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	MPD HSE PROGRAM		

1.0 LEADERSHIP

The MPD Management team is committed to achieving a 100% safe culture in its workplaces and will ensure the integration of HSE into its work.

Responsibility

At MPD, responsibility for HSE lies with the CEO. Line management is expected to make every reasonable and practicable effort to prevent losses.

Performance Objectives

MPD is firmly committed to protecting people from injury or illness, property from damage and the environment from negative impact.

HSE Partnership

MPD believes a 100% safe culture must be demonstrated by all stakeholders including employees, clients, contractors, suppliers, labour unions, and the general public.

100% Safe Philosophy

No task is so important to justify injuring employees, damaging property, or harming the environment. Employees, customers, suppliers and vendors engaged in work at a MPD worksite will be provided a work environment free from recognized hazards.

Respect for People

People have the right to be treated with respect and dignity. This includes the right to be provided a workplace free from recognized hazards and to leave the worksite as physically sound as when they arrived.

Continuous Improvement

MPD embraces a philosophy of continuous improvement. As improvement opportunities are identified, they will be reviewed to determine their value to HSE processes and implemented accordingly.

Line Responsibility for HSE

Line Management is expected to maintain HSE control over their area of responsibility. MPD management will hold line personnel accountable for HSE issues within their area of responsibility.

Right To Refuse

All employees and contractors have a responsibility to refuse work they consider to be unsafe, or which may present a hazard to themselves or other workers. MPD

encourages workers to refuse hazardous work and will take corrective action on all legitimate concerns.

Auditing

A management system audit schedule will be established and carried out in accordance with the schedule. Non-compliance will be recorded, with corrective action taken and followed up to completion.

Contractor Control

Within a project, (Sub)Contractors are required to comply with the MPD HSE Management System. Project leadership will monitor (Sub)Contractor performance and initiate corrective action where required to ensure (Sub)Contractors comply with project HSE requirements.

2.0 RESPONSIBILITIES

GENERAL

All employees and (Sub)Contractors and their employees are held accountable for safely carrying out their specific responsibilities. If an individual is not meeting their responsibilities, there will be a breakdown in the system, which could lead to an undesired incident.

RESPONSIBILITIES

Responsibilities for the HSE Management System lie with the President.

The following positions have the responsibility for implementation and management of the HSE Management System within their area of responsibility.

- a) Project Manager
 - Sponsor “Project HSE” efforts, demonstrate ownership, leadership and actively participate in the HSE process
 - Set/demand high HSE standards and hold project team accountable for performance Monitor project performance against organizational goals
 - Review serious/major incident investigations Ensure project MS is regularly audited.

- b) Manager of Construction
 - Provide the physical and financial resources and management support necessary to carry out the HSE Management System.
 - Lead by positive example.
 - Build a 100% safe culture where incidents are an unacceptable consequence of performing work.

- Interface with regulatory agencies/clients on HSE matters.
- Establish “Project HSE” objectives.

c) General Foreman

- The General Foreman has responsibility for planning, leading, organizing, and controlling activities of a specific craft within an area.

Each employee is responsible to carrying out work. The employee is accountable to the Foreman and

- Exercise necessary steps to protect health and safety of self and others
- Know and comply with HSE rules, regulations and procedures.
- Report all incidents and hazards to immediate supervisor in a timely manner.
- Stop all unsafe work and take corrective action.
- Maintain and use personal protective and safety equipment.

3.0 INSPECTIONS

Inspections are an important part of the Project HSE Management System. They assist in enhancing compliance to legislated requirements, improving employee morale, and increasing work efficiency.

Planned Inspections

- Verify each Discipline Superintendent is conducting one inspection per week
- Review inspection reports and action log to verify all actions identified in the inspection reports have been followed up to completion
- Spot check to verify that inspections are conducted as per established requirements

Regulatory Inspections

Verify that corrective actions identified in regulatory inspection reports have been followed up to completion.

