



Miller Environmental Corporation

**Manitoba Environmental Centre (MEC)
Safety and Health Plan**

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1.0 Introduction

1.1 Background

Miller Environmental Corporation (Miller) is the operator of the Manitoba Environmental Centre (MEC), a hazardous and industrial waste treatment and storage facility located in the Rural Municipality of Montcalm.

This document outlines the Miller safety and health program. The program has been developed to address existing legislation and regulatory requirements both federally and provincially.

The program is in several parts, as required to meet various separate regulatory and licensing requirements. The part documented here is the overview of the safety and health program as required under the Workplace Safety and Health Act. A second component is the safety and health policies, developed to support safe work practices and attached as an appendix to this document. A third component is the emergency response plan required by Miller's hazardous waste management license under the Dangerous Goods Handling and Transportation Act. The emergency response plan conforms to the CAN/CSA-Z731-95 Emergency Planning for Industry standard. A final component is the MEC fire suppression system information, as required by the fires prevention and emergency response act. The program addresses the safety and health concerns presented by the Miller hazardous and industrial waste management transfer and processing facility.

1.2 Site Description

The PB1 transfer station is an approximately 400 m² building equipped with a sub-grade ramp and loading dock, and an at-grade loading door. Other features of the transfer station include spill containment capability, fire suppression equipment, fugitive emission control, emergency eyewash and deluge shower. The transfer station is able to accommodate 136 double stacked pallet spaces (820 L equivalents) for a total of 111,520 L of container space. Small packaging stored on the floor in all process buildings is stored at a maximum of 2 pallets high (approximately 3.3 m) and 1 meter between rows not exceeding storage capacity. The facility also includes a work area for repackaging and liquid bulking/paint can crushing, and separate supply room, with washroom.

The loading dock and loading door of the transfer station are incorporated in a roofed, enclosed area (Process Building 4 (PB4)) as protection from the elements. The enclosed area is bermed with a concrete floor and is wired to meet fire protection standards.

Processing Building 1 (PB1) is 483 m² and is attached to the PB1 transfer station by means of an enclosed access. The building includes storage and processing areas, office space, laboratory, washroom and compressor room. Waste is processed in aqueous tanks (Tank 4 (T4, 11,500 L), tank 5 (T5, 11,500 L), tank 6 (T6, 11,500 L), tank 7 (T7, 40,000 L), tank 8 (T8, 50,000 L), tank 9 (T9, 50,000 L), tank 10 (T10, 50,000 L), tank 17 (T17, 30,000 L), tank 18 (T18, 30,000 L), and tank 19 (T19, 30,000 L)), a sludge mixing vat of 5,000 L capacity, and various mixing bins up to 15 m³. High water content organic liquids destined for disposal is stored in aqueous tanks. PB1 is able to accommodate 96 double stacked pallet spaces (820 L equivalents) for a total of 78,720 L of container space. Containers of waste requiring processing are stored in PB1 until transfer into a

process vessel. Organic waste processing and inorganic waste processing pumps, lines and drip trays are physically separated to avoid cross contamination. A 6' by 6' portable cage is used to store PCB materials from the household hazardous waste program.

Bulk storage of organic waste is in an exterior bermed and permitted tank farm adjacent to the processing building, and connected directly to the processing tanks by means of a pipe header system. There are 3 tanks (T8, T9 and T10), each of 50,000 L capacity.

Other features of the transfer station and PB1 described above include spill containment capability, fire suppression system, fugitive emission control (organic and inorganic), emergency eyewashes and deluge showers. PB1 also includes continuous THC monitoring of the organic fugitive emission control system.

Process building 2 (PB2) is 2,900 m² and contains waste stabilization material and storage of high volume waste requiring solidification and stabilization. This building is also used for a container management program (CMP) which consists of recycling plastic, wherein the collected plastic containers are rinsed, shredded and sent to a recycler. This building is wired to fire protection standards and is totally contained with a blind sump and leachate collection system. There is also an enclosed safety hut with an emergency eyewash and deluge shower. PB2 is able to accommodate 346 double stacked pallet spaces (820 L equivalents) for a total of 283,720 L of container space.

South of PB2 is a 446 m² storage coverall (Storage Building 1 - SB1) used to house reagents and supplies.

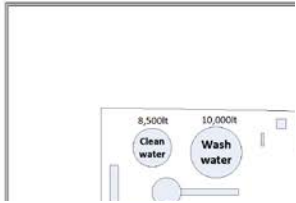
Process building 3 (PB3) is 84 m² and contains a filter press for low level contaminated waste waters. Liquid waste is transferred back and forth from PB1 to PB3 through a controlled valve and header system. There are 2 tanks (Tank 12 (T12, 10,500 L) and Tank 13 (T13, 10,000 L)) situated in PB3 used to hold finished non-regulated filtrate after going through the filter press. This building is also wired to fire protection standards and is totally contained with a blind sump. PB3 is able to accommodate 16 double stacked pallet spaces (820 L equivalents) for a total of 13,120 L of container space.

Process building 4 (PB4) is 585 m² and contains equipment storage along with non-flammable and non-reactive waste storage. A drum crusher is situated in PB4 to crush all unusable metal drums. The latex paint can crusher is also situated in PB4. Non-flammable wastes, non-reactive wastes and new reagents are also stored in PB4. This building is also wired to fire protection standards and is totally contained with a blind sump. PB4 is able to accommodate 148 double stacked pallet spaces (820 L equivalents) for a total of 121,360 L of container space.

