

APPENDIX D

Operation Environmental Management Plan

TSI Terminal Systems Inc.



Environmental Management Plan

**Procedures for Head Office, Vanterm, and
Deltaport**

DRAFT

November 1, 2009

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Introduction

Overview of the Environmental Management Plan

The EMP is designed to capture, organize and manage activities at the terminal so that a consistent approach for controlling environmental risks can be implemented. Environmental management will be integrated into routine planning processes and daily terminal operations. The EMP is divided into several sections, and contains the following components:

- TSI’s Environmental Policy
- A list and hazard ranking of terminal and office (administrative) activities that have actual or potential environmental impacts;
- Environmental Management Plan Procedures (EMPPs) to address overall policies for environmental management,

- Specific Environmental Operating Procedures (EOPs) to ensure that activities are carried out in a systematic manner to avoid adverse impacts on the environment; and
- A list of forms that support the EMPPs and EOPs

The EMP is reviewed and updated on an annual basis.



TSI Environment Policy

October 2009

TSI is committed to conducting its operations in an environmentally responsible manner, one which protects the environment, and the health and safety of its employees, customers, contractors and the community. We strive to integrate environmental and economic priorities into each business unit and to continuously improve environmental performance.

To accomplish these goals:

We will operate our facilities in a manner consistent with pollution prevention and environmental protection, while considering the needs of our employees, customers, contractors and the community.

We will comply with relevant environmental legislation and regulations.

- We will** establish and maintain corporate controls for implementation and maintenance of this policy.
- We will** work with government and industry to improve policies and practices supportive of environmental protection, particularly with respect to the handling and transportation of dangerous goods.
- We will** require, whenever possible, TSI's shippers and contractors to incorporate reasonable measures to reduce the potential environmental impact of dangerous goods and other products handled by TSI.
- We will** respond immediately to emergencies to protect employees, customers, contractors, the public, and the environment.
- We will** communicate this policy to our employees, customers, contractors, regulatory agencies, and the public.

Responsibility and Authority

The President and Chief Executive Officer of GCT has the responsibility and authority to implement this Policy, including the development and approval of Company policies, procedures and guidelines. All managers and supervisors must demonstrate commitment to this Policy at all times and are responsible within their respective jurisdictions for taking the actions they deem necessary to ensure compliance with Company policies, procedures and guidelines. ***The specific responsibilities of Senior Management, Managers and Supervisors, and Workers are set out in "Responsibility for Environment".***

All employees of the Company must demonstrate commitment to this Policy at all times and are responsible for performing their duties in a manner consistent with Company policies, procedures and guidelines.

Eric Waltz
Senior Vice-President, TSI Terminal Systems Inc.
Terminals

Michael Moore
Pres. and CEO, GCT Global Container

Definitions

Company	TSI Terminal Systems Inc.
EMP	Environmental Management Program (this document)
EMPP	Environmental Management Plan Procedure
Environmental Action Plan	A plan used to remedy an environmental issue
Environmental Aspect	The potential for an activity, event, or material to affect the environment
Environmental Impact	The effect of an activity, event, or material on the environment

EOP	Environmental Operating Procedure
GVRD	Greater Vancouver Regional District
HR	TSI Human Resources Department
MOC	Management of Change (see EMPF-06-01 Management of Change Form)
MSDS	Material Safety Data Sheet
SSE Department	TSI Safety, Security and Environmental Services Department
Terminal	Deltaport and Vanterm container terminals
TSI	TSI Terminal Systems Inc.
TSI Senior Management	Senior executives of TSI, consisting of the President and CEO; Senior Vice President, Vice Presidents and Directors

Environmental Management Plan

Procedures

EMPP-01-01 – Environmental Policy Maintenance

Owner: Safety, Security and Environmental Services Department
Effective Date: November 1, 2009

Purpose

To ensure that TSI Corporate Environmental Policy is maintained and communicated internally and externally

Scope

Corporate Environmental Policy

Instruction

Step	Action
1.1	The TSI Environmental Policy will be maintained on a shared drive and posted on the TSI Intranet as well as in the workplace.
1.2	The Safety, Security and Environmental Services Department will monitor changes to the TSI Corporate Environmental Policy and communicate to personnel as necessary.
1.3	The Environmental Policy will be reviewed annually or as needed if operations significantly change. The review will follow EMPP-20: Environmental Plan Effectiveness Review.
1.4	The Policy will be endorsed, signed and dated by the President and CEO.

Supporting References

GCT Environmental Policy

Related Documents

TSI Environmental Policy

Records

N/A

EMPP-02-01 – Review of the Significance of Environmental Aspects

Owner: Safety, Security and Environmental Services Department

Effective Date: November 1, 2009

Purpose

To review the significance of environmental aspects of new products, services and new or modified activities, as well as existing products, services, and activities in light of new regulations and scientific knowledge
The identification of significant environmental aspects will enable TSI to set environmental objectives and to target and prioritize the allocation of resources, people and equipment

Scope

All environmental aspects at Deltaport, Vanterm and Head Office

Instruction

Step	Action
1.1	Information on new environmental aspects will be submitted to the Safety, Security & and Environmental Services Department from the following processes: <ul style="list-style-type: none"> • The review of new products, new services, new and modified activities • The review of existing products, services, and activities in light of new regulations and scientific knowledge

	<ul style="list-style-type: none"> • Emergency incident investigations • EMP and compliance audits and inspections • Investigations of non-conforming incidents
1.2	The Safety, Security and Environmental Services Department will check the information against the Environmental Aspects Spreadsheet to verify it is in fact a new aspect.
1.3	The Safety, Security and Environmental Services Department will review the information gathered to determine significant aspects using the Environmental Aspects Spreadsheet and instituting EMPP-03 Risk Assessment .
1.4	<p>A high significant aspect will be defined by</p> <ul style="list-style-type: none"> • Environmental risk scores 32 and higher • Aspects with permit or regulatory conditions <p>A moderate significant aspect will be defined by</p> <ul style="list-style-type: none"> • Environmental risk scores between 16 and 32 <p>A low significant aspect will be defined by</p> <ul style="list-style-type: none"> • Environmental risk scores less than 16
1.5	The Operations and Maintenance Managers will review all risk ranking conducted at TSI, and will assist in determining which aspects are of high or moderate risk to TSI.
1.6	If the aspect is of high or moderate risk, TSI shall review objectives and targets and determine whether changes are required to address the aspect.
1.7	If the aspect is of low risk, TSI shall tabulate this information for presentation and review during the annual EMP Review.
1.8	Following the review of aspects, the EMP will update the Environmental Aspects Spreadsheet.
1.9	Significant aspects, as determined by Step 1.4, will be recorded and maintained in the EMP.
1.10	All high or moderate level significant aspects will have some form of management control, EMPP or EOP.
Supporting References	EMP Aspects Spreadsheet
Related Documents	Risk Ranking Matrix EMPF-01 Environmental Aspects Spreadsheet EMPP-10 Approval of New Materials and Supplier Notification of TSI Requirements EMPP-09 Review and Approval of New and Modified Activities EMPP-11 Contractor Approval and Management EMPP-06 Maintenance of Emergency Response Plans
Records	N/A

EMPP-03-01 – Risk Assessment

Owner: Safety, Security and Environmental Services (SSE) Department
 Effective Date: November 1, 2009

Purpose

To promote the use of risk identification and assessment to help TSI to

- identify risks and develop and implement appropriate mitigation strategies, thereby minimizing the potential for liability to TSI employees, the community, impact to the environment and the potential for financial loss
- ensure due diligence
- rank activities that have environmental impacts

assist in allocating resources, people and equipment to areas of high and moderate risk

Scope

Risk identification and assessment will be used as part of the following:

- Setting objectives and targets
- Establishing corrective and preventive actions
- Determining significance of environmental aspects
- Establishing environmental loss prevention programs

Instruction

Step	Action
1.1	Where risk assessments <ul style="list-style-type: none"> • identify the significance of environmental aspects • establish environmental objectives and targets • develop environmental programs • take corrective action for environmental incidents the assessments will be documented and filed by the SSE Department.
1.2	Risk assessments will be conducted according to the Risk Ranking Model and Matrix.
1.3	Risk ranking will be documented on the Environmental Aspects Spreadsheets.
1.4	SSE Department will annually prepare a summary for TSI Senior Management in support of the EMP Review.

Supporting References

Related Documents

EMPP-02 Review of the Significance of Environmental Aspects
 EMPP-04 Strategic Planning, Objectives, Targets and Environmental Management Programs
 EMPP-19 Non-Conformance, Corrective and Preventive Action
 EMPP-20 Environmental Management Review
 EMPF-01 Environmental Aspects Spreadsheet
 EMPF-02 Risk Ranking Model and Matrix

Records

Risk Assessments , Management Review Information Package
 Management Review Minutes

EMPP-04-01 – Strategic Planning, Objectives, Targets and Environmental Action Plans

Owner: Safety, Security and Environmental Services Department
 Effective Date: November 1, 2009

Purpose To standardize the objectives and targets relating to the EMP.

Scope TSI will develop objectives and targets unique to specific operations.

Instruction

	Step	Action
1 Strategic Plan	1.1	Annually, TSI will prepare an environmental "Budget"
	1.2	TSI will identify environmental requirements by reviewing the current annual management review results (e.g., costs for objectives and targets) and forecasting costs for materials (e.g., spill kits, equipment), professional services (e.g., EMP support, sampling, audits, training) and other items as needed.
	1.3	TSI will also review strategic, operational and financial opportunities and constraints, as well as technological and operational options
2 Setting Objectives and Targets	2.1	TSI will identify corporate environmental objectives and targets based on a Commitments in the Environmental Policy, Environmental aspects, including significant environmental aspects, Environmental performance for the previous year (audits, events, non-conformances and monitoring data), a summary of legal and other requirements that require action from TSI, a summary of the complaints, inquiries, and issues raised by interested parties and a list of cost control, production, operational effectiveness, and other business issues that should be considered in setting objectives and targets
	2.2	Each terminal and Head Office will prepare its own set of local objectives and targets that support the corporate objectives and targets.
	2.3	Objectives and targets will be developed as a result of the annual review or as needed.
3 Environmental Programs and Action Plans	3.1	TSI will develop detailed Environmental Action Plans for each terminal and the Head Office in consultation with the Operations and Maintenance Departments to achieve objectives and targets within each functional department/area.
	3.2	Environmental Action Plans will include the following information: <ul style="list-style-type: none"> • an objective • a target • a list of actions to be taken • roles and responsibilities for each action • a list of the financial resources required • a target completion date for each action item • documented progress reviews
	3.3	TSI will maintain a matrix of current objectives, targets, and environmental management programs and their status.

4 Review

4.1	Progress will be reviewed quarterly or as needed.
4.2	TSI will <ul style="list-style-type: none">• review the progress of achieving objectives and targets• review the continued appropriateness of objectives and targets and action plans as a result of<ul style="list-style-type: none">• changing budgetary or operational requirements;• changes in risks and opportunities,• non-conforming incidents,• emergency events,• regulatory requirements.
4.3	TSI will revise the objectives and targets and Environmental Action Plans to meet changing requirements.
Supporting References	
Related Documents	EMPF-03 Environmental Action Plans
Records	List of the TSI objectives and targets, and Minutes Management Reviews

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EMPP-05-01 – Regulatory Tracking

Owner: Safety, Security and Environmental Services Department

Effective Date: November 1, 2009

Purpose

To ensure compliance, TSI will maintain a system to track existing and planned regulatory requirements, and track industry codes of practice and corporate requirements to ensure a high standard of performance. Tracking changes enables TSI to respond provide input to government and industry on the impact of proposed standards.

Scope

TSI will track all applicable environmental federal, provincial and local laws and regulations, and applicable industry and corporate codes of practice.

Instruction

	Step	Action
1 Tracking Regulations	1.1	TSI will implement and maintain a library of regulatory standards, permits and industry standards.
	1.2	TSI will follow legislative updates and changes.
	1.3	TSI may maintain memberships in industry associations.
	1.4	TSI will maintain a matrix of environmental activities, aspects, impacts and related regulatory and other requirements.
	1.5	TSI will maintain contact with regulatory agencies, industry associations and corporate counsel
	1.6	When there are changes in Regulation, permit or industry standards of direct application, TSI will <ul style="list-style-type: none"> • determine which areas are affected and which personnel need to be informed of the change • assess changes to procedures, objectives and targets • evaluate changes training
2 Notification of Personnel	2.1	TSI will inform departments and employees areas affected by any change, and ensure employees understand the changes.
	2.2	TSI will prepare an annual summary of changes in legal requirements as part of the Management Review.
Supporting References	Regulatory Library STP Regulatory Updates	
Related Documents	EMPF-04 Register of Environmental Legislation	
Records	Strategic Planning, Objectives, Targets and Environmental Management Programs Environmental Management Review	

EMPP-06-01 – Maintenance of Emergency Response Plans

Owner: Safety, Security and Environmental Services Department

Effective Date: November 1, 2009

Purpose

To establish a process to

- maintain the effectiveness of emergency response plans
- define strategies to prevent and mitigate Environmental impacts associated with emergency events

Scope

All TSI Departments covered under the Emergency Response Plan.

Instruction

Step	Action
1.1	<p>TSI will</p> <ul style="list-style-type: none"> • plan and implement emergency response training for employees • test the effectiveness of the emergency response plan • report annually to management on drills, training, and associated corrective action
1.2	<p>TSI review annually and update</p> <ul style="list-style-type: none"> • mutual aid agreements • emergency response training plans for the following year • department evacuation lists • staging locations and maps • lists of emergency response equipment
1.3	<p>TSI will review annually the new aspects, legal requirements, training assessments, environmental alerts, spill reports, environmental audits and ensure the emergency response plan is updated.</p>
1.4	<p>Copies of the TSI Emergency Response Map and revisions as they occur will be sent to local "First Responders " (i.e. fire department)</p>

Supporting References

[EOP-17 Emergency Response](#)

Related Documents

TSI Emergency Response Plan

Records

Training and Drill Records

EMPP-07-01 – Public Inquiries and Concerns

Owner: GCT Canada , Media Relations Department

Effective Date: November 1, 2009

Purpose

To ensure timely and accurate response to public concerns and requests for information, and to ensure that TSI continues to be a good corporate neighbor and citizen.

