ERM-EnviroClean, Inc.

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38772

17 July 1995
W.O. 995-68

Mr. John Osolin
USEPA Region II
Emergency Remedial Response Division
290 Broadway, 19th Floor
New York, New York 10007-1866

ERM

Re: Work Plan for Off-Site Contaminated Soil Removal
Pulverizing Services Site
Moorestown, New Jersey

Dear Mr. Osolin:

On behalf of PPG Industries, Inc. (PPG), ERM-EnviroClean, Inc. (ERM) has prepared the following Work Plan for the excavation and stockpiling of pesticide-impacted soils from properties located adjacent to the Pulverizing Services (PS) Site in Moorestown, New Jersey.

This Work Plan describes the specific procedures to be employed to perform the required interim remedial action. The Work Plan will guide the interim remedial action work and will incorporate the procedures and goals of ERM and PPG for the safe, efficient, and cost-effective execution of the work.

SUMMARY

Pesticide impacted soils will be removed at the direction of PPG, or its representatives, from three off-site areas located adjacent to the PS Site. Excavation will take place in three areas exhibiting DDT concentrations above USEPA Region III risk based standards as referenced on the attached Figures 1N and 1S prepared by McLaren/Hart. It is believed that the contamination is limited only to the shallow soils, with an anticipated excavation depth of 1-2 feet below the surface. These soils will be transported onto the PS Site where they will be staged for future treatment or disposal pending completion of the remedy selection process. Excavated soils will be staged in two separate stockpiles within Building 29. One stockpile will contain soils with less than 10 parts per million (ppm) of DDT as measured by Dexsil® field tests, and the second stockpile will contain soils exceeding 10 ppm DDT. USEPA Region III

200001

Risk Based Concentrations will be the criteria for the extent of soil removal. An estimated 500 cubic yards of contaminated soils are expected to require removal during the interim removal activities. Field samples using a Dexsil® kit procedure, as per the Phase II investigation, will provide guidance for the completion of excavation. Confirmatory samples will also be collected for analysis at an off-site laboratory. All disturbed areas will be backfilled with clean soil and restored as nearly as possible to original conditions. All work will be performed to minimize disruption to the residents or occupants of adjacent properties.

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WORK PLAN

Mobilization

Upon approval to commence field activities, ERM will mobilize all necessary equipment and materials to the site for the performance of the required work. Designated Exclusion, Decontamination, and Support Zones will be established and clearly marked with hazard ribbon, or temporary fencing, as required. At this time, ERM will also construct the soil stockpile areas within Building 29. Each soil stockpile will be lined with two layers of 6-mil polyethylene sheeting.

All traffic on-site will be routed to avoid heavily contaminated areas to eliminate tracking of contaminants throughout the site. It is anticipated that access to the designated work areas will require the temporary removal of existing fencing. All fencing will be replaced to pre-existing condition upon completion of the work.

A minimum of three (3) days prior to commencing field activities, ERM will contact the Garden State Underground Plant Location Service (1-800-272-1000) to confirm the presence or absence of any subsurface utilities in the vicinity of the proposed excavation activities. ERM will work with PPG and the USEPA to confirm the nature of utilities on properties owned by the neighbors.

Soil Excavation and Staging

Upon completion of all necessary mobilization tasks, ERM will excavate pesticide impacted soils as directed by PPG, or its designated representatives. Excavation will be performed using conventional equipment consisting mainly of a backhoe (Case 580, or equivalent).

Initial excavation will be based upon prior sampling data. As excavation activities proceed, further decisions concerning the need to excavate will be based upon the results of field screening tests described below.

At this time, it is anticipated that all excavation activities will be limited to relatively shallow soils (1-2 feet below surface). Therefore, the potential for encountering ground water within the excavations is considered extremely remote. Temporary berms will be constructed as necessary around each excavation to prevent runoff from entering or exiting the exposed excavations.

Extreme caution will be taken during all excavation activities to minimize the generation of dust. Active dust suppression measures, primarily in the form of periodic watering, will employed in each work area. Given that the proposed work will be performed on third party properties, the control of dust during excavation is considered of paramount importance and will be a primary focus during the performance of this project.

Soils generated during excavation will be segregated, based upon the field screening results, and transported via dump truck to Building 29 for staging. Excavated materials will be staged in two separate stockpiles within Building 29. One area will contain soils with less than 10 parts per million (ppm) DDT as measured by Dexsil® field tests, and the second area will contain soils exceeding 10 ppm DDT.

An estimated 500 cubic yards of soils are expected to require removal during the proposed interim removal activities. All soils will be staged on, and covered with, two layers of 6-mil polyethylene sheeting. Soils will be treated and disposed of during the implementation of the final approved Remedial Action Work Plan.

Field Screening

Field screening for soil contamination will be used to rapidly assess the concentration of pesticides in site soils in order to direct the excavation activities. Representative soil samples will be obtained using a stainless steel trowel or hand auger. After each sample is collected, it will be placed in a stainless steel pan and thoroughly mixed. The resultant samples will be placed in appropriate sample containers in preparation for field screening. Field screening soil samples will be collected at a minimum of 1 sample per 900 ft^2 of excavation. Sidewall samples will be collected at a rate of 1 sample per 30 linear feet of sidewall.