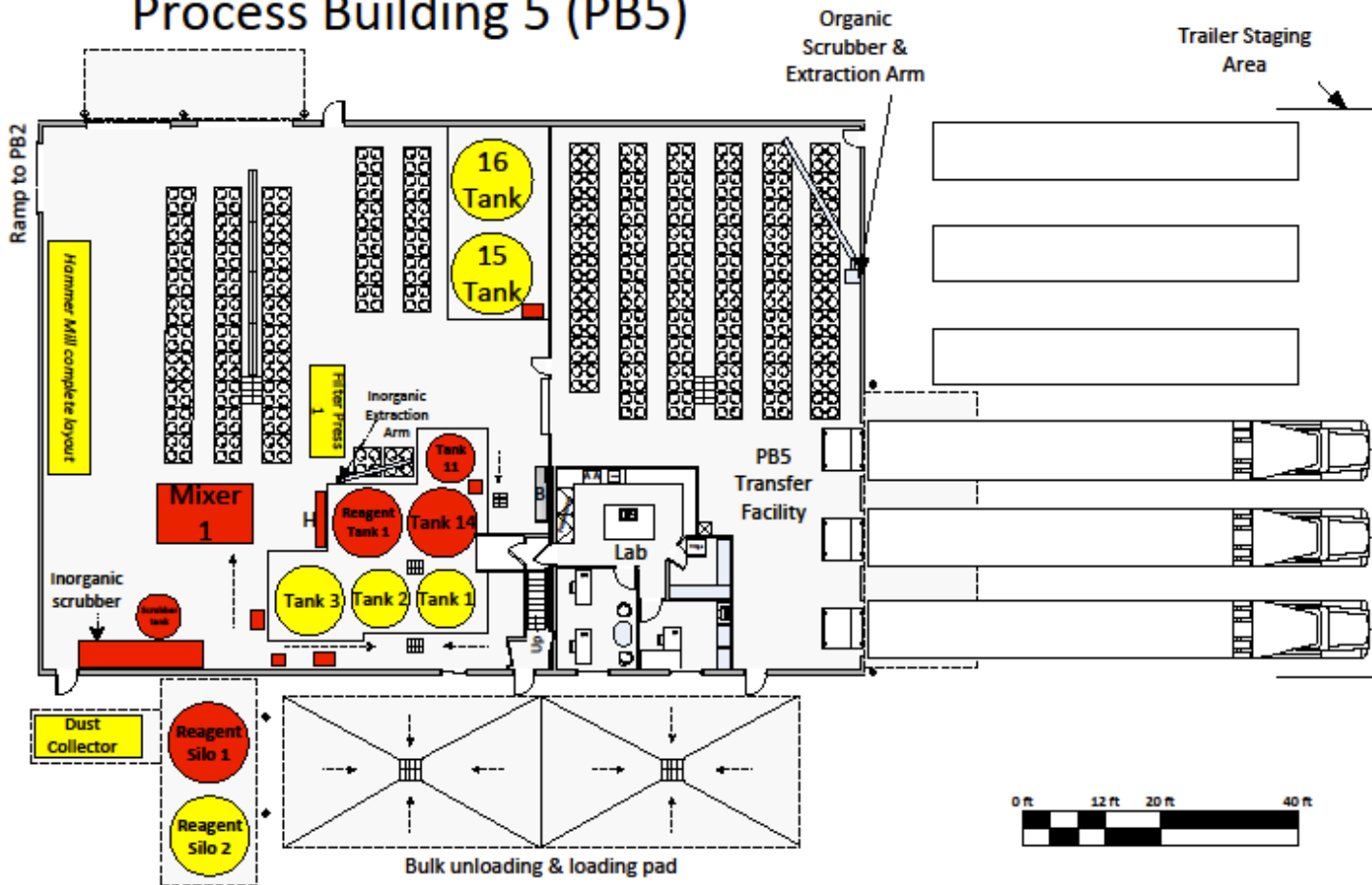
Process building 5 (PB5) is 892 m² and includes storage and processing areas, laboratory, washroom and service room. The waste processing area is referred to as PB5 and the receiving area of the building is referred to as PB5 transfer facility. Waste is processed in liquid aqueous tanks (Tank 1 (T1, 11,500 L), tank 2 (T2, 11,500 L), tank 3 (T3, 32,500 L), tank 11, (T11, 10,000 L), tank 14 (T14, 35,000 L), tank 15 (T15, 50,000 L) and tank 16 (T16, 50,000 L)). There is also a reagent tank (RT1, 30,000 L), reagent silos (x2, 60 tonnes each), mixer (8.5 yard capacity), dust collector, and wet (inorganic) and dry (organic) fugitive emission control scrubbers. The inorganic emission control scrubber is located on the PB5 processing side and the organic

emission control scrubber is located in the PB5 transfer facility. Other features of PB5 include spill containment capability, fire suppression system, emergency eyewash and deluge shower. PB5 is able to accommodate 206 double stacked pallet spaces (820 L equivalents) for a total of 168,920 L of container space.

MEC General Layout



Process Building 5 (PB5)



Legend	
Tank 01 -	11,500lt
Tank 02 -	11,500lt
Tank 03 -	32,500lt
Tank 11 -	10,000lt
Tank 14 -	35,000lt
Tank 15 -	50,000lt
Tank 16 -	50,000lt
Reagent Tank	
01-	30,000lt
Reagent Silo	
01 -	60 Tonne
02 -	60 Tonne

1.3 Regulatory Requirements

The Miller treatment and storage/transfer facilities are fully permitted under the Dangerous Goods Handling and Transportation Act (License #58HW S2 RR, October 15, 1997; revised June 2, 2000 and August 8, 2000). Extensive documentation on the facility, the site and potential environmental impacts, if any, as a result of the facility operation can be found in the document, License Application and Environmental Impact Assessment for Manitoba's Central Hazardous Waste Management Facility in the R.M. of Montcalm (EIA). This document was filed with the Department of Environment, March 5, 1992. Subsequent annual reports from 1992 on indicate minimal impact on the environment.