To ensure that emerging public concerns are considered in setting objectives and targets and in strategic planning and to provide a means of early warning of emerging public concerns.

Scope

All environmental concerns and inquiries to TSI

Instruction

Step	Action
1.1	Requests from the public regarding environmental information or concerns should be forwarded to the attention of TSI Senior Management staff immediately.
1.2	TSI will take immediate action as appropriate to deal effectively with the inquiry or complaint.
1.3	TSI Senior Management will be provided with an annual summary of public concerns and Company responses.

Supporting References

[Environmental Policy Statement](#)
[EMPF-05 Public Inquiries and Concerns Log](#)
Non-Conformance, Corrective and Preventive Action
Environmental Management Review

Related Documents

Completed Public Inquiries and Concerns Log

Records

N/A

EMPP-08-01 – Internal and External Communication of Environmental Performance

Owner: Safety, Security and Environmental Services Department
 Effective Date: November 1, 2009

Purpose To establish networks of communication to inform internal and external parties about the TSI EMP, receive input from internal and external parties, and keep senior management and employees informed of TSI compliance with regulatory requirements, company policies and environmental objectives and targets

Scope All TSI Operations

Instruction

	Step	Action
1 Communication to Management	1.1	TSI will communicate environmental performance to senior management through meetings with Operations and Maintenance Managers, an annual Management Review Meeting, and monthly management Safety Meetings
2 Communication to Employees	2.1	TSI will communicate environmental performance to employees through e-mail, bulletins and the TSI Intranet
3 Communication to the Public	3.1	TSI will communicate environmental performance to the community and interested parties through the TSI website, industry associations, and media releases

Supporting References TSI website, and TSI Intranet

Related Documents EMPP-07 Public Inquiries and Concerns, EMPP-20 Environmental Plan Effectiveness Review

Records Minutes of Operations meetings

EMPP-09-01 – Review and Approval of New and Modified Activities

Owner: Safety, Security and Environmental Services Department

Effective Date: November 1, 2009

Purpose

To manage the impact that changes to activities may have on the environment by identifying changes before they occur. TSI will look to minimize impact on the environment and consider modifications that provide the best environmental benefit at the least cost while ensuring compliance with laws and regulations

Scope

All that may have an impact on the environment.

Instruction

1 Management of Change Procedure

Step	Action
1.1	TSI will review potential environmental impacts from changes to operations.
1.2	The person responsible will use EMPF-06 Management of Change Form
1.3	The project owner must advise TSI Senior Management regarding any project that may impact the environment or present a risk of liability.
1.4	TSI will determine additional technical resources required
1.5	TSI will assess whether the project will result in new environmental aspects or a change in the risk associated with existing environmental aspects. The assessment will include a review of potential environmental impacts, identify mitigation strategies and ensure regulatory compliance
1.6	If a new aspect or a change in risk is identified, the significance of the aspect must be determined by following EMPP-02 Review of the Significance of Environmental Aspects .
1.7	If environmental concerns can be easily be mitigated, it will be incorporated into the project design.
1.8	TSI may approve, request further review, or reject the project
1.9	If approved, the project will proceed to the MOC approval process.
1.10	Where there are a need for new written procedures and/or other controls, said controls are implemented before commencement of the project.

Supporting References

Related Documents

[EMPP-02 Review of the Significance of Environmental Aspects](#)
[EMPF-06 Management of Change Form](#)

Records

Project Review File

EMPP-10-01 – Approval of New Materials and Supplier Notification of TSI Requirements

Owner: Safety, Security and Environmental Services Department
 Effective Date: November 1, 2009

Purpose	To prevent materials that have a negative environmental impact from being introduced into TSI meet environmental standards are stated clearly in contracts.	
Scope	All purchased and trial products	
Instruction		
1. New Material	Step	Action
	1.1	An MSDS must be obtained (where applicable) for materials and products
	1.2	Products are to be ordered only by authorized TSI personnel and in accordance with the EMP
	1.3	If the material is new, an MSDS sheet will be obtained where applicable. The EMPF-07 Chemical Approval Form may be used as a reference in determining potential environmental impacts of the new product.
	1.4	Trial (non-purchased) products being brought onto site will be reviewed using EMPF-06 Management of Change Form as a guide, prior to being allowed on site.
	1.5	An operating procedure or alternate operational control must be developed in advance of the use of a new product where there is a potential environmental impact
	1.6	MSDS will be maintained in the Maintenance Department and First Aid.
2 I.D. of Aspects	2.1	TSI will assess if a new product will result in new environmental aspects or a change in the risk associated with existing environmental aspects.
	2.2	If a new aspect or a change in risk is identified the significance of the aspect must be determined by following EMPP-02 Review of the Significance of Environmental Aspects .
3 Information to Suppliers	3.1	Written procedures for the transportation, use, handling or disposal of a materials will be provided by TSI to the supplier and/or transporter
Supporting References	Material Safety Data Sheets (MSDS)	
Related Document	EMPP-02 Review of the Significance of Environmental Aspects EMPF-06 Management of Change Form EMPF-07 Chemical Approval Form	
Records	Inventory Lists, MSDS and Letters of Agreement to Contractors	

EMPP-11-01 – Contractor Approval and Management

Owner: TSI Engineering and Maintenance Department
 Effective Date: November 1, 2009

Purpose

To ensure Contractors are notified and comply with all TSI environmental requirements.

Scope

All Contractors include (but not limited to) fuel delivery, hazardous and non-hazardous waste transportation and disposal, hazardous materials transportation, delivery and handling, and construction projects and process modifications. This procedure does not include consultants who provide mainly advisory services unless their services result in the generation of waste with potential environmental impacts.

Instruction

	Step	Action
1 Contractors	1.1	Ensure all contractors are approved by TSI, and qualifications are reviewed under EMPF-08 Contractor Review Checklist .
2. Aspects	2.1	TSI will review the environmental aspects and potential impacts of a contractor's services.
	2.2	TSI will update the environmental aspects list as needed in accordance with EMPP-02 Review of the Significance of Environmental Aspects .
3. Contractor Orientation	3.1	Contractors attend a TSI "contractor orientation" session.
	3.2	Contractor orientation will be conducted according to EOP-16 Contractor Orientation .
4. Renewals	4.1	TSI will review contractor qualifications using the Contractor Review Checklist prior to renewal
5. Inspections	5.1	The TSI Project Owner must conduct inspections of the contractors work activities at predetermined intervals.
	5.2	The TSI Project Owner will ensure that the contractor takes immediate corrective action.
	5.3	TSI will track non-compliance and institute corrective and preventive action procedure. (See EMPP-19 Non-Conformance, Corrective and Preventive Action)
	5.4	Where evidence reveals non compliance, the contractor may be removed from the job site.
Supporting References		EMPP-19 Non Conformance, Corrective and Preventive Action, EMPF-08 Contractor Review Checklist

EMPP-12-01 – New Employee Orientation

Owner: TSI Human Resources Department

Effective Date: November 1, 2009

Purpose

To ensure that all new or transferred employees receive all training required by TSI and the law prior to starting in their new position.

Scope

All new TSI employees or transfers within the TSI organization to a new position.

Instruction

Step	Action
1.1	When new employees are hired, the HR Department must advise the Safety, Security and Environmental Services Department at least one week prior to their starting work.
1.2	New employees must receive a routine orientation including an environmental component.
1.3	The Safety, Security and Environmental Services Department will develop the environmental component of the new employee indoctrination and will maintain it, by review, on an annual and as-needed basis.
1.4	Upon receiving confirmation of the hiring of a new employee, the HR Coordinator will <ul style="list-style-type: none">• Establish a training agenda for the new employee;• Advise trainers and Supervisors of the training to be given
1.5	The HR Department will provide the environmental orientation to new employees and record its successful completion in the corporate training database.

Supporting References

[EMPP-13 Training Needs Assessment and Planning](#)

Related Documents

Training Agendas
Environmental Orientation Package
TSI Training Matrix

Records

Training Database

EMPP-13-01 – Training Needs Assessment and Planning

Owner: Safety, Security and Environmental Services Department

Effective Date: November 1, 2009

Purpose

To ensure employees are provided with skills and knowledge to conduct their jobs in an environmentally responsible manner by providing effective training that includes both workplace objectives and legal requirements.

Scope

Environmental training for non-union staff.

Instruction

1 Training

Step	Action
1.1	TSI will determine training requirements as required.
1.2	Training needs will consider specific job duties, experience required for the position, job task analysis and procedures that the apply to the job position
1.3	Training requirements and successful completion by Employees will be entered into the TSI training Matrix database
2.1	TSI will ensure that training courses are effective and that evaluations are submitted at the conclusion of each course.
2.2	TSI will annually review training course evaluations to assess the effectiveness of training programs.

2 Evaluation

Supporting References

Training Tracking Database

Related Documents

TSI Training Matrix

Records

Annual Training Calendar
 TSI Training Matrix
 Training Tracking Database
 Employee Performance Evaluation
 Training Course Evaluations
 Environmental Training Plans

EMPP-14-01 – Document Control

Owner: Safety, Security and Environmental Services Department

Effective Date: November 1, 2009

Purpose

The purpose of this procedure is to provide a consistent format for developing and maintaining policies and procedures, and establishing the distribution and control of said policies and procedures TSI will ensure that procedures remain current, available to Employees, and are reviewed as required.

Scope

All TSI policies and procedures

Instruction

1 Document ID System

Step	Action
1.1	The Corporate Environmental policy will be maintained but no site-specific numbering scheme will apply.
1.2	Each specific policy and procedure will be identified by an identification code consisting of a series of letters and numbers..
1.3	All EMP Procedures are identified by the letters EMPP followed by a 2-digit number and a revision number (e.g. EMPP-03-01).
1.4	Environmental Operating Procedures are identified by the letters EOP followed by a 2-digit number and a revision number (e.g. EOP-03-01).
1.5	Forms are identified by the letters EMPF for forms referenced by the EMP Policy Procedures, or EOPF for forms referenced by Environmental Operating Procedures followed by a two-digit number and a revision number (e.g. EMPF-03-01 or EOPF-03-01).

2 Information	2.1	<p>All policies and procedures must include information that details</p> <ul style="list-style-type: none"> • the document number • The title of the policy or procedure • The document owner • Effective date on which the policy or procedure was issued
3 Component	3.1	<p>The policy or procedure must include the following key components:</p> <ul style="list-style-type: none"> • Purpose: The objective of the policy or procedure • Scope: The breadth of the application of the policy or procedure • Instruction: The text will describe the steps required to complete the procedure, roles and responsibilities, timing, documentation and reporting. • Reference: The legal, Regulatory or Company requirement(s) that govern the policy or procedure
4 Process	3.2	<p>Procedures may also include forms, related documents, records or other supporting documentation:</p>
4 Process	4.1	<p>An employee may initiate a request to develop, modify or remove a procedure.</p>
4 Process	4.2	<p>All requests to develop, modify or remove a procedure must be communicated directly to TSI Senior Management.</p>
4 Process	4.3	<p>The need to develop, modify or rescind an operating procedure may also be identified through various internal TSI reviewing procedures.</p>
4 Process	4.4	<p>Any and all changes to EMPPs and EOP's will be reviewed in consultation with the respective departments affected by said change.</p>
4 Process	4.5	<p>In developing, modifying and removing procedures, TSI will consider whether the procedure</p> <ul style="list-style-type: none"> • has the potential to affect more than one department • has environment implications • has the potential to affect the Company as a whole • has the potential to affect a key element of the Management System • will ensure conformity with Company policies, compliance with legal requirements, and equipment operating standards • will improve the effectiveness of operations, productivity, or the management system • will ensure consistency in the way activities are conducted between personnel, overtime and with succession of personnel • will provide a training mechanism • will define operating criteria/limits • will improve the definition and understanding of roles responsibilities and accountabilities • duplicates or conflicts with other procedures or policies covering the topic area of proposed procedure
5 Review	5.1	<p>Procedures will be reviewed every 24 months, and a summary provided when a change has been implemented</p>

6 Notification

6.1	Employees will be notified of any new procedures, changes to procedures or deletion of procedures through memos bulletins, meeting minutes and direct communication from supervisory staff.
6.2	Changes will be communicated to Employees immediately.
6.3	TSI shall ensure that employees additional training (where applicable) from changes to procedures.

7 Controlled Documents

7.1	Controlled documents include all TSI policies, procedures, manuals and Response Plans
7.2	Printed copies of Policies, EMPPs, and EOPs, will indicate an uncontrolled copies, including the date printed.
7.3	Anyone using an uncontrolled copy of a procedure should verify that the procedure is current.
7.4	TSI will use the EOP Revision and Distribution Form and the EMPP Revision and Distribution Form to track distribution of uncontrolled copies of EOPs and EMPPs.

8 Document Administration

8.1	<p>TSI will ensure to</p> <ul style="list-style-type: none"> • notifying personnel of any changes in policies and procedures • notifying persons responsible for assisting in conducting reviews of procedures of the dates for procedure reviews • assigning identification codes for policies and procedures • establishing database/links between all policies, core procedures and standard operating procedures • establishing database links between policies, core procedures and standard operating procedures, and the job positions to which they apply • maintaining the operability and integrity of the Document Database
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Supporting References

N/A

Related Documents

EMPF-09 EOP Revision and Distribution Form EMPF-11 EMPP Revision and Distribution Form

Records

Completed EOP and EMPP Revision and Distribution Forms
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EMPP-15-01 – Document Management/Records Management

Owner: Safety, Security and Environmental Services Department

Effective Date: November 1, 2009

Purpose

To ensure that the information needed by TSI to manage its environmental operational performance is maintained to ensure that information is protected from loss or damage, can be easily retrieved, and is available to employees that need it when they need it

The records management system must be sufficient to enable TSI to track its performance with and ensure compliance with regulatory requirements, track key indicators of performance, and provide evidence of compliance with regulations and regulating bodies

Scope

All TSI controlled documents

Instruction

Step	Action
1.1	All controlled documents will (as applicable) identify the records that are needed to support effective implementation of the procedure, evidence compliance and track key indicators
1.2	The Records Register Form will indicate the name, location, person responsible and retention period for all System records. The Register will be maintained by TSI.
1.3	TSI filing practices will include a mechanism for file identification (alphabetical), retrieval and protection from loss or damage
1.4	Records must be kept for a minimum of 5 years although inactive records may be archived.
1.5	Records (where applicable) will be destroyed by cross-shredding.
1.6	Archived records will be housed TSI's records retention area in boxes that identify a description of the contents of the box, the date of archiving, and box identification number

Supporting References

Related Documents

[EMPF-12 Records Register Form](#)

Records

EMPP-16-01 – Responsibility for the EMP

Owner: Safety, Security and Environmental Services Department

Effective Date: November 1, 2009

Purpose To define the roles, responsibilities and authorities for the TSI Environmental Management Program.

