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Health and Safety Plan

Geotechnical Investigation at the 12th Street Landfill to Support the Time-Critical Removal Action in the Former Plainwell Impoundment Plainwell, Michigan

Operable Unit No. 4 of the Allied Paper, Inc./ Portage Creek/Kalamazoo River Superfund Site

Revision 0
May 2007

Prepared for
Weyerhaeuser Company

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Section 1
Introduction

This Health and Safety Plan (HSP) has been developed to protect field personnel and authorized site visitors during execution of field activities by RMT at the 12th Street Landfill in Plainwell, Michigan.

This HSP is intended to be used in conjunction with the Geotechnical Investigation Data Quality Objectives (DQOs) and Workscope, submitted to the U.S. Environmental Protection Agency (U.S. EPA) on May 11, 2007.

This Plan was prepared based on the use of current Occupational Safety and Health Administration (OSHA), and U.S.EPA federal regulations and published guidelines. The objective of the HSP is to ensure that safe working conditions exist at the site.

The HSP is divided into two sections, a Risk Analysis (Section 2) and a Site Health and Safety Plan (Section 3). The Risk Analysis was performed to analyze the specific activities that will be performed at the site during fieldwork and the chemical and physical hazards that may be encountered during the completion of the field activities. From the Risk Analysis, the HSP was developed. The HSP identifies the required training, personal protective equipment (PPE), monitoring equipment, and other work procedures (site controls, decontamination, etc.) to be utilized by on-site personnel.

This HSP is a dynamic document that will be updated as conditions change. The HSP is designed to protect RMT personnel. Subcontractors will be required to submit HSPs applicable to their prescribed activities.

Geotechnical Investigation DQOs and Workscope Objectives

The objectives for the geotechnical investigation for the 12th Street Landfill site are as follows:

- **To determine the extent, height and width, and materials used in the berm along the Kalamazoo River so that a slope stability evaluation can be completed** - The location of the berm will be used to assess potential adverse affects to the stability of the fill material that may occur as a result of cutting back existing material along the riverfront. Visual observation of the materials used in the construction of the berm will be used to approximate the physical characteristics of the material, which will be used in the stability model. Together, the location and the physical characteristics of the berm will be used to model the stability of the landfill, provide data to help assess whether or not the vegetation present along the river can be preserved, and ultimately to provide inputs to the design of a stable final slope.

Section 2
Risk Analysis

Risk Analysis (RA) Section A

1. General Information

Business Unit (check one): ☐ SmartBurn℠ ☐ Environmental Construction and Remediation ☐ Power and Process ☐ Packaged Solutions ☒ Consulting

Client Name:	**Weyerhaeuser Company**	Project Number:	**5117.04**
Project Name:	**12th Street Landfill**	Project Manager:	**Linda Hicken**
Street Address (for mapping):		City, State, Zip Code (for mapping):	**Plainwell, MI**
Prepared By:	**Eric Watruba**	Date:	**May 16, 2007**
Approved By:	_____ (PM)		_____ (HSC)
	Linda Hicken		**John Hanson**
Date:	_____		_____

Proposed Scope of Work On-Site

The purpose of this Risk Analysis and Site Health and Safety Plan is to assess potential risks, and to provide appropriate health and safety procedures, associated with a geotechnical investigation. The Risk Analysis and Health and Safety Plan for other activities at the 12th Street Landfill will be reviewed, and modified as necessary, as part of the development of the Health and Safety Plan required for submittal to the U.S. EPA pursuant to the Consent Decree.

Risk Analysis (RA) Section A

Specific Tasks:

1. Advance a series of Geoprobe® borings into the 12th Street Landfill at six locations along the Kalamazoo River. The borings will be installed along transects that will be advanced inward from the riverfront. Approximately four borings will be installed along each transect. More borings may be installed as necessary to meet the Data Quality Objectives. The borings will be advanced to approximately 5 feet into the native soil underlying the fill, or to refusal.
2. Abandon the boreholes by filling them with bentonite grout following completion of the borehole logs.
3. Decontaminate the drilling equipment following completion of the work. Decontamination of equipment between borings is not necessary. Decontamination will be performed at the site.
4. Dispose Geoprobe® samples on-site in a location and manner that will not result in run-off of the materials into the river. Containerize the decontamination water in 55-gallon barrels that will be properly labeled and stored on-site.
5. Survey the locations and ground surface elevations of the boreholes following completion.

RMT Role(s) On Site:

☒ Resident Project Representative (*e.g.*, RPR, "Observe and Document")

☐ Construction Manager (*e.g.*, CM, Managing/General Contractor)

☐ Representative for Client (*e.g.*, "Agent for Owner")

☒ General On-site Consulting/Engineering Services

☒ Other (describe: sampling, surveying, etc.) Sampling

PROJECT TEAM MEMBER	PROJECT RESPONSIBILITIES
Linda Hicken	Project Manager
Eric Vincke	RMT Site Health and Safety (H&S) Representative
Michael Amstadt	Senior Engineer
Eric Vincke	Observe and document soil borings

Proposed Dates of Work: The geotechnical investigation will be performed in May or June 2007.

2. Site Characterization/Classification

Background information review:	☐ Preliminary	☐ Moderate	☒ Substantial
Summary of overall site hazard:	☐ Serious	☒ Moderate	☐ Low
Site status:	☐ Active	☒ Inactive	
Facility H&S orientation:	☒ Not Required	☐ Prerequisite (specify in H&S plan [HSP])	
Site access control:	☐ No Security	☐ On-site security (specify in HSP)	☒ Other
Facility alarms or signals:	☒ None	☐ Applicable (specify in HSP)	
Client-specific permits required :	☒ None	☐ Specific tasks (specify in HSP)	
		☐ LO/TO	☐ Equipment
		☐ Hot Work	☐ Excavations
		☐ Parking	☐ Scaffolding
		☐ Permit-required confined space	
Site utilities:	☐ Inactive	☒ As noted: Utilities will be marked in the field by Miss Dig.	
Utilities available on-site for project work:	☒ None	☐ As noted: ____	

