Their use will be designated at the discretion of the SSO, if a lack of shade in the work zones results in their need regardless of the temperature.
- Allow workers to obtain adequate shade from direct exposure to the sun during rest periods in the tree-shaded area on the north end of the property.
- At the discretion of the SSO, workers' vital signs will be monitored (i.e., body temperature, blood pressure and heart rate). If deemed necessary by the SSO, workers will be fitted with be fitted with heat stress monitors.
- Field personnel are encouraged to maintain their physical fitness.
- Intake of diuretics (coffee or alcohol) should be minimized prior to field work

GENERAL PROJECT SAFETY REQUIREMENTS

Project activities will be conducted in accordance with the minimum safety requirements:

- Eating, drinking and smoking will be restricted to designated areas. All personnel will be required to wash hands and face before eating, drinking or smoking in designated areas.

- Gross decontamination and removal of all personal protective equipment will be performed prior to leaving the site. Contaminated protective clothing will be removed and collected for disposal.

- The SSO will be responsible for taking the necessary steps to protect on-site personnel from physical hazards, including falling objects, falls from elevations, slip and trip hazards, and for providing proper equipment and appropriate safety equipment.

- On-site personnel will be cautioned to observe each other for the effects of the presence of toxic exposure such as headaches, dizziness, nausea, blurred vision, cramps, irritation of the eyes, skin or respiratory tract, changes in skin complexion/color, changes in motor coordination, changes in personality or changes in speech or pattern.

WORK ZONES

All areas within 15 feet of soil boring operations will be designated as Exclusion Zones. Cones or yellow caution tape will be used, if necessary, to deny public access to these areas. Surveillance of the areas will be performed by all on-site personnel to deny public access. Work will stop immediately when unauthorized access to the Exclusion Zones occurs.

PROTECTIVE EQUIPMENT REQUIREMENTS

On-site personnel are required to wear the following clothing and equipment, as a minimum while in the work areas:

- Hard Hat
- Steel Toed Boots
- Long Trousers
- Long Sleeve Shirt
- Protective Gloves

Cool vests and heat stress monitors will be available on-site if the ambient temperature is above 90° F and the SSO determines their use is appropriate. At the discretion of the SSO, a lack of shade may result in the need for cool vests regardless of the temperature.

EMERGENCY RESPONSE PROCEDURES

At a minimum, the following equipment will be present on-site and be readily accessible for use in the event of emergency:

- Emergency eye-wash bottle
- First Aid Kit
- 10 Pound NFPA approved Class ABC Fire Extinguisher

If suspected hazardous waste comes into contact with the eyes, the victim's eyelids must be held open and the eyes rinsed with eyewash solution for a minimum of 15 minutes. The victim must then be taken to a hospital for further treatment.

If suspected hazardous waste comes into contact with the skin, the affected areas must be held open and the skin rinsed with water for a minimum of 15 minutes. If further irritation exists, the victim must be taken to a hospital for further treatment.

If a fire starts, a Fire Department must be called immediately. Attempts to put out a fire should be considered only if there is little risk in doing so. Chemical fires will not be approached under any circumstance. In the case of chemical fires, the site will be vacated immediately.

In the event of an accident resulting in physical injury, first aid will be administered and the injured worker will be transported to the nearest hospital for emergency treatment.

EMERGENCY TELEPHONE NUMBERS

A list of emergency telephone numbers is attached to this site safety plan. Telephone numbers for the utility companies with services in the area are also included in the list of emergency telephone numbers.

EMERGENCY MEDICAL TREATMENT

In the event of injury or illness requiring emergency medical care beyond on-site capabilities, the following resources will be utilized as appropriate:

Local Emergency Hospital:	Memorial Hospital at Gulfport 4500 13th Street Emergency (228) 865-3420 Main (228) 867-4000
Ambulance Service:	American Medical Response 897-1192 or Emergency 911

The hospital is located approximately seven (7) minutes at a distance of 2.9 miles from the site traveling east along 33rd Street to US Highway No. 49, then south on US Highway No. 49 to US Highway No. 90, then west along US Highway No. 90 to Broad Avenue, then north on Broad Avenue to 13th Street. The hospital is located in the first block on the left side of 13th Street. A map is attached to this plan with directions from the site to the hospital.

This site safety plan has been prepared to prescribe minimum procedural and equipment requirements for worker protection in accordance with OSHA guidance for Hazardous Waste Site Activities.

This document was prepared by: WD Bates DATE: 11-12-01

WD BATES, Site Safety Officer

The following personnel have read the above plan and are familiar with its requirements:

Name: _____ Company: _____
Date:_____

Name: _____ Company: _____
Date:_____

Name: _____ Company: _____
Date:_____

Name: _____ Company: _____
Date:_____

Name: _____ Company: _____
Date:_____

Name: _____ Company: _____
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Date:_____

Name: _____ Company: _____
Date:_____

Name: _____ Company: _____
Date:_____

Name: _____ Company: _____
Date:_____

EMERGENCY CONTACTS:

National Response Center Hotline	800-424-8802
US EPA Region IV	800-424-8802
CMA Chemical Referral Center	800-262-8200
CHEMTREC	800-424-9300
Mississippi Department of Environmental Quality	601-961-5171
Mississippi Emergency Management Agency	601-352-9100
City of Gulfport Fire Department	868-5700 or 911
City of Gulfport Police Department	868-5959 or 911
Mississippi State Highway Department	601-833-7811
Mississippi State Health Department	601-894-2271
Poison Control Center	601-684-7361

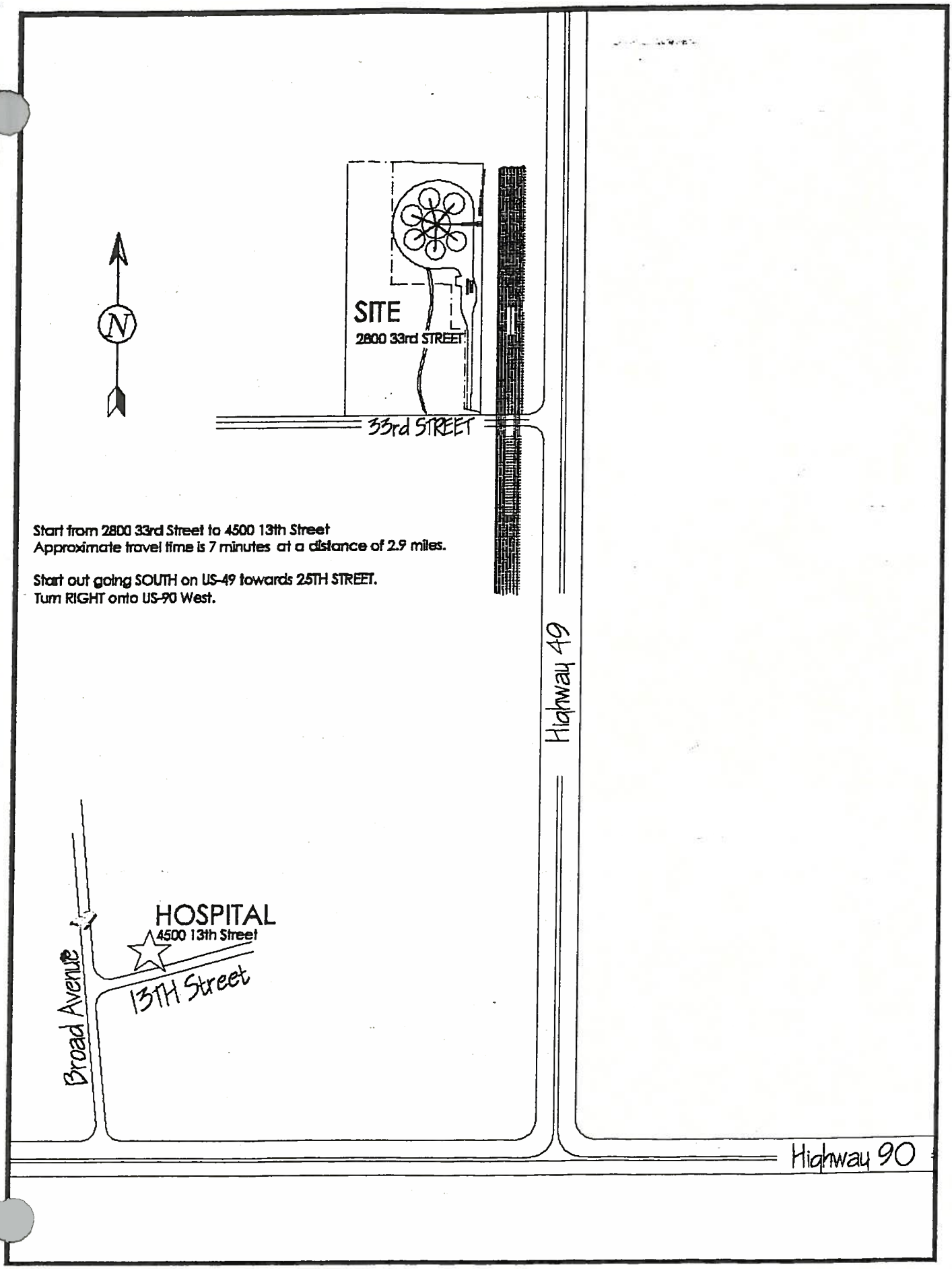
MEDICAL EMERGENCY:

Local Emergency Hospital: Memorial Hospital at Gulfport
4500 13th Street
Emergency (228) 865-3420
Main (228) 867-4000

Ambulance Service: American Medical Response, Inc.
897-1192 or
Emergency 911

UTILITY CONTRACTS:

City of Gulfport Department of Public Works (Water and Sewer)	228-868-5765
Mississippi Power Company	800-487-3275
BellSouth	800-227-6477


N
SITE
2800 33rd STREET
33rd STREET
Highway 49
Start from 2800 33rd Street to 4500 13th Street
Approximate travel time is 7 minutes at a distance of 2.9 miles.
Start out going SOUTH on US-49 towards 25TH STREET.
Turn RIGHT onto US-90 West.
HOSPITAL
4500 13th Street
13TH Street
Broad Avenue
Highway 90

ATTACHMENT A

MATERIAL SAFETY DATA SHEETS

ALDRICH CHEMICAL -- ARSENIC (III) OXIDE, 99.99%, 25548-3
MATERIAL SAFETY DATA SHEET
NSN: 681000N057756
Manufacturer's CAGE: 60928
Part No. Indicator: A
Part Number/Trade Name: ARSENIC (III) OXIDE, 99.99%, 25548-3

General Information

Company's Name: ALDRICH CHEMICAL CO INC
Company's Street: 1001 W ST PAUL AVE
Company's P. O. Box: 355
Company's City: MILWAUKEE
Company's State: WI
Company's Country: US
Company's Zip Code: 53201
Company's Emerg Ph #: 800-231-8327
Company's Info Ph #: 414-273-3850
Record No. For Safety Entry: 001
Tot Safety Entries This Stk#: 001
Status: SMJ
Date MSDS Prepared: 23NOV93
Safety Data Review Date: 25FEB97
MSDS Serial Number: CDMDC

Ingredients/Identity Information

Proprietary: NO
Ingredient: ARSENIC TRIOXIDE (SARA 302/313) (CERCLA)
Ingredient Sequence Number: 01
Percent: 99.99
NIOSH (RTECS) Number: CG3325000
CAS Number: 1327-53-3
OSHA PEL: SEE 1910.1018
ACGIH TLV: 0.01 MG/M3

Proprietary: NO
Ingredient: SUPP DATA:(SHOW LABEL WHERE POSSIBLE).
Ingredient Sequence Number: 02
NIOSH (RTECS) Number: 999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

Physical/Chemical Characteristics

Appearance And Odor: WHITE GRANULAR POWDER.
Specific Gravity: 3.74

Fire and Explosion Hazard Data

Extinguishing Media: NONCOMBUSTIBLE. USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.
Special Fire Fighting Proc: USE NIOSH APPROVED SCBA & FULL PROTECTIVE EQUIPMENT (FP N).
Unusual Fire And Expl Hazrds: EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

Reactivity Data

Stability: YES
Cond To Avoid (Stability): HEAT. MAY DECOMPOSE ON EXPOSURE TO MOIST AIR OR WATER.
Materials To Avoid: ACIDS, OXIDIZING AGENTS, HALOGENS.