Scope The Environmental management roles, responsibility and authorities of all TSI personnel.

Instruction

	Step	Action
1 Senior Management	1.1	TSI Senior Management is responsible for overseeing the development and maintenance of the EMP, and in establishing and monitoring environmental objectives, targets and programs. TSI Senior Management will review environmental performance, programs and procedures and provide necessary staff and resources to achieve the EMP goals. TSI Senior Management will identify an EMP Manager
2 EMP Manager	2.1	The EMP Manager will work with all departments of TSI to ensure compliance and adherence to the EMP. The EMP Manager will maintain and review the EMP as required, and be responsible for all administrative responsibilities within the EMP.
	2.2	The EMP Manager is additionally responsible for the coordination of environmental training and tracking and reporting performance of EMP to senior management
	2.3	The EMP Manager will work with TSI HR Department to ensure current information is entered into the TSI Training Matrix, and establish a training agenda for new employees.
4 Supervisors	4.1	Supervisors (Managers/Superintendents/Foreman) are responsible for identifying the need for new or modified procedures, communicating environmental deficiencies and advising the EMP Manager Supervisors will aid in the design and implementation of corrective actions, communicating environmental programs and procedures to their employees, and ensure policy and procedure compliance
5 Employees	5.1	Employees are responsible to attending training, following procedures, reporting incidents and deficiencies and suggesting process or operational improvements to their respective supervisors
Supporting References	Organizational Chart	
Related Documents	TSI Training Matrix, EMPP-20 Management Review	
Records	N/A	

EMPP-17-01 – Monitoring and Measuring Environmental Performance Including Evaluation of Regulatory Compliance

Owner: Safety, Security and Environmental Services Department
 Effective Date: November 1, 2009

Purpose To monitor legal and Regulatory requirements, verify compliance and measure performance relative to TSI objectives and targets

Scope All environmental compliance monitoring required under local, provincial and federal laws
 All key performance indicators relative to environmental objectives and targets
 All activities relating to compliance with environmental laws and regulations, and industry codes of practice to which TSI subscribes

Instruction

1 Monitoring

Step	Action
1.1	TSI will identify all key performance criteria required to measure performance relative to environmental objectives and targets.
1.2	TSI will monitor all aspects of operations required to maintain compliance with local, provincial, and federal laws.
1.3	TSI will monitor key characteristics of its activities that have an impact on the environment, such as <ul style="list-style-type: none"> • Effluent water quality • Storage/handling of hazardous materials • Hazardous and non-hazardous waste generation and disposal • Air pollution • Energy use • Noise
1.4	Compliance monitoring will be conducted in accordance with regulatory standards, accepted scientific standards and laboratory practices, or in-house developed procedures as appropriate.

2 Reporting

2.1	TSI will report monitoring results to regulatory agencies in accordance with regulatory reporting requirements.
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2.2	TSI will summarize monitoring and compliance verification activities.
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3 Audit

3.1	The objective of an environmental audit is to assess compliance with applicable laws, regulations, by-laws, approvals and other legal requirements, corporate and terminal environmental policies and procedures that apply to TSI.
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3.2	Compliance audits may include internal and external (independent) audits
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3.3	Any audit will review “Operations” since the date of the previous audit
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3.4	<p>The audit scope can include, but not limited to:</p> <ul style="list-style-type: none"> • air emissions management • hazardous waste management • solid waste management • spill and emergency response • ocean dredging and disposal • transportation of dangerous goods • chemical and fuel management • site management • follow-up on actions required identified in the previous audit
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3.5	<ul style="list-style-type: none"> • The audit process will follow generally approved practices (CSA Z-773-03 Environmental Auditing)
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4.1	The Lead Auditor will present audit observations and findings with TSI Senior Management to confirm the accuracy of information in the audit report.
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4.2	The Lead Auditor will provide TSI a written report within four weeks.
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4.3	TSI will assess corrective actions, assign and then track completion of said actions
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Supporting References

	CSA Z-773-03 Environmental Auditing
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Related Documents

	EMPP-19 Non-Compliance, Corrective and Preventative Action
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Records

	<p>Hard Copy Monitoring Records</p> <p>Corporate Environmental (Compliance) Audit Reports</p> <p>Annual EMP Audit Reports</p>
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EMPP-18-01 – Environmental Management Program Audits

Owner: Safety, Security and Environmental Services Department

Effective Date: November 1, 2009

Purpose

To evaluate EMP performance, assess conformance with company objectives and targets and policies and procedures and establish a framework for continual improvement
 To assess TSI's performance in relation to industry standards and best practices, and to develop skills and awareness regarding environmental laws, practices, issues and auditing
 To identify environmental risks so that corrective action can be taken to prevent those risks from becoming financial and legal liabilities

Scope

Environmental Compliance and Management Program Audits

Instruction

1 Audit Frequency and Coverage

Step	Action
1.1	TSI will conduct an audit of the EMP annually, and will be conducted by TSI Management and Staff
1.2	The period of audit will be the operating period from the previous year.
1.3	The objectives of the audit will be to verify whether the EMP conforms to TSI planned arrangements for environmental management, and that the EMP has been properly implemented and maintained. The audit will evaluate whether the EMP meets industry and due diligence standards and effectiveness
1.4	The audit will include an assessment of the core elements of the EMP and address the findings and recommendations of the previous audit
2.1	The responsibilities of the auditors will include preparation, duties as agreed with the audit leader, accurate notes and documentation of audit activities, findings, summarizing findings, and meeting attendance.
2.2	Auditors will be independent to ensure impartiality and objectivity, and have received the appropriate audit training.

2 Audit Roles and Responsibilities

Corrective Action

4.1 Corrective Action Plans will be developed according to [EMPP-04 Strategic Planning, Objectives, Targets and Environmental Management Programs](#).

Supporting References

N/A

Related Documents

[EMPP-20 Environmental Management Review](#)

Records

Environmental Audit Report
 Audit Action Plans
 Management Review Information Package
 Management Review Minutes

EMPP-19-01 – Non-Conformance, Corrective and Preventive Action

Owner: Safety, Security and Environmental Services Department
 Effective Date: November 1, 2009

Purpose

To identify and prevent incidents resulting in non-conformance with good business practice and environmental regulations, and ensure corrective and preventive actions are commensurate with the risks.
 To identify root causes of non-conformances and to raise awareness and individual responsibility of employees and ensure conformance to TSI objectives and targets.

Scope

All actions will be in response to public concerns, reportable spills, environmental regulatory infractions including permits and environmental alerts (employee identified issues). Actions will also result from emergency events, non-conformance with the EMP, annual Audit findings and any Regulatory Compliance audit findings

Instruction

1 Reporting

Step	Action
1.1	All employees have a responsibility to report environmental incidents including public concerns, reportable spills, improper waste disposal, emergency events, or non-conformance with regulations and company procedures
1.2	Non-compliance will be reported as follows: <ul style="list-style-type: none"> • Take reasonable steps to correct the problem • Contact an immediate supervisor (foremen) inclusive of a Company representative. • Follow the TSI Emergency Response Plan • Complete an incident investigation report
1.3	All spills must be reported (See Spill Reporting Procedure).
1.4	All complaints from external parties must be reported to the appropriate Contact in accordance with Public Inquiries and Complaints form.

2 Investigating

2.1	All incidents will be investigated as per TSI policy, and investigations will include root cause as well as corrective actions.
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3 Tracking Corrective and Preventive Action Plans

3.1	TSI is responsible for tracking the status of completion of all action plans and action items.
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4 Reviewing Effectiveness of Action Plans

4.1	Effectiveness and appropriateness of action plans will be reviewed by TSI Senior management and the TSI Site Safety Committee
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Supporting References

N/A

Related Documents

[EMPP-04 Strategic Planning, Objectives, Targets and Environmental Management Programs](#), [EMPP-06 Maintenance of Emergency Response Plans](#), [EMPP-07 Public Inquiries and Concerns](#), [EMPP-18 Environmental Management Program Audits](#)
[EMPP-20 Environmental Plan Effectiveness Review](#)

Records

Minutes of Operations and Maintenance Departments Meetings
Minutes Management Review, Site Safety Committee Meeting Minutes

DRAFT

EMPP-20-01 – Computer Equipment Sourcing and Disposal

Owner: TSI ISD (Information Services Department)
 Effective Date: November 1, 2009

Purpose

Obsolete but reusable computer systems are resold through a reseller that will provide its customers with information about electronic equipment stewardship programs and that end-of-lifecycle computers and other electronic equipment are disposed of in an environmentally responsible manner.

Scope

All computer systems, computer peripherals, and other electronic equipment for which stewardship programs and electronic recycling opportunities exist.

Instruction

	Step	Action
1 Computer Equipment	1.1	Computer equipment should only be ordered from a company that has an established product stewardship program Only LCD monitors will be ordered.
2 Disposal of Computer Equipment	2.1	Before disposal, computers are processed to ensure all company asset stickers and marks are removed. In the case of reusable/resalable computer systems, data will be destroyed by electronic shredding, followed by re-imaging the hard drive. In the case of non-reusable computers (to be sent directly to a recycler), data will be destroyed either by electronic shredding or by physically destroying the hard drive by drilling a hole through the platters.
	2.2	Reusable/resalable computer systems and peripherals will be picked up by/delivered to an approved reseller.
	2.3	Resellers must provide information on responsible recycling
	2.4	Non-reusable computer systems and peripherals will be picked up by/delivered to an approved recycler.
	2.5	Recyclers must provide certificates of destruction for selected components
3 Sourcing and Disposal of Other Electronic Equipment	3.1	Wherever possible, other electronic equipment (such as phones, cell phones, fax machines, calculators) will be sourced from a company that provides for direct return or end-of-lifecycle equipment through a stewardship program.
	3.2	Where direct return is not possible, electronic equipment will be picked up by/delivered to an approved reseller/recycler.
Supporting References	Environmental Management Act - Recycling Regulation	
Related Documents	EMPF-13 Approved Computer/Electronic Equipment Resellers/Recyclers	
Records	Copies of certificates of destruction for selected computer components Stewardship statements/responsible recycling plans from approved resellers/recyclers	

DRAFT

Environmental Operating Procedures

EOP-01-01 – Oil/Water Separators and Catch Basins

Owner: TSI Maintenance and Engineering Department

Effective Date: November 1, 2009

Purpose To prevent pollution of the marine environment with the discharge of storm water petroleum products collected in oil / water separators and catch basins.

Scope All oil/water separators

Roles Oiler, Maintenance Supervisor (Engineering) and Mechanics

Instruction

	Step	Action
1 General Information	1.1	Oil / water separators, interceptors and catch basins must be maintained in optimal condition to prevent release of petroleum products and other pollutants from the separators to the ocean and the effluent treatment plant.
2 Inspection	2.1	Inspect the oil/water separators and catch basins three times per year, or after processing of any spill.
	2.2	Inspect the first compartment (inlet side) and pump out any sludge. Dispose of the sludge in an appropriate manner (e.g., using approved disposal contractors only).
	2.3	Inspect the last compartment (outlet side) to ensure that the water being discharged does not contain any visible solids or oils.
	2.4	Record the inspections and servicing on the preventative maintenance checklist. Records should include depth of sludge, presence of oil, and amount of sludge removed. (Federal requirement).
3 Effluent Discharge Criteria	3.1	Final effluent should not exceed 15 mg/litre of total extractable hydrocarbon and 10 mg/litre mineral oil and grease unless otherwise permitted. If these levels are exceeded, identify the source and take corrective action.
Supporting References	Environmental Management Act and Regulations , Canadian Environmental Protection Act and Regulations, Fisheries Act, National Fire Code of Canada	
Related Documents	Maintenance Procedures and Checklists	
Records	Lab sample monitoring results	
	Completed waste manifests	

EOP-02-01 – Equipment Wash Pad, Steam Cleaner, and Detergent Use

Owner: TSI Maintenance and Engineering Department
 Effective Date: November 1, 2009

Purpose

To prevent or reduce the release of pollutants (e.g., emulsified oil) to the environment during and after the washing of equipment or vehicles.

Scope

Steam Wash Areas

Roles

Mechanics, Weekend Cleanup Personnel

Instruction

	Step	Action
1 Equipment Washing	1.1	Equipment should be washed on the Equipment Wash Pad or designated area at all times.
	1.2	Minimize the use of detergents, which can emulsify oils and prevent effective oil / water separation. Minimization techniques include using hot water washing with no detergent, quick-release detergents and avoiding the use of strongly alkaline or caustic detergents
2 Reservoir cleaning	2.1	Free oil is removed by pump by a certified contractor
	2.2	Remaining oil is removed by a chemical treatment system which is maintained once a month by Metro-Van Hotsy Equipment Limited in Surrey. Maintenance schedule includes the following activities: <ul style="list-style-type: none"> • Coagulant and flocculent addition • Changing and disposal of filter cartridges • General operational maintenance
	2.3	Treated effluent is then discharged to the storm sewer. Ensure that there is no evidence of oil residue to ensure treatment system is working.
Supporting References	GVRD Sewer Use Bylaw, Canadian Environmental Protection Act and Regulations Fisheries Act	
Related Documents	EOP-01 Oil / Water Separators and Catch Basins	
Records	Records of Detergent Type and Use	

EOP-03-01 – Empty Drums, Pails, and Other Containers

Owner: TSI Maintenance and Engineering Department

Effective Date: November 1, 2009

Purpose To ensure proper and cost-effective waste segregation.