Medical services offered on site:	☒ None	☐ First aid (specify in HSP)	☐ Other (specify in HSP)
Work traffic or parking issues:	☒ None	☐ On site (specify in HSP)	☐ Access to site (specify in HSP)
Railway traffic issues:	☒ None	☐ On site (specify in HSP)	☐ Access to site (specify in HSP)

Other concurrent site activities or work: None

Past operations: Landfilling of paper mill residuals

Current operations: None

Detailed facility/site description (attach maps and/or diagrams): Site map attached

Risk Analysis (RA) Section A

Identification of Potential Hazards

	YES	NO	SITE TYPE [1]
1. Is the site regulated by 29 CFR 1910.120 (OSHA) or 30 CFR (MSHA)?	☒	☐	3
2. Is the site regulated as a NPL, CERCLA, RCRA, TSD, or SARA site?	☒	☐	3
3. Does the project include on-site work other than office type areas?	☒	☐	2 or 3
4.* Does the work include a mandatory client H&S orientation?	☐	☒	1, 2, or 3
5. Does the proposed work involve any of the following:			
*Phase I ESA (*i.e.*, supervised plant walk-through, etc.)	☐	☒	1
Invasive activities (*i.e.*, Phase II ESA, UST Removal, sampling, etc.)	☒	☐	2 or 3
Known chemical or biological hazards	☒	☐	2
Unknown or uncontrolled chemical or biological hazards	☐	☒	3
Known and uncontrolled chemical or biological hazards	☒	☐	3
Exposure to ionizing radiation	☐	☒	2 or 3
Open excavations or trenches	☒	☐	2 or 3
Confined space entry (tanks, pits, trenches, manholes, etc.)	☐	☒	2 or 3
The use of scaffolding	☐	☒	2 or 3
Heavy equipment	☒	☐	2 or 3
Facility maintenance (O&M, piping, electrical, lockout/tagout, etc.)	☐	☒	2 or 3
Underground utilities	☒	☐	2 or 3
Overhead utilities	☐	☒	2 or 3
Stack testing	☐	☒	2 or 3
Geotechnical drilling	☒	☐	2 or 3
Waste sampling	☒	☐	3
Construction activities with known or suspected contamination	☐	☒	3
Remedial activities (RCRA, CERCLA, EnviroBlend®, Oxigent, etc.)	☐	☒	3
Unprotected work at elevation	☐	☒	2

[1] Denotes typical site level (based on activities)

If all answers above are "no;" **excluding those questions marked ***, the site is considered a Level 1 site. For Level 1 sites only, please sign the first page and forward Section A to the HSC for approval. For Level 2 and 3 sites, ***all*** sections of this Risk Assessment (RA)/Health and Safety Plan (HSP) must be completed before forwarding to the HSC for approval.

Chosen Site Type:

☐ **Type 1** Known and controlled hazards associated with plant consulting/engineering services

☐ **Type 2** Known and controlled hazards, but with invasive, hazardous activities, and/or civil/mechanical construction related services, or sampling

☒ Type 3 Unknown and/or uncontrolled hazards associated with corrective action clean-up, and/or remediation of hazardous substances

3. Hazard Evaluation

Potential Chemical, Biological, or Radiological Hazards

COMPLETE [1] COMMON SUBSTANCE NAME	ALL [2] PHYSICAL STATES (S, L, G)	MAXIMUM [3] CONC. LEVEL PRESENT ON SITE	ALL [4] POTENTIAL ROUTES OF EXPOSURE (Inh, Ing, Abs, Con, Ext)	GENERAL [5] CONTROL MEASURES (Eng., Admin., PPE)	IP [6] (eV)	VP [6] (mm HG)	LEL [6] (%)	UEL [6] (%)	IDLH [7]	ACGIH TLV (C, ST,TWA) [8] (R) or (T) [9]	OSHA PEL (C, ST, TWA) [8] (R) or (T) [9]
4,4'-DDD	S	35.0	Inh., Ing., Abs., Con.	PPE	N/A	0.0000002	N/A	N/A	500	1 mg/m³	TWA 1 mg/m³ [skin]
4,4'-DDE	S	32.0	Inh., Ing., Abs., Con.	PPE	N/A	0.0000002	N/A	N/A	500	1 mg/m³	TWA 1 mg/m³ [skin]
4,4'-DDT	S	75.0	Inh., Ing., Abs., Con.	PPE	N/A	0.0000002	N/A	N/A	500	1 mg/m³	TWA 1 mg/m³ [skin]
2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)	S	0.0000918	Inh., Ing., Abs., Con.	PPE	N/A	0.000002	N/A	N/A	N/A	N/A	None
Aldrin	S	4.4	Inh., Ing., Abs., Con.	PPE	N/A	0.00008	N/A	N/A	25	0.25 mg/m³	TWA 0.25 mg/m³ [skin]
Arsenic	S	41.5	Inh., Ing., Abs., Con.	PPE	N/A	0	N/A	N/A	5	0.01 mg/m³	TWA 0.010 mg/m³ [skin]
Chlordane	S	39.0	Inh., Ing., Abs., Con.	PPE	N/A	0.00001	N/A	N/A	100	0.5 mg/m³	TWA 0.5 mg/m³ [skin]
Cyanide	S	18.1	Ing., Con.	PPE	N/A	N/A	N/A	N/A	25	5 mg/m³	5 mg/m³
Dieldrin	S	17.0	Inh., Ing., Abs., Con.	PPE	N/A	0.0000008	N/A	N/A	50	0.25 mg/m³	TWA 0.25 mg/m³ [skin]
Heptachlor	S	16.0	Inh., Ing., Abs., Con.	PPE	N/A	0.00003	N/A	N/A	35	0.5 mg/m³	TWA 0.5 mg/m³ [skin]
Lead	S	575	Inh., Ing. Con.	PPE	N/A	0	N/A	N/A	100	0.05 mg/m³	TWA 0.050 mg/m³ [skin]