Hazardous Decomp Products: TOXIC FUMES OF ARSENIC OXIDES.
Hazardous Poly Occur: NO
Conditions To Avoid (Poly): NOT RELEVANT

Health Hazard Data

LD50-LC50 Mixture: LD50:(ORAL,RAT) 14,600 UG/KG.
Route Of Entry - Inhalation: YES
Route Of Entry - Skin: YES
Route Of Entry - Ingestion: YES
Health Haz Acute And Chronic: ACUTE:MAY BE FATAL IF INHALED, SWALLOWED OR ABSORBED THROUGH SKIN. MAY CAUSE IRRITATION. TOXIC EFFECTS. MAY ALTER GENETIC MATERIAL. TARGET ORGANS:SKIN, LUNGS. TARGET ORGAN DATA:BEHAVIORAL (SLEEP; MUSCLE WEAKNESS), CARDIAC (ARRYTHMIAS), LUNGS, THORAX/RESP (OTHER CHANGES; TUMORS), GI (HYPERMOTILITY, (EFTS OF OVEREXP)
Carcinogenicity - NTP: YES
Carcinogenicity - IARC: YES
Carcinogenicity - OSHA: YES
Explanation Carcinogenicity: ARSENIC TRIOXIDE:IARC MONOGRAPHS, SUPP, VOL 7, PG 100, 1987:GRP 1. NTP 7TH ANNUAL RPT ON CARCINS, 1994:KNOWN TO (SUPDAT)
Signs/Symptoms Of Overexp: HLTH HAZ:DIARR), LIVER (LIVER FUNC TESTS IMPAIRED), BLOOD (OTHER CHANGES), MUSCULO-SKELETAL (OTHER CHANGES), SKIN & APPENDAGES (CORR), EFTS ON FERTILITY (LITTER SIZE), EFTS ON EMBRYO/FETUS (CYTOLOGICAL CHANGES; FETOTOXICITY), SPECIFIC DEVEL ABNORMS (MUSCULOSKELETAL SYS), EFTS ON NEWBORN (APGAR SCORE; OTHER (SUPP DATA)
Med Cond Aggravated By Exp: NONE SPECIFIED BY MANUFACTURER.
Emergency/First Aid Proc: EYES:IMMEDIATELY FLUSH W/COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. SKIN:IMMEDIATELY FLUSH W/COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAM CLTHG & SHOES. DISCARD CONTAMINATED CLOTHING & SHOES. INHAL:REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTF RESP. IF BREATHING IS DIFFICULT, GIVE OXYGEN. INGEST:WASH OUT MOUTH W/WATER PROVIDED PERSON IS CONSCIOUS. CALL MD IMMED.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: EVACUATE AREA. WEAR NIOSH APPROVED SCBA, RUBBER BOOTS & HEAVY RUBBER GLOVES. WEAR DISPOSABLE COVERALLS & DISCARD THEM AFTER USE. SWEEP UP, PLACE IN A BAG & HOLD FOR WASTE DISPOSAL. VENTILATE AREA & WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.
Waste Disposal Method: BURN IN A LANDFILL SITE APPROVED FOR THE DISPOSAL OF CHEMICAL HAZARDOUS WASTES. OBSERVE ALL FEDERAL, STATE & LOCAL ENVIRONMENTAL REGULATIONS.
Precautions-Handling/Storing: DO NOT BREATHE DUST. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. CARCINOGEN. MAY CAUSE CANCER. HIGHLY TOXIC. MUTAGEN. STORE IN A COOL, DRY PLACE.
Other Precautions: KEEP AWAY FROM COMBUST MATLS, HEAT, SPKS & OPEN FLAME. AVOID CONT W/ACID, METALS. MAY CAUSE HERITABLE GENETIC DMG. TOX BY INHAL, IN CONT W/SKIN & IF SWALLOWED. HARMFUL IF INHALED/SWALLOWED, USE ONLY W/ ADEQ VENT/NIOSH APPRVD RESP (SUPDAT)

Control Measures

Respiratory Protection: WEAR APPROPRIATE NIOSH APPROVED RESPIRATOR.
Ventilation: USE ONLY IN A CHEMICAL FUME HOOD.
Protective Gloves: CHEMICAL-RESISTANT GLOVES.
Eye Protection: ANSI APPROVED CHEM WORKERS GOGGS(SUPDAT)
Other Protective Equipment: EYE WASH FOUNTAIN & DELUGE SHOWER WHICH MEET ANSI DESIGN CRITERIA (FP N). WEAR SUITABLE PROTECTIVE CLOTHING.
Work Hygienic Practices: WASH THOROUGHLY AFTER HANDLING.
Suppl. Safety & Health Data: EXPLAN OF CARCIN:BE CARCIN. CFR VOL 29, PG NEONATAL MEASURES/EFTS), CARCIN (NEOPLASTIC BY RTECS CRITERIA; EQUIVOCAL

TUMORIGENIC AGENT BY RTECS CRITERIA). EYE PROT:& FULL LGTH FCSHLD (FP N). OTHER PREC:PROT. IF YOU FEEL UNWELL, SEEK MED ADVICE (ING 2)

Transportation Data

Disposal Data

Label Data

Label Required: YES
Technical Review Date: 03APR97
Label Date: 25FEB97
Label Status: G
Common Name: ARSENIC (III) OXIDE, 99.99%, 25548-3
Chronic Hazard: YES
Signal Word: DANGER!
Acute Health Hazard-Severe: X
Contact Hazard-Slight: X
Fire Hazard-None: X
Reactivity Hazard-None: X
Special Hazard Precautions: ACUTE:MAY BE FATAL IF INHALED, SWALLOWED OR ABSORBED THROUGH SKIN. MAY CAUSE IRRITATION. TOXIC EFFECTS. MAY ALTER GENETIC MATERIAL. TARGET ORGANS:SKIN, LUNGS. CHRONIC:CANCER HAZARD. CONTAINS ARSENIC TRIOXIDE, WHICH IS LISTED AS A HUMAN LUNG CANCER CARCINOGEN (FP N).
Protect Eye: Y
Protect Skin: Y
Protect Respiratory: Y
Label Name: ALDRICH CHEMICAL CO INC
Label Street: 1001 W ST PAUL AVE
Label P.O. Box: 355
Label City: MILWAUKEE
Label State: WI
Label Zip Code: 53201
Label Country: US
Label Emergency Number: 800-231-8327

TR METALS -- LEAD
MATERIAL SAFETY DATA SHEET
NSN: 681000N084293
Manufacturer's CAGE: 04MC9
Part No. Indicator: A
Part Number/Trade Name: LEAD

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General Information

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Company's Name: TR METALS
Company's Street: 1 PAVILION AVE
Company's City: RIVERSIDE
Company's State: NJ
Company's Country: US
Company's Zip Code: 08075
Company's Emerg Ph #: 800-424-9300(CHEMTREC)
Company's Info Ph #: 609-461-9000
Record No. For Safety Entry: 001
Tot Safety Entries This Stk#: 001
Status: SMJ
Date MSDS Prepared: 01JAN93
Safety Data Review Date: 25MAR98
MSDS Serial Number: CGSQQ

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Ingredients/Identity Information

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Proprietary: NO
Ingredient: LEAD (SARA 313) (CERCLA)
Ingredient Sequence Number: 01
Percent: 99.99
NIOSH (RTECS) Number: OF7525000
CAS Number: 7439-92-1
OSHA PEL: N/K (FP N)
ACGIH TLV: 0.15 MG/M3 DUST

Proprietary: NO
Ingredient: SUPDAT: NERVOUS SYS DAMAGE RESULTING IN SEVERE HDCHS, CONVULSIONS, COMA, DELIRIUM & DEATH. ALCOHOL & PHYSICAL (ING 3)
Ingredient Sequence Number: 02
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

Proprietary: NO
Ingredient: ING 2: EXERTION CAN BRING ON SYMPTOMS. OTHER EFFECTS OF LONG TERM EXPOSURE CAN RESULT IN DECREASED FERTILITY, (ING 4)
Ingredient Sequence Number: 03
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

Proprietary: NO
Ingredient: ING 3: MISCARRIAGE & BIRTH DEFECTS.
Ingredient Sequence Number: 04
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

Proprietary: NO
Ingredient: HYGIENE PRACTS: HYGIENE IE, WASH HANDS & FACE BEFORE EATING, DRINKING, PUTTING ON MAKE-UP OR SMOKING. SHOWERING (ING 6)
Ingredient Sequence Number: 05

NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

Proprietary: NO
Ingredient: ING 5: IS REQUIRED BEFORE PUTTING ON STREET CLOTHES.
Ingredient Sequence Number: 06
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

Physical/Chemical Characteristics

Appearance And Odor: HEAVY, DUCTILE, SOFT, BLUISH-GRAY METAL.
Boiling Point: 3164F,1740C
Melting Point: 621F,327C
Vapor Pressure (MM Hg/70 F): 1 @ 973C
Vapor Density (Air=1): N/A
Specific Gravity: 11.34 (H*2O=1)
Evaporation Rate And Ref: N/A
Solubility In Water: INSOLUBLE
Percent Volatiles By Volume: N/A

Fire and Explosion Hazard Data

Flash Point: N/A
Lower Explosive Limit: N/A
Upper Explosive Limit: N/A
Extinguishing Media: CLASS D EXTINGUISHERS: DRY POWDER TYPE.
Special Fire Fighting Proc: USE NIOSH APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT (FP N).
Unusual Fire And Expl Hazrds: NONCOMBUSTIBLE IN SOLID METAL FORM. FLAMMABLE IN THE FORM OF DUST WHEN EXPOSED TO HEAT OR FLAME.

Reactivity Data

Stability: YES
Cond To Avoid (Stability): EXCESSIVE HEAT (IE, ABOVE MELTING POINT). SEE MATERIALS TO AVOID.
Materials To Avoid: REACTS VIOLENTLY W/HYDROGEN PEROXIDE, CHLORINE TRIFLUORIDE, AMMONIUM NITRATE, POTASSIUM. INCOMPAT WITH NAN*3, (SUPDAT)
Hazardous Decomp Products: WHEN HEATED TO ABOVE MELTING POINT (IE, DECOMPOSITION) EMITS HIGHLY TOXIC FUMES OF LEAD.
Hazardous Poly Occur: NO
Conditions To Avoid (Poly): NOT RELEVANT

Health Hazard Data

LD50-LC50 Mixture: NONE SPECIFIED BY MANUFACTURER.
Route Of Entry - Inhalation: YES
Route Of Entry - Skin: YES
Route Of Entry - Ingestion: YES
Health Haz Acute And Chronic: LEAD APPEARS ON THE NAVY LIST OF OCCUP CHEM REPRO HAZS. SEEK CONSULTATION FROM APPROP HEALTH PROFESSIONALS CONCERNING LATEST HAZ LIST INFO & SAFE HANDLING & EXPOSURE INFO (FP N). SKIN: MAY CAUSE IRRIT. EYES: MAY CAUSE IRRIT. NORMAL HANDLING OR PROCESSING OF LEAD MAY RESULT IN GENERATION OF LEAD DUST (EFTS OF OVEREXP)
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: NOT RELEVANT
Signs/Symptoms Of Overexp: HLTH HAZ: &/OR FUME. LEAD IS CUMULATIVE TOXIN, EFTS OF PB EXPOS MAY NOT DEVELOP QUICKLY. SYMPS INCL DECREASED PHYSICAL

FITNESS, LOSS OF APPETITE, ABDOMINAL PAINS, CONSTIPATION, FATIGUE, SLEEP DISTURBS, HEADACHE, ANEMIA, IRRITABILITY, TREMORS, HALLUCINATIONS & DISTORTED PERCEPTION, MUSCLE & JOINT PAIN, MUSCLE (SUPDAT)
Med Cond Aggravated By Exp: DISEASES OF THE BLOOD AND BLOOD FORMING ORGANS, KIDNEYS, NERVOUS SYSTEM AND REPRODUCTIVE SYSTEM.
Emergency/First Aid Proc: INHALATION: REMOVE TO FRESH AIR. GET IMMEDIATE MEDICAL ATTENTION. EYES: FLUSH WELL WITH WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS SEEK MEDICAL ATTENTION. SKIN: WASH AREA THOROUGHLY WITH SOAP AND WATER. INGESTION: GIVE WATER. SEEK IMMEDIATE MEDICAL ATTENTION.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: LEAD IN DUST FORM; MINIMIZE EXPOSURE. WEAR FULL PROTECTIVE CLOTHING INCLUDING NIOSH APPROVED RESPIRATORS. CLEAN UP USING DUSTLESS METHODS (IE, VACUUM, DO NOT USE COMPRESSED AIR). PLACE IN CLOSED LABELED CONTAINERS FOR RECYCLING OR PROPER DISPOSAL.
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.
Waste Disposal Method: DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. MAY HAVE VALUE ON A RECYCLED BASIS.
Precautions-Handling/Storing: STRICT CONTROL OF ATMOSPHERIC CONCENTRATION IN PROCESSING AND WORK AREAS. KEEP MATERIAL DRY. AVOID STORAGE NEAR INCOMPATIBLE MATERIALS.
Other Precautions: NOT APPLICABLE.