Scope Terminal Operations

Roles Maintenance Supervisors, Mechanics , Oiler

Instruction

	Step	Action
1 Container Storage	1.1	Designate an area(s) for the storage of containers.
	1.2	Control addition of containers to the storage area(s).
	1.3	Ensure that all containers are empty and closed prior to storage.
2 Identifying Contents	2.1	If a container is partially full, identify and dispose of the contents appropriately. Do not dispose of the contents until identified.
	2.2	Check for labels (TDG, WHMIS or other markings) to identify contents.
3 Container Recycling	3.1	Many containers can be recycled by the supplier(s). If a supplier does not provide for recycling, an alternate supplier should be considered.
	3.2	A substantial deposit is paid on drums if returned in good condition. Employees handling drums are responsible to reduce damage.
	3.3	Coordinate return of empty containers to designated collection areas.
	3.4	Ensure suppliers pick up empty containers when supplies are delivered.
Supporting References	Transportation of Dangerous Goods Act and Regulations Paragraphs 5.5 to 5.15 (Container Labels)	
Related Documents	N/A	
Records	Supplier invoices/pick-up records, Completed waste manifests	

EOP-04-01 – Solid Non-Hazardous Waste

Owner: TSI Maintenance and Engineering Department
Effective Date: November 1, 2009

Purpose

To ensure safe and cost-effective disposal of non-hazardous wastes. Where possible, re-use and/or recycling will be emphasized for cost recovery and reduction of terminal waste contributions to the local municipal landfill.

Scope

Non-hazardous waste from all offices and operations. Note: Wood waste from international ships is handled as a hazardous waste.

Roles

Terminal management
Head Office and Terminal staff

Instruction

Step	Action
1.1	Segregate non-hazardous wastes, including office paper, cardboard, scrap metal, domestic beverage containers, and tires
1.2	Install storage bins to recover non-hazardous recyclable wastes.
1.3	Use approved waste recovery contractors to remove materials from terminal property and keep invoices on file.
1.4	Establish supplier return-recycle contracts where appropriate (e.g. tires).

Supporting References

[Environmental Management Act - Recycling Regulation](#)

Related Documents

N/A

Records

Waste disposal invoices (Maintenance Coordinator-Stores)

EOP-05-01 – Used Absorbent Materials

Owner: TSI Maintenance and Engineering Department
Effective Date: November 1, 2009

Purpose	To ensure environmentally responsible use, storage and disposal of used absorbents.	
Scope	All absorbent materials used at both terminals	
Roles	Mechanics , Maintenance Personnel, Maintenance Coordinator – Stores	
Instruction		
	Step	Action
1 Absorbent Use	1.1	Use absorbents to clean up small leaks and spills or after recovery of a reportable spill by other means (e.g., vacuum truck).
2 Absorbent Storage	2.1	Store used absorbents in a labeled metal container/drum with a lid.
3 Absorbent Disposal	3.1	When the waste container is full, contact the Safety, Security and Environmental Services Department for container disposal by an authorized waste management firm.
Supporting References	Environmental Management Act and Regulations A Field Guide to Fuel Handling, Transportation & Storage Transportation of Dangerous Goods Act and Regulations	
Related Documents	N/A	
Records	Disposal invoices Completed waste manifests	

EOP-06-01 – Batteries

Owner: Safety, Security and Environmental Services Department
Effective Date: November 1, 2009

Purpose To ensure safe and environmentally responsible storage and disposal of batteries

Scope All batteries

Roles Mechanics, Staff

Instruction

1 Wet-cell Batteries

Step	Action
1.1	Keep in a secure dry location to prevent acid or liquid from entering nearby storm drains or ditches.
1.2	Storage must comply with regulatory requirements for spill and drip containment, protection from impact and tipping, labeling, and regular inspection.
1.3	Used lead-acid batteries are taken back by the battery supplier when new batteries are delivered or picked up.

2 Dry-cell Batteries

2.1	Place in the marked collection containers provided by the contract recycling company.
2.2	Batteries will be collected by the contract recycling company on a regular basis.

3 General Notes

3.1	Do not throw used batteries in the garbage or place them in landfill.
3.2	Do not allow large numbers of batteries to accumulate.
3.3	Ensure all batteries are transported by a licensed transporter and delivered to an approved recycler.
3.4	Retain a copy of the waste manifest, recycling docket or bill of lading for two years.

Supporting References

[Canadian Environmental Protection Act](#)
[Environmental Management Act - Hazardous Waste Regulation](#)
[Transportation of Dangerous Goods Act and Regulations](#)

Related Documents

N/A

Records

Recycling dockets, invoices/receipts
Completed waste manifests

EOP-07-01 – Ozone Depleting Substances

Owner: Safety, Security and Environmental Services Department
Effective Date: November 1, 2009

Purpose	To ensure compliance for handling, storage and disposal of ozone-depleting substances such as chlorofluorocarbons (including Freon®), hydrofluorocarbons, and other halocarbons.								
Scope	All refrigeration and air conditioning equipment, and other equipment that contains ozone-depleting substances.								
Roles	TSI Maintenance Department, Contractors								
Instruction	<table border="1"><thead><tr><th>Step</th><th>Action</th></tr></thead><tbody><tr><td>1.1</td><td>Servicing of refrigeration or air conditioning equipment containing ozone depleting substance will be conducted by authorized technicians only.</td></tr><tr><td>1.2</td><td>Personnel servicing equipment containing ozone depleting substances will follow the codes of practice listed below.</td></tr><tr><td>1.3</td><td>Release of ozone-depleting substances is not permitted other than when connecting, disconnecting, servicing and test equipment.</td></tr></tbody></table>	Step	Action	1.1	Servicing of refrigeration or air conditioning equipment containing ozone depleting substance will be conducted by authorized technicians only.	1.2	Personnel servicing equipment containing ozone depleting substances will follow the codes of practice listed below.	1.3	Release of ozone-depleting substances is not permitted other than when connecting, disconnecting, servicing and test equipment.
Step	Action								
1.1	Servicing of refrigeration or air conditioning equipment containing ozone depleting substance will be conducted by authorized technicians only.								
1.2	Personnel servicing equipment containing ozone depleting substances will follow the codes of practice listed below.								
1.3	Release of ozone-depleting substances is not permitted other than when connecting, disconnecting, servicing and test equipment.								
Supporting References	Environmental Management Act and Regulations Code of Practice for the Reduction of Chlorofluorocarbon Emissions from Refrigeration and Air Conditioning System Code of Practice EPS 1/RA/1 March 1991								
Related Documents	N/A								
Records	Inspection and service records Contractor Certificates								

EOP-08-01 – Used Oil Filters

Owner: TSI Maintenance and Engineering Department
Effective Date: November 1, 2008

Purpose

To ensure responsible storage and disposal of used oil filters.

Scope

Mechanic Areas at both terminals

Roles

Maintenance Manager, Mechanics

Instruction

Step	Action
1.1	Store oil from drained filters in the waste oil tank.
1.2	Store the drained filters in the designated container.
1.3	Avoid large accumulation of filters.
1.4	Waste oil filters must not be discarded in regular waste bins.
1.5	It is the responsibility of the Maintenance Manager to arrange for pick-up by an approved recycler (typically weekly).

Supporting References

[Environmental Management Act and Regulations](#)
[Transportation of Dangerous Goods Act and Regulations](#)

Related Documents

N/A

Records

Completed waste manifests

EOP-09-01 – Waste Antifreeze

Owner: TSI Maintenance and Engineering Department
Effective Date: November 1, 2009

Purpose To ensure safe and environmentally responsible storage and disposal of waste antifreeze.

Scope Maintenance areas of both terminals

Roles Mechanics
Maintenance Stores

Instruction

	Step	Action
1 Storage	1.1	Store all waste antifreeze in designated and labeled containers in an area with appropriate secondary containment and free of potential collision.
	1.2	Minimize the volume of waste antifreeze onsite (i.e. under one Intermediate Bulk Container (IBC)).
2 Shipping/Transport	2.1	Arrange for the antifreeze supplier or a recycler to pick up waste antifreeze.
	2.2	Confirm that antifreeze will be transported by a licensed transporter.
	2.3	Ensure that the antifreeze goes to an approved or licensed recycler or disposal facility.
3 Spills	3.1	In the event of a spill, prevent antifreeze from entering storm drains.
	3.2	All spills in excess of 200 litres must be reported to the Provincial Emergency Response Program.
Supporting References	Environmental Management Act – Spill Reporting Regulation Transportation of Dangerous Goods Act and Regulations	
Related Documents	N/A	
Records	Waste manifests, recycling dockets or bills of lading from transporter.	

EOP-10-01 – Waste Oil and Petroleum Products

Owner: TSI Maintenance and Engineering Department

Effective Date: November 1, 2009

Purpose To ensure safe, environmentally responsible, and economical storage and disposal of waste hydrocarbons.

Scope Lubricating oil
Cutting oil
Fuel oil
Gear oil
Hydraulic oil
Synthetic oil

Roles Mechanics

Instruction

	Step	Action
1 Waste Oil Segregation and Oil Storage	1.1	Segregate waste oil from other wastes such as antifreeze and solvents.
	1.2	Avoid leaving small volumes in open containers that could spill from impact or overflow from accumulation of rainwater if left exposed.
	1.3	Transfer waste oil as soon as possible once generated to the nearest waste oil tank.
	1.4	Monitor the volumes of waste oil and contact the waste oil recycler for pick up.
2 Transport and Recycling of Waste Oil	2.1	Waste oil container(s) should be clearly labeled indicating the contents.
	2.2	If the full container is to be transported, rather than pumped out, labeling must conform to the Transportation of Dangerous Goods Regulations .
	2.3	The transporter / recycler must have all necessary licenses and approvals.

Supporting References [Environmental Management Act and Regulations](#)
[Canadian Environmental Protection Act and Regulations](#)
[A Field Guide to Fuel Handling, Transportation & Storage](#)
[Environmental Code of Practice for Above Ground Storage Tank Systems Containing Petroleum and Allied Petroleum Products](#)
[Transportation of Dangerous Goods Act and Regulations](#)
ULC-S652, "Standard for Tank Assemblies for Collection of Used Oil"
[National Fire Code of Canada](#)

Related Documents N/A

Records Manifests, recycling dockets or bills of lading from transports/recyclers

EOP-11-01 – Waste Solvents

Owner: TSI Maintenance and Engineering Department
Effective Date: November 1, 2009

Purpose	To ensure safe, environmentally responsible, and economical storage and disposal of waste solvents such as white spirit (Varsol®).	
Scope	All solvents	
Roles	Mechanics Maintenance Manager	
Instruction		
	Step	Action
1 Solvent Suppliers	1.1	If possible, use suppliers who provide clean solvents and remove the waste solvent for recycling.
2 Waste Solvent Storage	2.1	Wash parts at the three parts washers to ensure that waste solvent is collected in the parts washer container.
	2.2	Avoid mixing waste solvents with waste oil.
3 Shipping/Transport	3.1	The transporter/recycler must have all necessary licenses and approvals.
4 Alternate Management Options	4.1	If recycling of waste solvent is not possible, manage as a Hazardous Waste and transport to a licensed waste management facility.
Supporting References	Environmental Management Act Transportation of Dangerous Goods Act and Regulations National Fire Code of Canada	
Related Documents	N/A	
Records	Manifest, recycling docket or bill of lading from contractors	

EOP-12-01 – Contaminated Soil Management

Owner: TSI Maintenance and Engineering Department

Effective Date: November 1, 2009

Purpose
To ensure that any and all contractors removing contaminated soils from the terminal property do so in accordance with applicable legislation and that leaching to receiving waterways is prevented.

Scope
Terminal operations

Roles
Maintenance Manager, (Civil) Contracted Service Providers

Instruction

	Step	Action
1 Contaminated Soil	1.1	Contractors will collect contaminated or visually stained soil
	1.2	Contractors will store the soil in an appropriate area on the terminal as directed by TSI. This area must be located well away from waterways that may carry potentially toxic leachate.
	1.3	Do not allow excessive accumulation of contaminated soil in the area.
	1.4	Contractors will cover piles fully with tarps or plastic sheets to prevent leaching by rainfall.
2 Testing	2.1	Contractors will arrange for an independent consultant to take soil samples.
	2.2	Samples should be analyzed and compared to applicable Industrial Land standards for petroleum hydrocarbons and metals.
	2.3	Samples should be analyzed for contaminants of concern based on the knowledge of the substance contaminating the soil. Parameters can include the following: <ul style="list-style-type: none"> • pH • Inorganic substances (metals) • BTEX/VPH (benzene, toluene, ethylbenzene, xylene, styrene, VPHs, VHs) • Extractable Petroleum Hydrocarbons (EPH, Light EPHs, Heavy EPH) • Polycyclic Aromatic Hydrocarbons (PAHs)
	2.4	Depending on lab results, contractors will dispose of contaminated soil as a hazardous waste or evaluate alternate uses.
Supporting References	Environmental Management Act - Contaminated Sites Regulation	
Related Documents	N/A	
Records	Soil Sample Lab Results Consultant's reports Waste Manifests	

EOP-13-01 – Above Ground Tank Management

Owner: TSI Maintenance and Engineering Department
 Effective Date: November 1, 2009

Purpose

To ensure that the management of fuel storage tanks conforms to established codes, regulations and good practices to minimize the uncontrolled release of hydrocarbons into the environment.

Scope

All fuel tanks

Roles

TSI Maintenance and Engineering Department

Instruction

1 Administration

Step	Action
1.1	Records for tanks containing petroleum products or allied petroleum products will be maintained by TSI. Records will include the following: <ul style="list-style-type: none"> • Number, contents and total volume of tanks • Age of tank, installation dates or nearest estimate • Location on a site plan • Inspections, tests or maintenance checks of storage tank system equipment
1.2	Document all alterations, upgrades or changes to the tank system and retain the documentation for the life of the tank. In event of transfer of ownership, all records are forwarded to the new owner.
1.3	Label all tanks with the product contained.
1.4	Register (with the proper authority) tanks containing petroleum products and having a single or total capacity of more than 880 gallons (4,000 litres).
2.1	The following containment volumes are required: <ul style="list-style-type: none"> • A containment berm for a single tank must contain the tank volume plus 10%. • A containment berm for a multi-tank farm facility must be able to contain 110% of the volume of the largest tank or 100% of the largest tank plus 10% of the combined volume of all the tanks within the berm, whichever is greater.