Table 1 represents applicable legislation respecting this facility.

Table 1 – Legislation Applicable to the MEC

Operations

Workplace Safety and Health Act C.C.S.M. c. W210

Pertinent Regulations:

- Workplace Safety and Health Regulation MR 217/2006

The Dangerous Goods Handling and Transportation Act C.C.S.M. c. D12

Pertinent Regulations:

- Dangerous Goods Handling and Transportation Regulation MR 55/2003
- Classification Criteria for Products, Substances and Organisms Regulation MR 282/87
- Generator Registration and Carrier Licencing Regulation MR 175/87
- Environmental Accident Reporting Regulation MR 439/87
- Manifest Regulation MR 139/88
- Storage and Handling of Petroleum Products and Allied Products Regulation MR 188/2001
- PCB Storage Site Regulation MR 474/88

The Environment Act

Pertinent Objectives and Guidelines:

- Manitoba Water Quality Standards, Objectives, and Guidelines
- Ambient Air Quality Criteria - Objectives and Guidelines for Various Air Pollutants
- Treatment and Disposal of Petroleum Contaminated Soil, Guideline 96 – 05

The Pesticides and Fertilizers Control Act C.C.S.M. c. P40

The Public Health Act C.C.S.M. c. P210

The Highway Traffic Act C.C.S.M. c. H60

The Fires Prevention and Emergency Response Act C.C.S.M. c. F80

Pertinent Regulations:

- Manitoba Fire Code MR 216/2006

Transportation of Dangerous Goods Act, 1992

Pertinent Regulations:

- Transportation of Dangerous Goods Regulations SOR/2001-286

The Canadian Environmental Protection Act (CEPA)

Pertinent Regulations:

- PCB Regulations (SOR/2008-273)
- Export and Import of Hazardous Wastes Regulations (SOR/92-637)
- Interprovincial Movement of Hazardous Waste Regulations (SOR/2002-301)

2.0 Organizational Structure

An organizational structure has been developed to support the safety and health activities, including emergency response at the MEC. Figure 2.1 illustrates the basic structure and includes both on-site and off-site personnel, outside responders (e.g., fire, ambulance, regulatory authorities) and community liaison. The responsibilities of these personnel are briefly described below.

General Manager is responsible for determining project objectives, allocating resources, establishing the chain-of-command and evaluating the program. Management provides the necessary resources including adequate personnel, time to conduct activities safely, and provides appropriate disciplinary action when unsafe acts or practices occur.

Community Liaison Committee are community appointed members responsible for oversight of various MEC activities. In the event of an emergency they will be the main community liaison.

Health and Safety Representative is responsible for reviewing, and supporting the safety and health program and acting as the worker safety representative.

Technical Service provides inter-disciplinary technical support to all Corporation Departments. This includes preparation and delivery of safety and health training in TDG, WHMIS and related subjects. Scientific advice is also provided for development and revision of the Program.

Operations Manager reports to the General Manager and is directly responsible for all on-site activities. This position implements the site work plan and site safety plan, and manages all waste handling/processing staff.

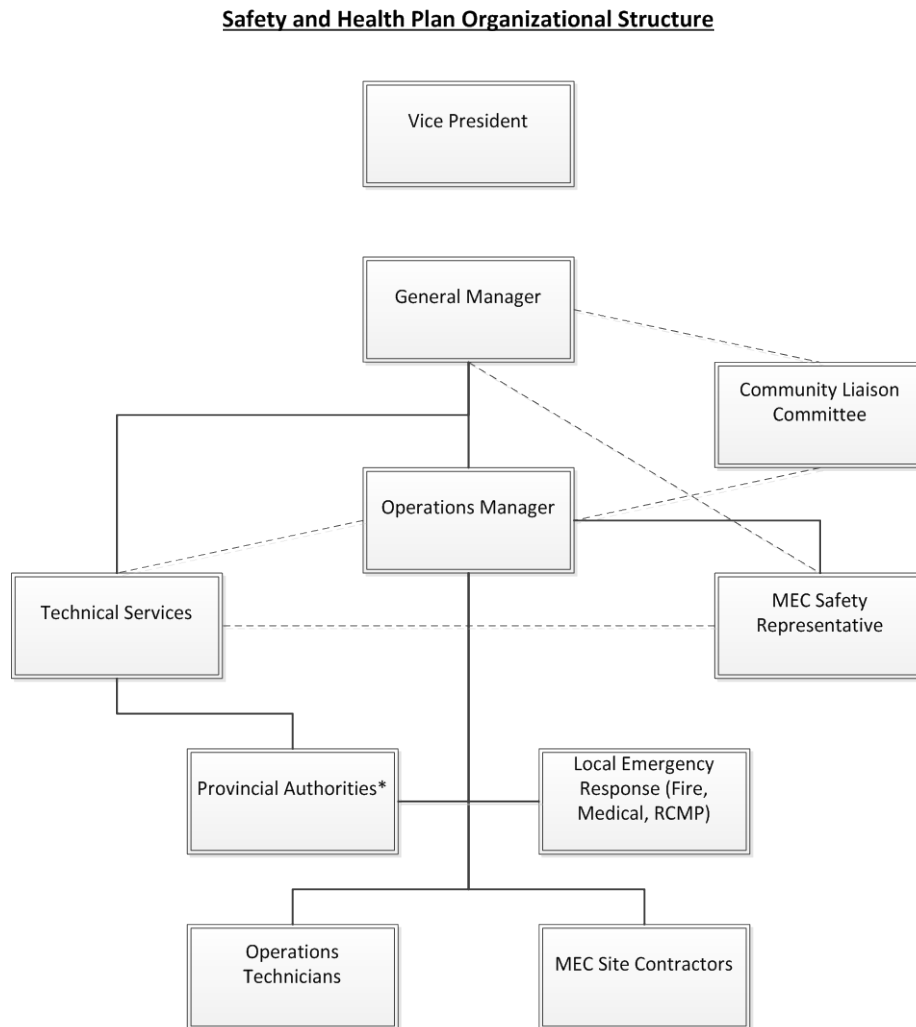
Provincial Authorities are responsible for regulatory oversight and enforcement and for assistance in the event of emergencies.