Risk Analysis (RA) Section B

Potential Chemical, Biological, or Radiological Hazards

COMPLETE [1] COMMON SUBSTANCE NAME	ALL [2] PHYSICAL STATES (S, L, G)	MAXIMUM [3] CONC. LEVEL PRESENT ON SITE	ALL [4] POTENTIAL ROUTES OF EXPOSURE (Inh, Ing, Abs, Con, Ext)	GENERAL [5] CONTROL MEASURES (Eng., Admin., PPE)	IP [6] (eV)	VP [6] (mm HG)	LEL [6] (%)	UEL [6] (%)	IDLH [7]	ACGIH TLV (C, ST, TWA) [8] (R) or (T) [9]	OSHA PEL (C, ST, TWA) [8] (R) or (T) [9]
Polychlorinated Biphenyls (PCBs)	S	74.0	Inh., Ing., Abs., Con.	PPE	N/A	0.00006-0.001	N/A	N/A	5	0.5-1.0 mg/m³	TWA 0.5-1.0 mg/m³ [skin]

(1) Use complete common name, cross-reference if necessary. If available, attach MSDS. Identify any **sample preservative or O&M chemicals** or **subcontractor chemicals** in this table also.
(2) S = Solids, L = Liquid, G = Gas
(3) If available, attach laboratory results or summary tables.
(4) Inh = Inhalation, Ing = Ingestion, Abs = Absorption, Con = Contact, Ext = External
(5) See the following sections for detailed control measures: **personal protection equipment (PPE), Air Monitoring (Admin)**, or **Site Control (Admin and Eng.)**.
(6) IP = Ionization Potential, VP = Vapor Pressure, LEL = Lower Explosive Limit, UEL = Upper Explosive Limit
(7) IDLH = Immediately Dangerous to Life and Health. **NEVER** enter IDLH conditions on site without proper respiratory protection.
(8) C = Ceiling Value, ST = Short-Term Exposure Limit, TWA = Time-Weighted Average
(9) R = Respirable Limit, T = Total Limit

3. Hazard Evaluation (continued)

Common Physical Hazards
(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Bending/Stooping	To help prevent injury to back or leg joints, avoid excessive bending or stooping, especially while lifting or moving objects.
☒	Drum Handling	If drums are used or encountered on-site, they should be clearly labeled with the name of the contents. Drums should only be handled with the appropriate equipment.
☒	Dust	For general dust, work should be performed up-wind if possible. ***If conditions warrant it,*** monitoring should be done with a particulate/aerosol monitor (mini-ram). Monitoring should occur at least 3 times per day, and every time re-entering the site. Readings should be taken downwind from the work area or inside the equipment work area as indicated by the conditions on site. If the OSHA PEL is exceeded, or is likely to be exceeded, engineering or administrative controls should be used, or a dust respirator must be worn. For hazardous dusts, a detailed air monitoring plan and a respiratory protection plan should be developed for the site activities.
☒	Evening or Early Morning Work	If work is performed during the evening or early morning hours, work should be limited by the availability and the quality of artificial lighting. Care should also be taken to avoid slip, trip, and fall hazards that are not as easy to identify during low light conditions.
☒	Field Equipment	If field equipment is heavy or awkward to carry, get assistance or use carts, etc. to help move around the site.
☒	Hand Tools	Use only the appropriate tool for the task at hand. Use the tool(s) as designed, described, and intended by the manufacturer. Do not use screwdrivers as hammers, or chisels as screwdrivers, etc. Misuse of hand tools is a common cause of injuries.
☒	Heat Stress	The work schedule may be modified if the ambient temperature is higher than 80°F. Take breaks as necessary, and drink plenty of fluids. If necessary, wear sunscreen and sunglasses on bright days. Monitor site personnel for signs of heat stress (heat rash, heat cramps, heat exhaustion, or heat stroke).

Risk Analysis (RA) Section C

Common Physical Hazards
(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Heavy/Contractor Equipment (drill rigs, trucks, trackhoes, backhoes, scrapers, dozers, fork lifts, etc.)	Contractor is responsible for the safe operation of equipment. All mobile heavy equipment must have a functioning backup alarm and other safety features, and operators must comply with equipment manufacturers' instructions. Equipment must be maintained in good working condition. Any loads being carried by equipment must be balanced and stable before moving. Equipment must maintain a safe working distance from utilities, buildings, excavations, and slopes. Maintain proper distance, and remain in line of sight of operator and out of reach of equipment. Isolate equipment swings, if possible. Make eye contact with the equipment operator before approaching the equipment. Understand and review hand signals, and wear an orange safety vest, if necessary. RMT employees will not operate heavy equipment on-site unless they are properly trained, and RMT has been contracted by the client to perform such activities.
☒	Heavy Lifting	Use proper lifting procedures and equipment when handling heavy objects such as drums, bags of bentonite, manhole covers, tank covers, etc.
☒	Insects	Site workers with known allergies to insect bites should carry their own medication. It is also a good idea to inform fellow workers of the allergy, in case of emergencies. Use insect repellant as necessary, and as specifically allowed on site. If possible, wear long-sleeved shirts and pants. If appropriate, check for ticks at the end of each day. Have other appropriate first aid supplies handy for bites. Some insects such as the African Bee (commonly known as the killer bee) are highly irritable and may chase a victim for more than a half mile with the intent to sting. If chased by a swarm of attacking bees, run as fast as possible and in a straight line away from the nest. Batting them away will only agitate them further. Common areas for nests are hollow trees; in the ground; in walls; in dense vegetation; under building overhangs; in piles of debris; in well casings; etc. If you must work near a bee's nest wear protective clothing (thick and light colored), and avoid attracting the bees with scented lotions, deodorants, or perfumes. Noise can also disturb bees from as far away as 100 feet. Plan an escape route prior to beginning work.
☒	Long Work Hours	Long work hours can lead to fatigue, and fatigue can lead to the physical inability to perform the work in a safe manner, or travel to, or from, a work site in a safe manner. If long work hours are scheduled, or if the scheduled work takes longer than planned, field staff should determine if fatigue is, or will be, an issue. Field staff should evaluate whether they are able to complete the work in a safe manner, or whether they are able to travel in a safe manner. If fatigue is an issue, appropriate breaks should be planned or taken, including overnight stays when necessary.