Field screening will be conducted using a field chemical extraction method with final chloride measurement (Dexsil®). This procedure utilizes sodium metal to remove chloride from the soil sample. The concentration of chloride in the final extract is then measured using a chloride-specific electrode. By measuring the chloride concentration the pesticide concentration can then be estimated. The field method assumes that all chloride detected is from a pesticide compound.

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Each soil sample will be prepped/extracted according to Dexsil's recommended procedures and analyzed for chloride using the L2000™ analyzer. The chloride concentration of the sample will be compared to the calibration curves in order to estimate the pesticide concentration. The rapid testing time associated with the L2000 will allow for a much quicker evaluation of the need to continue or cease excavation. Additional information regarding the L2000 analyzer is provided as an appendix to this Work Plan.

Confirmation Sampling and Analysis

Following completion of excavation activities in each area, representative confirmation samples will be collected for off-site laboratory analysis. Each sample will be collected using a stainless steel trowel or hand auger. Confirmation soil samples will be collected in accordance with the Phase II Investigation Work Plan prepared by McLaren/Hart. The estimated number of confirmation samples is 20% of the number of field screening samples. After each sample is collected, it will be placed in a stainless steel pan and thoroughly mixed. The resultant samples will be placed in appropriate sample containers in preparation for laboratory analysis.

Each sample will be labeled at the time of collection by the field personnel performing the sampling. Information marked on the sample label will include the following minimum items:

- Sample Identification Number
- Collector's Name
- Date of Collection
- Type of Sample
- Preservatives Used
- Analysis To be Performed
- Number of Bottles in Sample Set

All samples will be transported to the laboratory in durable, secured metal or plastic coolers or laboratory-supplied, secured waterproof metal or plastic containers. Containers will be shipped via common overnight carrier within 24 hours of collection. Samples will be shipped in accordance with State and Federal DOT Regulations. Chain-of Custody documentation will accompany all samples.

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PPG proposes to use Quanterra Laboratories in North Canton, Ohio for the necessary confirmation sample analyses.

Site Health & Safety Protocol

ERM has prepared an Addendum (Addendum #2) to the previously approved site-specific Health and Safety Plan (HASP) in accordance with current OSHA guidelines as specified in 29 CFR 1910.120. The purpose of the HASP Addendum #2 is to supplement the existing HASP, and further define the requirements and designate protocols to be followed at the PS Site during the proposed interim remedial activities. Applicability extends to all project personnel, as well as any visitors who wish to enter the designated Decontamination or Exclusion Zones.

All personnel involved in field activities will be provided with the necessary Hazardous Waste Operation Training in accordance with 29 CFR 1910.120, and will be a participant in ERM's ongoing medical surveillance program

In developing HASP Addendum #2, consideration was given to current standards, as defined by USEPA/OSHA/NIOSH, health effects and standards for known contaminants, and procedures designed to account for the potential exposure of unknown substances. Specifically, the following reference sources have been consulted:

- OSHA Regulation for Construction (29 CFR 1926);
- OSHA Regulation for General Industry (29 CFR 1910);
- OSHA Regulation for Hazardous Waste Operations (29 CFR 1910.120);
- NIOSH/OSHA/USCG/USEPA Occupational Health & Safety Guidance Manual for Hazardous Waste Site Activities;
- PS Site HASP prepared by Paul C. Rizzo and Associates, and HASP Addendum #1 prepared by McLaren/Hart;

- ERM's Corporate Health & Safety Guidance Manual.

Emergency and Contingency Plans have been included within the original HASP to inform personnel on site of the site emergency response procedures and potential fire, explosion, health, or safety hazards of the operation. The HASP summarizes those hazards and defines applicable protective measures for the site. HASP Addendum #2 includes an updated list of emergency contacts for this phase of work.

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A copy of HASP Addendum #2 is provided as an Appendix to this Work Plan. Except where specifically stated in Addendum #2, all provisions of the original site HASP and Addendum #1 will also apply to this work.

Personnel and Equipment Decontamination

A designated area will be established on-site for the decontamination of both personnel and equipment. The Decontamination Zone will be located such that all personnel exiting the Exclusion Zone must first pass through the Decontamination Zone, prior to reaching the remainder of the facility grounds.

ERM will also construct a temporary decontamination pad prior to the demobilization of any large equipment (e.g. backhoe or dump truck). The decontamination pad will be constructed of wood and 6-mil polyethylene sheeting. Soil present on the equipment will first be scraped or brushed off. A pressure washer will then be used to further remove any residue, particulates, or soil buildup on the equipment, if necessary.

Decontamination of equipment used for sampling will be carefully performed to minimize any possibility of cross contamination through the use of tools and equipment. All equipment will also be decontaminated prior to initial use. Small tools and other apparatus used for sampling will be decontaminated using the following procedures:

- Wash with low-phosphate detergent solution (Alconox);
- Rinse with tap water;
- Rinse with one percent nitric acid, ultra pure;
- Rinse with acetone;
- Thoroughly rinse with deionized water;
- Air dry; and
- Wrap in aluminum foil.

The deionized water shall meet the following criteria:

- Purgeable organics <10 ppb;
- Semivolatile organics <CRQL;
- Pesticides < CRQL;
- PCBs < CRQL; and
- Inorganics <CRQL.

