

Midland Engineering Co., Inc. Safety Management System			Doc No:	HAZWAS
			Initial Issue Date	12/14/15
Chapter 21-Hazardous Waste Operations & Resource Conservation Recovery Act			Revision Date:	Initial Version
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Purpose

The purpose of this plan is to protect employees, equipment and all in the surrounding environment from hazardous waste operations and conserve resources. This program is used as a reference for information and testing records, as a tool to communicate practices on preventing and responding to discharges with employees.

Responsibilities

Midland Engineering Co., Inc. is committed to preventing prohibited discharges to navigable waters and the environment, and to maintaining the highest standards for spill prevention control and countermeasures through the implementation and regular review and amendment to the program.

The Site Supervisor is the Designated Person accountable for the program at the facility and has the authority to commit the necessary resources to implement this program.

Management and Midland Engineering Co., Inc. Safety Director will be responsible for the administration and training of the program.

Location of Plan

A complete copy of this written safety and health plan for employees involved in hazardous waste operation will be maintained at the designated facility office in addition to main office.

Regulations

Except to the extent that more explicit or more stringent requirements are written directly into these guidelines, the primary regulatory reference relating to employee protection and the performance of work area hazard assessment activities shall be Title 29 Code of Federal Regulations Part 1926.20 and 1910.120. These regulations, promulgated and enforced by the Occupational Safety and Health Administration (OSHA), are applicable to the work performed by Midland Engineering Co., Inc..

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DEFINITIONS

Designated Employee - *Midland Engineering Co., Inc.* employee who is termed by *Midland Engineering Co., Inc.* management as the generator of a specific waste. Although there may be more than one *Midland Engineering Co., Inc.* employee involved in the process, which generates the waste, the designated employee is assigned the responsibility for fulfilling the waste handling requirements detailed in this procedure.

Hazardous Waste - The same as RCRA Waste

Non-RCRA Waste - Waste that is not regulated by, or is exempted from regulation by, RCRA.

RCRA - Resource Conservation and Recovery Act

RCRA Waste - A solid waste identified as hazardous under the regulations found in 40 CFR Part 261 (Resource Conservation and Recovery Act)

Regulated Waste - A waste regulated by RCRA or DOT.

Satellite Accumulation - The collection of hazardous waste at or near the point of generation, not exceeding 55 gallons for hazardous waste or 1 quart for acutely hazardous waste.

Waste - Any material that is no longer suitable to use for its original intended purpose.

Chemical - any element, chemical compound or mixture of elements or compounds that include: Liquids, Solids, and Gases.

Hazardous Chemical - any chemical that has been identified as a physical hazard or a health hazard by the manufacturer or supplier.

Material Safety Data Sheet (MSDS) - Written/printed information concerning a hazardous chemical that is prepared in the format required by the OSHA standard.

Label - Any written, printed or graphic sign or symbol displayed on or affixed to containers of hazardous chemicals. A label identifies the hazardous chemical, appropriate hazard warnings, and name and address of the manufacturer, importer, or other responsible party, and target organ effects.

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Hazardous Substance - exposure to which results or may result in adverse effects on health or safety of employees.

Health Hazard - a chemical, mixture of chemicals, or a pathogen for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees.

Immediately Dangerous to Life and Health (IDLH) - an atmospheric concentration of any toxic or corrosive substance that poses an immediate threat to life or would cause irreversible or delayed adverse health effects or would interfere with an individual's ability to escape from a dangerous atmosphere.

Permissible Exposure Limit (PEL) - means the dermal or inhalation exposure limit.

LIST OF ACRONYMS AND ABBREVIATIONS

AST	Aboveground Storage Tank
EPA	U.S. Environmental Protection Agency
NPDES	National Pollutant Discharge Elimination System
PE	Professional Engineer
POTW	Publicly Owned Treatment Works SPCC Spill Prevention, Control, and Countermeasure
STI	Steel Tank Institute UST Underground Storage Tank
SPCC	Spill Prevention, Control, & Countermeasure Plan
SWPP	Storm Water Pollution Prevention Plan

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Employee Protection

In efforts to monitor, maintain and/or reduce exposure to hazardous waste operations, every effort to protect employees will be made. Engineering controls, safe work practices and personal protective equipment will be used to reduce and maintain exposure limits. Engineering controls include the use of pressurized cabs or control booths on equipment, and/or the use of remotely operated material handling equipment. Reference the medical surveillance section for monitoring information.