St. Jean/Letellier Fire Department and Ambulance provide emergency response appropriate to the incidents on-site, respond to fires and upset conditions that may occur and perform rescue operations.

Operations Technicians accept and manage waste brought to the facility. They may also comprise part of the emergency response team. These employees are likely to be the first respondents to an emergency situation and are responsible for emergency reporting and self-preservation.

Site Contractors will safely complete on-site tasks required to fulfill the work. They will comply with the site safety health program and will notify the safety and health representative of unsafe conditions.

Figure 2.1 – Safety and Health Plan Organizational Structure



*Provincial Authorities include: Workplace Safety and Health, Manitoba Conservation and Water Stewardship, Emergency Measures Organization

All personnel have ready access to the safety and health representative or to other safety and health or technical expertise. As with all aspects of the program, one of the most critical aspects is a strong commitment by management. Senior Corporation personnel are involved in the establishment, implementation and enforcement of the program and establish integrity for the entire operation. Other key factors include:

- A strong commitment as defined by actions reflecting management support and involvement in safety activities;
- A high level of housekeeping, orderly workplace conditions and environmental quality control;
- Open communication between staff and management;
- Well developed employee support services;
- Training, emphasizing early indoctrination and regular follow-up in job safety;
- Added features to enhance conventional safety practices; and
- Effective disciplinary plan to encourage staff to adhere to safety practices.

The local community must be aware of the safety and health program and have confidence in it. This means effective and continuous liaison with the community.

3.0 Hazard Assessment

The following hazards may be encountered below.

3.1 Tank Farm

- Organic vapours
- Confined space entry
- The inhalation of volatile organic vapours during all operations
- Flammable vapours: fuel, flammable solvent
- Presence of flammable vapours can pose a potential fire hazard and health hazard
- Potential for skin contact
- Danger of slipping/falling (ice in winter)

3.2 PB1 Transfer Station

- Organic vapours: solvent, gasoline, diesel
- Confined space entry
- The inhalation of volatile organic vapours during all operations
- Flammable vapours: fuel, flammable solvent
- Presence of flammable vapours can pose a potential fire hazard and health hazard
- Fugitive emissions including dust
- Hazards associated with handling and storage of drums
- Vehicular traffic: fork lift
- Physical hazard from operating mechanical equipment, moving drums and containers
- Potential for skin contact, accidental ingestion of hazardous substances
- Hazards associated with inorganic substances (Primarily metal salts) liquids or dust
- Transfer of flammable liquids - static discharge hazard

3.3 Process Building 1

- Organic vapours: gasoline, diesel, heating oil
- The inhalation of volatile organic vapours during all operations
- Flammable vapours: gasoline or diesel fuel sources
- Presence of flammable vapours can pose a potential fire hazard and health hazard
- Fugitive emissions including dusts
- Vehicular traffic: forklift
- Hazards associated with handling and storage of drums
- Physical hazard from operating mechanical equipment such as sludge blender
- Potential for sound levels above 85 dB(A)
- Potential for skin contact, ingestion or hazardous substances (acids, alkali)
- Hazards associated with inorganic substances (primarily metals) liquid or dust
- Pressure release from filters
- Transfer of flammable liquids - static discharge hazard
- Confined space

3.4 Process Building 2

- Inorganic fugitive emissions including dust
- Vehicular traffic: fork lift
- Hazards associated with handling and storage of drums
- Potential for skin contact, ingestion of hazardous substances (acids, alkali)
- Hazards associated with inorganic substances (primarily metal contaminated dusts)
- Physical hazard from mechanical equipment such as back hoe, auger, cement truck movement
- Pesticide and herbicide vapours from the bulking of the residues from the CMP program
- Hazards associated with moving conveyor belts
- Hazards associated with moving shredder parts
- Hazards associated with a slippery floor

3.5 Process Building 3

- Presence of flammable vapours can pose a potential fire hazard and health hazard
- Vehicular traffic: forklift
- Physical hazard from operating mechanical equipment such as filter press
- Hazards associated with inorganic substances (primarily metals) liquid or dust
- Pressure release from filters
- Confined space

3.6 Process Building 4

- The inhalation of volatile organic vapours during all operations (minimal potential in this area)
- Presence of flammable vapours can pose a potential fire hazard and health hazard
- Fugitive emissions including dust
- Vehicular traffic: fork lift
- Hazards associated with handling and storage of drums
- Physical hazard from operating mechanical equipment such as paint can crusher, tote washing equipment

- Potential for skin contact, ingestion of hazardous substances (acids, alkali)
- Hazards associated with inorganic substances (primarily metals)

3.7 Process Building 5

- Organic vapours: gasoline, diesel, heating oil
- The inhalation of volatile organic vapours during all operations
- Flammable vapours: gasoline or diesel fuel sources
- Presence of flammable vapours can pose a potential fire hazard and health hazard
- Fugitive emissions including dusts
- Vehicular traffic: forklift
- Hazards associated with handling and storage of drums
- Physical hazard from operating mechanical equipment such as mixers and hammer mills
- Potential for sound levels above 85 dB(A)
- Potential for skin contact, ingestion or hazardous substances (acids, alkali)
- Hazards associated with inorganic substances (primarily metals) liquid or dust
- Pressure release from filters
- Confined space