Monthly Assessments

- Verify each area General Superintendent conducts one assessment per month
- Identify and determine causes of non-compliance determined, if possible

Equipment Inspections

- Review logs to verify that equipment is inspected prior to being brought onsite
- Check equipment for inspection decal

4.0 COMMUNICATIONS

Effective communication is the most important aspect of an effective HSE Management System. To be effective, communication must flow through the organization in both directions, from the Construction/Site Manager through to the workers and back again.

An important component of effective communication is trust. Employees must believe that their comments and observations will be taken seriously or they will not openly communicate.

Daily Pre-Job Meetings

A daily pre-job meeting will be required for each (Sub)Contractor crew. These meetings will take place each morning prior to the start of any work activity. The time will be used to pre-plan for safety, discuss housekeeping, check for defective tools and equipment, check scaffolding, etc.

Weekly Supervisors' HSE Meeting

On a weekly basis, the Discipline Superintendent will conduct an HSE meeting with the line supervisors within their area of responsibility. This provides line supervisors an opportunity to raise concerns or put forth suggestions on ways and means to improve safety and environmental compliance on the project.

Monthly Stewardship Meeting

On a monthly basis, the project will host a stewardship meeting to review performance and identify opportunities for improvement.

One-On-One Personal Contacts

All members of Line Supervision from the Construction/Site Manager to Foremen are expected to conduct regular one-on-one personal contacts with employees within their area of responsibility.

DOCUMENTATION REQUIREMENTS

The Project HSE Department will maintain general communication files, specifically:

- Safety Alerts & Postings.

- Weekly Tool Box Meeting Minutes.
- Daily Pre-Job Meetings Minutes.
- Construction Managers' Daily HSE Meeting.

5.0 INCIDENT MANAGEMENT

Incident Management provides a framework for the reporting, recording, investigating and following up of incidents that could or did result in injury/illness, property damage, environmental release, or business interruption. Employees are required to comply with incident notification and investigation requirements. Employees have a responsibility to promptly report incidents to their line supervisor. Supervisors are responsible to ensure incidents are properly reported and an investigation conducted.

Near Miss - An event which, because of circumstance, did not result in an injury or illness to people, damage or loss to property, equipment or the environment or interruption to process.

Safety Opportunity - A substandard condition or situation that has the potential to cause an incident.

Incident - An event that could or did result in an injury or illness to people, damage or loss to property, equipment or the environment or interruption to process.

Incidents Requiring Investigation

The responsibility to fully investigate these incidents is the same regardless of who is involved. The following occupational incidents must be investigated:

- Fatalities.
- Lost Time Injuries.
- Medical Treatment Cases, including Restricted Work Cases.
- First Aid Cases.
- Refusal to work due to imminent danger.
- Property losses, including vehicle and/or equipment damage.
- Environmental incidents, including spills.
- Security losses, including material and tool loss, vandalism, unauthorized site access.
- Fires, explosions.
- Near misses with serious potential.

Incidents Reporting

Incidents will be reported on the day of occurrence through the line organization. Severity and/or severity potential will dictate who within the organization will be notified of the incident and how soon notification must occur.

Investigation

Each incident will be fully investigated and an incident report prepared. The report will include incident details and associated documentation, immediate and basic causes, and corrective actions taken to prevent recurrence. Investigations must be conducted promptly in order to ensure incident details are fresh in the minds of personnel involved and that physical evidence remains intact.

Responsibility to comply with the incident investigation process lies with the Construction/Site Manager. HSE personnel will support the Incident Investigation process and serve as a resource to line supervision.

As part of the investigation process, a post incident review will be conducted on all serious or potentially serious incidents. The review meeting will be held within 48 hours of occurrence.

6.0 TRAINING AND EDUCATION

MPD will provide employees with the necessary training to safely and efficiently perform assigned tasks. To meet this requirement a project-specific training plan will be developed.