Risk Analysis (RA) Section C

Common Physical Hazards
(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Material Storage & Handling	Move containers and heavy material only with the proper equipment, and secure them to prevent dropping, falling, or loss of control during transport. Stay clear of material handling operations, especially near slopes. Do not stand down the slope from equipment, supplies or materials being moved above on the slope, or being deployed onto the slope. Stored material may be a falling hazard, or a crush hazard. Do not stand adjacent to materials stacked up, such as pipes, geosynthetic rolls, etc., or in the area of deployment.
☒	Noise	Hearing protection must be worn when noise levels exceed 85 dBA in the work area. If you need to raise your voice to be heard at the work site, then hearing protection should be worn. Hearing protection will be worn near drill rigs.
☒	Overexertion	Avoid overexerting yourself by planning your work to include adequate breaks or rest periods. Overexertion can lead to fatigue or physical injury, or contribute to the development of other hazards such as heat stress.
☒	Overhead Hazards	Pay attention to overhead equipment, piping, and structures. A hard hat must be worn at all times when overhead hazards are present on site.
☒	Severe Weather	Work may be suspended if dangerous weather conditions (lightning, tornadoes, high winds, heavy rain, freezing rain, etc.) occur. Be aware of changing weather conditions, and be prepared to take shelter as necessary. Potential shelters should be identified prior to beginning work.
☒	Sharp Objects	Wear appropriate gloves when handling sharp objects, or use appropriate equipment to move objects.
☒	Slips, Trips, and Falls	Maintain clear walkways for work areas. Exercise caution, especially on slopes, and field trailer floors and stairs, after a precipitation event. Use slip resistant boots, or implement surface preparations to eliminate the slippery nature of the surface prior to accessing the area. Spill control measures and general housekeeping should be utilized to help prevent slipping on wet floors, wet pavement, and general work areas. Uneven or steep terrain can cause hazardous conditions for walking and transporting equipment around the site. Site personnel should use caution when working on uneven surfaces, and they should avoid working down-slope from heavy equipment, or materials being moved or stored.
☒	Utilities – Underground (electric, gas, telephone, water, storm sewer, sanitary sewer, cable-TV, etc.)	Subcontractor, client, or RMT will call Digger's Hotline to locate all underground utilities. The owner or client will be responsible for marking all applicable on-site underground utilities, product lines, pipes, and tanks.

Risk Analysis (RA) Section C

Site-specific Physical Hazards

OTHER PHYSICAL HAZARDS	GENERAL CONTROL MEASURE
Vegetation	Wooded areas that contain thick vegetation border the 12th Street Landfill. Vegetation, such as poison ivy, poison oak, and poison sumac, can cause severe skin irritation and my be present. For protection against contact with these plants, clothing that limits skin exposure will be worn, and contact with vegetation should be avoided.

Section 3
Site Health and Safety Plan

Site Health & Safety Plan (HSP)

1. General Information

Client Name:	**Weyerhaeuser Company**	Project Number:	**5117.04**
Project Name:	**12th Street Landfill**	Project Manager:	**Linda Hicken**
Street Address (for mapping):		City, State, Zip Code (for mapping):	**Plainwell, MI**
Prepared By:	**Eric Watruba**	Date:	**May 16, 2007**
Approved By:	_____ (PM)		_____ (HSC)
	Linda Hicken		**John Hanson**
Date:	_____		_____

Proposed Scope of Work On-Site

The purpose of this Risk Analysis and Site Health and Safety Plan is to assess potential risks, and to provide appropriate health and safety procedures, associated with a geotechnical investigation. The Risk Analysis and Health and Safety Plan for other investigation activities will be reviewed, and modified as necessary, as part of the development of the Health and Safety Plan required for submittal to the U.S. EPA pursuant to the Consent Decree.

Specific Tasks:

1. Advance a series of Geoprobe® borings into the 12th Street Landfill at six locations along the Kalamazoo River. The borings will be installed along transects that will be advanced inward from the riverfront. Approximately four borings will be installed along each transect. More borings may be installed as necessary to meet the Data Quality Objectives. The borings will be advanced to approximately 5 feet into the native soil underlying the fill, or to refusal.
2. Abandon the boreholes by filling them with bentonite grout following completion of the borehole logs.
3. Decontaminate the drilling equipment following completion of the work. Decontamination of equipment between borings is not necessary. Decontamination will be performed at the site.
4. Dispose Geoprobe® samples on-site in a location and manner that will not result in run-off of the materials into the river. Containerize the decontamination water in 55-gallon barrels that will be properly labeled and stored on-site.
5. Survey the locations and ground surface elevations of the boreholes following completion.

ON-SITE PROJECT TEAM MEMBER	ON-SITE PROJECT RESPONSIBILITIES
Linda Hicken	Project Manager
Eric Vincke	RMT Site Health and Safety Representative
Michael Amstadt	Senior Engineer
Eric Vincke	Observe and document soil borings

(1) It is recommended that field projects be audited for H&S compliance if they have significant project tasks that present significant potential for employee exposure to chemical or physical hazards.

Any required construction/demolition activities: ☒ No ☐ Yes If Yes, complete Section 2

Site Health & Safety Plan (HSP)

3. Training Required (* required for all "Type 3" sites)

Check "A" if the training topics are required for everyone working on the project.
Check "T" if the training topics are considered task-specific.

