SITE HEALTH AND SAFETY PLAN Former Building 9 – Delphi Flint West Plant (#12990-11-01) Flint, Michigan

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Prepared By:



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1.0	INTRODUCTION	1
2.0	KEY PERSONNEL	2
PR	OFCT MANAGER	2
HF	HEALTH AND SAFETY OFFICER	
HE	ALTH AND SAFETY SUPERVISOR	2
FIE	ELD GEOLOGIST	2
FIE	ELD TECHNICIANS	2
3.0	TASK HEALTH AND SAFETY RISK ANALYSIS	3
Pr	eliminary Evaluation	3
Co	NTAMINANT ASSESSMENTS	3
Co	VERED INVESTIGATIONS	3
ON	SITE MEETINGS AND WALKTHROUGHS	4
GP	'R	4
Ge	OPROBE INVESTIGATION	4
St.	ATIC WATER LEVEL MEASUREMENT	4
WI	ELL INSTALLATION	4
Mo	DNITORING WELL SAMPLING	4
FR	EE PRODUCT CHARACTERIZATION	5
SIT	E SURVEY	5
4.0	PERSONNEL TRAINING REQUIREMENTS	6
5.0	PERSONAL PROTECTIVE EQUIPMENT	7
6.0	MEDICAL SURVEILLANCE	8
7.0	AIR MONITORING AND SAMPLING	9
8.0	SITE CONTROL MEASURES1	.0
9.0	DECONTAMINATION PROCEDURES1	1
10.0	EMERGENCY RESPONSE / CONTINGENCY PLAN1	2
Co Fir	NTAMINATION EMERGENCY CONTINGENCY PLAN	2 3
Em Ne	iergency Contact Informant	3 3
11.0	CONFINED SPACE ENTRY PROGRAM	4
12.0	SPILL CONTAINMENT PROGRAM1	5
13.0	HAZARD COMMUNICATION1	6

TABLE OF CONTENTS

ATTACHMENTS:

Appendix A: Site Location and Hospital Location Maps

1.0 Introduction

This Health and Safety Plan (Safety Plan) was prepared by Applied *EcoSystems-Great Lakes*, Inc. (Æ) for site investigations conducted on the RACER Trust Property known as Former Building 9 – Delphi Flint West Plant (#12990-11-01).

This Safety Plan shall be in effect during the duration of the project. Personnel requesting access to the site, regardless of their employer or professional affiliation, are subject to the requirements of this Safety Plan. All site activities will be performed under the direction of the OSHA trained site supervisor.

The Safety Plan is designed to comply with Michigan Part 432 of Section 24 of 1974 Public Act 154 as amended, Michigan compiled laws 408.1024, and 29 CFR 1910.120.

2.0 Key Personnel

Key Personnel assigned to general projects in Genesee County are listed below:

Project Manager	Michael Smith
Health and Safety Officer	Josh Adams
Health and Safety Supervisor	Michael Smith
Field Geologist	Josh Adams
Field Technicians	Michael Smith, Josh Adams,
	Lynn Ledebuhr, Steve Luzkow

The project responsibilities for the key the personnel are as follows:

Project Manager

The Project Manager will be responsible for overall coordination of the project. This includes scheduling of site activities, subcontractor coordination, and client contact. Job coordination or scheduling problems will be brought to the attention of the Project Manager.

Health and Safety Officer

The Health and Safety Officer will be responsible for the development, review, modification, and approval of the Safety Plan. Any changes in the scope of work will be brought to the Health and Safety Officer for review.

Health and Safety Supervisor

The Health and Safety Supervisor will oversee the activities of all site workers.

Field Geologist

The Field Geologist will oversee the subcontractor operations on-site and be responsible for sampling and data collection.

Field Technicians

The Field Technicians will assist the Field Geologist in or may on his own direct subcontractor operation and be responsible for sample and data collection.

3.0 Task Health and Safety Risk Analysis

Preliminary Evaluation

Prior to conducting field activities, a preliminary site evaluation including the following will be noted for each site:

- Monitoring of ambient air;
- Access to the site;
- Potential slip/trip/fall hazards;
- Confined spaces;
- Location of utilities;
- Topography;
- Weather conditions;
- Types and number of containers, buildings, and impoundments;
- Biological indicators dead vegetation, animals, insects, and fish; and
- Unusual odors or conditions

Contaminant Assessment

Potential contaminants are believed to be limited to the following: petroleum products, organic solvents, PCBs, and metals. Note that if additional contaminants not outlined in this plan are believed to be on-site, additional information will be attached to this general safety plan.