HSE training will be:

- Relevant to the employees' assignment.
- Delivered with a "just-in-time" philosophy.

Supervisors are responsible to ensure that workers are competent to perform assigned tasks and are expected to assess the competency of each worker they supervise. Particular attention must be given to the new worker, who represents an unknown with respect to ability and who may take risks to impress their supervisor.

Site Specific Training

A project-specific training matrix has been developed to address:

- Site-specific training requirements (e.g. orientation, self-contained breathing apparatus training, etc.).
- Training requirements for each level of line organization

New Employee Orientation

All direct hire and (Sub)Contractor employees will attend an orientation program before being allowed to work on site. The orientation will introduce the minimum worksite HSE policies and standards.

Area Specific Orientation

In addition to the general site orientation, employees will receive an area specific orientation. Conducted by the line supervisor, this orientation is intended to familiarize workers with area-specific requirements.

Visitor Orientation

While they are on the worksite, responsibility for a visitor's safety rests with the host. Visitors must comply with project HSE rules and regulations.

Safety Training System (CSTS)

MPD recognizes and encourages the use of the Construction Safety Training System (CSTS) as a safety orientation tool and means to achieve a level of competency.

Documentation

Attendance lists for the training courses will be filed as part of the project record.

Training records will be maintained on file by the HSE department for the duration of the project and archived at project completion.

7.0 SUBCONTRACTOR CONTROLS

As an EPC contractor, MPD has a responsibility to ensure selected (Sub)Contractors are competent to safely perform contracted work and comply with established project requirements.

Pre-Contract Phase

a) (Sub)Contractor Pre-Qualification

During (Sub)Contractor selection, contractors are pre-qualified to ensure that only those contractors capable of meeting HSE expectations are invited to bid.

Evaluations focus on: past performance; strength of their HSE management system; how contractor ensures competency of project personnel; experience and qualifications of nominated personnel; checking references to verify that contractor's work practices are consistent with the processes they have presented. Sub contractors are to submit a copy of their HSE program for review.

b) (Sub)Contractor HSE Plans

(Sub)Contractors must submit for review and approval:

Copy of their company HSE management system;

Active Contract Phase

a) Pre-Construction Meeting

On the first day the (Sub)Contractor mobilizes at the worksite, the Contract Administrator and the HSE Specialist will meet with the (Sub)Contractor to review HSE Management System requirements.

Post Contract Phase

Upon completion of a project the Project HSE Specialist and Contract Administrator will review the (Sub)Contractors project performance

8.0 SECURITY

Security is an important part of an overall loss control program. Security related losses (i.e. theft of property, technology and vandalism) represent significant financial exposure. While most employees and (Sub)Contractors are honest and operate in the best interest of the company, losses still occur.

Security Plan

The project may have work occurring both within and outside of an existing operating facility. Consideration must be given to the requirements of both locations.

In some situations the project security plan may require consideration for existing security plans to complement each other. As part of the security assessment, the existing security plan must be reviewed for incorporation into the project security plan

Site security plan

To ensure all security requirements are identified and implemented, a project specific security plan will be developed and reviewed on a regular bases. The plan will be adjusted to include identified opportunities as the project progresses and will reside with the HSE department.

- 1) The objectives of the security plan is to:
 - Identify and control loss of assets
 - Identify ways and means to control loss
 - Control access and egress of people and vehicle traffic
- 2) The security plan will include:
 - Purpose, policy and authority to act

- Responsibilities by position within the organization
- Required training of security personnel
- Procedures to be followed in the event of loss
- Reporting protocol
- Mutual agreements between existing and construction security roles and responsibilities.
- Site control

Documentation

Security personnel are responsible to maintain a shift log to document site occurrences. Logs will be maintained for the duration of the project and then archived for log content. Security records and a review log will be maintained for compliance to site security requirements

Security related files will be maintained in the security office and will include as a minimum:

- Incident Reports of theft or vandalism
- Vehicle Passes issued and logged
- Property Removal Passes
- Daily Visitor Registry
- Daily Vehicle Registry

9.0 DOCUMENTATION AND RECORD KEEPING

MPD has a responsibility to ensure that documents relevant to verification of the HSE Management System are maintained and accessible on the project. Records will be stored and maintained so that they are readily retrievable and protected against damage, deterioration, or loss. Due to the confidential nature of the material (e.g. medical records), certain records will be stored in a secured area.