2 Containment Or Berming (Single-Walled Tanks)

3 Containment or Berming (Double-Walled Tanks)

2.2	All tanks must be securely bolted to support pads, or on skids, or positioned securely on a cradle. The supports must be consistent with the appropriate earthquake construction code.	
2.3	Drainage valves and plugs in a steel secondary containment unit must be closed or sealed at all times.	
3.1	<p>The Fire Commissioner has ruled that a “tank within a box” above ground tank assembly satisfies the intent of the National Fire Code of Canada, and is acceptable without the need for a conventional dike. However, double-walled above ground tanks should only be installed and accepted without dikes provided that</p> <ul style="list-style-type: none"> • the interstitial space is vacuum monitored and emergency vented, OR • the interstitial space is accessible by means of a leak detection or monitoring tube for manual or continuous hydrocarbon sensor monitoring • monitoring is done on a regular basis and recorded (e.g., monthly PM checklist) • the tank is protected from vehicular impact by barriers <p>If a double-walled tank does not meet the criteria described above, a secondary containment that is capable of containing an accidental spill from the tank, piping or transfer system must be installed.</p>	
4 Maintenance	4.1	Perform frequent visual inspections of the piping system, pumps, and ancillary equipment for leaks, spills, and abnormal conditions. Repair leaks as soon as possible.
4.2	If an above ground storage tank will be out of service for less than 180 days, ensure that the piping from the tank is capped or the valves necessary to achieve similar isolation of the tank, are closed and securely locked.	
4.3	If the tank contains flammable or combustible liquids, perform monthly measurements of the contents (e.g. Monthly PM Checklist). Record the measurements and compare them to the previous month’s measurements looking for leakage and/or water contamination.	
4.4	If an above ground storage tank will be out of service for more than 180 days, remove all liquid and vapour from the tank and its connected piping. Ship the contents to an appropriate facility for storage or use. Clearly mark the tank with signs to indicate that it is empty.	
5 Suspected Tank Leak	5.1	Where there is substantial evidence of a leak or spill, take action to verify, stop, clean up, and mitigate the impact of a leak or spill, including but not limited to the following steps.
5.2	Follow the spill response plan reporting procedure.	
5.3	Remove the tank and / or piping, or arrange for precision testing.	
5.4	Remove the volume of petroleum product from the leaking components.	
5.5	Remove or repair the damaged component within a reasonable time.	
5.6	Take all reasonable steps to measure the extent of the leak or spill, contain	

	the petroleum product, and prevent further migration.
5.7	Take all reasonable steps to recover or remove escaped product
5.8	Verify and document the event.
6 Tank Modifications	6.1 New installations are to be in accordance with manufacturer's instructions and will be reported to authorities having jurisdiction.
	6.2 Repairs must be conducted by the tank manufacturer or a person certified by the manufacturer. Persons repairing a tank must certify in writing that they have met manufacturer's applicable codes.
	6.3 Every tank will be leak tested if modifications are made.
	6.4 Upgrades may include the repair, replacement, or installation of piping systems, leak detection devices, overfilling prevention devices, internal lining and liquid- and vapor-tight connections
Supporting References	<p>Federal Aboveground Storage Tank Technical Guidelines</p> <p>Hazardous Products Act - Controlled Products Regulations</p> <p>Federal Registration of Storage Tank Systems for Petroleum Products and Allied Petroleum Products on Federal Lands Regulations</p> <p>Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products</p> <p>National Fire Code of Canada</p> <p>A Field Guide to Fuel Handling, Transportation & Storage</p>
Related Documents	<p>EMPF-14 Fuel Tank List</p> <p>Manufacturer Specifications</p> <p>Spill Plan</p>
Records	<p>Spill/Event documentation</p> <p>Monthly Maintenance Checklist</p>

EOP-14-01 – Fuel Management and Dispensing

Owner: TSI Maintenance and Engineering Department

Effective Date: November 1, 2009

Purpose To minimize the impact of hydrocarbons on the environment during vehicle fueling

Scope Fueling activities at both terminals

Roles Mechanics

Instruction

	Step	Action
1 Requirements for Fueling Areas	1.1	Regularly clean the fueling area pad to prevent buildup of solids, oil and fuel.
2 Vehicle and Equipment Fueling	2.1	Ensure the fueling vehicle/equipment is equipped with a spill mat and absorbent diking.
	2.2	Set up cones around the fuel vehicle as necessary.
	2.3	Cover drains where possible.
	2.4	Park the vehicle and stay in the area throughout the fueling process.
	2.5	Eliminate all possible sources of ignition. Follow posted procedures.
	2.6	Dispense fuel according to the instructions.
	2.7	Watch for leaks.
	2.8	When the delivery is complete, disconnect hose and bonding wires.
3 Spill Response	3.1	Ensure personal safety.
	3.2	Call for assistance if required.
	3.3	Stop the fuel flow to the oil / water separator with pads or booms.
	3.4	Determine loss volume.
	3.5	If loss volume is less than 100 litres, the spill may be cleaned up by TSI personnel.
	3.6	If loss volume is 100 litres or more, the spill must be reported to the Provincial Emergency Program.
Supporting References	Fisheries Act Canadian Environmental Protection Act and Regulations Environmental Management Act - Spill Reporting Regulation	
Related Documents	EOP-01 Oil/Water Separators & Catch Basins EOP-17 TSI Emergency Response	
Records	N/A	

EOP-15-01 – Petroleum, Oil, and Lubricant Delivery

Owner: TSI Maintenance and Engineering Department
Effective Date: November 1, 2009

Purpose	To minimize the potential for release of hydrocarbons to the environment during the delivery of petroleum, oil, and lubricant products.																
Scope	Maintenance Area Drum Storage Area Main Fuel Station																
Roles	Maintenance																
Instruction	<table border="1"><thead><tr><th>Step</th><th>Action</th></tr></thead><tbody><tr><td>1</td><td>All drivers must be TDG certified.</td></tr><tr><td>2</td><td>Drivers must have spill response training and be familiar with the TSI Spill Response Procedure.</td></tr><tr><td>3</td><td>Delivery vehicles must park in designated areas. It is important that fuel delivery trucks park directly on the fuel pad. This area provides immediate containment and processing capabilities in the event of a spill.</td></tr><tr><td>4</td><td>Drivers must follow posted instructions:<ul style="list-style-type: none">• No smoking or ignition source• Operator always in attendance during fuel delivery• Know location of nearest spill kit• Report all spills immediately</td></tr><tr><td>5</td><td>The parking brake must be applied during delivery.</td></tr><tr><td>6</td><td>Do not fill tanks to capacity. Leave manufacturer-recommended amount of air space.</td></tr><tr><td>7</td><td>Ensure spills are cleaned up immediately and absorbents are disposed properly.</td></tr></tbody></table>	Step	Action	1	All drivers must be TDG certified.	2	Drivers must have spill response training and be familiar with the TSI Spill Response Procedure.	3	Delivery vehicles must park in designated areas. It is important that fuel delivery trucks park directly on the fuel pad. This area provides immediate containment and processing capabilities in the event of a spill.	4	Drivers must follow posted instructions: <ul style="list-style-type: none">• No smoking or ignition source• Operator always in attendance during fuel delivery• Know location of nearest spill kit• Report all spills immediately	5	The parking brake must be applied during delivery.	6	Do not fill tanks to capacity. Leave manufacturer-recommended amount of air space.	7	Ensure spills are cleaned up immediately and absorbents are disposed properly.
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6	Do not fill tanks to capacity. Leave manufacturer-recommended amount of air space.																
7	Ensure spills are cleaned up immediately and absorbents are disposed properly.																
Supporting References	TSI Detailed Fuelling Procedures Transportation of Dangerous Goods Regulations																
Related Documents	N/A																
Records	Receiving bills																

EOP-16-01 – Contractor Orientation

Owner: Safety, Security and Environmental Services Department
Effective Date: November 1, 2009

Purpose

TSI will ensure that contractors conduct their work in a safe and environmentally responsible manner.

Scope

All contractor activities at terminals and Head Office

Roles

Safety, Security and Environmental Services Department
Maintenance and Engineering Department

Instruction

Step	Action
1	TSI will create a “contractor orientation” for all persons conducting work at any of the locations (Deltaport, Vanterm and Head Office)
2	TSI will communicate to all contractors that a “contractor orientation” is required before work may commence at the workplace
3	TSI will administer the “contractor orientation” to all contractors and provide a complete written copy of said orientation
4	TSI will require a written acknowledgement that contractors have, further to completion of the orientation” read and understand the content of said orientation, and will undertake to follow and adhere to all policies and procedures of TSI at all time
5	TSI will maintain records of all contractor orientations for a period of 5 years.

Supporting References

[Labour Code of Canada, Canadian Occupational Safety and Health Regulations, Marine Occupational Safety and Health Regulations](#)

Related Documents

TSI Contractor Orientation Package

Records

Contractor Orientation Sign-off

EOP-17-01 – Emergency Response

Owner: Safety, Security and Environmental Services Department
 Effective Date: November 1, 2009

Purpose To ensure safe effective respond to situations that may cause environmental damage
Scope TSI All , contractors, Vessels
Roles TSI All

Instruction

1 General Note

Step	Action
1.1	These are the key initial environmental procedures extracted from the Emergency Response Plan

2 Spill Management

2.1	Report the spill to supervisor, Co-ordinate spill team and evacuate non-spill team person(s)
2.2	Assess area. Consider other potential risks near the spill, eliminate all ignition, heat or power sources, Remove portable items without coming in contact with spill and determine Hot Zone Area with roughly a 10 foot buffer
2.3	Identify spill. Do not approach unidentified spill. . Examine labels, markings, color of container, signs. Determine what product is. Use MSDS identify
2.4	Respond. Spill team suit up with chemical resistant clothing, gloves, goggles, etc. and if needed, cover all drains, doorways and areas where spill can escape. Contain spill from spreading using granular or socks and absorb spilled material working from outside inward-circular motion is recommended
2.5	Clean-up/disposal Use spark-proof equipment to clean up (shovels, brooms, dustpans, etc.) and pick up absorbed material, place in disposal bag or container. All pads, granular, socks, non-reusable gloves, clothing, etc. should be placed in disposal container
2.7	Reporting Report all spills to TSI Maintenance and SSE Department Management

3 If you see a fire

3.1	Activate the fire alarm, alert others, and move people away from the area of the fire. Close doors behind you. Follow the Emergency Response Plan
3.2	Call 911. Report the location of the fire. Know muster stations locations.

Supporting References

[Environmental Management Act - Spill Reporting Regulation](#)

Related Documents

Emergency Response Plan

Records

Emergency Incident Form

EOP-18-01 – Office Recycling

Owner: Safety, Security and Environmental Services Department

Effective Date: November 1, 2009

Purpose	To ensure the proper management of wastes at TSI
Scope	All administration offices
Roles	Safety, Security and Environmental Services Department, All office staff

Instruction

Step	Action
1.1	Several non-hazardous wastes are generated at the different TSI locations. Waste is listed along with the appropriate disposal procedures.
1.2	Corrugated cardboard should be placed in designated bins for removal by the waste disposal contractor. Cardboard placed in these bins must be corrugated (i.e., no stiff paper), and may not contain food residue
1.3	Office paper should be placed in designated paper recycling bins. Acceptable types of paper are listed on the Urban Impact bins.
1.4	Toner cartridges from copiers and printers should be stored in a designated area. They will be picked up by DocuSystems.
1.5	E-waste is placed in a designated storage areas Contact ISD for removal.
1.6	Batteries should be placed in a secure, dry location. Batteries will be picked up by Newlife. TSI will retain copies of documentation
1.7	Beverage containers are disposed of in designated bins in each office.
1.8	Refrigeration or air conditioning equipment must be serviced by authorized technicians only , following appropriate codes of practice.

Supporting References

Environmental Management Act - Hazardous Waste Regulation, Environmental Management Act - Recycling Regulation, Federal Halocarbon Regulations 2003
Code of Practice for the Reduction of Chlorofluorocarbon Emissions from Refrigeration and Air Conditioning Systems (Report EPS 1/RA/1)

Related Documents

Records

Battery disposal records
Air conditioner contractor certificates
Air conditioning inspection and service records

EOP-19-01 – Effluent Treatment System Management and Testing

Owner: TSI Maintenance and Engineering Department
 Effective Date: November 1, 2009

Purpose To ensure that discharge water quality from TSI effluent treatment system minimizes environmental impact and, where applicable, meets permit or regulatory requirements.

Scope TSI Deltaport effluent treatment plant

Roles Safety, Security and Environmental Services Department
 Maintenance Manager (Deltaport)
 Yard Supervisor (Deltaport)
 Mechanics (Deltaport)

Instruction

	Step	Action
1 Mapping	1.1	TSI will maintain all current and update engineering drawings of the effluent treatment system on site.
	1.2	TSI will ensure engineering drawings are kept current.
2 Identification and Maintenance	2.1	The location of the outfall shall be posted.
	2.2	The system will be maintained by a qualified contractor.
	2.3	The outfall shall be inspected once every five years.
3 Effluent Quality Testing/Monitoring	3.1	The Maintenance Manager will contract effluent water quality monitoring for the presence of contaminants according to permit requirements. Parameters analyzed will include the following: <ul style="list-style-type: none"> • Biochemical Oxygen Demand (BOD) • Total Suspended Solids (TSS) • LT50 toxicity
	3.2	TSI will retain copies of lab results.
Supporting References		
Related Documents		BC Ministry of Environment Effluent Permit PE-7210
Records		Lab results from effluent testing

EOP-20-01 – Removing Problem Wildlife (DRAFT)

Owner: Safety, Security and Environmental Services Department
Effective Date: November 1, 2009

Purpose

To ensure that problem wildlife such as birds (building nests on the terminals) is dealt with effectively and responsibly.

Scope

All TSI facilities where problem wildlife can cause potential safety risks.