Control Measures

Respiratory Protection: NIOSH APPROVED HIGH EFFICIENCY RESPIRATOR FOR DUST AND LEAD FUME. USE AND PROCESS IN A WELL VENTILATED AREA.
Ventilation: LOCAL EXHAUST: AS REQUIRED FOR LEAD DUST & FUME. MECHANICAL (GEN): AS REQUIRED TO MAINTAIN APPROP OSHA PEL/TLV LEVELS.
Protective Gloves: IMPERVIOUS GLOVES (FP N).
Eye Protection: ANSI APPRVD CHEM WORKERS GOGGLES (FP N).
Other Protective Equipment: ANSI APPRVD EYE WASH & DELUGE SHOWER (FP N). FULL PROT CLTHG & SHOES, INCLUDING HARD HATS, REQD FOR WORK W/MOLTEN METAL.
Work Hygienic Practices: NO EATING, DRINKING OR SMOKING WHILE PROCESSING OR HANDLING LEAD OR IN LEAD AREAS. PRACTICE GOOD PERSONAL (ING 5)
Suppl. Safety & Health Data: MATL TO AVOID: ZR, DISODIUM ACETYLIDE & OXIDANTS. CAN REACT STRONGLY W/OXIDIZING MATLS. EFTS OF OVEREXP: WEAK. INHAL OF LARGE AMTS OF LEAD MAY LEAD TO SEIZURES, COMA & PALE SKIN, BLUE LINE AT GUM MARGIN, DECREASED HAND-GRIP & PARALYSIS OF WRIST JOINTS. PRLNGD VERY HIGH EXPOS CAN ALSO RSLT IN KIDNEY DMG & (ING 2)

Transportation Data

Disposal Data

Label Data

Label Required: YES
Technical Review Date: 25MAR98
Label Date: 23MAR98
Label Status: G
Common Name: LEAD
Chronic Hazard: YES
Signal Word: WARNING!
Acute Health Hazard-Moderate: X
Contact Hazard-Slight: X
Fire Hazard-None: X
Reactivity Hazard-None: X
Special Hazard Precautions: ACUTE: EYES/SKIN: IRRITATION. CHRONIC: LEAD APPEARS ON THE NAVY OCCUPATIONAL CHEMICAL REPRODUCTIVE HAZARDS LIST (FP N).

SYMPTOMS OF LEAD OVEREXPOSURE INCLUDE DECREASED PHYSICAL FITNESS, LOSS OF APPETITE, ABDOMINAL PAINS, CONSTIPATION, FATIGUE, SLEEP DISTURBANCES, HEADACHE, ANEMIA, IRRITABILITY, TREMORS, HALLUCINATIONS AND DISTORTED PERCEPTION, MUSCLE AND JOINT PAIN, MUSCLE WEAKNESS, SEIZURES, COMA & DEATH. ANEMIA, PALE SKIN, BLUE LINE AT GUM MARGIN, DECREASED HAND-GRIP STRENGTH, ABDOMINAL PAIN, NAUSEA, VOMITING, AND PARALYSIS OF WRIST JOINTS. KIDNEY AND NERVOUS SYSTEM DAMAGE.
Protect Eye: Y
Protect Skin: Y
Protect Respiratory: Y
Label Name: TR METALS
Label Street: 1 PAVILION AVE
Label City: RIVERSIDE
Label State: NJ
Label Zip Code: 08075
Label Country: US
Label Emergency Number: 800-424-9300(CHEMTREC)

ATTACHMENT B

EQUIPMENT DECONTAMINATION PROCEDURES

EQUIPMENT DECONTAMINATION PROCEDURES

- The sampler and sample tubes will be cleaned using tap water and Liquinox. A brush will be used, if necessary, to remove particulate matter and surface films during cleaning.

- The equipment will then triple rinsed thoroughly with tap water, analyte free water and pesticide-grade isopropanol followed by a final rinse of analyte free water only. If analyte free water is not available, the equipment will be allowed to air dry following the solvent rinse. A solvent rinse will not be applied to PVC items or plastic items.

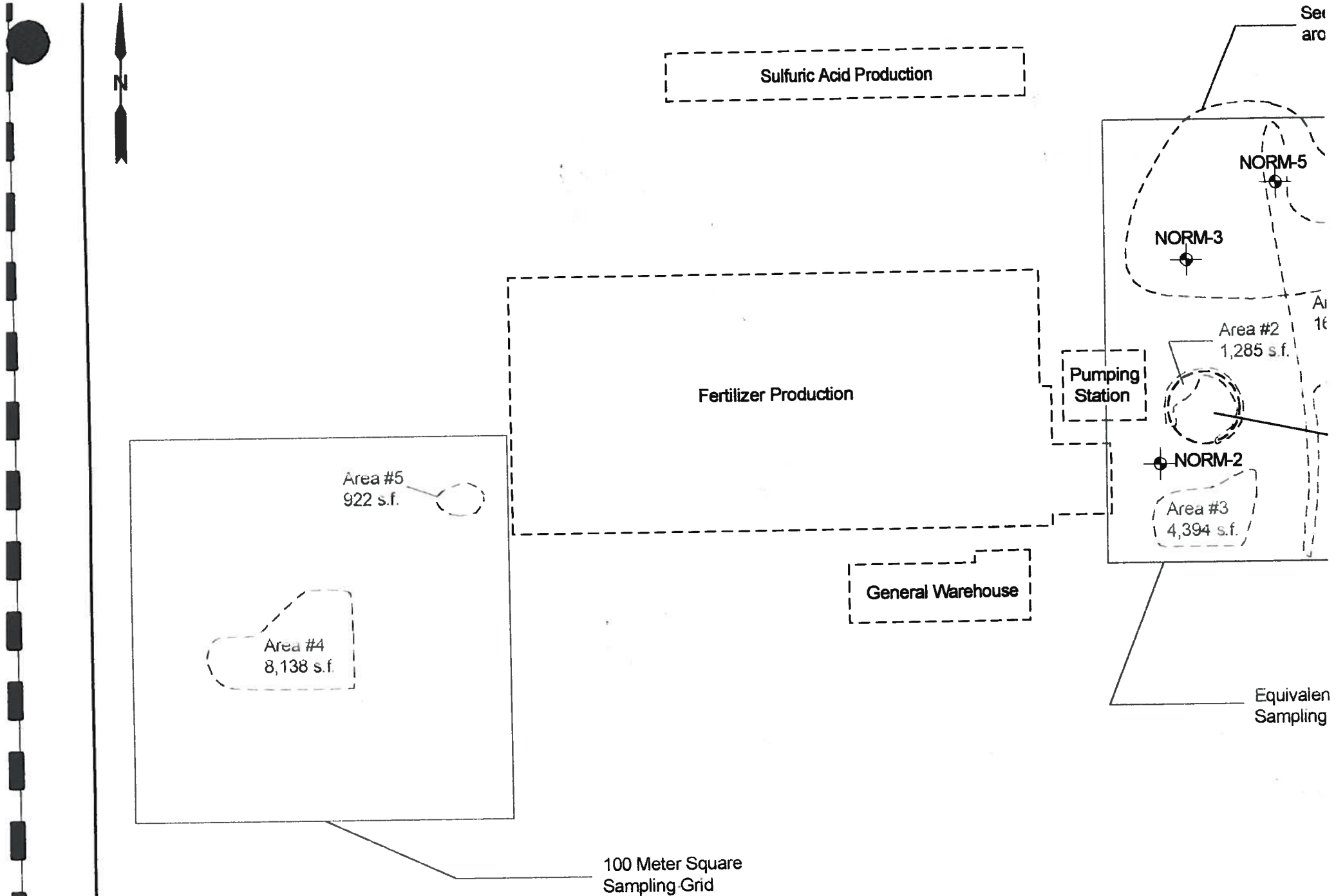
- Once the equipment has been cleaned it will be removed from the decontamination area and covered with aluminum foil when not in use.

- Equipment to be stored overnight will be wrapped in aluminum foil and covered with clean, unused plastic.

- The rinsate will be containerized and transferred to drums for characterization and disposal off-site in a permitted facility.

ATTACHMENT C

NORM SAMPLING INFORMATION & DRAWINGS


N
Sulfuric Acid Production
Fertilizer Production
Pumping Station
General Warehouse
NORM-5
NORM-3
NORM-2
Area #2
1,285 s.f.
Area #3
4,394 s.f.
Area #4
8,138 s.f.
Area #5
922 s.f.
100 Meter Square
Sampling Grid
LEGEND:
Historical Site Facilities
Area with NORM Reading > 20 uR/hr.

Approx. Area > 15 pCi/gm (6"-12" depth)

Sample Location and Designation

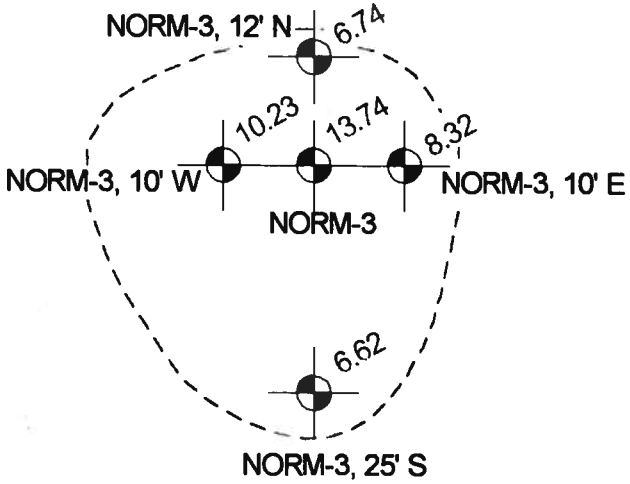
1-5, 30' S

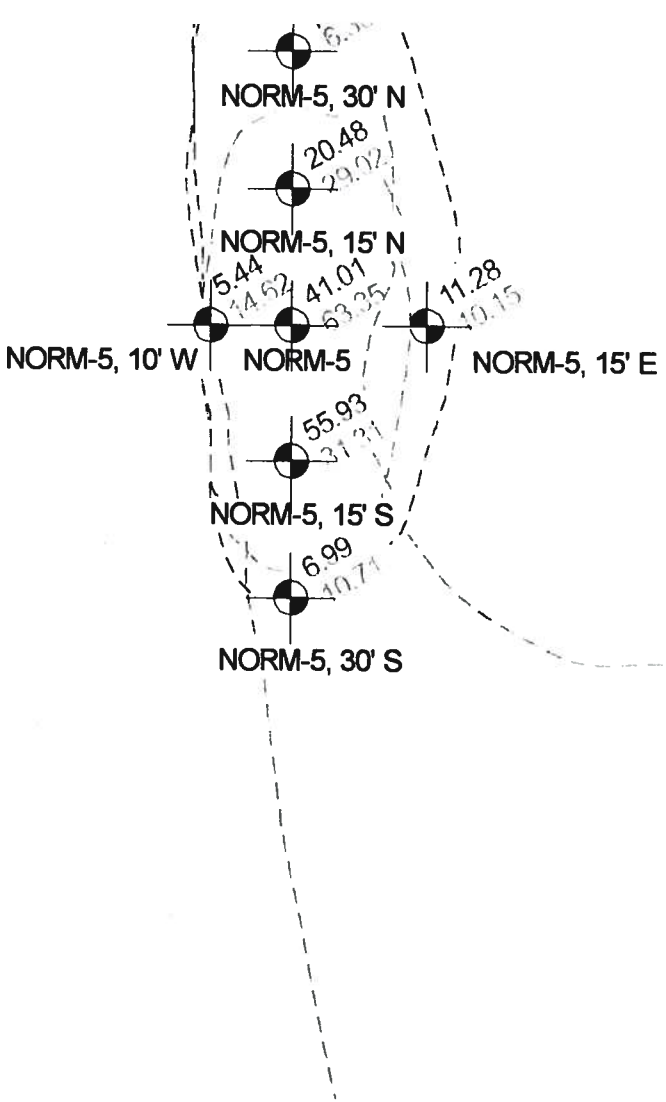
Ra-228 Reading (0"-6" depth) at Sample Location

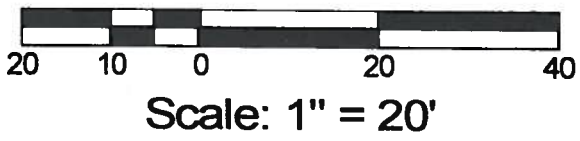
Ra-228 Reading (6"-12" depth) at Sample Location

S

ee Figure 1 for location of NORM-3 and NORM-5 on the site.







Scale: 1" = 20'

Summary of Radionuclide Analysis
Gulfport Fertilizer Site
Gulfport, MS

Sample Location	Sample Depth	Ra-226 (pCi/gm)	Ra-228 (pCi/gm)	Field Reading (uR/hr)
NORM-1	0"-6"	4.73	0.30	10
NORM-2	0"-6"	3.99	0.78	15
NORM-3	0"-6"	**13.74**	0.77	12
NORM-3, 12' N	0"-6"	**6.74**	1.60	12
NORM-3, 10' E	0"-6"	**8.32**	0.51	13
NORM-3, 25' S	0"-6"	**6.62**	0.47	13
NORM-3, 10' W	0"-6"	**10.23**	0.48	15
NORM-4	0"-6"	3.63	0.40	11
NORM-5	0"-6"	**41.01**	0.46	50
NORM-5, 30' N	0"-6"	**12.43**	1.73	18
NORM-5, 15' N	0"-6"	**20.48**	0.44	25
NORM-5, 15' E	0"-6"	**11.28**	0.60	15
NORM-5, 15' S	0"-6"	**55.93**	0.75	52
NORM-5, 30' S	0"-6"	**6.99**	0.30	20
NORM-5, 10' W	0"-6"	**5.44**	0.78	23
Avg.	**0"-6"**	**14.10**	**1.15**	
NORM-1	6"-12"	0.54	0.31	
NORM-2	6"-12"	14.29	<0.24	
NORM-3	6"-12"	8.05	0.35	
NORM-4	6"-12"	1.29	<0.11	
NORM-5	6"-12"	**63.35**	0.34	
NORM-5, 30' N	6"-12"	6.36	0.79	
NORM-5, 15' N	6"-12"	**29.02**	0.35	
NORM-5, 15' E	6"-12"	10.51	0.51	
NORM-5, 15' S	6"-12"	**31.31**	1.00	
NORM-5, 30' S	6"-12"	10.71	0.33	
NORM-5, 10' W	6"-12"	14.62	0.52	
Avg.	**6"-12"**	**17.28**	**0.20**	

Regulatory Limits:

5 pCi/gm for upper 15 cm (0"-6") of soil

15 pCi/gm for second 15 cm (6"-12") of soil

- Indicates reading exceeds regulatory limit for Sample Depth.