ERM

A personnel decontamination station will be included within the decontamination Zone. The personnel decontamination station will have the following minimum components:

- Plastic drop cloths for depositing heavily contaminated equipment or outer protective clothing;
- Containers for storing contaminated equipment or protective clothing to be discarded;
- Tubs for wash and rinse solutions;
- Long handled brushes for washing and rinsing;
- Containers for storage of decontaminated clothing ad equipment; and
- Disposal wiping cloths and towels.

All rinseate liquids generated from the decontamination activities will be transferred to the existing decontamination water storage tanks at the site.

Cleanup Criteria

USEPA Region III Risk Based Concentrations will be the criteria for the extent of soil removal. The cleanup criteria will be as follows:

- 1.9 ppm DDT and for residential property
- 17 ppm DDT and for commercial property

Site Restoration

Upon receipt of approval to close each excavation, all disturbed areas will be backfilled with clean soil and restored as nearly as possible to original conditions. All previously vegetated areas will be re-seeded upon completion of grading. All fence which required removal will be reinstalled to its original condition. All temporary structures, such as the

decontamination pad, will be dismantled and demobilized at the completion of the project.

Project Team and Organization

ERM

ERM believes that our in-house team is experienced and knowledgeable in the broad range of project management, environmental remediation, and construction issues related to this project.

The members of the project team which ERM has selected for this assignment have been chosen to provide the correct mix of project management experience and technical skills necessary to implement the remedial action effectively. Our project team is comprised of experienced management, technical, and construction professionals.

Figure 1 presents ERM's Organizational Chart for this project.

Project Reporting

Upon completion of the field activities, ERM will prepare a brief letter report for submittal to PPG providing a narrative of activities, a map depicting all excavated areas and sampling locations, and the results of all field analyses. Verification sample results and all sample chain of custody documentation will also be included in this report.

Community Relations

The majority of the proposed activities covered in this Work Plan are to be performed on third party properties. As such, the need for an active community relations plan is essential to ensure the successful performance of this work with a minimum of disruption to the public.

It is assumed that the lead community relations role for this project will lie with the USEPA and PPG. It is ERM's understanding that meetings with the impacted neighbors are in the process of being held, and will be completed prior to the commencement of field activities. ERM's primary function to ensure a successful community relations effort will be to perform all work while minimizing disruption to the residents or occupants of adjacent properties. All site personnel will be instructed to act in a courteous manner while directing any questions from neighbors to the appropriate USEPA or PPG representatives.

Schedule of Field Activities

Field activities will not begin until agency approval of this Work Plan and completion of access agreements between PPG and the property owners.

ERM anticipates that all field activities can be completed in approximately one week.

If you have any questions concerning this Work Plan, please feel free to contact David Guzik at (412) 772-1022 or me at (609) 895-0050.

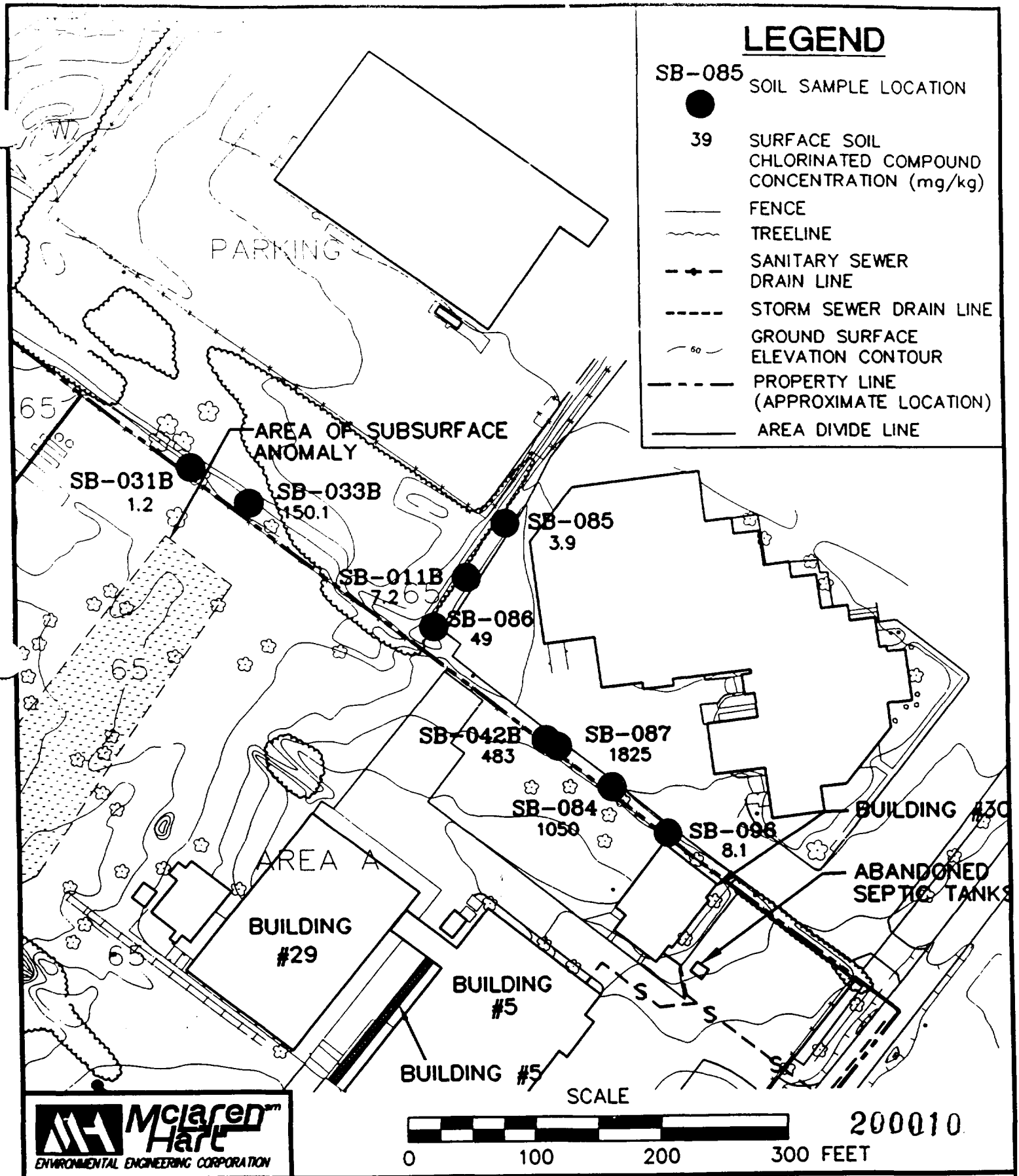
Sincerely,
ERM-EnviroClean, Inc.