3.8 PB1 Bulk Unloading and Loading Pad

- Transfer of flammable liquids - static discharge hazard
- Organic vapours: gasoline, diesel, heating oil
- The inhalation of volatile organic vapours during all operations
- Flammable vapours: gasoline or diesel fuel sources
- Vehicular traffic: forklift, tankers and trucks
- Potential for skin contact, ingestion of hazardous substances (organic)
- Hazards associated with inorganic substances (primarily metals) liquid or dust
- Danger of slipping/falling (ice in winter)

3.9 PB5 Bulk Unloading and Loading Pad

- Transfer of inorganic liquids - potential oxidizing, corrosive hazards
- Potential for skin contact, ingestion or hazardous substances (acids, alkali)
- The inhalation of inorganic vapours during all operations
- Hazards associated with inorganic substances (primarily metals) liquid or dust
- Fugitive emissions including dusts
- Vehicular traffic: forklift, tankers and trucks
- Danger of slipping/falling (ice in winter)

4.0 Safe Work Practices

4.1 Tank Farm

- Use eye protection in all areas of the MEC except for the office
- Wear hearing protection when loud equipment is being operated
- Wear hard hats

- Use personal protective equipment as required (dust mask, respirators, goggles, safety glasses)
- Use confined space procedure when entering tanks

4.2 PB1 Transfer Station

- Use eye protection in all areas of the MEC except for the office
- Wear hearing protection when loud equipment is being operated
- Wear hard hats
- Use personal protective equipment as required (dust mask, respirators, goggles, safety glasses)
- When on forklift, honk horn prior to passing through doorways
- Grounding during flammable liquid transfer
- Use emission control system when transferring, bulking any volatile organics
- Use mechanical lifting equipment for moving heavy items
- Use confined space procedure when entering sump or a tank

4.3 Process Building 1

- Use eye protection in all areas of the MEC except for the offices
- Wear hearing protection when loud equipment is being operated
- Wear hard hats
- Use personal protective equipment as required (dust mask, respirators, goggles, safety glasses)
- Monitor ambient air for volatile organic vapours and flammable vapours during all operations and use personal protective equipment
- Use emission control system (inorganic & organic) during working hours
- When on forklift, honk horn prior to passing through doorways
- Grounding during flammable liquid transfer
- Use mechanical lifting equipment for moving heavy items
- Use confined space procedure when entering tanks

4.4 Process Building 2

- Use eye protection in all areas of the MEC except for the offices
- Wear hearing protection when loud equipment is being operated
- Wear hard hats
- Use personal protective equipment as required (dust mask, respirators, goggles, safety glasses)
- When on forklift, honk horn prior to passing through doorways
- Use mechanical lifting equipment for moving heavy items
- Use confined space procedure when entering sump or a tank

4.5 Process Building 3

- Use eye protection in all areas of the MEC except for the offices
- Wear hearing protection when loud equipment is being operated
- Wear hard hats
- Use personal protective equipment as required (dust mask, respirators, goggles, safety glasses)
- When on forklift, honk horn prior to passing through doorways
- Use mechanical lifting equipment for moving heavy items
- Use confined space procedure when entering tanks

4.6 Process Building 4

- Use eye protection in all areas of the MEC except for the office
- Wear hearing protection when loud equipment is being operated
- Wear hard hats
- Use personal protective equipment as required (dust mask, respirators, goggles, safety glasses)
- When on forklift, honk horn prior to passing through doorways
- Use mechanical lifting equipment for moving heavy items
- Use confined space procedure when entering sump or a tank

4.7 Process Building 5

- Use eye protection in all areas of the MEC except for the offices
- Wear hearing protection when loud equipment is being operated
- Wear hard hats
- Use personal protective equipment as required (dust mask, respirators, goggles, safety glasses)
- Use emission control system (inorganic & organic) during working hours
- When on forklift, honk horn prior to passing through doorways
- Use mechanical lifting equipment for moving heavy items
- Use confined space procedure when entering tanks

4.8 PB1 Bulk Unloading and Loading Pad

- Use eye protection in all areas of the MEC except for the office
- Wear hearing protection when loud equipment is being operated
- Wear hard hats
- Use personal protective equipment as required (dust mask, respirators, goggles, safety glasses)
- Grounding for all flammable liquid transfer
- Use confined space procedure when entering tankers
- Use mechanical lifting equipment for moving heavy items

4.9 PB5 Bulk Unloading and Loading Pad

- Use eye protection in all areas of the MEC except for the office
- Wear hearing protection when loud equipment is being operated
- Wear hard hats
- Use personal protective equipment as required (dust mask, respirators, goggles, safety glasses)
- Use confined space procedure when entering tankers
- Use mechanical lifting equipment for moving heavy items

5.0 Personal Protective Equipment Requirements

5.1 General PPE Requirements

All personal protective equipment (PPE) conforms to the Workplace Health and Safety Act and regulation requirements. Training in the correct use of PPE is provided. Personal protective equipment is required to be worn by all staff of the MEC when in areas requiring such protection.

Contact with contaminated surfaces, or surfaces suspected of being contaminated should be avoided. This includes walking through, kneeling or place equipment in puddles, mud, discolored surfaces, or leaning on drums and other contaminated containers. Eating, smoking, drinking and/or application of cosmetics in the immediate contaminated work area is prohibited.

Specific safety and health requirements are detailed in the Safety and Health Policies (Appendix A), and in applicable standard operating procedures.