Roles

SSE Department, Maintenance Department, Operations Department

Instruction

1 Dealing with nests

Step	Action
1.1	High masts should be monitored periodically by TSI for signs of nests.
1.2	If a nest is discovered, the SSE Department will be notified.
1.3	SSE Department will advise Provincial Wildlife Branch and will coordinate any action with said branch
1.3	The SSE Department will coordinate appropriate measures with Maintenance.
1.4	At the soonest convenience, Maintenance should lower the ring on the high mast to a level that will discourage the birds from continuing to build the nest (under 50 feet).
1.5	The SSE Department will apply for a permit under the Wildlife Act of British Columbia to remove the nest.
1.6	Once the permit has been received, the high mast ring will be lowered to a height at which it can be reached with a Manlift.
1.7	The nest should be inspected for eggs. If eggs are present, the SSE Department should be notified immediately. The SSE Department will contact a wildlife biologist at the BC Ministry of Environment and take action according to the Ministry's instructions.
1.8	If no eggs are present, the nest may be disassembled, and the debris disposed of as wood waste.

Supporting References

[BC Ministry of Environment: Permit and Authorization Service Bureau: Application Forms: Wildlife Act: General Permit](#)

Related Documents

Records

Completed Wildlife Act permit applications and permit records

EOP-21-01 – How to Complete a Waste Manifest

Owner: Safety, Security and Environmental Services Department
 Effective Date: November 1, 2009

Purpose

To ensure that all hazardous waste transported from TSI complies with [Section 46](#) of the [BC Hazardous Waste Regulation](#).

Scope

All hazardous wastes generated by TSI as defined in the [BC Hazardous Waste Regulation](#)

Roles

Security, Safety and Environmental Services Department, Maintenance Manager or designate, Administrative Staff

Instruction

1 Maintenance Manager or Designate

Step	Action
1.1	Complete Part A of the Movement Document/Manifest for the waste shipment. If the carrier has completed Part A on TSI's behalf, ensure the information is accurate.
1.2	Print your name at the bottom of Part A under "Name of authorized person (print)".
1.3	Sign your name at the bottom of Part A under "Signature".
1.4	Enter your telephone number at the bottom of Part A under "Tel. No."
1.5	Remove Copy 1 (white) and Copy 2 (green).
1.6	Give Copies 3 to 6 to the carrier.
1.7	Send Copies 1 and 2 to the SSE Department via inter-office mail.
1.8	If you receive Copy 6 (brown) via postal mail, send it to the SSE Department via inter-office mail.

2 Administrative Staff

2.1 If you receive Copy 6 (brown) of a waste manifest via postal mail, send it to the SSE Department via inter-office mail.

3 SSE Department

3.1 Upon receiving Copies 1 (white) and 2 (green) from Maintenance, send Copy 1 to the Environmental Management Branch within three days.

3.2 File Copy 2 (green) and maintain on file for two years.

3.3 Upon receiving Copy 6 (brown), staple it to Copy 2 and retain on file for two years.

Supporting References

[BC Hazardous Waste Regulation](#)
[Hazardous Waste Legislation Guide Section 5: The Manifest System](#)

Related Documents

Records

Waste Manifests

Forms

DRAFT

EMPF-01-01 – Environmental Aspects

Owner: Safety, Security and Environmental Services Department
Effective Date: November 1, 2009

Definitions

Risk Ranking	$C \times E \times P = S$
C	Consequence
E	Exposure
P	Probability
S	Score

Impacts	
A	Air emissions
B	Soil or water contamination
C	Ecological impacts to fish or wildlife
D	Use of landfill
E	Destruction of indigenous ecosystems by invasive species
F	Noise pollution
G	Light pollution
H	Depletion of natural resources
I	Positive impact due to reduced use of landfill

1 Vanterm Aspects

1.1 Vanterm Internal Aspects

1.1.1 Site Drainage

Activity	Aspect	Impact	Risk Ranking				Risk	Reg	EMP Document	Objective	Target
			C	E	P	S					
Use and maintenance of oil water separators, strip drains and catch basins	Generation of waste	D	1	2	2	4	Low		EOP-01		
Use and maintenance of oil water separators, strip drains and catch basins	Spills from non-maintained separators	B C	2	2	2	8	Low		EOP-01, EOP-17		
Use of vehicle wash & steam cleaner	Generation of oily residue	B C	2	4	2	16	Moderate		EOP-02		
Use of detergents at vehicle wash pad & steam cleaner	Emulsification of oil in water	B C	2	4	2	16	Moderate		EOP-02		
Uncontrolled sewer discharges into Burrard Inlet	Oil and sediment release to ocean	B C									
Storm system outfall monitoring	Exceedances of permitted levels	B C	2	2	2	8	Low				

1.1.2 Non-Hazardous Waste Management

Storage of empty drums, pails and other containers	Possible spills from containers that are not completely empty or that are not contained/covered	B C	1	3	2	6	Low		EOP-03, EOP-17		
Disposal of empty drums, pails and other containers	Generation of waste	D	1	2	2	4	Low		EOP-03		
Use of recyclable materials	Recycling	I	1	4	2	8	Low		EOP-04, EOP-16		
Use of non-recyclable domestic solid waste	Generation of waste	D	1	4	2	8	Low		EOP-04		

1.1.3 Hazardous Waste Management

Activity	Aspect	Impact	Risk Ranking				Risk	Reg	EMP	Objective	Target
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			C	E	P	S			Document		
Storage and disposal of used absorbent materials	Generation of hazardous waste	B	2	3	2	12	Low		EOP-05		
Storage and disposal of aerosol cans	Generation of hazardous waste	A B	2	3	2	12	Low				
Storage and disposal of used batteries	Generation of hazardous waste	B	2	3	2	12	Low		EOP-06		
Storage and disposal of used oil filters	Generation of hazardous waste	B	2	3	2	12	Low		EOP-08		
Storage and disposal of waste antifreeze	Generation of hazardous waste	B	2	3	2	12	Low		EOP-09		
Storage and disposal of waste oil and petroleum products	Generation of hazardous waste	B	2	3	2	12	Low		EOP-10		
Storage and disposal of waste solvents	Generation of hazardous waste	A B	2	3	2	12	Low		EOP-11		
Storage and disposal of contaminated soil	Generation of hazardous waste	A B	2	2	2	8	Low		EOP-12		
Storage and disposal of international wood pallets	Introduction of non-native insects	E	3	3	2	18	Moderate				
Storage and disposal of waste paint	Generation of hazardous waste	A B	2	3	2	12	Low		EOP-10		
Storage and disposal of used sandblasting grit	Generation of hazardous waste	A B	2	3	2	12	Low				

1.1.4 Hazardous Materials Management

Aboveground diesel fuel storage	Spills or air emissions	A B C	3	3	2	18	Moderate		EOP-13, EOP-17		
Activity	Aspect	Impact	Risk Ranking				Risk	Reg	EMP Document	Objective	Target
			C	E	P	S					
Aboveground propane storage	Spills or air emissions	A B C	2	3	2	12	Low		EOP-13, EOP-17		

Petroleum, oil and lubricant delivery	Spills or air emissions	A B C	3	3	2	18	Moderate		EOP-15, EOP-17		
Storage and use of hazardous materials in shops and water treatment plant	Spills or air emissions	A B C	2	3	2	12	Low		EOP-10, EOP-17		

1.1.5 Maintenance of Vehicles and Equipment

Use of hazardous materials	Spills	A B C	3	3	2	18	Moderate		EOP-10, EOP-17		
Welding	Generation of air emissions	A	1	3	2	6	Low				
Painting	Spills or air emissions	A B C	1	3	2	6	Low				

1.1.6 Use of Vehicles and Equipment

Movement of vehicles and equipment	Generation of air emissions	A	2	4	3	24	Moderate				
Movement of vehicles and equipment	Noise generation	F	2	4	3	24	Moderate				
Lifting containers with hydraulic equipment systems	Spills and leaks	A B C	2	4	2	16	Moderate		EOP-17		
Parking (storage) of hydraulic equipment	Spills and leaks	A B C	2	4	2	16	Moderate		EOP-17		

1.1.7 Fueling Operations

Dispensing of fuel to bulk tanks	Spills, volatilization during dispensing	A B C	3	3	2	18	Moderate		EOP-14, EOP-17		
Dispensing of fuel to site vehicles using gas truck	Spills, volatilization during dispensing	A B C	3	4	2	24	Moderate		EOP-14, EOP-17		

1.1.8 Use and Maintenance of Buildings

Activity	Aspect	Impact	Risk Ranking				Risk	Reg	EMP Document	Objective	Target
			C	E	P	S					
Office work and minor building repairs	Electricity, water and natural gas use.	H	1	4	2	8	Low				
Use of ozone depleting substances in building refrigeration systems	Release of ozone depleting substances	A	1	4	2	8	Low		EOP-07, EOP-17		

1.1.9 Terminal Operations

Movement of containers and maintenance of grounds and equipment	Generation of noise and use of lights at night	F G	2	4	3	24	Moderate				
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1.1.10 Electrical Sub-station

Use and maintenance of sub-station	Spills of transformer oil	A B C	2	2	2	8	Low		EOP-17		
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1.2 Vanterm External Aspects

1.2.1 Chemical Management

Import Chemical Shipments by Truck	Spills or air emissions	A B C	2	1	2	4	Low		EOP-17		
Import Chemical Shipments by Rail	Spills or air emissions	A B C	2	1	2	4	Low		EOP-17		
Import Chemical Shipments by Ship	Spills or air emissions	A B C	2	1	2	4	Low		EOP-17		
Movement of Chemicals	Spills or air emissions	A B C	3	2	2	18	Moderate		EOP-17		
Storage of Chemicals at Terminal	Spills or air emissions	A B C	3	2	3	18	Moderate		EOP-17		
Export Chemical Shipments by Truck	Spills or air emissions	A B C	2	1	2	4	Low		EOP-17		
Export Chemical Shipments by Rail	Spills or air emissions	A B C	2	1	2	4	Low		EOP-17		
Export Chemical Shipments by Ship	Spills or air emissions	A B C	2	1	2	4	Low		EOP-17		

1.2.2 Maintenance of Container Refrigeration Systems

Use/recharging of ozone depleting substances	Releases to atmosphere	A	1	4	2	8	Low		EOP-07, EOP-16, EOP-17		
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2 Deltaport Aspects

2.1 Deltaport Internal Aspects

2.1.1 Site Drainage

Activity	Aspect	Impact	Risk Ranking				Risk	Reg	EMP Document	Objective	Target
			C	E	P	S					
Use and maintenance of oil water separators, strip drains and catch basins	Generation of waste	D	1	2	2	4	Low		EOP-01		
Use and maintenance of oil water separators, strip drains and catch basins	Spills from non-maintained separators	B C	2	2	2	8	Low		EOP-01, EOP-17		
Use of vehicle wash & steam cleaner	Generation of oily residue	B C	2	4	2	16	Moderate		EOP-02		
Use of detergents at vehicle wash pad & steam cleaner	Emulsification of oil in water	B C	2	4	2	16	Moderate		EOP-02		
Storm system outfall monitoring	Exceedances of permitted levels	B C	2	2	2	8	Low				

2.1.2 Non-hazardous Waste Management

Storage of empty drums, pails and other containers	Possible spills from containers that are not completely empty or that are not contained/covered	B C	1	3	2	6	Low		EOP-03, EOP-17		
Disposal of empty drums, pails and other containers	Generation of waste	D	1	2	2	4	Low		EOP-03		
Use of recyclable materials	Recycling	I	1	4	2	8	Low		EOP-04, EOP-16		
Use of non-recyclable domestic solid waste	Generation of waste	D	1	4	2	8	Low		EOP-04		

2.1.3 Hazardous Waste Management

Activity	Aspect	Impact	Risk Ranking				Risk	Reg	EMP Document	Objective	Target
			C	E	P	S					
Storage and disposal of used absorbent materials	Generation of hazardous waste	B	2	3	2	12	Low		EOP-05		
Storage and disposal of aerosol cans	Generation of hazardous waste	A B	2	3	2	12	Low				
Storage and disposal of used batteries	Generation of hazardous waste	B	2	3	2	12	Low		EOP-06		
Storage and disposal of used oil filters	Generation of hazardous waste	B	2	3	2	12	Low		EOP-08		
Storage and disposal of waste antifreeze	Generation of hazardous waste	B	2	3	2	12	Low		EOP-09		
Storage and disposal of waste oil and petroleum products	Generation of hazardous waste	B	2	3	2	12	Low		EOP-10		
Storage and disposal of waste solvents	Generation of hazardous waste	A B	2	3	2	12	Low		EOP-11		
Storage and disposal of contaminated soil	Generation of hazardous waste	A B	2	2	2	8	Low		EOP-12		
Storage and disposal of international wood pallets	Introduction of non-native insects	E	3	3	2	18	Moderate				
Storage and disposal of waste paint	Generation of hazardous waste	A B	2	3	2	12	Low		EOP-10		
Storage and disposal of used sandblasting grit	Generation of hazardous waste	A B	2	3	2	12	Low				

2.1.4 Hazardous Materials Management

Aboveground gasoline and diesel fuel storage	Spills or air emissions	A B C	3	3	2	18	Moderate		EOP-13, EOP-17		
Activity	Aspect	Impact	Risk Ranking				Risk	Reg	EMP Document	Objective	Target
			C	E	P	S					

Aboveground propane storage	Spills or air emissions	A B C	2	3	2	12	Low		EOP-13, EOP-17		
Petroleum, oil and lubricant delivery	Spills or air emissions	A B C	3	3	2	18	Moderate		EOP-15, EOP-17		
Storage and use of hazardous materials in shops and water treatment plant	Spills or air emissions	A B C	2	3	2	12	Low		EOP-10, EOP-17		

2.1.4 Domestic/Sanitary Sewer Use

Effluent treatment plant operation and outfall monitoring	Exceedances of permitted outfall levels	B C	2	3	2	12	Low		EOP-02		
Effluent treatment plant operation	Odour generation	A	2	3	2	8	Low		EOP-02		

2.1.5 Maintenance of Vehicles and Equipment

Use of hazardous materials	Spills	A B C	3	3	2	18	Moderate		EOP-10, EOP-17		
Welding	Generation of air emissions	A	1	3	2	6	Low				
Painting	Spills or air emissions	A B C	1	3	2	6	Low				

2.1.6 Use of Vehicles and Equipment

Movement of vehicles and equipment	Generation of air emissions	A	2	4	3	24	Moderate				
Movement of vehicles and equipment	Noise generation	F	2	4	3	24	Moderate				
Lifting containers with hydraulic equipment systems	Spills and leaks	A B C	2	4	2	16	Moderate		EOP-17		
Parking (storage) of hydraulic equipment	Spills and leaks	A B C	2	4	2	16	Moderate		EOP-17		