Peter L. Sudano

Peter L. Sudano, PG, CHMM
Senior Project Manager

PLS/dag
enclosures: McLaren/Hart Figures 1N and 1S (Soil Sampling Locations)
ERM Figure 1 - Project Organizational Chart
Dexsil® L2000 Analyzer Information
Health & Safety Plan Addendum 2

cc: T. Ebbert (PPG Industries, Inc.)
S. Porfido
D. Guzik
S. Bills

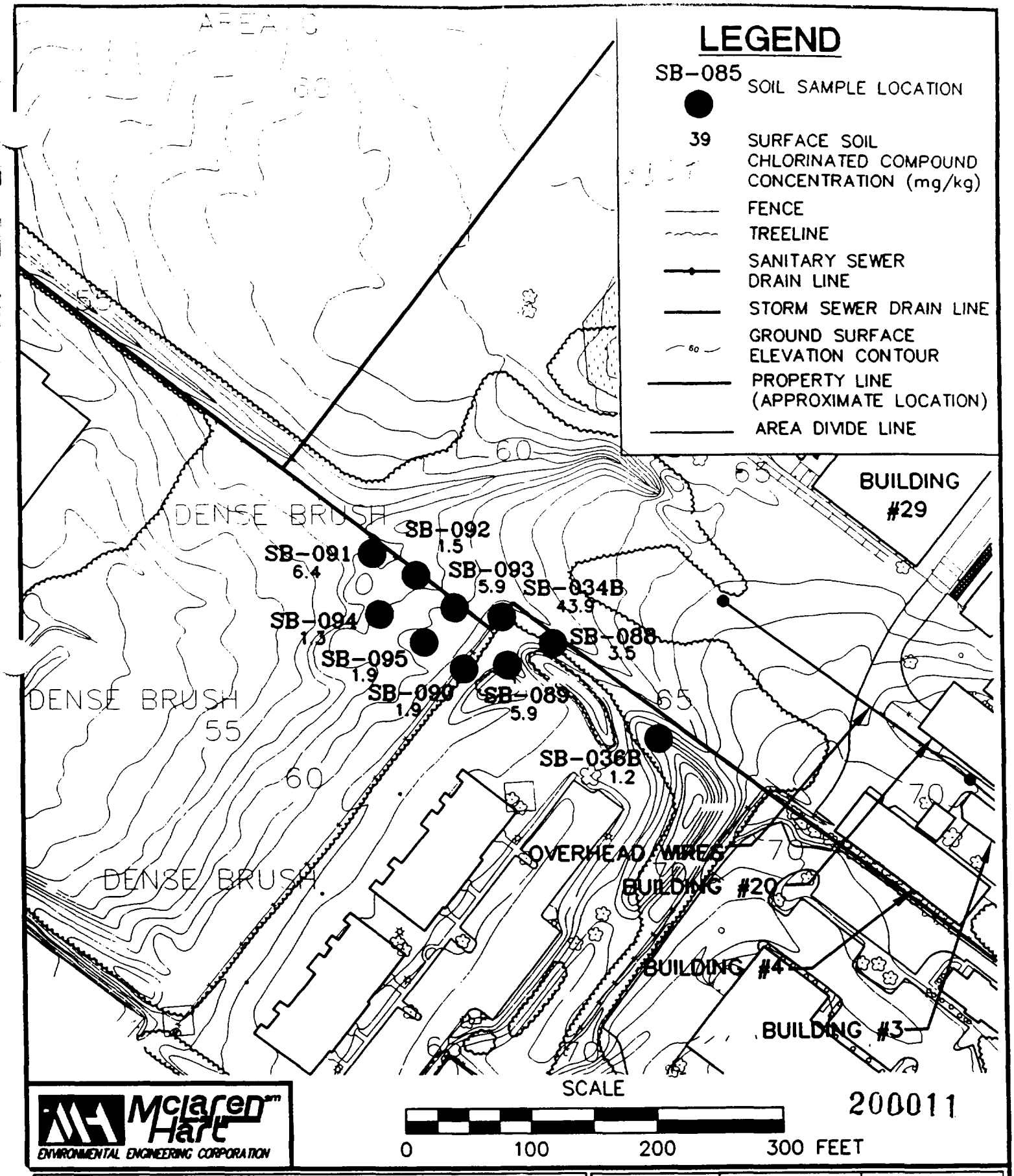


McLaren Hart
ENVIRONMENTAL ENGINEERING CORPORATION

PULVERIZING SERVICES SITE

MOORESTOWN, NEW JERSEY

DRWN: PAR	CHKD:	APPD:
SCALE: 1"=100'		DATE: 6/5/95
SOIL SAMPLE LOCATIONS		DRAWING NUMBER 09.0801461 FIG-1N



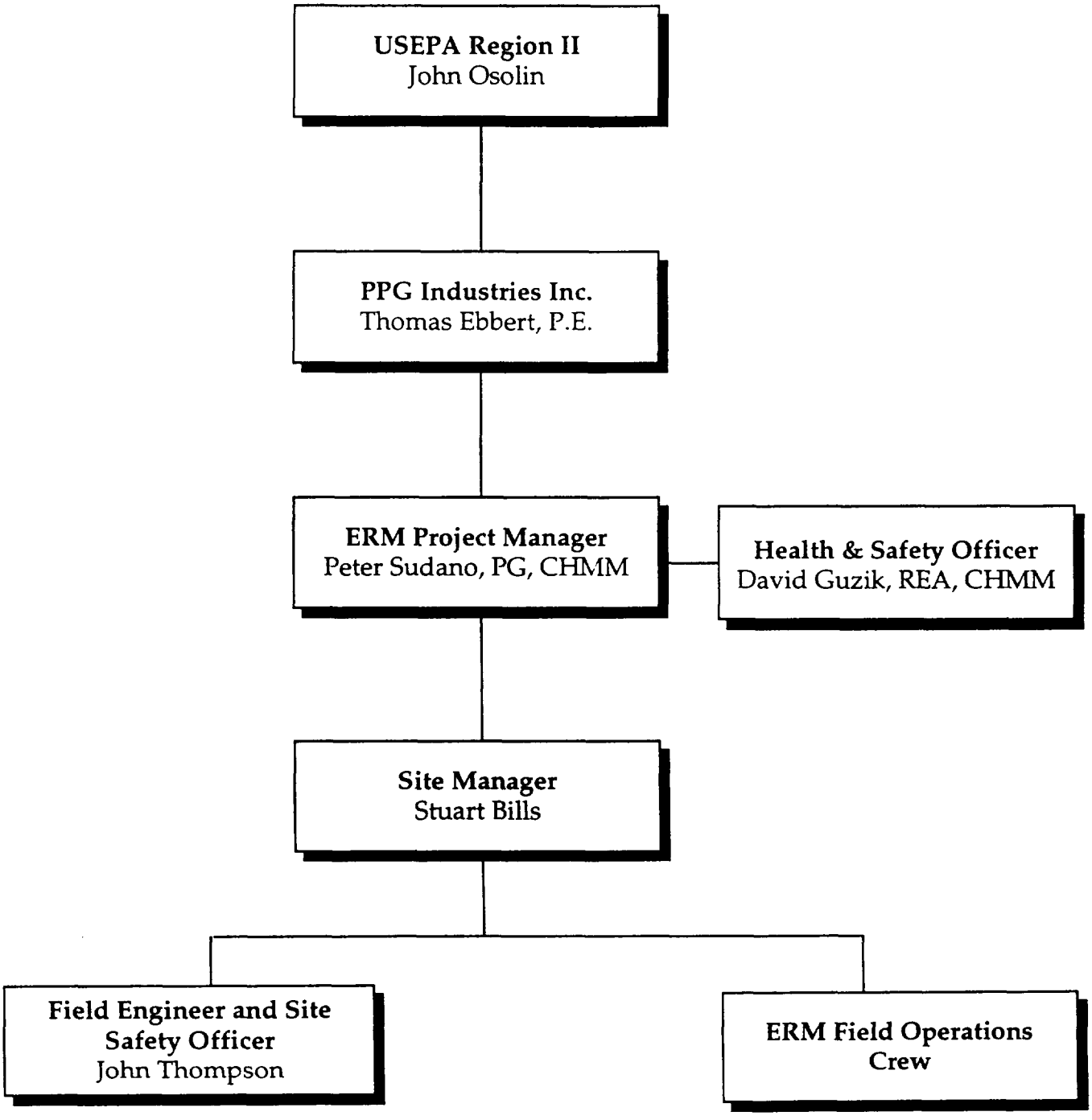
McLaren Hart
ENVIRONMENTAL ENGINEERING CORPORATION

PULVERIZING SERVICES SITE

MOORESTOWN, NEW JERSEY

DRWN: PAR	CHKD:	APPD:
SCALE: 1"=100'		DATE: 6/5/95
SOIL SAMPLE LOCATIONS		DRAWING NUMBER 09.0801461 FIG-1S

Figure 1
Project Organization Chart



L2000™ PCB/CHLORIDE ANALYZER

DEXSIL®

200013

The L2000 PCB/Chloride Analyzer

Dexsil's L2000 PCB/Chloride Analyzer is a field portable instrument that determines PCB concentration in oil and soil over a range of 5 to 2000 ppm. The L2000 tests for the total amount of chloride present in the sample, converts the amount of chloride sensed to an equivalent amount of PCB and provides an LCD readout in parts per million.