A	T	SUBJECT	REFERENCE
☐	☐	Client-specific training (specify below)	Contract Documents
☐	☐	Site-specific/facility orientation (specify below)	Plant Manager
☒	☐	HAZWOPER 40 hour*	29 CFR 1910.120 (e)(3)
☐	☒	3-Day HAZWOPER Supervised On-Site*	29 CFR 1910.120 (e)(3)
☒	☐	8-Hour HAZWOPER Refresher*	29 CFR 1910.120 (e)(8)
☐	☒	8-Hour Supervisor HAZWOPER*	29 CFR 1910.120 (e)(4)
☐	☒	First Aid, CPR	For Work At Remote Sites
☐	☐	Respiratory Protection	29 CFR 1910.134
☐	☐	Confined Space	29 CFR 1910.146/1926.21
☐	☐	Mine Safety (MSHA)	30 CFR 48.8
☐	☐	Lockout/Tagout (energized sources)	29 CFR 1910.147 (c)(7)
☐	☐	Bloodborne Pathogens	29 CFR 1910.1030 (g)(2)
☐	☐	Noise Exposure	29 CFR 1910.95 (k)
☐	☐	Competent Person	Specify Below
☐	☐	Construction Health and Safety OSHA 10-Hour	
☐	☐	Excavations	29 CFR 1926.650-652 & Appendix A-F
☐	☐	Electrical Work	29 CFR 1910.332/1926.400-.449
☐	☐	Scaffolding	29 CFR 1910.28 or 1926.454
☐	☐	Fall Protection	29 CFR 1926.501-503
☐	☐	Commercial Diving	29 CFR 1910.410
☐	☐	Welding, Cutting, Brazing	29 CFR 1910.252/1926.350
☐	☐	Hot Work Permits	29 CFR 1910.119 (k)
☐	☐	Lead Awareness	29 CFR 1910.1025 (l)(1) or 1926.62 (l)(1)
☐	☐	Asbestos Awareness	29 CFR 1910.1001 (j) or 1926.1101 (k)(9)
☐	☐	Cadmium	29 CFR 1910.1027 (m) or 1926.1127 (m))
☐	☐	Benzene	29 CFR 1910.1028 (j)
☐	☐	Ionizing Radiation	29 CFR 1910.1096 (i) or 10 CFR 19.12

☐	☐ Troxler Gauge User	10 CFR 19.12
☐	☐ NITON XRF User	10 CFR 19.12
☐	☐ RMT In-House Radiation Safety	Contact the Radiation Safety Officer (RSO)
☐	☐ DOT Hazardous Materials Shipping	49 CFR 172.704

Client-specific training: N/A

Site-specific orientation: N/A

Competent person: N/A

Direct-hire employee training/certification: N/A

4. Medical Surveillance Required (* required for all "Type 3" sites)

SURVEILLANCE NEEDED	REFERENCE
☐ Client-specific drug testing (specify below)	Contract Documents (If checked, contact HR)
☐ Client-specific surveillance (specify below)	Contract Documents
☐ Site-specific/facility surveillance (specify below)	Client/Plant Manager
☒ HAZWOPER Physical - Baseline*	29 CFR 1910.120 (f)(3)
☐ HAZWOPER Physical - Annual	29 CFR 1910.120 (f)(3)
☒ HAZWOPER Physical - Biennial*	29 CFR 1910.120 (f)(3)
☐ OSHA Respiratory Protection Questionnaire	29 CFR 1910.134 (e)
☐ Respiratory Certification Exam	If required by RMT medical director
(** Specify frequency below)	
☐ Arsenic (urine) **	29 CFR 1910.1018
☐ Asbestos **	29 CFR 1910.1001 (j)
☐ Cadmium (blood) **	29 CFR 1910.1027 (l)
☐ Lead/ZPP (blood) **	29 CFR 1910.1025 (j)
☐ Mercury (blood) **	
☐ PCB **	
☐ Vinyl Chloride **	29 CFR 1910.1017 (k)
☐ Hepatitis B Vaccine (series) **	29 CFR 1910.1030
☐ Tetanus/Diphtheria	Stay Current
☐ Stress Test	Task Related
☐ Visual Acuity Test	Task Related
☐ Hearing Test (Audiometry)	Task Related
☐ Pulmonary Function	Task Related

Site Health & Safety Plan (HSP)

Client-specific drug testing:	N/A
Client-specific medical monitoring:	N/A
Site-specific medical monitoring:	N/A
Frequency of medical monitoring:	N/A

5. Personal Protection

Based on evaluation of potential hazards, the following levels of personal protection have been designated for the applicable work tasks:

SPECIFIC TASK	SPECIFIC JOB FUNCTION	LEVEL OF PROTECTION			
Advance Geoprobe borings through paper residuals into a containment berm surrounding the landfill.	Prepare a log of each borehole in the field.	☒ D	☐ C	☐ B	☐ A
Survey the locations and ground surface elevations of the boreholes following completion.	Surveying	☒ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A
		☐ D	☐ C	☐ B	☐ A

Site Health & Safety Plan (HSP)

SPECIFIC TASK	SPECIFIC JOB FUNCTION	LEVEL OF PROTECTION

Criteria for changing protection levels are as follows:

PROTECTION LEVEL CHANGE CRITERIA	APPROVALS REQUIRED [1]		
	HSR	HSC	CHSM
To Level[2] when	☐	☐	☐
To Level when N/A	☐	☐	☐
To Level when	☐	☐	☐
To Level when	☐	☐	☐
Site Evacuation Plan[3]: N/A			

(1) HSR: Health & Safety Representative On-Site
HSC: Health & Safety Coordinator
CHSM: Corporate Health & Safety Manager

(2) General Recommendation: To Level C when PID readings are >10 ppm in the breathing zone.

(3) General Recommendations: Evacuate the area when PID readings are >100 ppm in the breathing zone, or when LEL readings are >10% in the atmosphere (tanks will start at >10% LEL).

Changes to the level of protection shall be made after the required approvals are obtained. All changes shall be recorded in the field log and reported to the HSC as soon as possible.

Site Health & Safety Plan (HSP)

The following monitoring instruments shall be used on-site to measure airborne contaminant concentrations in either the breathing zone, or as per the overall site monitoring plan (attach):

6. Air Monitoring[1]

	LOCATION OF MONITORING	FREQUENCY OF MONITORING
☐ Combustible Gas Indicator	N/A	☐ Continuously when potential combustible gases or lack of oxygen are suspected.
☐ O_2 Monitor	N/A	
☐ Colorimetric Tubes Type: Type: Type:	N/A	
☐ PID Lamp: _____ eV Calibration Gas: _____ Correction Factor:	N/A	☐ Periodically during sampling for analytical purposes only ☐ Whenever noticeable odor is present
☐ FID	N/A	
☐ Mini-RAM	N/A	
■ ☐ Laboratory Supported ■ ☐ Personal ■ ☐ Area ■ ☐ Perimeter		

[1] Whenever air monitoring is required to be performed, a detailed air-monitoring plan should be developed and attached to the HSP. The plan should include **Monitoring Locations, Frequency of Readings,** and any **Action Levels** being used to control the work site.