Level D PPE is sufficient to prevent dermal exposure to the identified contaminants. Volatile contaminants were not identified at concentrations likely to present an air inhalation concern. The relevant exposure limits for the identified volatile contaminants are as follows:

Compound	CAS #	Lower of OSHA an NIOSH PEL	IDLH
1-1 Dichloroethane	75-34-3	100 ppm	3,000 ppm
Cis 1,2 Dichloroethene	156-59-2	200 ppm	1,000 ppm
MTBE	1634-04-4	50 ppm	Not established
Trichloroethene	79-01-6	100 ppm	1,000 ppm
Vinyl Chloride	75-01-4	1 ppm	Not established

Covered Investigations

The tasks covered under this safety plan are as follows:

- On-site meetings and walkthroughs;
- Ground Penetrating Radar (GPR) (or other geophysical) study;
- Geoprobe® Investigation;
- Static water level measurement;
- Monitoring well installation;
- Monitor well sampling;
- Free product characterization; and
- Site survey

Each potential task to be conducted on-site with its risk analysis is summarized below.

On site Meetings and Walkthroughs

The purpose of the meetings is to refine the scope of work and to identify and address any potential health and safety issues not recorded in the Safety Plan. The participants at the on-site meeting and walk through will be representatives from Applied *Eco*Systems–Great Lakes, Inc. and other interested parties. The participants are not expected to be exposed to contaminants, as the subsurface soils will not be disturbed. The walkthroughs will be conducted in Level D Personal Protective Equipment (PPE).

<u>GPR</u>

The GPR study will scan the subsurface with a radar array. The study will not disturb the subsurface soils. Potential exposure with the contaminants is not expected during this task. The GPR study will be implemented using Level D PPE.

Geoprobe® Investigation

Geoprobe[®] investigations are conducted to determine the potential existence of impacted soils and groundwater at the site. The investigation activity will bring potential impacted soils and groundwater to the surface. To prevent dermal contact with the contaminants, Field Geologists, Field Technicians, and the Geoprobe[®] operator will wear nitrile gloves. The air quality will be monitored with a PID meter. The task will be conducted in Level D PPE unless air monitoring detects concentrations exceeding the applicable exposure threshold.

Borings will be conducted by hand to a depth of five feet below grade in order to avoid utility structures.

Static Water Level Measurement

Static water level will be measured with a Keck® electronic water level meter. To prevent dermal contact with potentially impacted groundwater, nitrile gloves will be worn with Level D PPE.

Well Installation

The installation of monitoring wells will bring impacted soils and groundwater to the surface. To prevent dermal contact with the contaminants, Field Geologists, Field Technicians and the driller will wear nitrile gloves. The air quality will be monitored with a PID meter. The task will be conducted in Level D PPE unless air monitoring detects concentrations exceeding the applicable exposure threshold.

Monitoring Well Sampling

Monitoring well sampling will bring potentially impacted groundwater to the surface. To prevent dermal contact with potentially impacted groundwater, nitrile gloves will be worn with Level D PPE.

Free Product Characterization

Free product characterization will be conducted using an intrinsically safe interface probe. To prevent dermal contact with potential impacted groundwater or free product, nitrile gloves will be worn with Level D PPE.

<u>Site Survey</u>

A site survey will be conducted, as appropriate at the conclusion of some investigations. The survey will locate the primary structures on site and determine the location and elevations of monitoring wells and soil borings if applicable. Exposure to contaminants is not expected, as the subsurface soils will not be disturbed. The site survey will be performed in Level D PPE.

4.0 Personnel Training Requirements

The Project Manager, Health and Safety Officer, Site Safety Supervisor, Field Geologist, Field Technicians, Geoprobe® Operator, Driller, and any other workers who may come into contact with the contaminants will have completed a 40 hour hazardous waste site operations training course that meets the requirements of Part 432 of Michigan Public Act 154 as amended and 29 CFR 1910.120. Additionally, these personnel shall have completed an eight-hour refresher course within the last year and have three days of documented field experience under the direct supervision of a Site Safety Officer.

The Health and Safety Supervisor will have completed an 8 hour site supervisors training course that meets the requirements of part 432 of Michigan public act 154 as amended and 29 CFR 1910.120.