WORK PLAN
OFF-SITE/SOURCE AREA SOILS AND GROUNDWATER SAMPLING

FORMER GULFPORT FERTILIZER PLANT SITE
33RD STREET
GULFPORT, MISSISSIPPI

PREPARED
FOR
THE HANCOCK BANK
COMMERCIAL LOAN DEPARTMENT
2510 14TH STREET
GULFPORT, MS 39501

PREPARED BY
BUTLER SERVICES OF MISSISSIPPI, INC.
PO Box 1164
PASCAGOULA, MISSISSIPPI 39568-1164
(228) 769-6983

August 21, 2000
(Revised December 18, 2000)

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TABLES

Table 1 – PROPOSED SAMPLING LOCATIONS AT DEPTH

Table 2 – PROPOSED INTERMEDIATE SAMPLING LOCATIONS

APPENDIX

WELL CONSTRUCTION DETAIL
HEALTH AND SAFETY PLAN (HASP)

WORK PLAN
OFF-SITE/SOURCE AREA SOILS
AND GROUNDWATER SAMPLING
FORMER GULPORT FERTILIZER PLANT
GULFPORT, MISSISSIPPI

This work plan outlines the activities to further characterize the subject property based on the findings and recommendations contained in the Butler Services of Mississippi, Inc. (Butler Services) Site Characterization Report, dated October 25, 1999. Further, the work plan has been prepared with the intent of addressing the concerns and requirements contained in the Mississippi Department of Environmental Quality (MDEQ) review letter dated July 7, 2000.

Revisions to the original work plan document, submitted to the MDEQ for review and approval on August 21, 2000, are identified herein by underlined text. These revisions address the comments/requirements contained in the MDEQ review letter dated November 28, 2000.

1.0 BACKGROUND

The subject property is an approximate 33.06-acre parcel of land located on 33rd Street approximately one block west of its intersection with State Highway 49 in Gulfport, Mississippi. The Gulfport Fertilizer Company, which closed for business in circa 1960, was formerly located on the subject property. The fertilizer company reportedly manufactured superphosphate fertilizer. Improvements to the land once consisted of concrete buildings, surfaced roads and railroad spurs, but the improvements have been largely destroyed.

1.1 Previous Investigations.

A total of 260 soil samples were analyzed to define the horizontal and vertical extent of arsenic and lead in the underlying soils on the 33.06-acre subject property. Of these 112 soil samples were collected during the first sampling event on September 30 and October

1, 1998 and 148 soil samples were collected during the second sampling event on July 19 and July 23, 1999. Iso-concentration maps prepared from both sampling events for the 33.06-acre subject property revealed four identifiable source areas and one isolated area with arsenic and lead contaminants on the northern portion of the property. Two of these source areas are located along the western property boundary. The one isolated area with elevated levels of arsenic and lead contaminants is located near the railroad tracks along the eastern property boundary. The maximum level of contaminants in the apparent source areas ranged from 348 mg/kg to 5982 mg/kg for lead and 113 mg/kg to 702 mg/kg for arsenic.

Work plan references to sample numbers contained herein under investigative activities are as identified in the two previous investigations.

1.2 Target Remediation Goal (TRG) Concentrations.

Random background soil samples were collected as apart of the previous site characterization activities to establish background concentrations of arsenic in the native soils resulting from naturally occurring or anthropogenic sources. This soil data was then used to develop background concentrations based on guidance from USEPA Engineering Forum Issue: "*Determination of Background Concentrations of Inorganics in Soils and Sediments at Hazardous Waste Sites*", December 1995.

The site specific arsenic (As) remediation concentration for surficial soils (defined as soils at a depth of zero to six feet below ground surface (bgs) or zero to groundwater depth, whichever is less) at the site is 7.18 milligrams per kilogram (mg/kg). This agreed to background concentration is based upon MDEQ's calculation using all perimeter sample data from zero to two feet bgs.

The unrestricted TRG concentration for lead (Pb) is 400 mg/kg as set forth in the Mississippi Commission of Environmental Quality's Final Regulations Governing Brownfield Voluntary Cleanup and Redevelopment in Mississippi.

2.0 OBJECTIVES

The objectives of this phase of the work is to (1) delineate the vertical extent of subsurface contamination in the soils in the areas where target remediation goal (TRG) concentrations are exceeded at the four feet below ground surface (bgs) termination depth of the previous investigation; (2) delineate the off-site vertical and horizontal extent of soil contamination encountered along the western property boundary, and (3) evaluate the vertical and horizontal extent of site groundwater contamination, if any.

Discreet soil samples will be collected at depth in the source areas to better define the vertical extent of contamination in the surficial water bearing zone above the low permeability confining layer. In addition to the installation of six groundwater monitoring wells, conductivity probes and temporary monitoring wells will be used to better define the underlying geological units, groundwater flow direction and water-bearing zones.

During the initial Phase I and limited Phase II environmental assessment of the subject property by Covington & Associates, Inc., elevated levels of naturally occurring radioactive material (NORM) was recorded at the site. While the levels recorded are questionable given the location and existing conditions at the site, an independent NORM survey will be conducted prior to Butler Services initiating any further field activities. It is our understanding, General Counsel for Hancock Bank and the Bank's outside counsel, Brunini, Grantham, Grower and Hewes, PLLC have arranged for a professional services firm to conduct this survey in accordance with Mississippi Department of Health regulations and requirements. The work plan for conducting this survey is being submitted under separate cover for MDEQ review and approval. The report will be

incorporated into the appendix to this work plan. Recommendations from the NORM survey and report will be included in the Site Health and Safety Plan.

The Mississippi Department of Environmental Quality (MDEQ) will be notified a minimum of two (2) weeks prior to conducting any field work or sampling event. The MDEQ will be provided the opportunity to observe field work and collect split samples. Butler Services will provide MDEQ with the appropriate sample containers and preservatives should MDEQ request split samples.

3.0 INVESTIGATIVE ACTIVITIES

The investigative activities to further characterize the subsurface soil contamination on the subject property at depth and the vertical and horizontal extent of off-site subsurface contamination along the western property boundary are outlined hereinafter. These work plan investigative activities include the collection of subsurface soil samples to the laterally extensive low permeability confining layer underlying the surficial water bearing zone, advancing conductivity probes and the installation of groundwater monitoring wells. An initial round of groundwater samples will be collected from monitoring wells installed and existing monitoring well MW1 will be re-sampled. Soil and groundwater sampling will be in general accordance with the procedures outlined in USEPA, Region IV's *"Environmental Investigations Standard Operating Procedures and Quality Assurance Manual"* (EISOPQAM).

3.1 Site Reconnaissance & Grid Marking.

Prior to initiating, subsurface drilling activities Mississippi One Call System, Inc. will be contacted to mark the location of any gas, water, and sewer or buried electrical lines at the site. No permit requirements are anticipated for use of the direct-push equipment during the investigation.

Property access and permission to clear underbrush and advance borings will be obtained from adjoining property owners to delineate off-site subsurface contamination. The site will be bush-hogged in the areas to be investigated on-site. Care shall be exercising during the surface clearing operation to retain any remaining flags or grid markings from previous investigations. Traffic cones and caution tape will be used, as necessary, to restrict traffic into work areas.

The on-site grid system will be re-established in the source areas that require further vertical soil delineation. Flags with appropriate sample location labeling will be placed at the specific grid points to mark where soil borings and conductivity probes are to be advanced.

In the areas on the western property boundary were contamination above the TRG for arsenic and lead was encountered a 50-foot horizontal grid for sampling will be extended from the western property boundary to the west 300 feet. The grid system described is a westerly extension of the previously established on-site grid system and will extend 200 feet north and 600 feet south along the western property line from sample point RC10. The first set of off-site sampling points will be at the fifty-foot north-south interval line that lies parallel to the property with the exception of two additional points on the property boundary. Subsurface soil samples would continue to be collected at the fifty-foot interval for a distance of 300 feet, field conditions permitting. The two additional points to be sampled on the property boundary are located at the intersection of the extension of the 200 foot north of and 600 foot south of the originally proposed radial conveyor line (RC1 - RC10). These two sample locations are an extension of the previously established on-site grid system and labeled N30 and S70.

Flags will be placed at the specific grid points to mark where off-site soil borings are to be advanced. It may be necessary to offset grid sampling points in the field due to the dense surface vegetation and trees located in the area of investigation.

3.2 Conductivity Survey.

Conductivity probing will be conducted using the model 540U Geoprobe® unit. The unit uses a direct push-probing tool to directly measures the soil conductivity as the tool is advanced into the subsurface. The soil conductivity tool is approximately 18 inches in length and has a sensing area of approximately eight inches in length, which contains four rings to provide electrical contact with the soil. The probe measures the ease with which an electrical current can be made to flow through the surrounding soils. Barring the influence of strong electrolyte solutions such as natural brines or strong acids and bases, the electrical conductivity of most soil increases with clay content, moisture and temperature.

As the probe is advanced both the soil conductivity and probe penetration rate are continuously recorded and displayed on the real-time computer display. This data is displayed in the form of an onscreen graph and shows depth versus soil conductivity and penetration rate. The graphs can be used to supplement other geologic data once sufficient geologic control is established through verification testing using standard soil boring and logging techniques.

During verification testing at each site, conductivity logs are recorded adjacent to one or more existing soil boring locations that have logs based on conventional drilling and sampling techniques. Typically, the conductivity log exhibits a reasonable similarity to the physical log; however, it is usually clear that the conductivity log detected compositional/textural changes that were not recorded during sample logging or at slightly different depths. This is due to the lost samples, inaccurate sample depths, and individual logging bias that commonly occurs in collecting and describing soil samples.

A total of at least 10 soil conductivity logs will be conducted along two east-west linear transects, one to the north and one to the south of the main area of soil contamination. At

each location, once the tool has been extracted the borehole will be grouted to the surface using a cement-bentonite grout mix. Each location will be surveyed to determine its location with respect to the grid system established during previous investigations at this site and the ground surface elevation will be determined. All downhole equipment will be decontaminated prior to setting up at the next location.

Soil conductivity logs will be used to supplement geologic interpretation between conventional soil boring locations and well locations. Depending on the verification test results at this site, and acceptance by the MDEQ, this technique may also be used as a logging technique for the placement of monitor wells.

3.3 Soil Sampling and Delineation.

Soil borings will be advanced using Geoprobe's Macro-core soil sampler, a 48-inch long by 2-inch diameter soil sampler capable of recovering a sample that measures up to 1300 ml in volume in the form of a 46-inch x 1.5-inch core. This tool is advanced to the desired sampling depth with the retractable opening point sealed. The point is then released, and the sample is allowed to enter as the sampling tube is advanced over a 48-inch depth interval. This procedure is repeated as the boring is advanced in 4 feet increments until the total depth of the boring is reached.

Soil samples will be collected using new clear PVC sample collection liners that are approximately 46-inch long by 1.75-inches in diameter. Once the PVC liner is extracted from the Macro-core sampler, the lithologic description of each core will be recorded on a sample log form. Samples of the soil from the desired depth intervals will be placed into laboratory supplied containers for analysis by Micro-Methods, Inc., located in Ocean Springs, Mississippi.

and approval prior to incorporating this figure as an addendum to this work plan. Sample collection and equipment decontamination procedures shall be as outlined herein.

Soil samples will be collected at the 2-foot and 4-foot depth interval at all 56 locations on the grid. At the fifty and one hundred foot projected off-site interval sampling point, west of the property line and at the two locations on the property line (N30 and S70), the soil probes will be advanced to the laterally extensive low permeability layer. Additional samples will be collected at these twenty (20) locations at 6-foot and 8-foot bgs and thereafter at the 4-foot depth interval. An additional soil sample will be collected at the eight-foot termination depth at each of these four locations. It is estimated that a total of 233 soil samples (including 21 replicate samples) will be collected for independent laboratory analysis.

As a part of the field Quality Assurance and Quality Control (QA/QC) program, replicate samples at a rate of 10 percent for each matrix and a daily equipment field blank sample will be prepared similarly for delivery to the laboratory. The samples will be transferred to new laboratory furnished glass sample jars, sealed with a teflon-lined cap and labeled. The samples will then be placed into plastic zip-lock bags and delivered to Micro Methods Laboratory in Ocean Springs, Mississippi in a chilled condition for analyses. A chain-of-custody will be maintained to trace sample custody.

The soil samples will be analyzed by the laboratory for lead (Pb) and arsenic (As) using USEPA Methods SW 846, 7420 and SW 846, 7060A, respectively. The laboratory will be instructed to analyze samples beginning at the fifty-foot grid interval nearest the property line and continuing off-site until the constituent concentrations are below TRG levels. The intent being to analyze only those samples necessary to define the limits of the off-site soil contamination, if any. The remaining samples would be discarded after a reasonable holding period to be established with the laboratory. The laboratory analytical

Soil samples will be collected and will be logged continuously for all soil boring locations. Geologic cross-sections will be prepared from the data generated from the boring logs and to confirm data obtained from the conductivity survey.