The instrument is easy to use and does not require a laboratory or an experienced technician to get accurate results. Being an on-site instrument, the L2000 eliminates the days or even weeks of waiting for the laboratory. Sample testing time is cut to 5 minutes for oil and 10 minutes for soil. The L2000 also eliminates the high cost of laboratory analysis. An average oil analysis costs $4.00 per sample and soil $8.00 per sample.

How The L2000 Works

The L2000 utilizes a chloride specific electrode to quantitatively measure the amount of PCB in a sample. A sodium reagent is reacted with the sample to convert the PCB to chloride. The instrument senses the amount of chloride in the sample and translates it to the equivalent amount of PCB.

Because different types of PCB contain different percentages of chlorine, the L2000 has an analysis range switch which allows the user to adjust for either Aroclor 1242, Aroclor 1260 or Askarel A (60% Aroclor 1260 and 40% trichlorobenzene). If the Aroclor of the sample being tested is unknown, the analysis range switch is set for 1242 for the most conservative reading.

How To Use The L2000

One L2000 can be used to test both oil and soil samples. For soil analysis, any PCB must first be extracted from the soil using the extraction solvent supplied with the instrument. After the PCB has been extracted from the soil, the procedure for oil and soil is the same. The sample is reacted with a sodium reagent to transform the PCB into chloride which the instrument then quantifies. The L2000 shows the result in parts per million PCB.

Several samples can be prepared concurrently to speed the sample testing time. In a single 8 hour day, one operator can run as many as 150 oil samples or 100 soil samples.

200014

Typical Application Of The L2000 PCB/Chloride Analyzer

A site suspected of formerly holding PCB transformers is being considered for the location of a new office complex. Before the property is purchased, the prospective buyer wants the entire lot checked for PCB levels. By using the L2000 Analyzer, the entire site can be quickly screened for PCB, and, if necessary, cleaned up in a fraction of the time required by conventional methods.

1. The entire site is mapped out, and using a grid system, samples are taken from different areas that will give a representative view of the entire site. Each sample can be analyzed the same day with the L2000 to determine just how much PCB is in each sample. If the instrument shows that PCBs are present, several samples are then sent to a laboratory for GC analysis to confirm that the source of the organic chloride is indeed PCB and to identify what Aroclor or Aroclors may be present.

2. As clean-up of the site starts, additional samples are analyzed with the L2000 to determine just where the points of greatest contamination are located. In less than a day, all hot-spots are located and isolated.

3. As excavation takes place, additional samples are analyzed to determine the vertical and horizontal soread of the contamination. Since results on any sample can be obtained in less than ten minutes, only the soil that is truly contaminated is actually removed. Excavation continues until the L2000 shows that the soil now being removed from the site contains PCBs below the critical level. As soon as all test sites in the area register less than the critical level (eg, 10 ppm) with the L2000, digging can stop and several final samples are sent to a laboratory for GC analysis to confirm that any remaining soil contains less than the critical concentration of PCB.

During the entire process of detecting the presence of PCBs, isolating local hot-spots, and removing contaminated soil from the site, the L2000 saves both time and expense by providing quick, accurate results on a large number of samples. Waiting for analytical results is reduced to a minimum and excavating can proceed at a continuous pace because in less than ten minutes, the L2000 lets you know right where you stand. Just the waiting time that is saved can pay for the instrument in less than a week and the decreased analytical costs can help bring you in under budget.

Whether you test oil or soil samples, the L2000 PCB/Chloride Analyzer can help you work faster and more economically, and provide you with a competitive edge in PCB analysis that will increase your productivity and improve your bottom line.

200015

Pulverizing Services Site
Moorestown, NJ

Health and Safety Plan

Addendum 2

INTRODUCTION

The purpose of this plan is to define the requirements and designate protocols to be followed during the proposed remediation activities at the Pulverizing Services Site in Moorestown, NJ. Applicability extends to all employees, subcontractors, and visitors.

This plan is to supplement the existing Health and Safety Plan (HASP) prepared by Paul C. Rizzo and Associates and Addendum 1 prepared by McLaren/Hart. This Addendum 2 provides supplemental information specific to the remediation activities to be performed by ERM.

All personnel on site shall be informed of the site emergency response procedures and potential fire, explosion, health, or safety hazards of the operation.

This plan must be reviewed and an agreement to comply with the requirements must be signed by all personnel prior to entering the Decontamination Zone or Exclusion Zone.

KEY SITE PERSONNEL AND ASSIGNED RESPONSIBILITIES

The following personnel are critical to the planned activities at the Moorestown, NJ Site:

Key Personnel

Client Representative: (PPG Industries, Inc.)	Mr. Thomas Ebbert, P.E.	(412) 492-5478
ERM Project Manager:	Mr. Peter L. Sudano, P.G. CHMM	(609) 895-0050
ERM Site Manager:	Mr. Stuart B. Bills	(609) 895-0050
ERM Site Safety Officer (SSO)	Mr. John C. Thompson	(412) 772-1022
ERM Health & Safety Coordinator:	Mr. David A. Guzik, REA, CHMM	(412) 772-1022
USEPA Region II Rep.:	Mr. John Osolin	

Responsibilities

Client Representative: The client has the authority to select and dismiss organizations in charge of construction.