As a rule, all records will be maintained until the end of the project at which time they will be boxed and archived. All file boxes will be labelled to identify contents and will include a destruction date if applicable.

In the case of inspections, investigations, and meeting minutes, records must include follow-up on identified corrective actions.

10.0 HSE GENERAL RULES

MPD has developed a list of HSE general rules. The rules are broad in nature and can be applied to most projects. As a project proceeds, additional requirements may be identified, with new rules added.

Discipline System

The need to take corrective action on substandard behaviour must be addressed. Ignoring substandard behaviour sends the silent message that the behaviour is acceptable. This in turn makes it increasingly difficult to enforce site requirements. When an employee operates in a substandard way, it's the responsibility of line supervision to take corrective action.

Discipline must be a consideration in situations where the individual does not voluntarily comply with site Health Safety Environmental requirements. In these situations, non-compliance will be managed in the same way as any other substandard performance issue and the progressive discipline system will apply.

1) Verbal Warning

Arrange to meet the employee in a private setting and inform the employee of the purpose of the meeting. Explain the nature of the offence or act committed and advise the employee of your performance expectation (e.g. wear safety glasses and face shield when grinding).

2) Written Warning

Follow the same procedure as above, but issue the employee a written warning using the standard written warning form.

3) Suspension

Suspension of an employee is a more severe form of discipline generally following a series of progressive verbal and written warnings.

4) Termination

The termination of an employee is the final step in the progressive disciplinary procedure and should not be taken until the matter has been carefully reviewed.

Smoking Policy

Smoking may only take place in designated areas. Smoking is not permitted in vehicles, mobile equipment, or office complexes.

Personal Protective Equipment

While the preferred method to control hazards is through the use of engineering or administrative systems, in some situations PPE must be used to protect the worker. Personal protective equipment does not minimize or eliminate the actual hazard, but protects the worker from its effects.

Safety Absolutes

These are site rules for which the site team will accept only complete compliance.

The objective of the safety absolutes is to focus attention on those rules where non-compliance has traditionally resulted in severe injury or fatality. Non-compliance to Project Safety Absolutes will not be tolerated and is treated with the utmost gravity. This set of rules will be based on the input and consensus of the site management team and may include:

- 100% Fall Protection Standard
- Confined Space Access and Entry Control Procedure
- Mechanical, Electrical or Energy System Isolation or Blinds
- Creating an Unprotected Hole or Leading Edge
- Wilful Violation of any Project or Plant Work Permit
- Tampering with Safety Devices

Safety Absolutes

In addition to the identified general rules, MPD plans to identify and adopt "Safety Absolutes". These are site rules for which the site team will accept only complete compliance.

The objective of the safety absolutes is to focus attention on those rules where non-compliance has traditionally resulted in severe injury or fatality. Non-compliance to Project Safety Absolutes will not be tolerated and is treated with the utmost gravity. This set of rules will be based on the input and consensus of the site management team and may include:

- 100% Fall Protection Standard
- Confined Space Access and Entry Control Procedure
- Mechanical, Electrical or Energy System Isolation or Blinds
- Creating an Unprotected Hole or Leading Edge
- Wilful Violation of any Project or Plant Work Permit
- Tampering with Safety Devices
- On-site Possession or Use of Alcohol or Illicit Drugs

Personal Protective Equipment

While the preferred method to control hazards is through the use of engineering or administrative systems, in some situations PPE must be used to protect the worker. Personal protective equipment does not minimize or eliminate the actual hazard, but protects the worker from its effects.