After samples have been collected from the soil cores, the remaining soil will be drummed and characterized for disposal in a permitted facility. The boring will then be sealed to the ground surface with cement-bentonite grout.

The sampler and sample tubes will be cleaned using tap water and Liquinox. A brush will be used, if necessary, to remove particulate matter and surface films during cleaning. The equipment will then be triple rinsed thoroughly with tap water, analyte free water and pesticide-grade isopropanol, followed by a final rinse of analyte free water only. If analyte free water is not available, the equipment will be allowed to air dry following the solvent rinse. A solvent rinse will not be applied to PVC items or plastic items. Once the equipment has been cleaned it will be removed from the decontamination area and covered with aluminum foil when not in use. Equipment to be stored overnight will be wrapped in aluminum foil and covered with clean, unused plastic. The rinsate will be containerized and transferred to drums for characterization and disposal off-site in a permitted facility.

3.3.1 Off-Site Subsurface Soil Delineation.

The off-site subsurface investigation in the projected area along the western property boundary where contamination above the TRG for arsenic and lead was encountered on the property line will include advancing 56 direct-push probes with the Geoprobe soil sampling equipment. The direct-push probes will be advanced along the grid pattern as described in Section 3.1. Once survey and topographic information of the projected off-site area is completed a figure will be prepared as an addendum to this work plan. The figure showing all proposed boring locations would be submitted to the MSEQ for review

data sheets will state the minimum quantifiable level (MQL) for each constituent and the dilution factor for each sample.

3.3.2 Source Area Subsurface Soil Delineation.

The subsurface investigation to further identify vertical contamination at depth will include advancing 18 direct push probes in the previously identified source hot spots (see Table 1). The extent of arsenic and lead contamination exceeding TRGs at the two-foot and four-foot depth interval has been defined from the previous site characterization data. The 18 soil borings that are the subject of this investigation will be advanced to the laterally extensive low permeability-confining layer underlying the surficial water-bearing zone. In addition, it is proposed that 23 intermediate soil borings (Table 2) be advanced to the laterally extensive low permeability-confining layer in the zone between the hot spots and adjoining sample location where identified constituents concentrations are below TRGs. The purpose of these additional intermediate soil borings within the established on-site 100-foot grid pattern is to further define the horizontal as well as the vertical extent of contamination in the source areas. Sample collection and equipment decontamination procedures shall be as outlined herein.

Soil samples will be collected at 2-foot intervals to a depth of eight feet bgs and at the 4-foot depth interval thereafter in the 18 soil borings to be advanced to the laterally extensive low permeability-confining layer (minimum thickness 6-inches) underlying the surficial water-bearing zone (estimated not to exceed 20 feet in depth). The intermediate borings will be advanced to the laterally extensive low permeability-confining layer and samples collected at 2-foot intervals to a depth of eight feet and at the 4-foot depth interval thereafter. It is estimated that a total of 316 soil samples will be collected (including 29 replicate samples) for independent laboratory analysis.

As a part of the field Quality Assurance and Quality Control (QA/QC) program, replicate samples at a rate of 10 percent for each matrix and a daily equipment field blank sample

will be prepared similarly for delivery to the laboratory. The samples will be transferred to new laboratory furnished glass sample jars, sealed with a teflon-lined cap and labeled. The samples will then be placed into plastic zip-lock bags and delivered to Micro Methods Laboratory in Ocean Springs, Mississippi in a chilled condition for analyses. A chain-of-custody will be maintained to trace sample custody.

The soil samples will be analyzed by the laboratory for lead (Pb) and arsenic (As) using USEPA Methods SW 846, 7420 and SW 846, 7060A, respectively. The laboratory will be instructed to analyze samples beginning at the depth interval nearest the surface and continuing at depth until the constituent concentrations are below TRG levels. To insure that contamination above TRGs does not underlie a low level near surface sample, one additional sample at depth may be analyzed based on field data and previous site characterization delineation to four feet bgs. The intent being to analyze only those samples necessary to define the limits of the vertical soil contamination as well as refine the horizontal extent of soils exceeding TRGs in potential source areas. The remaining samples would be discarded after a reasonable holding period to be established with the laboratory. The laboratory analytical data sheets will state the minimum quantifiable level (MQL) for each constituent and the dilution factor for each sample.

3.3.3 Soil Leachability.

The leachability of arsenic and lead contaminates in the soil underlying the site was evaluated during the second sampling event for site characterization. Of the five (5) soil samples analyzed using the Toxicity Characteristics Leachate Procedure (TCLP), the lead leachate from two (2) of the samples (27.7 mg/l in soil sample S18 at 4-foot and 7.8 mg/l in soil sample S19 at 2-foot) exceeded the regulatory limit of 5.0 mg/l. Arsenic leachates from all five (5) samples were well below the regulatory limit of 5.0 mg/l for this contaminate.

Total lead in each of the samples collected from below the 4-foot level in sample location S18 and at four (4) feet and below in the adjacent intermediate borings to S18 will be evaluated to determine which samples are to be selected for further TCLP analysis. This determination will be made after review and approval of MDEQ. A portion of all samples collected in these five (5) boring locations will be held in the laboratory pending a review of totals a determination is made if additional TCLP analyses is required. It is estimated that up to six (6) samples will be analyzed for hazardous waste toxicity characteristics as defined in the Resources Conservation and Recovery Act (RCRA) using TCLP.

3.4 Monitoring Well Installation.

MDEQ requires that permanent monitoring wells be installed at the site to evaluate groundwater contamination at the site. Further, a minimum of six monitoring wells is required as a result of the concern about the possibility of radial groundwater flow at the site.

Monitoring wells will be constructed of threaded, flush joint, schedule 40 PVC well materials, supplied by the drilling subcontractor and installed using hollow stem auger drilling techniques. To ensure that representative samples of the groundwater are obtained, monitoring wells are to be installed in accordance with monitoring well installation and design specifications for unconsolidated material.

Prior to installing a well, a test boring will be drilled at each of the monitoring well locations. Subsurface soils encountered will be recorded continuously and the approximate depth to groundwater determined to ensure that samples collected from the well borings are at appropriate depth increments.

Upon completion of the test borings, sections of 2-inch PVC, 0.010-inch slotted well screen will be installed through the hollow stem augers. The screened interval will be determined

from data developed from boring logs and conductivity survey data. The remainder of the well consists of PVC casing, which will be finished approximately 2-feet above with the ground surface. Filter sand will be placed in the annulus between the screen and the borehole to a level of at least 2 feet above the top of the screen. A bentonite pellet seal will be placed on top of the filter sand. The bentonite pellet seal shall extend a minimum of two (2) feet above the filter pack. The bentonite pellet seal will be allowed to hydrate a minimum of eight hours or the manufacturer's recommended hydration time, whichever is longer. The remainder of the annulus will be grouted with a cement bentonite grout acceptable for use in monitoring wells. The grout will be pumped by the tremie method into the annular space around the casings up to within two (2) feet of the ground surface. The grout will be allowed to set a minimum of twenty-four hours before the surface pad and protective casings are installed. The surface pad shall be a minimum of three (30 feet by three (3) feet by 6-inches in thickness. The surface protection for the well will consist of a lockable cap and four steel pipe protection posts anchored in cement. Each steel pipe protection post will be installed into an 8- t0 10-inch diameter hole to a minimum depth of two (2) feet bgs and filled with concrete. The protective posts shall extend above the ground surface a minimum of three (3) feet. A typical single cased monitoring well construction diagram is included in the Appendix.

Upon completion of construction each monitoring well it will be developed by bailing. A minimum of twenty-four hours must pass between the installation of the surface pad and protective casings and monitoring well development. The wells will be developed to remove fine-grained materials generated during the installation and to ensure that hydraulic continuity is established between the well and the aquifer. The monitoring wells will be developed until the column of water in the well is free of visible sediment, and the pH, temperature, turbidity, and specific conductivity have stabilized.

3.4.1 Groundwater Flow Direction.

A licensed land surveyor will survey the wells to a benchmark of known elevation above mean sea level. The depth to groundwater will also be measured in each well using an electric water-level indicator, originating at a specific point on the well casing prior to collecting groundwater samples. This information will be used to determine groundwater flow direction and to construct groundwater contour maps.

3.4.2 Groundwater Sampling.

The six (6) additional monitoring wells and existing monitoring well No. MW-1 will be sampled as a part of this work plan. The wells will be purged and sampled in general accordance with the procedures outlined in USEPA, Region IV's *"Environmental Investigations Standard Operating Procedures and Quality Assurance Manual"* (EISOPQAM). If the groundwater is found to be contaminated the well will be re-sampled. If groundwater contamination is confirmed, a work plan will be prepared for the delineation of the vertical and horizontal extent of contamination. The work plan will be submitted to MDEQ for review and approval prior to initiating any further groundwater assessment activities.

A minimum of twenty-four (24) hours shall have passed between the development of the wells and monitoring well sampling occurs. The wells will be purged using a slow purge method. Water quality indicator parameters shall be used to determine when purging is complete prior to sample collection in each monitoring well. Purging is considered adequate when the pH, specific conductance, and temperature of the groundwater have stabilized and the turbidity either has stabilized or is below 10 Nephelometric Turbidity Units (NTUs). Stabilization occurs when pH measurements remain constant within 0.1 Standard Unit (SU), specific conductance varies no more than 10 percent, and the temperature is constant for at least three consecutive readings. A peristaltic pump or new disposable bailer will be used to collect the groundwater sample from each well. The sample from each well will be transferred into new 1 liter, laboratory furnished and nitric

acid preserved, plastic sample containers. As a part of the field QA/QC program, a field equipment blank sample will be prepared similarly for delivery to the laboratory. As each sample is collected, it will then be stored in a chilled ice chest for delivery to Micro Methods Laboratory in Ocean Springs, Mississippi for analyses. A chain-of-custody will be maintained to trace sample custody.

The laboratory will analyze the samples for lead (Pb) and arsenic (As) using USEPA Methods 239.2 and 206.2, respectively. The laboratory analytical data sheets will state the minimum quantifiable level (MQL) for each constituent.

4.0 HEALTH AND SAFETY

The field sampling work will be performed under a written Health and Safety Plan (HASP). The HASP included in the Appendix will be revised to include recommendations from the NORM survey once completed. The revised HASP will be submitted to MDEQ for review and approval prior to initiating any field activities. A Health and Safety meeting will be held at the site with the Geoprobe subcontractor, drilling subcontractor and Butler personnel prior to initiating any site activities. A Site Safety Officer will be designated to see that the work is performed according to the HASP.

5.0 SITE CHARACTERIZATION REPORT

After completion of site activities and receipt of laboratory data and analyses, Butler Services will prepare a supplemental Site Characterization Report. The report will include a summary of the work that was conducted, the procedures that were used, pertinent findings, conclusions regarding the extent of contamination present at the site, and recommendations for further assessment work, if warranted.

The Site Characterization Report will be submitted to the MDEQ within sixty (60) days after completion of field activities and receipt of laboratory data and analyses.

TABLE 1
PROPOSED SAMPLING LOCATIONS AT DEPTH
OFF-SITE/SOURCE AREA SOILS
AND GROUNDWATER SAMPLING
WORK PLAN
(SOIL SAMPLING ANALYTICAL RESULTS FROM PREVIOUS INVESTIGATION)
FORMER GULFPORT FERTILIZER PLANT
33RD STREET
GULFPORT, MISSISSIPPI

Sample Number	Sample Location	Sample Depth 2ft		Sample Depth 4ft		REMARKS
		Arsenic As (mg/kg)	Lead Pb (mg/kg)	Arsenic As (mg/kg)	Lead Pb (mg/kg)	
31N29	200 ft North of Radial Conveyor Line	1.2	6.5	20.2	16.5	
N18	100 ft North of Radial Conveyor Line	13.2	298	-	-	
31N19	100 ft North of Radial Conveyor Line	**9.5**	**42.3**	**66.5**	**14.0**	
RC7	**Radial Conveyor Line**	**78.1**	**5280**	**34.9**	**8.74**	
RC9	**Radial Conveyor Line**	145	474	8.11	26.9	
RC10	Radial Conveyor Line	127	348	175	22.8	
S16	100 ft South of Radial Conveyor Line	90.4	291	18.4	9.69	
S18	100 ft South of Radial Conveyor Line	6.06	640	29.0	3657	
S40	300 ft South of Radial Conveyor Line	1.27	2.38	3.50	492	
S45	400 ft South of Radial Conveyor Line	4.24	303	23.6	72.2	
S50	400 ft South of Radial Conveyor Line	702	597	113	12.6	
T450N	**50 ft North of Test Pt 4**	**21.3**	**147**	-	-	
T450E	50 ft East of Test Pit 4	11.7	1076	0.22	780	
T4100E	100 ft East of Test Pit 4	0.69	298	14.3	23.4	
T5	**Test Pt 5**	**47.2**	**28.6**	**242**	**28.1**	
T550N	50 ft North of Test Pit 5	359	226	146	703	
31S15	100 ft South of Radial Conveyor Line	42.7	17.0	23.4	3.6	
31S51	500 ft South of Radial Conveyor Line	57.6	70.5	74.5	1241	

Notes:
1. Sample analytical results shown in the Table are from previous investigation to a depth of 4-frt below ground surface.
2. Soil samples will be collected at the location(s) listed in the Table to a laterally extensive low permeability confining layer underlying the surficial water bearing zone encountered at approximately four feet bgs during the previous sampling event.