ERM Project Manager: The Project Manager is directly responsible for the performance of the project and will ensure timely and responsive communication with the Client Representative.

ERM Health & Safety Coordinator: The Health & Safety Coordinator is responsible for any changes or modifications that may need to be made to this HASP, as well as other general health and safety issues.

ERM On-Site Health & Safety Officer: The On-Site Health & Safety Officer (On-site H&S Officer) has total responsibility for ensuring that the provisions of this HASP are implemented in the field. The On-site H&S Officer will also be responsible for conducting site inspections on a regular basis in order to ensure the effectiveness of this plan. ERM proposes that the ERM Site Manager will also serve as the On-site H&S Officer.

SUMMARY OF PROJECT ACTIVITIES

The proposed remediation activities at the Moorestown site involve the excavation of pesticide impacted soils from three properties adjacent to the site and transport of these soils to a staging area on-site. The excavated soils will be staged inside of a Building # 29 and concealed in plastic until treatment or disposal at a later date. Confirmatory soil samples will be collected and analyzed prior to backfilling the excavation and restoration of the area.

It is anticipated that approximately 500 cubic yards of impacted soils will be excavated to a depth of approximately 2-feet below ground surface. All remediation activities will performed in such a manner as to minimize impacting unaffected areas and minimize human exposure to potentially hazardous materials.

The following activities are anticipated at the Moorestown site:

- Removal and reinstallation of site fencing (as needed),
- Excavation of contaminated soil using a backhoe and hand tools in a manner so as to remove only soil determined to be contaminated,
- Transport excavated soil to plastic protected stockpiles in Site Building #29,
- Pro-active dust suppression with water will be performed during all intrusive activities,
- Collection and field analysis of post-excavation samples using a Dexsil® L2000 analyzer.

- Collection of post-excavation samples for confirmatory laboratory analysis by Quanterra Laboratories,
- Backfill all excavations to grade with clean fill,
- Restoration of all excavations with grass seed, and
- Properly decon all equipment and containerize all PPE and decon water for on-site storage and future disposal by PPG.

Work Areas

Soils will be excavated from three distinct areas adjacent to the Pulverizing Services Site boundary. The soil will be transported via dump truck to the on-site staging area inside of building # 29.

VISITORS

All visitors entering the Decontamination Zone and Exclusion Zone will be required to read and verify compliance with the provisions of this HASP by signing the sign-off sheet located at the end of this HASP. In addition, visitors will be expected to comply with relevant OSHA requirements such as training, medical monitoring, and respiratory protection (if applicable). Visitors who desire to enter the Decontamination Zone or Exclusion Zone must supply a certificate documenting health and safety training pursuant to 29 CFR 1910.120. With the exception of hard hats, visitors will also be expected to provide their own personal protective equipment.

In the event that a visitor does not adhere to the provisions of this HASP, he/she will be requested to leave the work area. All nonconformance incidents will be recorded in the site log book.

HEALTH & SAFETY HAZARDS

Chemical Contaminants

Planned remediation activities involve the excavation of soils known to be contaminated with pesticide compounds. Reference is made to Table I of HASP Addendum 1, which provides a summary of the hazards associated with the chemicals suspected to be present in the soil. Skin adsorption is the major exposure pathway for the chemicals present on-site, therefore strict adherence to PPE requirements is critical.

Physical Hazards

Open Excavations: ERM anticipates shallow excavations (less than 2 feet) will be required to remove contaminated soil. Therefore, shoring of the excavations is not anticipated. If the excavations become deeper than four feet and require stabilization,

ERM will take appropriate measures. Any open excavations will be properly marked with safety fence or hazard tape.

Utilities: All utility companies and local authorities must be notified of planned excavation activities and that all underground utilities must be appropriately marked prior to excavation work (Garden State Underground Plant Location Service 1-800-272-1000).

Heavy Equipment: Heavy Equipment Operators will be required to don the appropriate PPE set forth for specific work activities. At a minimum, the wearing of Level D protective gear will be required for operation of all heavy equipment. Spotters will be utilized during excavation activities involving heavy equipment. All equipment will be inspected daily.

AIR MONITORING

ERM does not plan to conduct air monitoring during excavation operations. Pro-active dust suppression will be performed to minimize the potential of exposure to contaminants present on dust particulates.

ANTICIPATED PERSONNEL PROTECTIVE EQUIPMENT (PPE)

Personnel entering the established Exclusion or Decontamination Zones will be required to adhere to the PPE requirements set forth in this plan as protection from exposures to site compounds through inhalation, ingestion, and/or skin contact.

It is anticipated that all site activities related to excavation of the pesticide impacted soils of will be conducted in Modified Level D protection. Decontamination and soil sampling activities will also be conducted in modified Level D protection.

Mandatory PPE for Modified Level D includes the following: hard-hat, safety glasses, tyvex coveralls, steel toe/shank work boots with rubber overboots, latex inner gloves and neoprene outer gloves.