5.2 Specific Hazard Level Requirements

Level D personal protection will be the minimum acceptable level of PPE for the MEC site. Modified Level D includes:

- Hard hat
- Safety glasses
- Steel toe and shank boots
- Vinyl or nitrile gloves (as appropriate when handling waste)
- Coveralls/work uniform
- Outer leather or Nitrile butyl-rubber (NBR) gloves (as appropriate)
- Outer boots-chemical resistant (as appropriate)
- Splash goggles (as appropriate)
- Polyethylene coated Tyvek suit (as appropriate)
- Hearing protection (as appropriate)

At specified times and during an emergency, Level C personal protection will be required at the MEC site. Level C includes:

- Buddy systems required at all times (no less than 2 trained workers)
- Full face respirator with approved chemical cartridges
- Saranex coated Tyvek suit
- Inner vinyl or nitrile gloves
- Outer protective gloves - can be leather or Nitrile butyl-rubber (NBR) gloves
- Steel toe and shank boots
- Outer boots-chemical resistant
- Hard hat
- Hearing protection (appropriate above 80dBA action level)

At specified times and during an emergency, Level B personal protection will be required at the MEC site (Level B to be undertaken by NFPA 472 operations level or higher trained personnel, or under the direct supervision of such personnel):

- Miller safety and health representatives must be on site upon start up on any project requiring level B protection; this should be understood to include subcontractors conducting level B activity.
- Buddy system required at all times (no less than [2] trained workers)
- Supplied air respirator with air line or SCBA
- Saranex or PE-coated Tyvek suit

- Inner nitrile gloves
- Outer Nitrile butyl-rubber gloves
- Steel toe and shank boots
- Chemical resistant boot covers (Tyvek or Saranex)
- Hard hat
- Hearing protection (as appropriate)

Visitors entering the active area must have the following

- Safety glasses
- Hard hat
- Safety shoes (if working)
- If working in the area all other safety procedures apply

6.0 Safety Measures

6.1 PB1 Transfer Station

The PB1 transfer station has the following safety features;

- Class 1, division 2 fire rated
- Safety shower and eye wash station
- Respirators &/or self-contained breathing apparatus readily available.
- A grounding system required during handling of potentially flammable or explosive materials.
- Portable fire extinguishers throughout the facility
- Fugitive organic emissions collected and treated by the secondary emission control system
- LEL sensor and alarm system
- Spill containment materials and equipment available
- First aid located in change room
- Regular inspections and recharging of fire extinguishers
- Routine checks conducted to ensure the integrity of all safety equipment
- Fire alarm and suppression system (heat sensors and/or pull station activation)
- Regular inspection and testing of the fire suppression system
- Back-up alarms for trucks and loading equipment are required to reduce the hazard of hitting pedestrian workers

The PB1 transfer station is equipped with appropriate engineered controls and provides mitigation measures in order to minimize potential impacts on personal safety and health and environmental protection. These controls include:

- Explosion proof electrical fittings on overhead door operators, light switches and sump pumps;
- Class 1 division 2 light fixtures;
- In-floor radiant heating system;
- 5,000 cfm exhaust system with explosion proof motors and motorized dampers;
- A secondary ventilation system for fugitive emission control in the work area; and

- High expansion foam system as per NFPA 11A Standard for Medium and High Expansion Foam Systems

The foam system is equipped with a two-stage alarm and manual override. The first alarm initiates procedures which will result in one of two actions. If the triggering event can be controlled by on-site personnel (e.g., a localized fire which can be extinguished with hand held extinguishers), a manual override will prevent foam release. If the triggering event cannot be controlled, the building will be evacuated. A stage alarm will then activate the foam release.

The pull station activates an immediate discharge of the foam system.

The system is designed to discharge at a rate to fill the building with foam to a depth above the hazard; that is, to cover the top of the highest stored flammable drum. This should occur before unacceptable damage occurs to the building and will submerge the contents in a minimum of 2 minutes.

In addition to the engineered controls, site personnel conduct daily, weekly and monthly procedural checks on sumps, stored drums, safety equipment, ventilation systems and the fire suppression system.

6.2 Process Building 1

PB1 has the following safety features;

- Class 1, division 2 fire rated
- Safety showers and eye wash stations
- Respirators &/or self-contained breathing apparatus readily available.
- A grounding system required during handling of potentially flammable or explosive materials
- Portable fire extinguishers throughout the facility
- Gaseous emissions collected and treated by the secondary emission control system
- LEL sensors and alarm system
- Spill containment materials and equipment available
- Tank level monitor and alarm system
- First aid stations located in change room and lab
- Regular inspection and recharging of fire extinguishers
- Routine checks conducted to ensure the integrity of all safety equipment
- Fire suppression system (heat sensors and/or pull station activation)
- Regular inspection and testing of the fire suppression system
- Back-up alarms for trucks and loading equipment are required to reduce the hazard of hitting pedestrian workers

The PB1 is equipped with appropriate engineered controls and provides mitigation measures in order to minimize potential impacts on personal safety and health and environmental protection. These controls include:

- Explosion proof electrical fittings on overhead door operators, light switches and sump pumps,
- Class 1 division 2 light fixtures,

- Class 1, division 2 rated electric forced air heating,
- 5,000 cfm exhaust system with explosion proof motors and motorized dampers,
- Secondary ventilation systems (scrubbers) for organic and inorganic fugitive emission control in the work area, and
- High expansion foam system as per NFPA 11A Standard for Medium and High Expansion Foam Systems.

The foam system is equipped with a single-stage alarm and manual override. If the triggering event can be controlled by on-site personnel (e.g., a localized fire which can be extinguished with hand held extinguishers), a manual override will prevent foam release. If the triggering event cannot be controlled, the building will be evacuated and the foam release allowed to continue.

The system is designed to discharge at a rate to fill the building with foam to a depth above the hazard; that is, to cover the top of the highest stored flammable drum. This should occur before unacceptable damage occurs to the building and will submerge the contents for a minimum of 2 minutes.

In addition to the engineered controls, site personnel conduct daily, weekly and monthly procedural checks on sumps, stored drums, safety equipment, ventilation systems and the fire suppression system.