It is important that:

- Proper PPE is selected.
 - Employees are trained in its use.
- PPE is used in accordance with established standards.

PPE will be:

- In compliance with applicable regulatory requirements.
- Inspected by the user at time of issue and before each use.
- Removed from service immediately if damaged, in need of service or repair, or of questionable reliability.
- Be used and maintained in accordance with manufacturer's specifications or Government regulations and not altered in any way.

Vehicles and Equipment

- Vehicle service and wash down shall be only in approved areas.
- All vehicles and machinery shall be maintained to minimize or eliminate any unacceptable environmental emissions.
- Traffic signs must be strictly adhered to.
- Vehicle operators inside an enclosed cab are not required to wear protective eye or headwear.
- All vehicles driven on site will be required to park in areas so as not to block traffic flow in or out of the project.

11.0 OFFICE SAFETY

Office environments are typically low risk, but the opportunity for injury and illness still exists. The same general requirements for health, safety, environmental and security considerations required in an office environment are also required on the construction site.

Planned Inspections

Planned monthly inspections are required in site offices. Results will be distributed to HSE specialist and individuals with identified actions. Identified actions will be followed up to completion and documented on the project file.

Incident & Hazard Reporting

Office employees do not always report occurrences or hazardous conditions. The Management must encourage employees to promptly report any incidents or hazardous conditions to ensure corrective action is initiated and followed up to completion.

Communications

To communicate health, safety, environmental and security messages, line supervisors are encouraged to make HSE communication part of their regular employee contacts. Each month, office employees will participate in an HSE meeting.

Emergency Response

The potential for emergency situations is present in an office environment. To facilitate emergency response and evacuation if required, the office manager has the responsibility to ensure an office specific emergency response plan has been developed and communicated to personnel assigned to the work area.

Clean Desk Policy

With respect to personal valuables, items need to be stored in a secure location. Employees are encouraged to protect their personal property and to keep a clean desk at the end of the workday.

12.0 RECOGNITION

The objective of an HSE recognition program is to strengthen and reinforce employee awareness and positive behaviors.

Within the project, there will be a number of awareness activities to provide for involvement by all levels of the organization. Employees will be encouraged to provide input into ways and means to improve HSE performance.

Awareness Campaigns

The project will select an awareness campaign topic on a monthly basis. These will be directed at issues that are a source of concern, and by their nature are suited to being addressed in part by a promotional campaign.

Topics will be delivered by senior construction management to crews and will include activities such as:

- Prepared Safety Talks.
- Bulletin Board Postings.

Incident Statistics

Performance measures will be shared with personnel to make them aware of the relationship between project performance and the 100% safe objectives.

To promote awareness, a project performance board will be located at each entrance to the worksite and will provide:

- Hours Worked on the Project.
- Hours Since Last Lost Time.
- Number of Restricted Work Cases.
- Number of Medical Treatment Cases.
- Total Recordable Frequency.
- Lost Time Frequency.

Records supporting the recognition activities must be kept including:

- Safety campaigns.
- Applications made for safety recognition from external agencies.
- Recognition awards.

13.0 EMERGENCY RESPONSE PLANNING

Regardless of the best efforts of an effectively implemented HSE plan, the potential for an event requiring emergency response still exists.

Emergency response involves managing the situation in the moments and hours following the event. The mark of an effective emergency response plan is efficiently coordinating and managing the actions required to reduce the loss exposure to people, property and the environment.

Emergency – An event or a sequence of events that requires immediate actions to minimize loss exposures to people, property or the environment. Emergencies include, but are not limited to, injury or illness of personnel, fire, explosion, environmental release and severe weather.

Emergency Control Centre – The pre-designated location from which the emergency response is directed and coordinated.

Emergency Evacuation – To safely evacuate personnel from an area of danger to a safe area.