Butler Services of Mississippi, Inc.

TABLE 2
PROPOSED INTERMEDIATE SAMPLING LOCATIONS
OFF-SITE/SOURCE AREA SOILS
AND GROUNDWATER SAMPLING
WORK PLAN
FORMER GULFPORT FERTILIZER PLANT
33RD STREET
GULFPORT, MISSISSIPPI

Reference Sample Number	Proposed Sample Location	REMARKS
31N29	50 Ft North	Located between Reference Sample and Grid Sample No. 31N39
31N19	**50 Ft East**	Located between Reference Sample and Grid Sample No. N18
	50 Ft West	" " " No. N20
RC7	**50 Ft North**	Located between Reference Sample and Grid Sample No. N17
	50 Ft South	" " " No. S17
	50 Ft West	" " " No. RC8
RC10	50 Ft North	Located between Reference Sample and Grid Sample No. N20
	50 Ft South	" " " No. S20
S16	50 Ft South	Located between Reference Sample and Grid Sample No. S26
	50 Ft West	" " " No. S17
S18	50 Ft North	Located between Reference Sample and Grid Sample No. RC8
	50Ft South	" " " No. S28
	50 Ft East	" " " No. S17
	50 Ft West	" " " No. S19
S45	50 Ft North	Located between Reference Sample and Grid Sample No. 31S35
	50 Ft South	" " " No. S55
	50 Ft East	" " " No. S44
	50 Ft West	" " " No. S46
S50	50 Ft North	Located between Reference Sample and Grid Sample No. S40
	50 Ft South	" " " No. S60
	50 Ft East	" " " No. S49
31S15	50 FT South	Located between Reference Sample and Grid Sample No. 31S25
	50 Ft East	" " " No. 31S14

APPENDIX

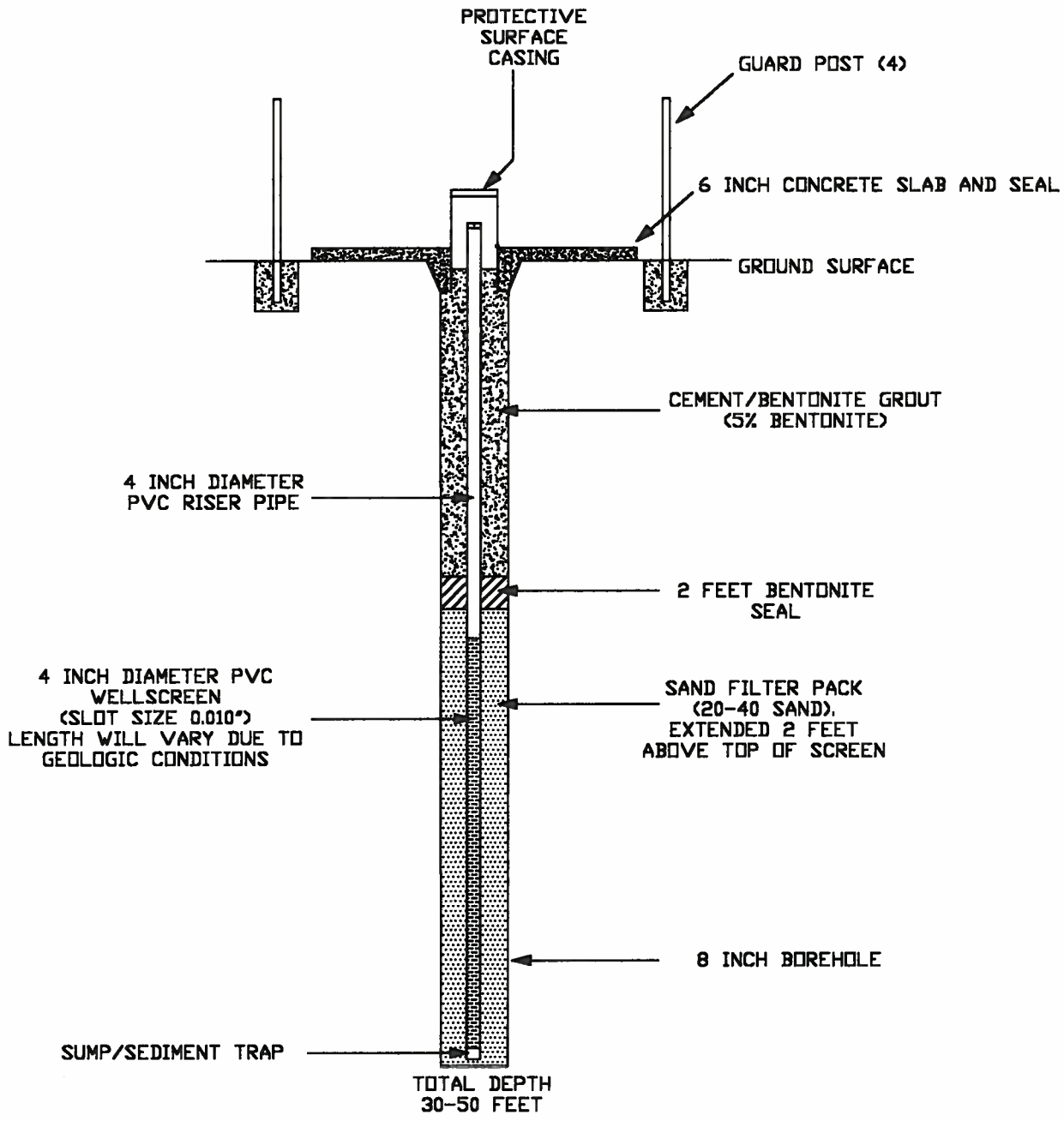


FIGURE 1

MONITOR WELL CONSTRUCTION (TYPICAL)

DATE: AUGUST 4, 2000	APPROVED BY:	DRAWN BY: JDS
SCALE: N/A		FILE: MON-WELL.DWG

ENVIRONMENTAL MANAGEMENT SERVICES
HATTIESBURG, MISSISSIPPI

HEALTH AND SAFETY PLAN

Subsurface Investigation
Gulfport Fertilizer Plant Site
33rd Street, Gulfport, MS

This Health and Safety Plan outlines the basic safety requirements for the site/assessment work to be performed at the above site. The plan addresses the expected potential hazards that may be encountered on this project. If changes in site or working conditions occur as the activities progress, addenda to this plan will be provided.

The provisions set forth in this plan will apply to all employees and subcontractors of Butler Services of Mississippi that will be working on this project. The subcontractors may request to increase the safety requirements what is described herein with a written request to and approval from the Butler Services Safety Officer.

AUTHORITY FOR SAFETY

The Butler Site Safety Officer (SSO) will be responsible for implementing the requirements of the site safety plan. Mr. Denton Bates will be designated SSO for this project.

The SSO is responsible for addressing the following items:

- Implementing the provisions of the HASP.
- Dissemination of information contained in the plan to all on-site personnel involved in the project through a daily safety meeting.
- Ensure all onsite workers have proof of OSHA 40-Hour Health and Safety Training.
- Review on-site safety supplies and equipment inventory.
- Procedures for reporting accidents or incidents.

The SSO has the authority to suspend work at any time he finds nonconformance to the plan or discovers that the provisions of the plan are inadequate for worker safety.

MEDICAL SURVEILLANCE

Butler personnel and it's subcontractors engaged in project activities must be participants in a medical surveillance program and must be cleared by the examining physician to wear respiratory protection and protective clothing, if necessary, for working with hazardous substances. All applicable State and Federal occupational safety requirements are to be observed.

HAZARD ASSESSMENT

Chemical hazards

The constituents of concern that may be encountered on the site are lead and arsenic in the soil and groundwater. These contaminants are the result of the manufacture of phosphate fertilizer at the site.

When the fertilizer plant was in operation the type of phosphate commonly manufactured at that time was normal super-phosphate. Normal super-phosphate is manufactured by introducing sulfuric acid to phosphate rock (tri-calcium-phosphate). Typically, the phosphorous pentoxide, referred to as P205, and calcium oxide content of the rock used in production at the time the plant was operating was about 33% and 48%, respectively. The remainder of the constituents in the phosphate rock consisted of lead and arsenic as well as a low percentage of other compounds such as aluminum, iron, carbon dioxide, fluorine and miscellaneous trace elements.

The typical exposure pathways include inhalation, ingestion and dermal absorption. Ingestion is the primary exposure pathways of concern. Level "D" protection consisting of hard hats, steel toed boots, long trousers, long sleeve shirts and protective gloves will be mandatory on site.

Table 1
Anticipated Contaminants

CONTAMINATE	HIGHEST OBSERVED CONCENTRATION	PEL/TLV ppm or mg/m^3	IDLH ppm or mg/m^3	SYSTEMS/EFFECTS OF ACUTE EXPOSURE
Lead	Soil 11,000 ppm			See MSDS – Attachment A
Arsenic	Soil 325 ppm			See MSDS – Attachment A

Controls and procedures of this plan will be used to keep exposures below the lowest recommended limit.

Naturally Occurring Radioactive Materials (NORM)

During the initial Phase I and limited Phase II environmental assessment of the subject property by Covington & Associates, Inc., elevated levels of naturally occurring radioactive material (NORM) was recorded at the site. While the levels recorded are questionable given the location and existing conditions at the site, an independent NORM survey will be conducted prior to Butler Services initiating any further field activities.

The work plan for conducting this survey is being submitted under separate cover for MDEQ review and approval. Recommendations from the NORM survey and report will be included in the Site Health and Safety Plan.

Physical Hazards

The work area shall be secured and the area restricted during the soil and groundwater

The location of underground utilities shall be marked prior to the initiation of subsurface activities at the site. Mississippi one-call (1-800-227-6477) has been contacted to cause to have the utility companies mark utility locations at the site, Verification No. 99071214410706. Known utilities at the site include a buried underground utility cable along the railroad right-of-way on the eastern boundary of the site.

It is anticipated that the field activities addressed in this plan will occur during the winter season. If there is a delay in proceeding with the work resulting in the extension of field activities into the summer season, then the work should be scheduled during the cooler parts of the day. The following protocols are to be used to counter summer heat stress:

- Water should be made available at the site to allow workers to replace body fluids. Liquids for electrolyte replenishment will be available at the discretion of the SSO.
- Cool vests will be made available. Their use will be designated at the discretion of the SSO, if a lack of shade in the work zones results in their need regardless of the temperature.
- Allow workers to obtain adequate shade from direct exposure to the sun during rest periods in the tree-shaded area on the north end of the property.
- At the discretion of the SSO, workers' vital signs will be monitored (i.e., body temperature, blood pressure and heart rate). If deemed necessary by the SSO, workers will be fitted with be fitted with heat stress monitors.
- Field personnel are encouraged to maintain their physical fitness.
- Intake of diuretics (coffee or alcohol) should be minimized prior to field work

GENERAL PROJECT SAFETY REQUIREMENTS

Project activities will be conducted in accordance with the minimum safety requirements:

- Eating, drinking and smoking will be restricted to designated areas. All personnel will be required to wash hands and face before eating, drinking or smoking in designated areas.
- Gross decontamination and removal of all personal protective equipment will be performed prior to leaving the site. Contaminated protective clothing will be removed and collected for disposal.
- The SSO will be responsible for taking the necessary steps to protect on-site personnel from physical hazards, including falling objects, falls from elevations, slip and trip hazards, and for providing proper equipment and appropriate safety equipment.
- On-site personnel will be cautioned to observe each other for the effects of the presence of toxic exposure such as headaches, dizziness, nausea, blurred vision, cramps, irritation of the eyes, skin or respiratory tract, changes in skin complexion/color, changes in motor coordination, changes in personality or changes in speech or pattern.

WORK ZONES

All areas within 15 feet of soil boring operations will be designated as Exclusion Zones. Cones or yellow caution tape will be used, if necessary, to deny public access to these areas. Surveillance of

the areas will be performed by all on-site personnel to deny public access. Work will stop immediately when unauthorized access to the Exclusion Zones occurs.

PROTECTIVE EQUIPMENT REQUIREMENTS

On-site personnel are required to wear the following clothing and equipment, as a minimum while in the work areas:

- Hard Hat
- Steel Toed Boots
- Long Trousers
- Long Sleeve Shirt
- Protective Gloves

Cool vests and heat stress monitors will be available on-site if the ambient temperature is above 90° F and the SSO determines their use is appropriate. At the discretion of the SSO, a lack of shade may result in the need for cool vests regardless of the temperature.

EMERGENCY RESPONSE PROCEDURES

At a minimum, the following equipment will be present on-site and be readily accessible for use in the event of emergency:

- Emergency eye-wash bottle
- First Aid Kit
- 10 Pound NFPA approved Class ABC Fire Extinguisher

If suspected hazardous waste comes into contact with the eyes, the victim's eyelids must be held open and the eyes rinsed with eyewash solution for a minimum of 15 minutes. The victim must then be taken to a hospital for further treatment.