The On-site H&S Officer may request a reduction in the level of protection from ERM's Health and Safety Coordinator. However, the Health and Safety Coordinator is the only person authorized to downgrade the level of protection from those specified above.. The On-site H&S Officer may at his/her discretion upgrade the levels of protection at any time. Contingency levels will always be one protection factor greater then those specified (i.e. Level C). Minimum Level C PPE includes Tyvex, and half-face GMC-H respirator, as well as those items previously listed under Level D PPE.

DECONTAMINATION

A designated area will be established on-site for the decontamination of both personnel and equipment. The Decontamination Zone will be located such that all personnel

exiting the Exclusion Zone must first pass through the Decontamination Zone, prior to reaching the remainder of the facility grounds.

A personnel decontamination station will be included within the decontamination Zone. The personnel decontamination station will have the following minimum components:

- Plastic drop cloths for depositing heavily contaminated equipment or outer protective clothing;
- Containers for storing contaminated equipment or protective clothing to be discarded;
- Tubs for wash and rinse solutions;
- Long handled brushes for washing and rinsing;
- Containers for storage of decontaminated clothing and equipment; and
- Disposal wiping cloths and towels.

Decontamination of equipment used for sampling will be carefully performed to minimize any possibility of cross contamination through the use of tools and equipment. All equipment will also be decontaminated prior to initial use. Small tools and other apparatus used for sampling will be decontaminated using the following procedures:

- Wash with low-phosphate detergent solution (Alconox);
- Rinse with tap water;
- Rinse with one percent nitric acid, ultra pure;
- Rinse with acetone;
- Thoroughly rinse with deionized water;
- Air dry; and
- Wrap in aluminum foil.

The deionized water shall meet the following criteria:

- Purgeable organics <10 ppb;
- Semivolatile organics <CRQL;
- Pesticides < CRQL;
- PCBs < CRQL; and
- Inorganics <CRQL.

ERM will construct a temporary decontamination (decon) pad at the completion of the project or prior to demobilization of any large equipment. The decon pad will be constructed of wood and 6 mil polyethylene plastic sheeting. The decon pad will have dike walls and a sump to contain the rinsate liquids with in the pad. A pressure washer will be used to decontaminate any residue, particulates, or soil build up on the haul vehicles or other equipment, if necessary. All decon rinsate will be pumped into a holding tank on-site that contains decon rinsate from previous work.

At the completion of the project ERM will dismantle the decon pad and place the plastic sheeting in 55 gallon drums. The drums will be labeled properly and staged with the other waste materials generated.

SITE ACCESS AND CONTROL

The proposed project location will be divided into work zones as a means to control site access and decontamination efforts. These zones will be established by the On-site H&S Officer and may change over the course of project as work areas change. Work zones include the following:

- Support Zone - clean area, storage for excess non-contaminated equipment.
- Decontamination Zone - where decontamination processes will take place. Location of the decontamination pad, and drums of contaminated personal protective equipment (PPE).
- Exclusion Zone - potentially contaminated excavation area and soil staging area.

Certain procedures will be followed to ensure suitable site control and limitation of access so that those persons who may be unaware of site conditions are not exposed to inherent hazards. Contaminated soils will be placed on plastic sheeting, covered, and secured within a designated area of the Exclusion Zone to prevent unauthorized tampering. Temporary protective fencing is required to be erected around all open excavations.

EMERGENCY AND CONTINGENCY PROCEDURES

Emergency Contacts and Telephone Numbers

Police:	**(609) 235-0130**
Fire:	**(609) 234-1111**
Ambulance:	**(609) 234-1111**
Memorial Hospital :	**(609) 267-0700**
EPA Region II: **Mr. John Osolin**	

Client Rep(s):	Mr. Thomas Ebbert, P.E. (PPG Industries, Inc.)	(412) 492-5478
ERM Proj. Manager:	Mr. Peter L. Sudano, P.G., CHMM	(609) 895-0050 (609) 446-4486 (Home)
ERM Health & Safety Coordinator:	Mr. David A, Guzik, REA, CHMM	(412) 772-1022 (412) 865-2429 (Home)
On-Site Health Safety Officer:	Mr. John C. Thompson	(412) 772-1022 (412) 453-0804 (Home)
USEPA Region II		(212) 264-8674
USEPA Region II (24 Hour Hotline)		(201) 584-8730
USEPA National Response Center		(800) 424-8802
NJ Department of Environmental Protection		(609) 292-7172
Center for Disease Control		(404) 488-4100

Hazard Communication Procedures

Two blasts on an air horn will be the emergency signal to indicate that all personnel should leave the Exclusion zone.

The following standard hand signals will be used in case of failure or radio communications:

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

RAINING AND BRIEFING

Prior to the commencement of site construction activities, a project kickoff meeting will be held to discuss safety and other topics. Weekly project status meeting will be held each Monday morning at which point health and safety issues will be addressed. In addition, daily "Tailgate" safety meetings will be conducted at the beginning of each work day and prior to the commencing of new work. These meetings will be documented and maintained as a part of this HASP. Finally, specific health and safety

issues will be addressed with site workers as required during the daily course of activities at the site.

HASP SIGN-OFF SHEET

All employees, contractors, client visitors, and visitors will read this H&S Plan and sign-off on the HASP Sign-Off Sheet. These sheets will be maintained on-site as a part of this H&S Plan.