7. Site Controls and Work Zones (describe in detail or provide a sketch or map)

Facility Alarms or Signals:

None

Work Permits Required:

None

Work Traffic or Parking Issues:

Parking should occur near the support zone in the attached figure.

Railway Traffic Issues:

None

Site Health & Safety Plan (HSP)

Support Zone(s):

- ☒ RMT field vehicle
- ☐ Job trailer on site
- ☒ See attached map/sketch
- ☒ _____

Contamination Reduction Zone(s):

- ☒ Rear of RMT field vehicle
- ☐ Facility restroom or utility room
- ☐ See attached map/sketch
- ☐ Convenient upwind location from the Exclusion Zone
- ☐ Water for washing and decontamination will be staged at least 10 feet from Exclusion Zone
- ☐ _____

Exclusion Zone(s):

- ☐ See attached map/sketch
- ☒ Adjacent to the drilling
- ☐ Area immediately surrounding the hazardous activity

Site Entry Procedures:

- ☒ Notify Site H&S Representative.
- ☒ Read H&S Plan and sign Acknowledgment Statement
- ☐ Check in with the facility contact person
- ☐ Check in with facility security guard. (Specify: _____)
- ☒ Wear proper personal protective equipment.
- ☐ Attend facility orientation (Describe: _____)
- ☒ Conduct "Toolbox" safety meeting.
- ☐ Other: (Specify:)

Decontamination Procedures:

Personnel: Example: If severe contamination is expected or work was performed in Level A, Level B, or Level C, a specific and detailed decontamination procedure should be written to address the appropriate contamination. If work was performed in Level D or Modified Level D, and minimal contamination is expected, follow standard decontamination procedures, and good personal hygiene. Disposable PPE should be removed, contained, and disposed in an appropriate manner. Prior arrangements should be made if disposal is planned for at the project site.

Site workers should plan and stage for wash water and soap at the site, prior to beginning the work. Site workers should wash hands and any exposed skin extremely well with soap and water, prior to leaving the contamination reduction zone, eating, drinking, driving, or leaving the site. Any soiled or contaminated clothing should be removed and handled appropriately, by either washing as soon as possible, or if necessary, disposing. Soiled or contaminated clothing should be carefully bagged prior to disposal or washing, to reduce potential exposure.

Equipment: Example: If severe contamination is expected, a specific and detailed decontamination procedure should be written to address the appropriate contamination. Site workers should plan and stage for the appropriate decontamination method at the site, prior to beginning the work. Any

contaminated single-use disposable equipment or PPE should be appropriately containerized and disposed as soon as possible in an appropriate manner. Prior arrangements should be made if disposal is planned for at the project site. Contaminated equipment or PPE that will be re-used should be handled and cleaned while wearing the appropriate PPE. Typically, equipment is decontaminated using Alconox soap and de-ionized water.

Site Health & Safety Plan (HSP)

Investigation-derived Material Disposal:

☐ Leave on site for disposal. _____

☒ Other (describe) *Leave onsite in a location and manner that will not result in run-off of the materials into the river.*

Work Limitations (time of day, buddy system, etc.):

☒ Work will be performed during daylight hours only

☐ Work will be performed using artificial light. A lighting plan is attached.

☒ No eating, drinking, or smoking in contamination reduction zone(s) or exclusion zone(s)

☒ When temperatures are either above 80°F or below 20°F, work schedules may be modified

Troxler Radiation Safety:

☒ Radiation information is not applicable to this project.

☐ Notify RSO.

☐ Wear dosimeter badge when handling gauge.

☐ Post applicable radiation signs.

☐ Post emergency numbers.

☐ Provide at least two lock systems for overnight storage.

☐ Maintain storage at least 15 feet from full-time workstations.

☐ Block and brace gauge during "all" transportation.

☐ Limit "public" exposure to gauge while in use.

☐ Provide sketch of gauge storage to RSO.

Site Health & Safety Plan (HSP)

8. Contingency Planning

LOCAL EMERGENCY RESOURCES:	
Ambulance 911	Hospital Emergency Room 911
Police 911	Fire Department 911
USEPA Contact Tim Prendiville 312-886-5122	Poison Control Center 1-800-222-1222
Other (client services offered, etc.)	

SITE RESOURCES:			
Water Supply - Potable	☒ RMT	☒ Contractor	☐ Owner
Water Supply - Washing	☒ RMT	☒ Contractor	☐ Owner
Telephone – Land Line	☐ RMT	☐ Contractor	☐ Owner
Telephone - Cellular	☒ RMT	☒ Contractor	☐ Owner
First Aid Kit	☒ RMT	☒ Contractor	☐ Owner
Fire Extinguisher	☒ RMT	☒ Contractor	☐ Owner
Emergency Shower	☐ RMT	☐ Contractor	☐ Owner
Eye Wash	☐ RMT	☐ Contractor	☐ Owner
Other:	☐ RMT	☐ Contractor	☐ Owner
Other:	☐ RMT	☐ Contractor	☐ Owner

Site Health & Safety Plan (HSP)

EMERGENCY CONTACTS:	
RMT Technical Contact:	Michael Amstadt 608/662-5271 (work) 608/358-2669 (cell)
RMT Project Manager (PM):	Linda Hicken 608/662-5307 (work) 608/358-1768 (cell) 608/833-5007 (home)
RMT Corporate Health & Safety Manager (CHSM):	Jason Chevallard 864/234-9369 (work) 864/525-8357 (cell) 864/627-8567 (home)
Radiation Safety Officer (RSO):	John Hanson 608/662-5238 (work) 608/220-2502 (radiation program emergency only) 608/222-4588 (home)
RMT Health & Safety Coordinator (HSC):	John Hanson 608/831-4444 (work) 608/222-4588 (home)
RMT Site Health & Safety Representative:	Eric Vincke 616/975-5415 (work) 616/340-0382 (cell)
RMT Field Contact	Eric Vincke 616/975-5415 (work) 616/340-0382 (cell)
Contractor Contact:	N/A
Client Contact:	Jennifer Hale 253/924-3746 (work) 253/218-5147 (cell)

Emergency Route (provide detailed directions and attach a map):

If possible, the planned emergency route should be driven at least once before fieldwork begins. Hospitals or clinics identified for emergency medical care should also be contacted, to verify that emergency care is provided at that location. Attempt to determine the exact location of the medical facility, and the chosen emergency route during this call.