6.3 Process Building 2

PB2 has the following safety features:

- Respirators or self-contained breathing apparatus readily available where the possibility exists for a release of potentially hazardous dusts or gases. Personnel are required to wear this equipment when directly handling materials having the potential for the release of hazardous dust or gases
- Portable fire extinguishers are located throughout the facility
- Particulate emissions are collected and treated by an emission control system
- A first aid station will be located in the attached mechanical blower building and in the Transfer Facility office
- Fire extinguishers are regularly inspected and recharged
- Routine checks conducted to ensure the integrity of all safety equipment
- Back-up alarms for trucks and loading equipment are required to reduce the hazard of hitting pedestrian workers

6.4 Process Building 3

PB3 has the following safety features:

- Respirators or self-contained breathing apparatus are readily available where the possibility exists for a release of potentially hazardous dusts or gases. Personnel are required to wear this equipment when directly handling materials having the potential for the release of hazardous dust or gases
- Portable fire extinguishers are located throughout the facility

- First aid stations located in PB1
- Fire extinguishers are regularly inspected and recharged
- Routine checks are conducted to ensure the integrity of all safety equipment
- Back-up alarms for trucks and loading equipment are required to reduce the hazard of hitting pedestrian workers

6.5 Process Building 4

PB4 has the following safety features;

- Class 1, division 2 fire rated (no fire suppression system)
- Portable fire extinguishers at all man doors throughout the facility
- Regular inspection and recharging of the fire extinguishers
- Mechanical ventilation system
- Routine checks conducted to ensure the integrity of all safety equipment
- Volatile flammable materials not allowed to be stored or managed in this area
- Hazardous waste cannot be stored in this area (some solids transfer and drum scraping allowed)

6.6 Process Building 5 and PB5 Transfer Facility

PB5 and PB5 transfer facility have the following safety features:

- Safety showers and eye wash stations
- Respirators or self-contained breathing apparatus are readily available where the possibility exists for a release of potentially hazardous dusts or gases. Personnel are required to wear this equipment when directly handling materials having the potential for the release of hazardous dust or gases
- Gaseous emissions collected and treated by the secondary emission control system
- Spill containment materials and equipment available
- Tank level monitor and alarm system
- Portable fire extinguishers are located throughout the facility
- Fire suppression system (heat sensors and/or pull station activation)
- Regular inspection and testing of the fire suppression system
- Particulate emissions are collected and treated by an emission control system
- First aid stations located in PB5
- Fire extinguishers are regularly inspected and recharged
- Routine checks conducted to ensure the integrity of all safety equipment
- Back-up alarms for trucks and loading equipment are required to reduce the hazard of hitting pedestrian workers

The PB5 and PB5 transfer facility is equipped with appropriate engineered controls and provides mitigation measures in order to minimize potential impacts on personal safety and health and environmental protection. These controls include:

- 2,000 cfm exhaust system with explosion proof motor and blower
- Secondary ventilation systems (scrubbers) for organic and inorganic fugitive emission control in the work area, and

- High expansion foam system as per NFPA 11A Standard for Medium and High Expansion Foam Systems.

The foam system is equipped with a single-stage alarm and manual override. If the triggering event can be controlled by on-site personnel (e.g., a localized fire which can be extinguished with hand held extinguishers), a manual override will prevent foam release. If the triggering event cannot be controlled, the building will be evacuated and the foam release allowed to continue. (5 pull stations, 1 manual override)

The system is designed to discharge at a rate to fill the building with foam to a depth above the hazard; that is, to cover the top of the highest stored container. This should occur before unacceptable damage occurs to the building and will submerge the contents for a minimum of 2 minutes.

In addition to the engineered controls, site personnel follow daily, weekly and monthly procedural checks on sumps, stored drums, safety equipment, ventilation systems and the fire suppression system.

6.7 Site Security

Site security includes a 40" high fence (6"x8" mesh wire with wooden posts) around the facility property. A chain link fencing with a lockable gate surrounds the tank farm. All buildings are secured with a monitored alarm system.

Should the building alarm system be activated for security or an LEL excursion, an alarm is activated at a 24 hour monitoring company who via a telephone pager system will activate a response from Miller on-call personnel and the local enforcement authorities, who will be responsible for investigation.

During business hours all visitors, including waste haulers, are required to report to the site supervisor, or designate. No persons are allowed on the site without Miller personnel accompanying or directing them. All visitors are required to sign in and out.

6.8 Maximum Exposure Limits

Consistent with the Workplace Safety and Health Act, occupational exposure limits are determined through a workplace monitoring program where possible excursions are identified. Through the use of safe work practices, engineering controls, and if necessary, personal protective equipment, these limits will not be exceeded during normal operations.

6.8.1 Sound Level Monitoring

Sound pressure level monitoring was completed in 2002 in the process building to assess the protection requirements in that area. MEC employees were tested for hearing capacity following the sound level survey. Hearing capacity testing for MEC technicians is done on an annual basis.

6.8.2 VOC Emission Level Monitoring

VOC emission surveys have been completed in the past, and no workplace problem detected. Periodic testing is performed as necessary.

6.8.3 Particulate Level Monitoring

Particulate sampling including total dust and respirable dust was undertaken in process building 2 during 2003 to determine potential exposure to nuisance dusts and heavy metals contained in the dust. Periodic testing is performed as necessary.

7.0 Maintenance Program

All tools and equipment are maintained in a condition that maximizes the safety of all personnel.