If suspected hazardous waste comes into contact with the skin, the affected areas must be held open and the skin rinsed with water for a minimum of 15 minutes. If further irritation exists, the victim must be taken to a hospital for further treatment.

If a fire starts, a Fire Department must be called immediately. Attempts to put out a fire should be considered only if there is little risk in doing so. Chemical fires will not be approached under any circumstance. In the case of chemical fires, the site will be vacated immediately.

In the event of an accident resulting in physical injury, first aid will be administered and the injured worker will be transported to the nearest hospital for emergency treatment.

EMERGENCY TELEPHONE NUMBERS

A list of emergency telephone numbers is attached to this site safety plan. Telephone numbers for the utility companies with services in the area are also included in the list of emergency telephone numbers.

EMERGENCY MEDICAL TREATMENT

In the event of injury or illness requiring emergency medical care beyond on-site capabilities, the following resources will be utilized as appropriate:

Local Emergency Hospital:	Memorial Hospital at Gulfport 4500 13th Street Emergency (228) 865-3420 Main (228) 867-4000
Ambulance Service:	American Medical Response Emergency 911

The hospital is located approximately seven (7) minutes at a distance of 2.9 miles from the site traveling east along 33rd Street to US Highway No. 49, then south on US Highway No. 49 to US Highway No. 90, then west along US Highway No. 90 to Broad Avenue, then north on Broad Avenue to 13th Street. The hospital is located in the first block on the left side of 13th Street. A map is attached to this plan with directions from the site to the hospital.

This site safety plan has been prepared to prescribe minimum procedural and equipment requirements for worker protection in accordance with OSHA guidance for Hazardous Waste Site Activities.

This document was prepared by: William D. Bates DATE: 12-18-00

WD BATES, Site Safety Officer

ATTACHMENTS:

EMERGENCY CONTACTS
HOSPITAL ROUTE MAP
A - MATERIAL SAFETY DATA SHETTS FOR LEAD AND ARSENIC
B - EQUIPMENT DECONTAMINATION PROCEDURES

EMERGENCY CONTACTS:

National Response Center Hotline	800-424-8802
US EPA Region IV	800-424-8802
CMA Chemical Referral Center	800-262-8200
CHEMTREC	800-424-9300
Mississippi Department of Environmental Quality	601-961-5171
Mississippi Emergency Management Agency	601-352-9100
City of Gulfport Fire Department	911
City of Gulfport Police Department	911
Mississippi State Highway Department	601-833-7811
Mississippi State Health Department	601-894-2271
Poison Control Center	601-684-7361

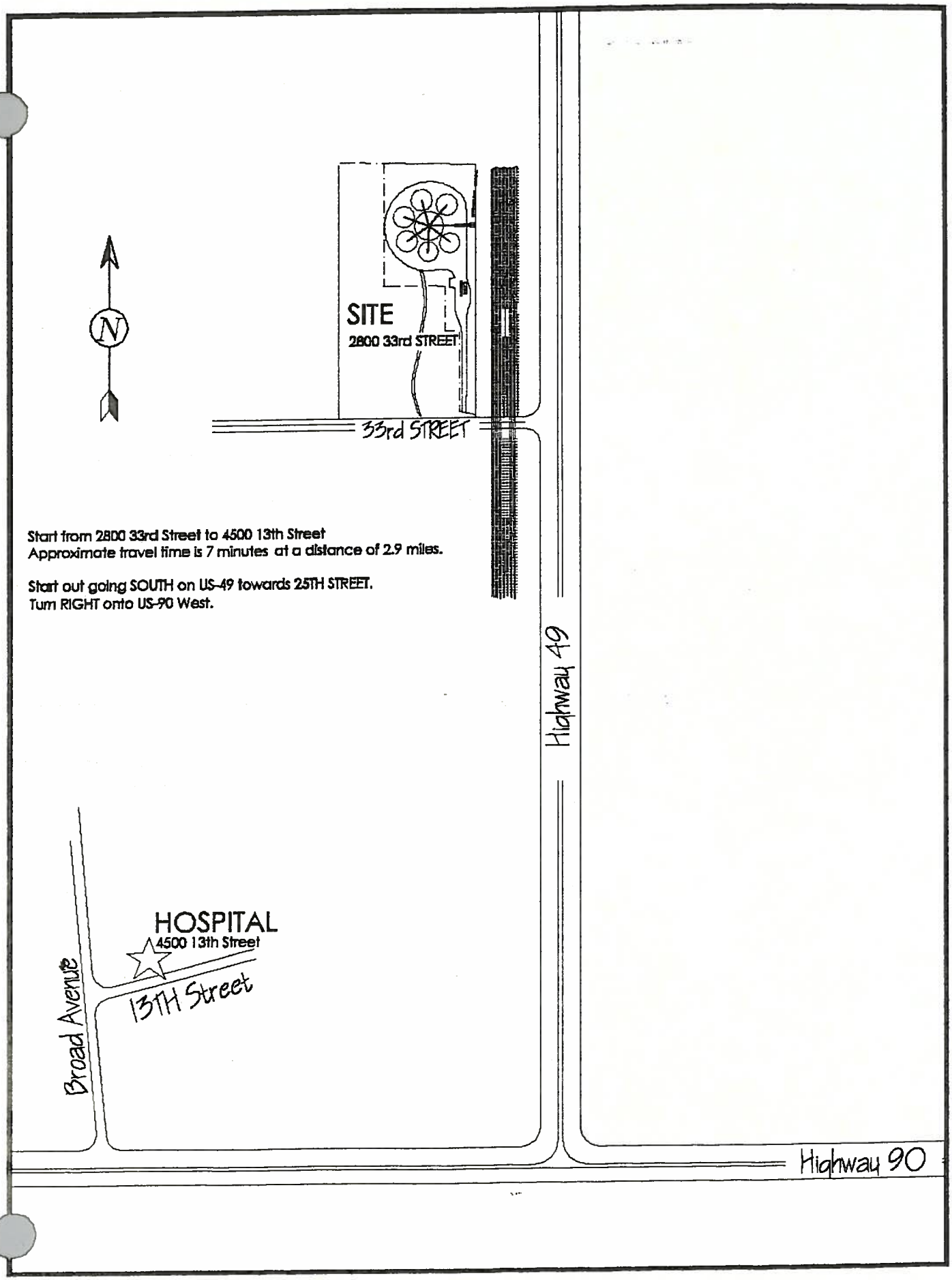
MEDICAL EMERGENCY:

Local Emergency Hospital: Memorial Hospital at Gulfport
4500 13th Street
Emergency (228) 865-3420
Main (228) 867-4000

Ambulance Service: American Medical Response, Inc.
Emergency 911

UTILITY CONTRACTS:

City of Gulfport Department of Public Works (Water and Sewer)	228-868-5765
Mississippi Power Company	800-487-3275BellSouth
Telephone	800-227-6477



Start from 2800 33rd Street to 4500 13th Street
Approximate travel time is 7 minutes at a distance of 2.9 miles.

Start out going SOUTH on US-49 towards 25TH STREET.
Turn RIGHT onto US-90 West.

TR METALS -- LEAD
MATERIAL SAFETY DATA SHEET
NSN: 681000N084293
Manufacturer's CAGE: 04MC9
Part No. Indicator: A
Part Number/Trade Name: LEAD

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General Information

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Company's Name: TR METALS
Company's Street: 1 PAVILION AVE
Company's City: RIVERSIDE
Company's State: NJ
Company's Country: US
Company's Zip Code: 08075
Company's Emerg Ph #: 800-424-9300(CHEMTREC)
Company's Info Ph #: 609-461-9000
Record No. For Safety Entry: 001
Tot Safety Entries This Stk#: 001
Status: SMJ
Date MSDS Prepared: 01JAN93
Safety Data Review Date: 25MAR98
MSDS Serial Number: CGSQQ

==========

Ingredients/Identity Information

==========

Proprietary: NO
Ingredient: LEAD (SARA 313) (CERCLA)
Ingredient Sequence Number: 01
Percent: 99.99
NIOSH (RTECS) Number: OF7525000
CAS Number: 7439-92-1
OSHA PEL: N/K (FP N)
ACGIH TLV: 0.15 MG/M3 DUST

Proprietary: NO
Ingredient: SUPDAT: NERVOUS SYS DAMAGE RESULTING IN SEVERE HDCHS, CONVULSIONS, COMA, DELIRIUM & DEATH. ALCOHOL & PHYSICAL (ING 3)
Ingredient Sequence Number: 02
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

Proprietary: NO
Ingredient: ING 2: EXERTION CAN BRING ON SYMPTOMS. OTHER EFFECTS OF LONG TERM EXPOSURE CAN RESULT IN DECREASED FERTILITY, (ING 4)
Ingredient Sequence Number: 03
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

Proprietary: NO
Ingredient: ING 3: MISCARRIAGE & BIRTH DEFECTS.
Ingredient Sequence Number: 04
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

Proprietary: NO
Ingredient: HYGIENE PRACTS: HYGIENE IE, WASH HANDS & FACE BEFORE EATING, DRINKING, PUTTING ON MAKE-UP OR SMOKING. SHOWERING (ING 6)
Ingredient Sequence Number: 05

NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

Proprietary: NO
Ingredient: ING 5: IS REQUIRED BEFORE PUTTING ON STREET CLOTHES.
Ingredient Sequence Number: 06
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

Physical/Chemical Characteristics

Appearance And Odor: HEAVY, DUCTILE, SOFT, BLUISH-GRAY METAL.
Boiling Point: 3164F,1740C
Melting Point: 621F,327C
Vapor Pressure (MM Hg/70 F): 1 @ 973C
Vapor Density (Air=1): N/A
Specific Gravity: 11.34 (H*2O=1)
Evaporation Rate And Ref: N/A
Solubility In Water: INSOLUBLE
Percent Volatiles By Volume: N/A

Fire and Explosion Hazard Data

Flash Point: N/A
Lower Explosive Limit: N/A
Upper Explosive Limit: N/A
Extinguishing Media: CLASS D EXTINGUISHERS: DRY POWDER TYPE.
Special Fire Fighting Proc: USE NIOSH APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT (FP N).
Unusual Fire And Expl Hazrds: NONCOMBUSTIBLE IN SOLID METAL FORM. FLAMMABLE IN THE FORM OF DUST WHEN EXPOSED TO HEAT OR FLAME.

Reactivity Data

Stability: YES
Cond To Avoid (Stability): EXCESSIVE HEAT (IE, ABOVE MELTING POINT). SEE MATERIALS TO AVOID.
Materials To Avoid: REACTS VIOLENTLY W/HYDROGEN PEROXIDE, CHLORINE TRIFLUORIDE, AMMONIUM NITRATE, POTASSIUM. INCOMPAT WITH NAN*3, (SUPDAT)
Hazardous Decomp Products: WHEN HEATED TO ABOVE MELTING POINT (IE, DECOMPOSITION) EMITS HIGHLY TOXIC FUMES OF LEAD.
Hazardous Poly Occur: NO
Conditions To Avoid (Poly): NOT RELEVANT

Health Hazard Data

LD50-LC50 Mixture: NONE SPECIFIED BY MANUFACTURER.
Route Of Entry - Inhalation: YES
Route Of Entry - Skin: YES
Route Of Entry - Ingestion: YES
Health Haz Acute And Chronic: LEAD APPEARS ON THE NAVY LIST OF OCCUP CHEM REPRO HAZS. SEEK CONSULTATION FROM APPROP HEALTH PROFESSIONALS CONCERNING LATEST HAZ LIST INFO & SAFE HANDLING & EXPOSURE INFO (FP N). SKIN: MAY CAUSE IRRIT. EYES: MAY CAUSE IRRIT. NORMAL HANDLING OR PROCESSING OF LEAD MAY RESULT IN GENERATION OF LEAD DUST (EFTS OF OVEREXP)
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: NOT RELEVANT
Signs/Symptoms Of Overexp: HLTH HAZ: &/OR FUME. LEAD IS CUMULATIVE TOXIN, EFTS OF PB EXPOS MAY NOT DEVELOP QUICKLY. SYMPS INCL DECREASED PHYSICAL

FITNESS, LOSS OF APPETITE, ABDOMINAL PAINS, CONSTIPATION, FATIGUE, SLEEP DISTURBS, HEADACHE, ANEMIA, IRRITABILITY, TREMORS, HALLUCINATIONS & DISTORTED PERCEPTION, MUSCLE & JOINT PAIN, MUSCLE (SUPDAT)
Med Cond Aggravated By Exp: DISEASES OF THE BLOOD AND BLOOD FORMING ORGANS, KIDNEYS, NERVOUS SYSTEM AND REPRODUCTIVE SYSTEM.
Emergency/First Aid Proc: INHALATION: REMOVE TO FRESH AIR. GET IMMEDIATE MEDICAL ATTENTION. EYES: FLUSH WELL WITH WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS SEEK MEDICAL ATTENTION. SKIN: WASH AREA THOROUGHLY WITH SOAP AND WATER. INGESTION: GIVE WATER. SEEK IMMEDIATE MEDICAL ATTENTION.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: LEAD IN DUST FORM; MINIMIZE EXPOSURE. WEAR FULL PROTECTIVE CLOTHING INCLUDING NIOSH APPROVED RESPIRATORS. CLEAN UP USING DUSTLESS METHODS (IE, VACUUM, DO NOT USE COMPRESSED AIR). PLACE IN CLOSED LABELED CONTAINERS FOR RECYCLING OR PROPER DISPOSAL.
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.
Waste Disposal Method: DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. MAY HAVE VALUE ON A RECYCLED BASIS.
Precautions-Handling/Storing: STRICT CONTROL OF ATMOSPHERIC CONCENTRATION IN PROCESSING AND WORK AREAS. KEEP MATERIAL DRY. AVOID STORAGE NEAR INCOMPATIBLE MATERIALS.
Other Precautions: NOT APPLICABLE.