Hospital: Borgess-Pipp Hospital
411 Naomi Street
Plainwell, MI 49080
269-685-0700

Other: ____

Directions to Plainwell, MI 49080-1222

YAHOO! LOCAL Maps

Summary and Notes

START A 42.456331,-85.670616,

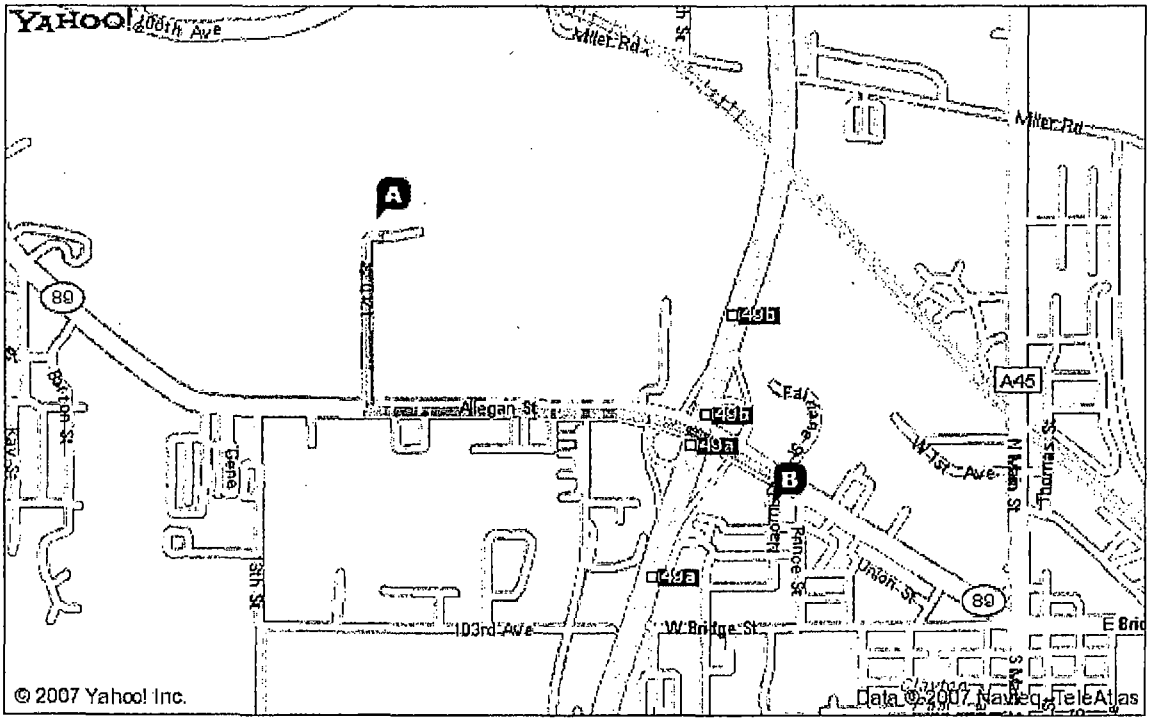
FINISH B Borgess-Pipp Hospital (269) 685-0700
411 Naomi St, Plainwell, MI 49080-1222

Total Distance: 1.5 miles, Total Time: 3 mins (approx.)

Add your notes here...

	Distance
A 42.456331,-85.670616,	
1. Starting at **42.456331,-85.670616** on **12TH ST**	go **0.4** mi
2. Turn L on **ALLEGAN ST[M-89]**	go **1.0** mi
3. Turn R on **NAOMI ST**	go **0.1** mi
4. Arrive at **411 NAOMI ST, PLAINWELL**, on the R	
B **411 NAOMI ST, PLAINWELL, MI 49080-1222**	

Distance: 1.5miles, Time: 3 mins



When using any driving directions or map, it's a good idea to do a reality check and make sure the road still exists, watch out for construction, and follow all traffic safety precautions. This is only to be used as an aid in planning.

Site Health & Safety Plan (HSP)

Emergency Procedures:

If an emergency develops at the site, the discoverer will take the following course of action:

- Notify the proper emergency services (fire, police, ambulance, etc.) for assistance.
- Notify other affected personnel at the site.
- Contact RMT and the client representative to inform them of the incident as soon as possible.
- Prepare a summary report of the incident for RMT and the client representative as per client requirements or RMT requirements (see below).

Emergency Equipment Required On Site:

☒ First Aid/Bloodborne Pathogens Kit
☐ Eye Wash
☐ Shower
☐ Other: (describe) _____

☒ Fire Extinguisher
☐ Spill Control Media
☐ Other: (describe) _____
☐ Other: (describe) _____

Investigation of Near Miss Incident and Initial Report of Incident/Exposure:

RMT employees are encouraged to report as soon as possible any incident, near miss, and/or injury, regardless of the severity, by contacting the following:

☒ Jason Chevallard (864)234-9369 ☒ Notify supervisor ☒ Notify project manager
☐ Notify client at _____ ☐ Complete client report

The incident report submittal operator (Jason Chevallard) will obtain the necessary information from the employee and enter the information into the H&S incident database. All appropriate H&S, HR, and legal staff will be notified and will follow-up as necessary.

Site Health & Safety Plan (HSP)

Acknowledgment Statement:

As an employee of RMT, Inc., I have reviewed the Hazard Assessment (HA)/Health & Safety Plan (HSP). I hereby acknowledge that I have received the required level of training and medical surveillance, that I am knowledgeable about the contents of this site-specific HSP, and that I will use personal protective equipment and follow procedures specified in the HSP.