7.1 Maintenance Required

7.1.1 Operations

Facilities

- VOC hydrocarbon and LEL monitoring equipment
 - o Calibration
 - o Weekly data collection and management
- Daily (workweek) facility check - for leaking drums, pipes, storage tanks, sumps
- Facility checked at least once on weekend
- Routine equipment maintenance as specified by equipment manuals
- Equipment maintenance schedule maintained in log book
- All maintenance recorded in log book
- Some equipment maintained through maintenance contract
- Periodic check of tanks and piping for sludge buildup and corrosion

Safety equipment

- Routine maintenance and checks to ensure integrity of safety equipment
- Work clothing is provided and regularly cleaned under contract. Personal protective equipment for all employees is cleaned and serviced by individual employees in order to maintain its effectiveness. Miller provides training and direction in the correct use and maintenance of supplied safety equipment.

Fire extinguishers and suppression systems

- Inspection and maintenance schedule as required by fire code

8.0 Safety and Operations Training Measures

All tools and equipment are maintained in a condition that maximizes the safety of all personnel.

8.1 Training

Comprehensive training programs have been developed and implemented to ensure that worker safety is not compromised by hazardous waste handling activities. Training also prepares personnel for emergency response and to manage potential situations which are not expected to ordinarily occur. All employees are required to complete general and job specific training. Employee training records, including safety and health, transportation of dangerous goods, emergency response and other job related training are kept.

Different levels and types of training occur for personnel specific to their job duties and responsibilities. All personnel receive Workplace Hazardous Materials Information System (WHMIS) training. Technicians and those specifically requiring additional training are also receive Transportation of Dangerous Goods (TDG), first aid, and emergency response training. Supervisory staff is required to have higher levels of training.

Other more specific training also takes place (e.g., hazardous materials handling, forklift, Class 3 drivers permit). New personnel receive training as part of job orientation and all personnel are required to receive appropriate annual refresher training. The specific training requirements, as well as the emergency response training requirements are described below.

8.1.1 Operations

Operations Training

The employee training program enables personnel to perform their assigned duties and functions in a safe and healthful manner so as not to endanger themselves or other employees. Personnel receive initial corporate and operational training. A record is kept attesting to successful completion of various modules.

Initial indoctrination training includes the following:

- Organizational structure and responsibilities
- Site and office tour and familiarization
- Explanation and introduction of the ISO programs
- Explanation of the company policies and procedures, and specific standard operating procedures

Following a three month probation period, additional training will be provided to technicians and those who require the training because of job responsibilities. The additional training includes:

- Specific training to the job requirements
 - o Understanding of the content, purpose and significance of standard operating procedures (SOP's)
 - o Understanding of the equipment to be used and the safety procedures required
- WHMIS, safety, health and hazards;
 - o Understanding of the content, purpose and significance of information on supplier and workplace labels (i.e.: supplier labels affixed to original containers of controlled products, workplace labels affixed to controlled products that have been transferred from the original container into another container, etc.), and on material safety data sheets (i.e.: obtaining for all controlled products, readily available to employees, etc.) pursuant to WHMIS, and
 - o Proper labeling of hazardous waste containers pursuant to the Workplace Safety and Health Regulation.
- Transportation of Dangerous Goods training and certification:
 - o Proper classification and labeling of hazardous waste containers and placarding of vehicles pursuant to TDG Regulations
 - o Reporting requirements for dangerous goods incidents
 - o Preparation and distribution of documentation, including notification for international shipments, and
 - o Safety requirements and standard for the offering for transport and transportation of dangerous goods.
- Use of personal protective equipment:
 - o Proper use of protective clothing (e.g., splash suits, chemical resistant coveralls, footwear), and
 - o Proper use of safety and emergency equipment (e.g., protective hearing and eye equipment, respirators, self-contained breathing equipment, eye wash equipment),
- Chemical safety;
 - o Training in hazardous waste identification and proper packaging/storage,
 - o Procedures for bulking, lab packing and overpacking hazardous wastes,
 - o Procedures for handling hazardous wastes where fugitive emissions are present, and
 - o Handling of chemicals, biological and physical hazards that could affect personnel,
- Work practices by which the employee can minimize risks from hazards;
 - o Awareness of health hazard and occupational exposure limit of materials handled,
 - o Awareness of health hazard when working with or near fugitive emissions,
 - o Awareness of grounding requirements for flammable liquid transfer,
 - o Awareness of physical hazards in handling and transporting waste materials,
 - o Procedures for loading and off-loading containers from vehicles, and
 - o Confined space entry procedures,
- Safe use of engineered controls and equipment at the facility;
 - o Primary ventilation system operation and use,
 - o Material handling and transfer area secondary fugitive emission control system operation and use, and
 - o Fire suppression system

- Personal hygiene procedures
 - o Use of protective clothing,
 - o Awareness of cleanliness procedures, and
 - o Decontamination procedures
- The spill containment program, and
- Reporting requirements.

Additional training includes:

- Forklift operation training and certification through a Corporation approved program of instruction; and
- Emergency response training for every Corporation personnel whose primary responsibilities include handling or transportation of hazardous materials. Within the first two years of employment, all personnel so designated will complete a Corporation approved course regarding emergency response to spills and accidents.

Emergency Response Training

Emergency response personnel complete training for NFPA 472 awareness before they are allowed to perform in actual emergencies. Such training covers:

- The elements of the emergency response plan,
- The Corporation's standard operating procedures for the job,
- Selection and use of personal protective equipment,
- Procedures for handling emergency incidents,
- Methods to minimize the risk from health and safety hazards,
- Techniques for coordination of other personnel to minimize risks, and
- Symptoms of and appropriate response to overexposure to health hazards.

Personnel completing this training are certified for competency. All personnel must have sufficient training to recognize an emergency, not attempt to control activities for which they are not trained and to summon the appropriate emergency response team for assistance.

Appendix 1
Safety and Health Policies – Table of Contents

Appendix 2
MEC Emergency Response Plan

Appendix 3
MEC Fire Suppression Systems Information