2.1.7 Fueling Operations

Dispensing of fuel to bulk tanks	Spills, volatilization during dispensing	A B C	3	3	2	18	Moderate		EOP-14, EOP-17		
Activity	Aspect	Impact	Risk Ranking				Risk	Reg	EMP Document	Objective	Target
			C	E	P	S					
Dispensing of fuel to site vehicles	Spills, volatilization during	A B C	3	4	2	24	Moderate		EOP-14,		

using gas truck	dispensing									EOP-17		
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2.1.8 Use and Maintenance of Buildings

Office work and minor building repairs	Electricity, water and natural gas use.	H	1	4	2	8	Low				
Use of ozone depleting substances in building refrigeration systems	Release of ozone depleting substances	A	1	4	2	8	Low		EOP-07, EOP-17		

2.1.9 Terminal Operations

Movement of containers and maintenance of grounds and equipment	Generation of noise and use of lights at night	F G	2	4	3	24	Moderate				
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2.1.10 Electrical Sub-station

Use and maintenance of sub-station	Spills of transformer oil	A B C	2	2	2	8	Low		EOP-17		
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2.2 Deltaport External Aspects

1.2.1 Chemical Management

Import Chemical Shipments by Truck	Spills or air emissions	A B C	2	1	2	4	Low		EOP-17		
Import Chemical Shipments by Rail	Spills or air emissions	A B C	2	1	2	4	Low		EOP-17		
Import Chemical Shipments by Ship	Spills or air emissions	A B C	2	1	2	4	Low		EOP-17		
Movement of Chemicals	Spills or air emissions	A B C	3	2	2	18	Moderate		EOP-17		
Storage of Chemicals at Terminal	Spills or air emissions	A B C	3	2	3	18	Moderate		EOP-17		
Export Chemical Shipments by Truck	Spills or air emissions	A B C	2	1	2	4	Low		EOP-17		
Export Chemical Shipments by Rail	Spills or air emissions	A B C	2	1	2	4	Low		EOP-17		
Export Chemical Shipments by Ship	Spills or air emissions	A B C	2	1	2	4	Low		EOP-17		

2.2.2 Maintenance of Container Refrigeration Systems

Activity	Aspect	Impact	Risk Ranking				Risk	Reg	EMP Document	Objective	Target
			C	E	P	S					
Use/recharging of ozone depleting substances	Releases to atmosphere	A	1	4	2	8	Low		EOP-07, EOP-16, EOP-17		

2.2.3 Grounds Maintenance

Use of pesticides/herbicides	Application of pesticides	A B C	2	2	2	8	Low				
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2.2.4 Building Maintenance

Preparation for painting	Removal of old paint	A B C	1	2	2	4	Low				
Use of paint	Spills or air emissions	A B C	2	2	2	8	Low	EOP-03, EOP-16, EOP-17			

2.2.5 Fueling

Fueling diesel gen-sets on site	Spills, volatilization during dispensing	A B C	2	3	2	12	Low	EOP-15, EOP-17, EOP-18			
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2.2.6 Construction Projects

New Construction	Use of raw materials	H	2	2	2	8	Low				
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2.2.7 Vessels at Berth

Use of diesel engines	Releases to atmosphere	A	2	4	2	16	Moderate				
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2.2.8 Container Management

Diesel engine use on trucks and trains	Releases to atmosphere	A	2	4	2	16	Moderate				
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EMPF-02-01 – Risk Ranking Model and Matrix

Owner: Safety, Security and Environmental Services Department
Effective Date: November 1, 2009

Definitions

- Normal Operations Includes all TSI operations that are not classified as Abnormal Operations or Emergency Operations.
- Abnormal Operations Includes shut-down and start-up of equipment for maintenance purposes.
- Emergency Operations This includes any incident that does or could involve emergency services (i.e. spills, fires, etc).
- Environmental Aspect An element of TSI activities, products or services that can interact with the environment.

Determining the Significance Ranking of an Environmental Aspect

The significance of the environmental aspects will be determined using the following risk assessment model. The model considers:

- an event's potential consequences (severity) of impact
- the exposure (frequency) of that event occurring during normal, abnormal and emergency operating conditions
- the probability (likelihood) that the hazard will lead to an accident or incident

The ranking is completed by the Safety, Security and Environmental Services Department and responsible manager/supervisor with input from knowledgeable employees.

Each aspect identified shall be rated against each operating condition with the highest rated condition being the risk ranking for that aspect. Note that all the conditions may not always apply - i.e. some aspects may never create abnormal or emergency conditions, and some aspects may only come into play if there is an emergency.

The risk ranking shall be calculated using the following equation:

$$\boxed{\text{Risk Ranking}} = \boxed{\begin{array}{c} \text{Consequence} \\ \text{of impact} \end{array}} \times \boxed{\begin{array}{c} \text{Exposure} \\ \text{to hazard} \end{array}} \times \boxed{\begin{array}{c} \text{Probability} \\ \text{of occurrence} \end{array}}$$

Table 1: Consequence of Impact

Factor	Consequence	Definition
1	Negligible	Damage is insignificant and localized (i.e. no damage to adjacent property); not greater than \$1,000.
2	Moderate	Damage is significant, but localized and reversible (i.e. minimal impact with effects lasting less than 3 years); between \$1,000 and \$10,000.
3	Critical	Damage is serious, but limited and reversible with some minor damage to adjacent property or environment (i.e. impact with effects lasting more than 3 years); between \$10,000 and \$100,000.
4	Catastrophic	Major or extensive environmental impact and/or irreversible damage with severe damage to adjacent property; greater than \$100,000.

Table 2: Exposure of Occurrence

Factor	Exposure	Definition
1	Rare	Possible, but very unlikely; not greater than one occurrence per 3 years or longer.
2	Remote	One occurrence every year.
3	Occasional	One occurrence every week.
4	Frequent	One or more occurrences per day

Table 3: Probability of occurrence

Factor	Probability	Definition
1	Practically impossible	Has never happened in spite of exposure over many years, a “one-in-a-million” possibility.
2	Remotely possible	Has occurred in the industry, but is considered to be very rare or an unusual sequence or coincidence.
3	Possible	It would not be unusual for this to occur; has an even 50/50 chance.
4	Likely	Is expected to occur.

An overall risk ranking for each identified aspect is recorded under the consequence, exposure and probability risk ranking columns on the Environmental Aspects Spreadsheet.

Table 4: Risk Ranking Matrix

Risk Ranking Score	Aspect Significance
1-16	Low
16-32	Moderate
32-64	High

All environmental aspects assigned a ranking of thirty-two (32) or more will be considered high significance. A ranking of between 32 and 16 will be considered moderate significance. Scores less than 16 will be considered low significance.

Existing Environmental Operating Procedures (EOPs) that relate to the high and moderate significant environmental aspects will be reviewed and/or new procedures should be developed as appropriate.

All significant environmental aspects will also be considered in the establishment of objectives and targets.

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EMPF-03-01 – Environmental Action Plans

Owner: Safety, Security and Environmental Services Department
Effective Date: November 1, 2009

Title:

Objective:

Target:

Adopted at management meeting held on

Plan (Stages)

Action	Action by	Start Date	Completion Date	Status	Date Completed

Legend for status column

Active: A

Complete: C

Delayed: D

EMPF-04-01 – Register of Environmental Legislation

Owner: Safety, Security and Environmental Services Department
 Effective Date: November 1, 2009

Requirement	Jurisdiction	Regulation/Bylaw No.	Applicable Aspect/Hazard
Canada Marine Act and Regulations	Federal		
Canada Water Act	Federal	(R.S.C. 1985, c. C-11) a. R.S.C. 1985, c. 16	Water Quality Management: quality controls (Section 9)
Canadian Environmental Protection Act, 1999	Federal	(S.C. 1999, c.33) a. S.C. 2001, c. 26	Air Quality Management: approvals/ registration (Section 171), reporting/recordkeeping (Section 169). Hazardous Materials Management: spill and emergency response (Section 95). Materials Import/Export: Approvals/ registration (Sections 142, 150, 153, 154, 162.3). Water Quality Management: approvals/ registration (Section 181); reporting/ record keeping (Section 179).
Controlled Products Regulations	Federal	(SOR/88-66) a. SOR/2001-254	Hazardous Materials Management: hazard control (Sections 19, 21, 25, 28, Part 1)
Fisheries Act	Federal	(R.S.C. 1985, c. F-14) a. S.C. 2000, c. 7	Land & Vegetation Management: wildlife management (Section 32.1). Water Quality Management: quality controls – streams/rivers (Sections 36.3, 38.4)
Ozone Depleting Substances Regulations	Federal	(SOR/99-7) a. SOR/2001-2	Air Quality Management: ozone depleting substances (Sections 7, 9)
Transportation of Dangerous Goods Act, 1992	Federal	(S.C. 1992, c. 34) a. 1999, c. 31	Hazardous Materials Management: spill and emergency response (Section 18); transportation of dangerous goods (Section 5, 6, 7.1, 8)
National Fire Code of Canada	Federal		Hazardous Materials Management: approvals/registration (Sections 4.12.1.1.3, 4.12.3.1); reporting/ record keeping (Section 1.1.1.2); training/ certification (Section 3.2.7.15); spill and emergency response (Sections 3.1.2.6.1, 3.3.5.2, 4.1.6.1, 4.1.6.2, 4.1.6.3.1, 5.7.3.3); hazard control (Sections 2.3.3.1 (1), 2.4.1.1, 3.1.2.4.1, 3.1.4.1, 3.2.7.13, 4.1.6.3.4, 4.4.11.7, 5.2.3.2, 5.3.1.2.1); storage – hazardous materials (Sections 3.2.7.10, 3.2.8.1, 3.2.8.2.1,

Requirement	Jurisdiction	Regulation/Bylaw No.	Applicable Aspect/Hazard
			3.3.2.11, 3.3.2.3.2, 3.3.2.6.1, 4.2.9.2). Storage Facilities: approvals/registration (Section 4.3.12.4); monitoring/ inspection (Sections 3.1.2.5, 3.2.2.2.1, 3.2.7.14, 3.2.7.16, 4.3.15.1.1, 4.3.15.3, 4.3.16.3, 4.5.4.1); reporting/record keeping (Sections 4.3.16.1.1, 4.3.16.1.2, 4.3.16.1.3, 4.3.16.1.4, 4.4.11.2.1); aboveground tanks (Section 4.5.2.3); underground tanks (Sections 4.3.8.1.1, 4.3.8.1.2, 4.3.8.1.6, 4.3.8.1.7, 4.3.8.2, 4.3.8.6, 4.3.9.1.1, 4.3.10.1, 4.3.10.3.1, 4.3.11.1.1, 4.3.11.2, 4.3.11.3.1-4, 4.3.12.10, 4.10.2.1.2, 4.10.3.1);
Environmental Management Act	Provincia l	S.B.C. 2003, c. 53 As amended by: S.B.C. 2003, c. 47; 2004, c. 18, c. 30, c. 31, c. 35, c. 67; 2006, c. 15	
BC Hazardous Waste Regulation	Provincia l	B.C. Reg. 63/88 As amended by: B.C. Reg. 10/89; 106/89; 132/92; 52/95; 109/2002; 214/2004; 319/2004; 464/2004	
BC Ozone Depleting Substances and Other Halocarbons Regulation	Provincia l	B.C. Reg. 387/99 As amended by: B.C. Reg. 109/2002; 268/2004; 321/2004	
BC Recycling Regulation	Provincia l	B.C. Reg. 449/2004 As amended by: B.C. Reg. 23/2006; 65/2006	
Environmental Code of Practice for the Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems	Code	a. March 1996	Air Quality Management: monitoring/ inspection (Sections 2.3.1, 2.3.2, 2.3.3, 2.5.2); reporting/record keeping (Sections 2.11, 2.7.4); emission control (Section 4.3.1); refrigerants (Sections 2.1.3, 2.3, 2.4, 2.5.4, 2.7, 2.8, 2.10); halons (Sections 2.13, 6.4)
Environmental	Code	1993	Storage Facilities: underground tanks (Sections 2.2,

Requirement	Jurisdiction	Regulation/Bylaw No.	Applicable Aspect/Hazard
Code of Practice for Underground Storage Tank Systems Containing Petroleum Products and Allied Petroleum Products			2.5.1, 3.3.2, 4.3.1, 4.3.2, 4.5, 4.5.2-3, 4.6.1, 4.6.2, 4.8.7.2, 4.9.1, 4.9.2.1., 4.9.2.2, 4.9.4, 4.9.5, 4.10.1, 4.13, 5.2.1, 5.3, 5.4, 5.6.1, 5.7, 6.3.1, 6.3.5, 6.4.1, 6.4.3, 6.5.1, 6.5.2, 6.7, 6.8, 6.9, 6.10, 7.3, 7.3.4, 7.4.2, 7.4.5, 7.5.2). Water Quality Management: quality controls – water wells (Sections 4.12.1, 4.12.11)
Propane Storage and Handling Code	Code	CSA B149.2-00	Hazardous Materials Management: hazard control (3.5.2, 3.10.1, 4.2.5, 4.3.3, 5.4.4, 5.9.1); storage – hazardous materials (Sections 5.5.4, 5.5.8)
A Field Guide to Fuel Handling, Transportation and Storage	Code		Storage Facilities: fuel dispensing stations (Sections 1.1, 1.3, 1.4, 1.5, 1.6, 2.5, 3.4, Ap. 6.3, 6.1.10, 6.4)
Sewer Use Bylaw	GVRD	Bylaw No. 299	Discharge limits for oil, suspended solids, pH and metals into sewer system. (Schedules A, B, and C)
Sewer and Watercourse Bylaw	City of Vancouver	Bylaw No. 8093	Regulates the disposal of wastewater and storm water and the use of watercourses with the City of Vancouver (Sections 2 to 6)
Solid Waste Bylaw	City of Vancouver	Bylaw No. 8417	Regulates the collection, disposal, transfer and recycling of solid waste (Part IV to VII)
Motor Vehicle Noise and Emissions Abatement Bylaw	City of Vancouver	Bylaw No. 9344	Restrictions on vehicle noise (Sections 2.1 to 2.4) and idling (Sections 2.7 and 2.8)
Noise Control Bylaw	City of Vancouver	Bylaw No. 6555	Limits on noise levels from operations (Sections 4, 5 and 6)
Zoning Bylaw	The Corporation of Delta	Bylaw No. 5740	Regulations on waste management, storage tank areas (Part IV, Sections 800 and 844)
Storm Sewers Regulation and Connection Charge	The Corporation of Delta	Bylaw No. 5786	Permits to connect to storm sewer, discharge must be unpolluted drainage water
Sanitary Sewer Use Regulation and Connection	The Corporation of	Bylaw No. 5783	Regulate use of sanitary sewers – pre-treatment of industrial wastewater.