Air Monitoring

Prior to work commencing, appropriate tests of the atmosphere must be made by authorized personnel from outside of the to determine if established air contaminant limits are exceeded, or if the oxygen concentration is less than or greater than permissible concentrations. Tests must be made with the appropriate monitoring equipment. The person authorized to monitor the atmosphere must be trained in the proper use, calibration, and care of the monitoring instruments and must remain at the site when work is being performed in a confined space.

Tests may indicate the atmosphere is initially safe, but the work may produce a hazardous atmosphere from such processes as cutting and welding, distributing of accumulated sludge, or use of solvents. Work in a hazardous waste operations area without continuous air monitoring will not be permitted. If tests indicate that the atmosphere is unsafe, it must be ventilated until the hazardous atmosphere is removed, prior to employee entry.

If after ventilating the space, tests indicate the atmosphere is less than 19.5 percent oxygen or levels of toxic contaminants hazardous to health, no person will be allowed to enter unless equipped with an approved airline respirator or a self-contained breathing apparatus.

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Immediately Dangerous to Life and Health (IDLH)

Where exposure cannot be identified or reasonably estimated, the atmosphere shall be considered immediately dangerous to life or health (IDLH). All oxygen-deficient atmospheres (less than 19.5% O₂ by volume) shall be considered IDLH. Supplied-air breathing apparatus, such as self-contained respirator with full face piece operated in pressure demand mode (SCBA), or TYPE-C supplied-air respirator with full face piece operated in pressure demand mode with an emergency backup SCBA or escape bottle operated in a pressure demand mode must be used in atmospheres Immediately Dangerous to Life and Health (IDLH). The user must be able to readily escape conditions. Standby persons must maintain communication with the employee in the IDLH environment. Standby person must have proper training and equipment and familiar with notification procedures and when to take necessary action. Rescue services must be on-site for immediately dangerous to life and health (IDLH) conditions while work is being performed.

Oil & Solvent Containment

If containers of various machine oils and solvents are stored onsite, the quantities of oil are managed to have a maximum of 1 1- 55-gallon containers of oil in each area. The solvent containers are to be stored in areas that prevent any release of the solvent to the sanitary sewer. The oil containers are stored on modular spill decks to provide containment. Each oil container must be labeled with the department number/location and a "Used Oil" label. Every container must be properly labeled.

Discharge Prevention

The following measures are implemented to prohibited discharges during the handling, use, or transfer of potentially harmful products at the facility.

For all Facilities Management areas, potentially harmful liquids in containers of 55 gallon or greater that are used in proximity to any drains that go to sanitary sewers are managed through some form of containment to prevent accidental discharges. Storage areas of these liquids are managed through good housekeeping practices and in some instances with some form of containment. These practices are described by area below.

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- Any person that has knowledge of an accidental discharge or prohibited discharge to the sanitary sewers shall immediately notify site supervision, and other appropriate personnel, of the discharge. Any person responsible for an accidental or prohibited discharge shall take immediate action as is reasonably possible to abate the discharge. Further, the responsible person shall perform any control and cleanup actions necessary to prevent additional accidental or prohibited slug discharge into the sanitary sewers.
- In the event that a spill occurs, employees are to follow the operating procedure referenced above. To assist the employees in implementing this procedure, there shall be spill absorbent materials available (socks, pads, pillows, etc.) to cleanup minor spills and contain spills from going to the drains.
- All unprotected drains with contamination potential must have a "Waste Water Discharge Prohibition" sign posted in the area.
- Oil & Solvent Containment - If containers of various machine oils and solvents are stored onsite, the quantities of oil are managed to have a maximum of 11- 55-gallon containers of oil in each area. The solvent containers are to be stored in areas that prevent any release of the solvent to the sanitary sewer. The oil containers are stored on modular spill decks to provide containment. Each oil container must be labeled with the department number/location and a "Used Oil" label. Every container must be properly labeled.
- Floor Drain Protection - Floor drains in the immediate vicinity of the used oil and solvent collection areas are protected with either plugs, curbs or located far enough from any drain to the sanitary sewer to prevent any oil or solvent that may be spilled from entering the drains.
- Documentation & Record Keeping Requirements - The responsible person shall submit a written report that describes the accidental or prohibited discharge after occurrence of the discharge. The report shall include the following information:
 - Time, duration and location of the discharge;
 - Description and quantity of the material or waste discharged including constituents and concentrations;
 - Cause of the accidental or prohibited slug discharge;
 - Actions taken to abate and clean up the accidental or prohibited slug discharge; and
 - A schedule of corrective measures to prevent further occurrences.