- Emergency Response Plan – A comprehensive document to provide guidance on actions to be taken under various emergency conditions including responsibilities of individuals and department, sources of aid outside the organization, general methods or procedures to follow, authority to make decisions, training and practice of emergency procedures, communications and reporting requirements.
- EMS – Emergency Medical Services.
- ERP – Emergency Response Plan.
- ERT – Emergency Response Team.
- Headcount – Confirming all workers in the area have been safely evacuated and have been accounted for.
- Muster Point – A safe location where personnel will gather for headcount after being evacuated from their work area.

Site Specific Emergency Response Plan

To ensure emergency readiness the project will prepare and maintain an ERP to address all foreseeable situations. Responsibility to develop and update the plan will reside with the HSE department.

The objectives of an ERP are to:

- Prevent or minimize injury to people.
- Effect the rescue and treatment of casualties.
- Minimize damage to property, equipment and the environment.

Emergency Response Team

The response team will be trained and have responsibility to be the first response to any green field worksite emergency. The team will be composed of work site volunteers trained to respond to emergency situations most likely to occur at the worksite.

Training

All employees will receive instruction concerning their responsibilities during an emergency within the new hire orientation

Emergency Evacuation

Emergency evacuation plans will be developed on a project specific bases. Should client resources be available, they must be considered during the planning stage.

Documentation

- Up-to-date ERP – Master filed in central HSE file.
- Post Incident Reviews – filed in central HSE file.

14.0 ENGINEERING LOSS MANAGEMENT

This section outlines the Engineering Loss Management (ELM) system in place to manage hazards and control losses associated with a process, the plant, personnel or the environment for all engineering design activities conducted at MPD.

Engineering Loss Management (ELM)

The application risk controls and safeguarding measures (barriers) to the engineering design of a process or plant to prevent an uncontrolled loss of containment of hazardous substances that could result in an economic loss, human injury or detrimental effect on the environment.

Requirements

ELM Activities are applicable at all stages in the engineering design cycle and are particularly appropriate when:

- There are opportunities for assessing and selecting inherently safer process options or design features
- Developing designs with process materials that are reactive, flammable, toxic, explosive or unstable and large inventories exist
- There is a potential for a hazardous situation to develop (loss of containment) due to deviations from normal design intent or operating conditions
- The nature and extent of a hazard and its potential impact on people, the facility or the environment are unknown
- Justification is required for making safety related design decisions

ELM Activities, Tools and Techniques

The safe design of any facility, plant or process is achieved by applying the requirements of identified codes, standards, guidelines and recommended practices together with a number of recognized ELM activities, tools and techniques.

Major Hazard Identification

- Hazard Assessment Techniques
- Process Hazards Analysis Techniques
- Geotechnical Studies

Hazards Identification, Assessment and Risk Control

- Process Hazards Analysis Techniques
- Risk Tolerability Criteria
- Qualitative Risk Assessment
- Plot Plan Risk and Model Review
- Energy Efficiency/Cleaner Production Philosophies
- Safer Process Technologies

Hazards and Effects

- Hazards Analysis & Effects Modeling Techniques
- Human Factors Engineering Assessment
- Accidental Release Modelling
- Prevailing Wind & Other Climatic Studies

Hazard Prevention & Response

- Inherently Safer Design Assessment
- Safety Critical Performance & Reliability Assessments
- Layers of Protection Analysis
- Fire Hazard Assessment & Review
- Ignition Source Control Techniques
- Fire Protection Assessment (passive)
- Safeguarding Reviews (loss of containment factors & controls incl. overpressure, temp, etc.)
- Loss Prevention Philosophy
- Pre-Startup Safety Review
- Operability and Maintenance Constraints

- Fire and Gas Detection

Anticipated Outputs

- Risk Register & Action Tracking)
- Prevention & Response Design Barriers (Hazard Bow Tie- HSE Case)
- Loss Prevention Report
- Safeguarding Manual