Signatures of RMT Site Personnel, including Direct-Hires (Required):

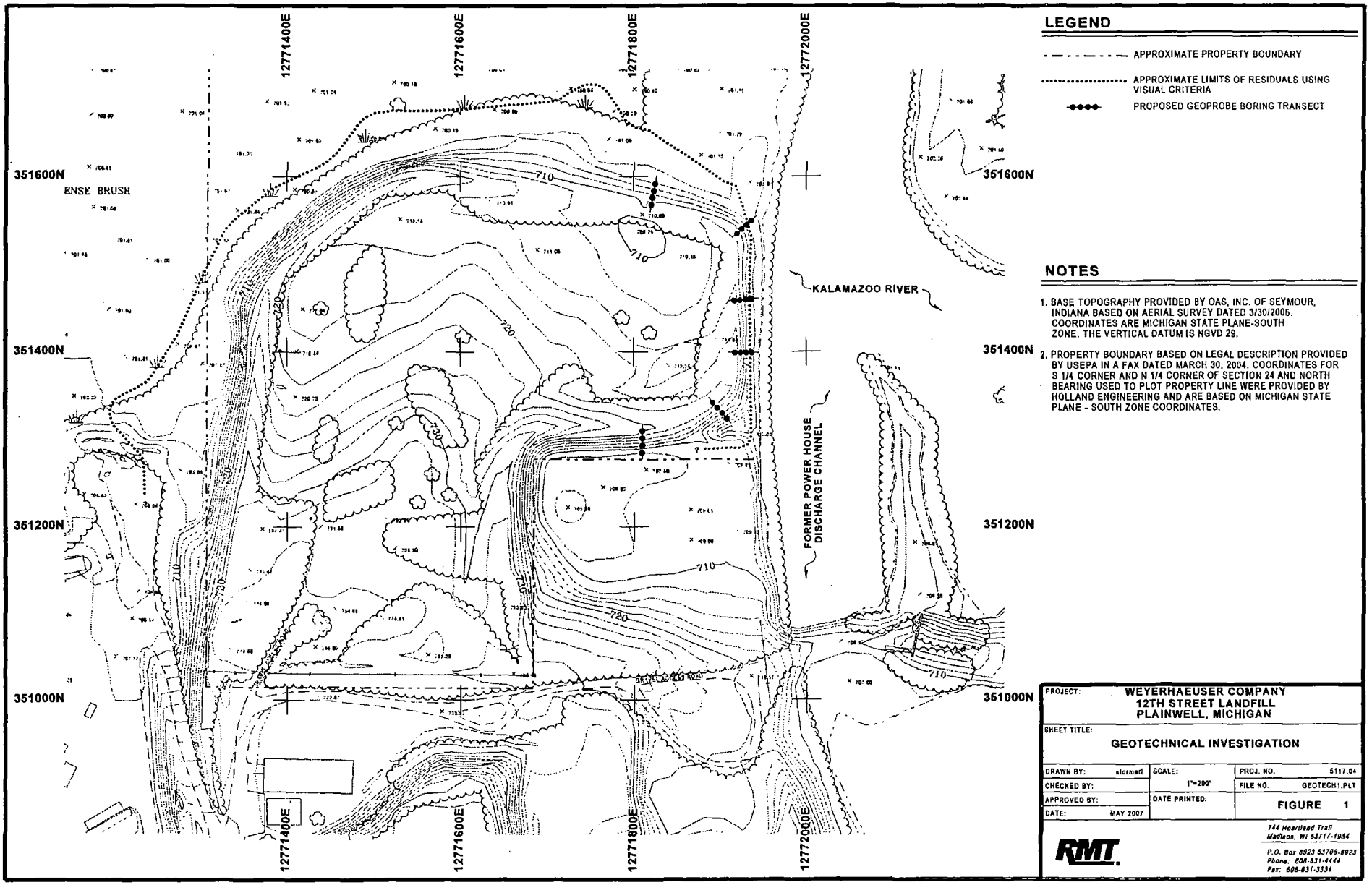
_____ Date: _____

_____ Date: _____

_____ Date: _____

_____ Date: _____

_____ Date: _____



LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE LIMITS OF RESIDUALS USING VISUAL CRITERIA
- PROPOSED GEOPROBE BORING TRANSECT

NOTES

1. BASE TOPOGRAPHY PROVIDED BY OAS, INC. OF SEYMOUR, INDIANA BASED ON AERIAL SURVEY DATED 3/30/2005. COORDINATES ARE MICHIGAN STATE PLANE-SOUTH ZONE. THE VERTICAL DATUM IS NGVD 29.
2. PROPERTY BOUNDARY BASED ON LEGAL DESCRIPTION PROVIDED BY USEPA IN A FAX DATED MARCH 30, 2004. COORDINATES FOR S 1/4 CORNER AND N 1/4 CORNER OF SECTION 24 AND NORTH BEARING USED TO PLOT PROPERTY LINE WERE PROVIDED BY HOLLAND ENGINEERING AND ARE BASED ON MICHIGAN STATE PLANE - SOUTH ZONE COORDINATES.

PROJECT:	WEYERHAEUSER COMPANY 12TH STREET LANDFILL PLAINWELL, MICHIGAN		
SHEET TITLE:	GEOTECHNICAL INVESTIGATION		
DRAWN BY: stormerl	SCALE: 1"=200'	PROJ. NO.	5117.04
CHECKED BY:		FILE NO.	GEOTECH1.PLT
APPROVED BY:	DATE PRINTED:	FIGURE	1
DATE: MAY 2007			

RMT
144 Heartland Trail
Madison, WI 53717-1934
P.O. Box 8923 53708-8923
Phone: 608-831-4444
Fax: 608-831-3334

Plot Data
Design File = J:\05117\04\geotech1.dit
stormerl Plot Date = Wed May 16 08:21:33 2007
Plot File = J:\05117\04\geotech1.prf
Pen Table = \\rmtn-plot\equorum\TBL\MSVBdefault7000.tbl
Levels On = 1-63

Reference Files
Ref. File 1 = J:\05117\04\bmc0333005.dgn
Ref. File 2 = J:\05117\04\bmrmt.dgn
Ref. File 3 = J:\05117\04\proposed.dgn
Ref. File 4 = J:\05117\04\11x17bdr.dgn

Logical Names
(1) bmc
(2) bmr
(3) pro
(4) bdr

Levels
(1) 27
(2) 1-63
(3) 1-63
(4) 1-63