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- Container Labeling - Midland Engineering Co., Inc. will assure that all containers of hazardous chemicals entering the workplace or containers with missing labels are properly labeled with:
 - Identity of chemical
 - Hazard warnings
 - Name and address of the manufacturer, importer, or responsible party
 If the chemical is to be transferred to a separate container that is not for immediate use, the employee will ensure that the new container is properly labeled. (i.e., that all secondary containers are labeled with a copy of the original manufacturer's label or with generic labels which have a block for identity, hazard warning, and the name and address of the manufacturer). Employees will also be informed of the hazards associated with chemicals contained in pipes within the work area.

Containment

Methods of secondary containment include a combination of methods (e.g., spill pallets) and land-based spill response (e.g., drain covers, sorbents) to prevent prohibited discharges.

- Spill Pallets -Each spill pallet has a capacity of 75 gallons, which can effectively contain the volume of any single 55-gallon drum. Drums are also stored in a manner as to not be exposed to precipitation.
- Drip Pans - Fill ports for all ASTs are equipped with drip pans to contain small leaks from the piping/hose connections.
- Sorbent Material - Spill cleanup kits that include absorbent material, booms, and other portable barriers are located within close proximity of the oil product storage and handling areas for rapid deployment should a spill occur. Sorbent material, booms, and other portable barriers are stored to allow for quick deployment in the event of a discharge.

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Oil Container Inspection

Daily Inspection - A designated employee shall perform a complete a daily walk-through of the designated area of the facility each day. This daily visual inspection involves: looking for containment damage or leakage, stained or discolored soils, or excessive accumulation of water in diked and bermed areas.

Monthly Inspection - Personnel shall perform monthly inspections. The monthly inspection covers the following key elements:

- Observing the exterior of containment, pipes, and other equipment for signs of deterioration, leaks, corrosion, and thinning.
- Observing the exterior of portable containers for signs of deterioration or leaks.
- Observing tank foundations and supports for signs of instability or excessive settlement.
- Observing the tank fill and discharge pipes for signs of poor connection that could cause a discharge, and tank vent for obstructions and proper operation.
- Verifying the proper functioning of overfill prevention systems.
- Checking the inventory of discharge response equipment and restocking as needed.
- Observing the effluent and measuring the quantity of accumulated oil within the oil/water separator.

All problems regarding containment or response equipment must immediately be reported to the owner. Visible oil leaks from containment walls, piping, or other components must be repaired as soon as possible to prevent a larger spill or a discharge. Pooled oil is removed immediately upon discovery. Written monthly inspection records are maintained for a period of three years.

Annual Inspection- Personnel perform a more thorough inspection of equipment on an annual basis. This annual inspection complements the monthly inspection described above. The annual inspection is preferably performed after a large storm event in order to verify the imperviousness and/or proper functioning of drainage control systems. Written annual inspection records are maintained for a period of three years.

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Decontamination

Decontamination plan with procedures will be developed along with the Site Safety Plan, communicated to employees and implemented before any employees or equipment may enter areas on site where the potential for exposure to hazardous substances exists. The decontamination plan should include:

- number and layout of decontamination stations
- decontamination equipment
- appropriate decontamination methods
- procedures to prevent contamination of clean areas
- methods and procedures to minimize worker contact with contaminants during removal of personal protective clothing and equipment
- methods for disposing of clothing and equipment that are not completely decontaminated

Decontamination methods either (1) physically remove contaminants, (2) inactivate contaminants by chemical detoxification or disinfection/sterilization, or (3) remove contaminants by a combination of both physical and chemical means. The site safety and health supervisor will monitor the decontamination procedures to determine their effectiveness and take necessary steps to correct any deficiencies.

All employees leaving a contaminated area will be decontaminated appropriately according to the procedures. All contaminated clothing and equipment leaving a contaminated area will be appropriately disposed of or decontaminated.

Decontamination shall be performed in geographical areas that will minimize the exposure of uncontaminated employees or equipment to contaminated employees or equipment.

PPE and equipment shall be decontaminated, cleaned, laundered, maintained or replaced as needed to maintain their effectiveness. Employees whose non-impermeable clothing becomes wetted with hazardous substances shall immediately remove the clothing. Unauthorized employees shall not remove protective clothing or equipment from change rooms. Where the decontamination procedure indicates a need for regular showers and change rooms outside of a contaminated area, they shall be provided and meet the requirements of 29 CFR 1910.141.

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Emergency Response Sequence

PURPOSE

The emergency response plan designates safe assembly areas, emergency coordinators, and procedures to follow in emergency situations. Compliance with this emergency response plan is mandatory and is applicable to all employees.