5.0 Personal Protective Equipment

The following section describes the type of personal protection equipment to be used on site. Level D and modified Level D protection will be used on-site. Modified Level D protection equipment includes:

- nitrile gloves;
- steel-toed work boots;
- safety glasses, as needed;
- splash shield, as needed; and
- hardhat.

The Modified Level D configuration has been developed in order to prevent skin contact, and remove the potential for dermal absorption of contaminants.

6.0 Medical Surveillance

On-site medical monitoring will not be required for general field activities conducted. If on-site medical monitoring is deemed necessary, a site specific Health and Safety Plan will be developed. All workers who are required to have the hazardous waste site operator's training are required to be enrolled in a medical monitoring program unless they meet the exemptions outlined in Part 432 of Michigan Public Act 154 as amended.

7.0 Air Monitoring and Sampling

The ambient air will be monitored during Geoprobe and monitoring well installation with a Photoionization Detector (PID) capable of detecting organic constituents with an ionization potential of 10.6 electron volts (eV), or greater. The PID will be calibrated to 100 ppm isobutylene in accordance with the manufacturer's specifications. The air will be monitored in the downwind direction of the active work area every half hour. If the PID readings exceed 1 ppm over background, work will be halted and employees will upgrade their PPE to include a respirator with an organic vapor cartridge.

8.0 Site Control Measures

Visitors to the site will be confined to non-working areas while site investigation activities are underway. The general public will be kept out of the work area when work is underway.

Communications on-site will be conducted by speaking. In the event of an emergency, a vehicle horn will be sounded to alert other workers. A cellular phone will be on site to call for emergency assistance if required. If verbal communication is not viable due to excessive noise, the following standard hand signals will be used:

- Hand Gripping throat "out of air, can't breathe"
- Both hands around waist "leave area immediately"
- Hands on top of head "need assistance"
- Thumbs up "OK, I am alright, I understand"
- Thumbs down "No, negative"

A buddy system will be utilized during site investigations. The Site Safety Supervisor will remain in visual contact with equipment operators. The buddies will provide his or her buddy with assistance when required; observe their buddy for signs of chemical, heat, or cold exposure; periodically check the integrity of their buddy's personal protective gear; and call for emergency assistance if required.

To prevent employee exposure to contaminants, the Site Safety Supervisor will ensure that employees are wearing the appropriate PPE and that the soils and ambient air are being monitored in accordance with this Safety Plan.

9.0 Decontamination Procedures

The primary decontamination procedure is to wash all potentially contaminated tools and clothing with soap and water. Tooling to be decontaminated will include Geoprobe® tools, drilling augers, static water level and free product meters and other sampling tools. The Geoprobe® tools and augers will be decontaminated at a temporary power wash station.

The decontamination wash water will be placed in 55 gallon DOT 17 H drums and stored in the drum storage area for later disposal.

The soil cuttings from the Geoprobe® investigation, monitoring well installation, and decontamination procedure will be placed in 55 gallon DOT 17 H drums and stored in the drum storage area for later disposal.

The Level D PPE will be decontaminated by laundering with soap and water. Any commercial laundry or cleaning establishment utilized to clean Level D clothing will be informed of the potential harmful effect of exposure to hazardous substances.

The contaminated nitrile gloves, spent bailers, lead filters, and other sampling supplies will be placed in 55 gallon DOT 17 H drums and stored in the drum storage area for later disposal.

Employees whose non-impervious clothing becomes wetted with hazardous substances shall immediately remove that clothing and wash the wetted skin with soap and water.

10.0 Emergency Response / Contingency Plan

If an emergency situation develops on-site which requires evacuation, it shall be the responsibility of the Site Safety Supervisor to sound a vehicle horn for site evacuation. The Site Safety Supervisor shall ensure that the evacuation is carried out in a calm, controlled fashion.

All personnel shall exit the site and shall congregate in an area designated by the Site Safety Supervisor to be safe. The route of evacuation will be dependent on wind direction, and the severity and type of incident. The Site Safety Supervisor shall ensure that all personnel are accounted for. If someone is missing, the Site Safety Supervisor shall alert emergency personnel by contacting the emergency phone numbers listed in this Safety Plan.