Requirement	Jurisdiction	Regulation/Bylaw No.	Applicable Aspect/Hazard
	Delta		
Waterways Protection	The Corporation of Delta	Bylaw No. 1615	Regulations against fouling, obstructing or impeding any waterway
Fire Regulation	The Corporation of Delta	Bylaw No. 5855	Prevention and suppression of fires
Noise Control	The Corporation of Delta	Bylaw No. 1906	Limits on noise levels from operations (Sections 5 to 12)

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EMPF-05-01 – Public Inquiries and Concerns

Owner: GCT Canada, Media Relations Department
Effective Date: November 1, 2009

Date Received (dd-mmm-yyyy)	Communication Initiated by: (external source)	Received by: (TSI employee)

Details of inquiry or concern:

Action:

Taken by:

Follow-up details:

Verified by:

EMPF-06-01 – Management of Change Form

Owner: Safety, Security and Environmental Services Department

Effective Date: November 1, 2009

Title		Number
Initiator	Date Started	Permanent <input type="checkbox"/> Temporary <input type="checkbox"/> Duration _____

Description (attach any supporting documents)	
Risks	Assessment
Safety <input type="checkbox"/>	Control Measures
Environment <input type="checkbox"/>	
Quality <input type="checkbox"/>	
Reliability <input type="checkbox"/>	

Implementation Requirements - Documentation					
	Require?	Complete		Require?	Complete
Drawing	<input type="checkbox"/>	_____	Lock Out Endorse Sheet	<input type="checkbox"/>	_____
Specification	<input type="checkbox"/>	_____	Job Safety Breakdown	<input type="checkbox"/>	_____
Policy or Procedure	<input type="checkbox"/>	_____	Update Manual:	<input type="checkbox"/>	_____
MSDS	<input type="checkbox"/>	_____			
Chemical Approval Form	<input type="checkbox"/>	_____			

Implementation Requirements – Communication							
	Inform	Train	Complete		Inform	Train	Complete
Terminal Mgr	<input type="checkbox"/>	<input type="checkbox"/>	_____	Maint/Eng Mgr	<input type="checkbox"/>	<input type="checkbox"/>	_____
Operation Mgr	<input type="checkbox"/>	<input type="checkbox"/>	_____	Maint Superintendents	<input type="checkbox"/>	<input type="checkbox"/>	_____
Ops Superintendents	<input type="checkbox"/>	<input type="checkbox"/>	_____	Eng Staff	<input type="checkbox"/>	<input type="checkbox"/>	_____
Pier Foremen	<input type="checkbox"/>	<input type="checkbox"/>	_____	Maint Foremen	<input type="checkbox"/>	<input type="checkbox"/>	_____
Ops Foremen	<input type="checkbox"/>	<input type="checkbox"/>	_____	H.D. Mechanics	<input type="checkbox"/>	<input type="checkbox"/>	_____
Rail Planners	<input type="checkbox"/>	<input type="checkbox"/>	_____	Electricians	<input type="checkbox"/>	<input type="checkbox"/>	_____
Ship Planners	<input type="checkbox"/>	<input type="checkbox"/>	_____	Welders	<input type="checkbox"/>	<input type="checkbox"/>	_____
Yard Planners	<input type="checkbox"/>	<input type="checkbox"/>	_____	Other Maint _____	<input type="checkbox"/>	<input type="checkbox"/>	_____
Checkers	<input type="checkbox"/>	<input type="checkbox"/>	_____	Other Maint _____	<input type="checkbox"/>	<input type="checkbox"/>	_____
RMG/RTG Operators	<input type="checkbox"/>	<input type="checkbox"/>	_____	Dispatch	<input type="checkbox"/>	<input type="checkbox"/>	_____
Dock Gantry Operators	<input type="checkbox"/>	<input type="checkbox"/>	_____	Gate House	<input type="checkbox"/>	<input type="checkbox"/>	_____
Mobile Eqpt Operators	<input type="checkbox"/>	<input type="checkbox"/>	_____	Signalmen	<input type="checkbox"/>	<input type="checkbox"/>	_____
SSE Manager	<input type="checkbox"/>	<input type="checkbox"/>	_____	ISD	<input type="checkbox"/>	<input type="checkbox"/>	_____
SSE Officer	<input type="checkbox"/>	<input type="checkbox"/>	_____	Human Resources	<input type="checkbox"/>	<input type="checkbox"/>	_____
Operations Staff	<input type="checkbox"/>	<input type="checkbox"/>	_____	Other Staff _____	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other Ops _____	<input type="checkbox"/>	<input type="checkbox"/>	_____				
Administration Staff	<input type="checkbox"/>	<input type="checkbox"/>	_____				

Approvals					
	Require?	Signature		Require?	Signature
Terminal Manager	<input type="checkbox"/>	_____	Maintenance/Eng Mgr	<input type="checkbox"/>	_____
Operations Manager	<input type="checkbox"/>	_____	Maint Superintendent	<input type="checkbox"/>	_____
Ops Superintendents	<input type="checkbox"/>	_____	Maint Foremen	<input type="checkbox"/>	_____
Ops Foremen	<input type="checkbox"/>	_____	Engineering Staff	<input type="checkbox"/>	_____
SSE Manager	<input type="checkbox"/>	_____	Human Resources Mgr	<input type="checkbox"/>	_____

Complete		
Signature of Initiator	Date	Temp. Change – Date for Review

Type of Change		Documentation	Communication	Inform	Train	Approvals
Policy	Safety or Environment	Written Policy	All affected employees	<input type="checkbox"/>	<input type="checkbox"/>	Terminal Manager SSE Mgr
	Business Practice	Written Policy	All affected employees	<input type="checkbox"/>	<input type="checkbox"/>	Ops Managers Maint/Eng Manager
	Human Resources	Written Policy	All affected employees	<input type="checkbox"/>	<input type="checkbox"/>	HR Manager
Operating Procedure incl. JSB		Written Procedure	Ops Superintendents Ops Foremen SSE Manager Maint/Eng Manager Engineering Staff			Operations Manager OR SSE Manager
Maintenance Procedure incl. JSB		Written Procedure	Maint Foremen Tradesmen SSE Mgr Operations Mgr			Maint/Eng Manager OR SSE Manager
Equipment		Specification Drawing Operating Procedure JSB Training Package	Operations Tradesmen Maintenance Supervisors Engineering Staff Operations Superintendents Maintenance Superintendents Foremen – Maint OR Ops			Operations Manager Maint/Eng Manager SSE Manager
Materials		Specification	Tradesmen Maint Supervisors			Maint/Eng Manager Steam Superintendent (where applicable)
Operations Chemical (may also involve change to procedures and equipment)		Chemical Approval Form MSDS	Operations Ops Supervisors Tradesmen Other Staff _____			Operations Manager OR SSE Manager
Maintenance Chemical (may also involve change to procedures and equipment)		Chemical Approval Form MSDS	Tradesmen Maint Supervisors Operations Other Staff			Maint/Eng Manager SSE Manager
Training Requirements or Content		Training Package	Trainer			Operations Manager
	Operations	Training Package	HR			
	Maintenance	Training Package	Trainer HR			Maint/Eng Mgr
	Safety, Security & Environment	Training Package	Trainer HR			SSE Manager

EMPF-07-01 – Chemical Approval Form

Owner: Safety, Security and Environmental Services Department

Effective Date: November 1, 2009

Name of Product	Initiator	Date
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Product Information	WHMIS controlled substance? Y <input type="checkbox"/> N <input type="checkbox"/>	If yes, provide WHMIS classification:
	Regulated under TDG Act & Regs.? Y <input type="checkbox"/> N <input type="checkbox"/>	If yes, provide TDG name & classification:
	Included in Domestic Substances List? Y <input type="checkbox"/> N <input type="checkbox"/>	If no, explain status under CEPA:
	Contains NPRI substance at >= 1% by weight? Y <input type="checkbox"/> N <input type="checkbox"/>	If yes, specify:
	Controlled product (e.g. pesticide or biocide)? Y <input type="checkbox"/> N <input type="checkbox"/>	If yes, specify controls:

Intended Use (Replacement or New Application):	Permanent <input type="checkbox"/>
	Temporary <input type="checkbox"/>

Equipment & Process Description

Safety Hazard (describe):	Safe Handling Procedure:
	Personnel Protective Equipment:

Environmental Hazard (describe):	Spill Response Procedure:
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Quality Risk (describe):	Control Measures:
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Delivery & Storage: Bulk <input type="checkbox"/>	Delivery Volume and Frequency:	Type:
Containers <input type="checkbox"/>	Returnable or Non-returnable?	
Inventory Amount & Location:		

Disposal of Containers, Wastes or Residues:

EMPF-09-01 – EOP Revision and Distribution Form

Owner: Safety, Security and Environmental Services Department
Effective Date: November 1, 2009

Number	Topic	Revision Date	Distribution
EOP-01	OIL / WATER SEPARATORS & CATCH BASINS	November 1, 2009	
EOP-02	EQUIPMENT WASH PAD, STEAM CLEANER, AND DETERGENT USE	November 1, 2009	
EOP-03	EMPTY DRUMS, PAILS AND OTHER CONTAINERS	November 1, 2009	
EOP-04	SOLID NON-HAZARDOUS WASTE	November 1, 2009	
EOP-05	USED ABSORBENT MATERIALS	November 1, 2009	
EOP-06	BATTERIES	November 1, 2009	
EOP-07	OZONE DEPLETING SUBSTANCES	November 1, 2009	
EOP-08	USED OIL FILTERS	November 1, 2009	
EOP-09	WASTE ANTIFREEZE	November 1, 2009	
EOP-10	WASTE OIL AND PETROLEUM PRODUCTS	November 1, 2009	
EOP-11	WASTE SOLVENTS	November 1, 2009	
EOP-12	CONTAMINATED SOIL MANAGEMENT	November 1, 2009	
EOP-13	ABOVE GROUND TANK MANAGEMENT	November 1, 2009	
EOP-14	FUEL MANAGEMENT AND DISPENSING	November 1, 2009	
EOP-15	PETROLEUM, OIL AND LUBRICANT DELIVERY	November 1, 2009	
EOP-16	CONTRACTOR ORIENTATION	November 1, 2009	
EOP-17	EMERGENCY RESPONSE	November 1, 2009	

EMPF-11-01 – EMPP Revision and Distribution Form

Owner: Safety, Security and Environmental Services Department
Effective Date: November 1, 2009

		Revision Date	Distribution
EMPP-01	Environmental Policy Maintenance	November 1,2009	
EMPP-02	Review of the Significance of Environmental Aspects	November 1,2009	
EMPP-03	Risk Assessment	November 1,2009	
EMPP-04	Strategic Planning, Objectives, Targets and Environmental Management Programs	November 1,2009	
EMPP-05	Regulatory Tracking	November 1,2009	
EMPP-06	Maintenance of Emergency Response Plans	November 1,2009	
EMPP-07	Public Inquiries and Complaints	November 1,2009	
EMPP-08	Internal and External Communication of Environmental Performance	November 1,2009	
EMPP-09	Review and Approval of New and Modified Activities	November 1,2009	
EMPP-10	Approval of New Materials and Supplier Notification of TSI Requirements	November 1,2009	
EMPP-11	Contractor Approval and Management	November 1,2009	
EMPP-12	New Employee Indoctrination	November 1,2009	
EMPP-13	Training Needs Assessment and Planning	November 1,2009	
EMPP-14	Document Control	November 1,2009	
EMPP-15	Document Management - Records Management	November 1,2009	
EMPP-16	Structure and Responsibility for the EMP	November 1,2009	
EMPP-17	Monitoring and Measurement of Environmental Performance	November 1,2009	
EMPP-18	Environmental Management System Audits	November 1,2009	
EMPP-19	Non-Conformance, Corrective and Preventive Action	November 1,2009	
EMPP-20	Environmental Plan Effectiveness Review	November 1,2009	

EMPF-12-01 – Records Register

Owner: Safety, Security and Environmental Services Department
Effective Date: November 1, 2009

Index	Document	Initiated by	Retained by	Retention time (years)
Environmental Documentation				
A				
B				
C				
D				
E				
F				
G				
H				
I				
J				
K				
L				
M				
N				
O				
P				
Q				
R				
S				
T				
U				
V				
W				
X				

EMPF-14-01 – Fuel Tank List

Owner: Safety, Security and Environmental Services Department
 Effective Date: November 1, 2009

Terminal	Location	Contents	Volume (litres)	Volume (US gallons)
Vanterm	Fueling Station	Diesel	42,450	11,214
		Propane	9,092	2,402
		TidyTank gas	500	132
	East side of Maintenance Building	SE waste oil	750	198
		E waste oil	1,500	396
		Engine oil	1,600	423
		Transmission fluid	1,000	264
		Hydraulic oil	1,600	423
		Gear oil (2 drums)	340	90
		Diesel Shop	Antifreeze	1,050
	Gas Shop	Antifreeze (2 tanks)	400	212
	Fuel trucks	Diesel (2 trucks)	20,000	5284
Deltaport	Fueling Station	Diesel	44,000	11,624
		Propane	18,927	5000
		Gasoline	800	211
	West side of Maintenance Building	Waste oil	1,600	423
		Engine oil	1,600	423
		Transmission fluid	800	211
		Hydraulic oil	800	211
		Gear oil	1,200	317
		Antifreeze	600	159

EMPx-xx-01 – Environmental Policy Template

Owner: Safety, Security and Environmental Services Department
Effective Date: November 1, 2009

Purpose

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Scope

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Roles

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Instruction

Step	Action
1	
2	
3	
4	

Supporting References

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Related Documents

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Records

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