Control Measures

Respiratory Protection: NIOSH APPROVED HIGH EFFICIENCY RESPIRATOR FOR DUST AND LEAD FUME. USE AND PROCESS IN A WELL VENTILATED AREA.
Ventilation: LOCAL EXHAUST: AS REQUIRED FOR LEAD DUST & FUME. MECHANICAL (GEN): AS REQUIRED TO MAINTAIN APPROP OSHA PEL/TLV LEVELS.
Protective Gloves: IMPERVIOUS GLOVES (FP N).
Eye Protection: ANSI APPRVD CHEM WORKERS GOGGLES (FP N).
Other Protective Equipment: ANSI APPRVD EYE WASH & DELUGE SHOWER (FP N). FULL PROT CLTHG & SHOES, INCLUDING HARD HATS, REQD FOR WORK W/MOLTEN METAL.
Work Hygienic Practices: NO EATING, DRINKING OR SMOKING WHILE PROCESSING OR HANDLING LEAD OR IN LEAD AREAS. PRACTICE GOOD PERSONAL (ING 5)
Suppl. Safety & Health Data: MATL TO AVOID: ZR, DISODIUM ACETYLIDE & OXIDANTS. CAN REACT STRONGLY W/OXIDIZING MATLS. EFTS OF OVEREXP: WEAK. INHAL OF LARGE AMTS OF LEAD MAY LEAD TO SEIZURES, COMA & PALE SKIN, BLUE LINE AT GUM MARGIN, DECREASED HAND-GRIP & PARALYSIS OF WRIST JOINTS. PRLNGD VERY HIGH EXPOS CAN ALSO RSLT IN KIDNEY DMG & (ING 2)

Transportation Data

Disposal Data

Label Data

Label Required: YES
Technical Review Date: 25MAR98
Label Date: 23MAR98
Label Status: G
Common Name: LEAD
Chronic Hazard: YES
Signal Word: WARNING!
Acute Health Hazard-Moderate: X
Contact Hazard-Slight: X
Fire Hazard-None: X
Reactivity Hazard-None: X
Special Hazard Precautions: ACUTE: EYES/SKIN: IRRITATION. CHRONIC: LEAD APPEARS ON THE NAVY OCCUPATIONAL CHEMICAL REPRODUCTIVE HAZARDS LIST (FP N).

SYMPTOMS OF LEAD OVEREXPOSURE INCLUDE DECREASED PHYSICAL FITNESS, LOSS OF APPETITE, ABDOMINAL PAINS, CONSTIPATION, FATIGUE, SLEEP DISTURBANCES, HEADACHE, ANEMIA, IRRITABILITY, TREMORS, HALLUCINATIONS AND DISTORTED PERCEPTION, MUSCLE AND JOINT PAIN, MUSCLE WEAKNESS, SEIZURES, COMA & DEATH. ANEMIA, PALE SKIN, BLUE LINE AT GUM MARGIN, DECREASED HAND-GRIP STRENGTH, ABDOMINAL PAIN, NAUSEA, VOMITING, AND PARALYSIS OF WRIST JOINTS. KIDNEY AND NERVOUS SYSTEM DAMAGE.
Protect Eye: Y
Protect Skin: Y
Protect Respiratory: Y
Label Name: TR METALS
Label Street: 1 PAVILION AVE
Label City: RIVERSIDE
Label State: NJ
Label Zip Code: 08075
Label Country: US
Label Emergency Number: 800-424-9300(CHEMTREC)

ALDRICH CHEMICAL -- ARSENIC (III) OXIDE, 99.99%, 25548-3
MATERIAL SAFETY DATA SHEET
NSN: 681000N057756
Manufacturer's CAGE: 60928
Part No. Indicator: A
Part Number/Trade Name: ARSENIC (III) OXIDE, 99.99%, 25548-3

General Information

Company's Name: ALDRICH CHEMICAL CO INC
Company's Street: 1001 W ST PAUL AVE
Company's P. O. Box: 355
Company's City: MILWAUKEE
Company's State: WI
Company's Country: US
Company's Zip Code: 53201
Company's Emerg Ph #: 800-231-8327
Company's Info Ph #: 414-273-3850
Record No. For Safety Entry: 001
Tot Safety Entries This Stk#: 001
Status: SMJ
Date MSDS Prepared: 23NOV93
Safety Data Review Date: 25FEB97
MSDS Serial Number: CDMDC

Ingredients/Identity Information

Proprietary: NO
Ingredient: ARSENIC TRIOXIDE (SARA 302/313) (CERCLA)
Ingredient Sequence Number: 01
Percent: 99.99
NIOSH (RTECS) Number: CG3325000
CAS Number: 1327-53-3
OSHA PEL: SEE 1910.1018
ACGIH TLV: 0.01 MG/M3

Proprietary: NO
Ingredient: SUPP DATA:(SHOW LABEL WHERE POSSIBLE).
Ingredient Sequence Number: 02
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

Physical/Chemical Characteristics

Appearance And Odor: WHITE GRANULAR POWDER.
Specific Gravity: 3.74

Fire and Explosion Hazard Data

Extinguishing Media: NONCOMBUSTIBLE. USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.
Special Fire Fighting Proc: USE NIOSH APPROVED SCBA & FULL PROTECTIVE EQUIPMENT (FP N).
Unusual Fire And Expl Hazrds: EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

Reactivity Data

Stability: YES
Cond To Avoid (Stability): HEAT. MAY DECOMPOSE ON EXPOSURE TO MOIST AIR OR WATER.
Materials To Avoid: ACIDS, OXIDIZING AGENTS, HALOGENS.

Hazardous Decomp Products: TOXIC FUMES OF ARSENIC OXIDES.
Hazardous Poly Occur: NO
Conditions To Avoid (Poly): NOT RELEVANT

Health Hazard Data

LD50-LC50 Mixture: LD50:(ORAL,RAT) 14,600 UG/KG.
Route Of Entry - Inhalation: YES
Route Of Entry - Skin: YES
Route Of Entry - Ingestion: YES
Health Haz Acute And Chronic: ACUTE:MAY BE FATAL IF INHALED, SWALLOWED OR ABSORBED THROUGH SKIN. MAY CAUSE IRRITATION. TOXIC EFFECTS. MAY ALTER GENETIC MATERIAL. TARGET ORGANS:SKIN, LUNGS. TARGET ORGAN DATA:BEHAVIORAL (SLEEP; MUSCLE WEAKNESS), CARDIAC (ARRYTHMIAS), LUNGS, THORAX/RESP (OTHER CHANGES; TUMORS), GI (HYPERMOTILITY, (EFTS OF OVEREXP)
Carcinogenicity - NTP: YES
Carcinogenicity - IARC: YES
Carcinogenicity - OSHA: YES
Explanation Carcinogenicity: ARSENIC TRIOXIDE:IARC MONOGRAPHS, SUPP, VOL 7, PG 100, 1987:GRP 1. NTP 7TH ANNUAL RPT ON CARCINS, 1994:KNOWN TO (SUPDAT)
Signs/Symptoms Of Overexp: HLTH HAZ:DIARR), LIVER (LIVER FUNC TESTS IMPAIRED), BLOOD (OTHER CHANGES), MUSCULO-SKELETAL (OTHER CHANGES), SKIN & APPENDAGES (CORR), EFTS ON FERTILITY (LITTER SIZE), EFTS ON EMBRYO/FETUS (CYTOLOGICAL CHANGES; FETOTOXICITY), SPECIFIC DEVEL ABNORMS (MUSCULOSKELETAL SYS), EFTS ON NEWBORN (APGAR SCORE; OTHER (SUPP DATA)
Med Cond Aggravated By Exp: NONE SPECIFIED BY MANUFACTURER.
Emergency/First Aid Proc: EYES:IMMEDIATELY FLUSH W/COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. SKIN:IMMEDIATELY FLUSH W/COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAM CLTHG & SHOES. DISCARD CONTAMINATED CLOTHING & SHOES. INHAL:REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTF RESP. IF BREATHING IS DIFFICULT, GIVE OXYGEN. INGEST:WASH OUT MOUTH W/WATER PROVIDED PERSON IS CONSCIOUS. CALL MD IMMED.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: EVACUATE AREA. WEAR NIOSH APPROVED SCBA, RUBBER BOOTS & HEAVY RUBBER GLOVES. WEAR DISPOSABLE COVERALLS & DISCARD THEM AFTER USE. SWEEP UP, PLACE IN A BAG & HOLD FOR WASTE DISPOSAL. VENTILATE AREA & WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.
Waste Disposal Method: BURN IN A LANDFILL SITE APPROVED FOR THE DISPOSAL OF CHEMICAL HAZARDOUS WASTES. OBSERVE ALL FEDERAL, STATE & LOCAL ENVIRONMENTAL REGULATIONS.
Precautions-Handling/Storing: DO NOT BREATHE DUST. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. CARCINOGEN. MAY CAUSE CANCER. HIGHLY TOXIC. MUTAGEN. STORE IN A COOL, DRY PLACE.
Other Precautions: KEEP AWAY FROM COMBUST MATLS, HEAT, SPKS & OPEN FLAME. AVOID CONT W/ACID, METALS. MAY CAUSE HERITABLE GENETIC DMG. TOX BY INHAL, IN CONT W/SKIN & IF SWALLOWED. HARMFUL IF INHALED/SWALLOWED, USE ONLY W/ ADEQ VENT/NIOSH APPRVD RESP (SUPDAT)

Control Measures

Respiratory Protection: WEAR APPROPRIATE NIOSH APPROVED RESPIRATOR.
Ventilation: USE ONLY IN A CHEMICAL FUME HOOD.
Protective Gloves: CHEMICAL-RESISTANT GLOVES.
Eye Protection: ANSI APPROVED CHEM WORKERS GOGGS(SUPDAT)
Other Protective Equipment: EYE WASH FOUNTAIN & DELUGE SHOWER WHICH MEET ANSI DESIGN CRITERIA (FP N). WEAR SUITABLE PROTECTIVE CLOTHING.
Work Hygienic Practices: WASH THOROUGHLY AFTER HANDLING.
Suppl. Safety & Health Data: EXPLAN OF CARCIN:BE CARCIN. CFR VOL 29, PG NEONATAL MEASURES/EFTS), CARCIN (NEOPLASTIC BY RTECS CRITERIA; EQUIVOCAL

TUMORIGENIC AGENT BY RTECS CRITERIA). EYE PROT:& FULL LGTH FCSHLD (FP N). OTHER PREC:PROT. IF YOU FEEL UNWELL, SEEK MED ADVICE (ING 2)

Transportation Data

Disposal Data

Label Data

Label Required: YES
Technical Review Date: 03APR97
Label Date: 25FEB97
Label Status: G
Common Name: ARSENIC (III) OXIDE, 99.99%, 25548-3
Chronic Hazard: YES
Signal Word: DANGER!
Acute Health Hazard-Severe: X
Contact Hazard-Slight: X
Fire Hazard-None: X
Reactivity Hazard-None: X
Special Hazard Precautions: ACUTE:MAY BE FATAL IF INHALED, SWALLOWED OR ABSORBED THROUGH SKIN. MAY CAUSE IRRITATION. TOXIC EFFECTS. MAY ALTER GENETIC MATERIAL. TARGET ORGANS:SKIN, LUNGS. CHRONIC:CANCER HAZARD. CONTAINS ARSENIC TRIOXIDE, WHICH IS LISTED AS A HUMAN LUNG CANCER CARCINOGEN (FP N).
Protect Eye: Y
Protect Skin: Y
Protect Respiratory: Y
Label Name: ALDRICH CHEMICAL CO INC
Label Street: 1001 W ST PAUL AVE
Label P.O. Box: 355
Label City: MILWAUKEE
Label State: WI
Label Zip Code: 53201
Label Country: US
Label Emergency Number: 800-231-8327

ATTACHMENT B
EQUIPMENT DECONTAMINATION PROCEDURES

- The sampler and sample tubes will be cleaned using tap water and Liquinox. A brush will be used, if necessary, to remove particulate matter and surface films during cleaning.

- The equipment will then triple rinsed thoroughly with tap water, analyte free water and pesticide-grade isopropanol followed by a final rinse of analyte free water only. If analyte free water is not available, the equipment will be allowed to air dry following the solvent rinse. A solvent rinse will not be applied to PVC items or plastic items.

- Once the equipment has been cleaned it will be removed from the decontamination area and covered with aluminum foil when not in use.

- Equipment to be stored overnight will be wrapped in aluminum foil and covered with clean, unused plastic.

- The rinsate will be containerized and transferred to drums for characterization and disposal off-site in a permitted facility.

The following personnel have read the above plan and are familiar with its requirements:

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