Contamination Emergency Contingency Plan

The following procedures shall be instituted <u>immediately</u> in the event of contamination to an employee or other on-site worker by a hazardous substance:

- 1) If emergency rescue is needed to remove the victim from the contaminated area, notify police, fire department, and EMS units immediately. Use the phone numbers contained in this Health & Safety Plan.
- 2) <u>Absolutely no emergency rescue is to be attempted without having a trained back up present.</u>
- 3) If the victim is able to move under their own power, escort them to an un-contaminated area as soon as possible.
- 4) Site activities shall immediately cease, and the area will be secured. The area in which the contamination occurred shall be considered off-limits until the arrival of trained personnel who are properly equipped with the appropriate personal protective equipment and monitoring instrumentation.
- 5) Assess the victim's condition for the nature of injury or contamination. The victim should be considered symptomatic if they exhibit any abnormalities. Pay close attention to the level of consciousness and any cardiac or respiratory involvement. Use special care to insure that you do not become contaminated as well. If any abnormal symptoms are present, notify police, fire department, and EMS units immediately.
- 6) Attempt to identify the exact type of material involved. If the material cannot be positively identified, attempt to acquire a grab sample if doing so will not expose personnel to the hazard. Use extreme caution if the danger of being contaminated exists.
- 7) The victim shall be decontaminated as soon as possible after removal from the contaminated area. This should be done in a non-contaminated area well away from the source of the problem. Extreme care should be used to avoid cross-contamination. The respirator should be removed last, except in the case of critical injury. The victim should not be transported until decontamination is performed to the degree that personnel will not be subjected to cross-contamination.

Fire Contingency Plan

The following procedures shall be initiated <u>immediately</u> in the event of a fire on-site:

- 1) The site shall be shut down and immediately secured. The area in which the fire occurred should be considered off-limits until the cause can be determined. All non-essential personnel shall be evacuated from the site to a safe area. Notify the fire department immediately using the phone number contained in this Health & Safety Plan.
- 2) No attempt to control the fire should be made by employees or other on-site personnel. All fires shall be handled by the emergency response team summoned to the site (e.g.: fire department).

Emergency Contact Information

The following emergency response agencies should be contacted immediately when an emergency situation arises:

Police:	911
Fire:	911
Ambulance:	911

<u>Nearest Hospital</u>

A general map showing the nearest hospital location is attached to the safety plan. The following hospitals in Genesee County Have 24-hour emergency services and are equipped to handle a chemical exposure:

- Hurley Medical Services One Hurley Plaza, Flint, Michigan
- McLaren Regional Medical Center 410 South Ballenger Highway, Flint, Michigan
- Genesys Health Park One Genesys Parkway, Grand Blanc, Michigan

11.0 Confined Space Entry Program

Confined spaces have not been identified at the site. Confined space entry is not covered under this safety plan. If confined spaces are identified and are to be entered, this Safety Plan shall be modified before entry is permitted.

12.0 Spill Containment Program

The following procedures shall be instituted <u>immediately</u> in the event of a spill or air release of a hazardous material on-site:

- 1) The site shall be shut down and immediately secured. The area in which the spill or release occurred shall be considered off-limits until the cause can be determined and site safety can be evaluated. All non-essential personnel should be evacuated from the site to a safe, upwind area.
- 2) The spilled or released material should be identified and appropriate measures, such as dikes or berms, should be instituted to halt and contain the spread of the release. If the spill extends into waterways, the U.S. Coast Guard and the National Response Center (1-800-424-8802) must be notified immediately. Spill booms should be used and placed in a manner that curbs downstream contamination.
- 3) Instantaneous real time air monitoring with the PID should be conducted. Ambient air quality monitoring should be done both upwind and downwind of the spill site or release point.
- 4) If the results of the monitoring indicate levels of contaminants exceed the IDLH values listed in this Health & Safety Plan, the site should be immediately evacuated and the appropriate Federal, State, and local authorities and emergency response personnel notified.
- 5) Notify police and fire departments immediately if contaminants are found to have migrated off-site into populated areas, if a large spill of flammable materials is involved, or, the material is considered acutely toxic or exceeds the IDLH.
- 6) The spill or release shall be reported to the appropriate regulatory agency per the reporting standards of that agency.

13.0 Hazard Communication

The anticipated chemicals to be encountered on site are believed to be limited to petroleum products, organic compounds, and heavy metals. MSDS sheets for petroleum products are attached to this report. If additional anticipated chemicals are noted, MSDS sheets for the chemicals will be attached to this safety plan.

SIGNATURE BLOCK

The information contained in this report is based on potential existing site conditions disclosed or discovered during the current site investigation activities.

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HOSPITAL LOCATIONS MAP

Racer Trust – Flint West Building 9 Glenwood and Stevens Streets Flint, Michigan





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