GENERAL REQUIREMENTS

The most senior official at the site shall be responsible for controlling operations at the site during an emergency response.

This plan shall address the following information:

1. Responsibilities
2. Notification
3. Evacuation Routes
4. Assembly Points
5. Communications
6. Subcontractors

This plan shall be designed to anticipate the actions required by supervision and employees to minimize dangers to employee's safety and damage to physical equipment or property in the event of an emergency. EAP will be developed prior to the start of a project. All EAP procedures will be reviewed annually and any necessary changes will be documented.

Types of hazards that normally would initiate an emergency action plan:

1. Fire & Explosion
2. Release of hazardous gases, vapors, or fumes
3. Significant chemical spill
4. Severe Weather
5. Flood
6. Earthquake
7. Major power outage
8. Bomb threats, sabotage, and illegal activities
9. Radiation emergencies
10. Catastrophic or multiple employee injury

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On construction projects a hazard analysis will be performed identifying those areas with potential for initiating the emergency action plan, such as an evacuation, chemical spill, and/or exposure. Each employee shall understand, know how to initiate, and follow the emergency action plan when it is put into effect. During orientation all personnel responsibilities will be thoroughly reviewed and discussed. The plan shall be in writing and available for inspection by employees, their representatives and OSHA.

First Responder Awareness Level

First responder awareness level is individuals who are likely to witness or discover a hazardous substance release & who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release.

NOTIFICATION

Different notification systems will be used on projects. Midland Engineering Co., Inc. will coordinate the method of notification with the owner, and when possible use the same method, i.e. horn, siren, speaker system, etc. The selected method shall be effective enough that every employee will be notified in the fastest possible manner of the emergency condition. The corporate office shall be immediately notified when an emergency evacuation has taken place.

EVACUATION ROUTES

During the site hazard analysis the primary and secondary evacuation routes shall be determined. They shall represent the safest, most expedient paths from the potential hazard area.

ASSEMBLY POINTS

Each evacuation route shall terminate in an assembly area. This designated area shall be used to take a head count and assure that all employees have evacuated the danger area. No employee shall leave the designated assembly area without the direct permission of the senior company representative.

COMMUNICATIONS

The methods and equipment for communication shall be established in such a manner as to include those emergencies where power outages may occur, as well as command line breakdowns. Personnel issued portable radios shall be briefed in their use as part of the emergency action plan.

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SUBCONTRACTORS

The Midland Engineering Co., Inc. representative shall closely coordinate the emergency action plan with other contractors, sub-contractors, the owner, and personnel on the project to assure all are aware of the provisions, notifications, evacuation routes, assembly points, etc.

Medical Surveillance

Medical surveillance shall be provided for affected employees who possess signs or symptoms which may have resulted from the exposure to hazardous substances. All employees who are or may be exposed to hazardous substances or health hazards at or above the established permissible exposure limit, above the published exposure levels for these substances, without regard to the use of respirators, for 30 days or more a year must be provided medical surveillance at no cost to the employee.

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Employee Training

A competent Midland Engineering Co., Inc. representative possessing either the required credentials and/or experiences shall train all job site supervisors and employees on hazardous waste operations and the Resource Conservation Recovery Act. Employees will be trained in the area they will be working and each employee's responsibilities prior to being allowed to work and will be defined and discussed at orientation. The training will cover the use of personal protective equipment and also cover work practices which minimize hazardous risks and safe use of engineering controls and equipment. Retraining shall be provided for each employee as necessary so that the employee maintains an understanding and knowledge of the plan. Documentation of training will be kept on file.

Compliance with this program is mandatory and is applicable to all employees. Employees will be instructed in the operation and maintenance of prevention equipment, discharge procedure protocols, and rules and regulations as described in the contents of this plan and with regards to the specific areas and tasks they will be performing. Any new personnel with hazardous chemical handling responsibilities are provided with this same training prior to being involved in operations. The designated site supervisor is the designee and is responsible for training on oil discharge prevention, control, and response preparedness activities.

All employees will receive annual refresher training and failure to comply with this program is grounds for disciplinary action and/or termination. All employees are required to sign the acknowledgement statement subsequent to these procedures. Written records of the verification of training are maintained with this plan for a period of three years.

Acknowledgement

I have read and understand the above referenced procedures. I understand that the complete procedures should be used when I perform this maintenance task.

Signature (Employee)

Date

Review by Supervisor/Department Head

I verify that the above signed person has an understanding of the above referenced procedures and is authorized to perform the tasks it entails. I understand I am responsible for keeping the on-site employees under my supervision informed of the above procedures.

Signature

Date