



July 26, 2024

Manitoba Environmental and Climate Change
Environmental Approvals Branch
Box 35, 14 Fultz Boulevard
Winnipeg, Manitoba
R3Y 0L6

Attention: Ms. Agnes Wittmann
Director

***Environment Act Proposal Form and Final Report for Mauser Packaging Solutions –
Winnipeg Location***

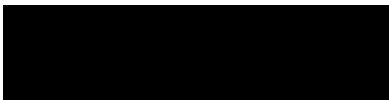
Dear Ms. Wittmann,

Please find attached the final Environment Act Proposal (EAP) for the facility located at 328 Dawson Rd N. in Winnipeg, Manitoba. The EAP has been prepared in accordance with the Classes of Development Regulation 164/88 of the Environment Act, as a Class 2 Waste Treatment and Storage Development.

If you require any further information, please contact the undersigned at ymorgan@dillon.ca or at (204) 453-2301 ext. 6015.

Sincerely,

DILLON CONSULTING LIMITED



Yvette Morgan, EIT
Project Manager

YPM:kml

cc: *Mr. Terry Hildebrand, Division Manager, Mauser Packaging Solutions*
Mr. Shawn Kerr, Regional Vice President, Mauser Packaging Solutions

Our file: 24-8262

300-100 Innovation
Drive
Winnipeg, Manitoba
Canada
R3T 6G2
Telephone
204.453.2301
Fax
204.452.4412

Environment Act Proposal Form



| | |
|--|--|
| Name of the development: Mauser Packaging Solutions Winnipeg Plant | |
| Type of development per Classes of Development Regulation (Manitoba Regulation 164/88): Class 2 Waste Treatment and Storage | |
| Legal name of the applicant: Mauser Packaging Solutions | |
| Mailing address of the applicant: 328 Dawson Road North, Winnipeg, Manitoba | |
| Contact Person: Terry Hildebrand | |
| City: Winnipeg | Province: Manitoba Postal Code: R2J 0S7 |
| Phone Number: (204) 233-3333 Fax: (204) 237-1551 email: Terry.Hildebrand@mauserpackaging.com | |
| Location of the development: 328 Dawson Road North, Winnipeg, Manitoba | |
| Contact Person: Terry Hildebrand | |
| Street Address: 328 Dawson Road North | |
| Legal Description: | |
| City/Town: Winnipeg | Province: Manitoba Postal Code: R2J 0S7 |
| Phone Number: (204) 233-3333 Fax: (204) 237-1551 email: Terry.Hildebrand@mauserpackaging.com | |
| Name of proponent contact person for purposes of the environmental assessment: Yvette Morgan | |
| Phone: (204) 453-2301 | Mailing address: 300-100 Innovation Drive Winnipeg, MB, R3T 6G2 |
| Fax: (204) 452-4412 | |
| Email address: ymorgan@dillon.ca | |
| Webpage address: www.dillon.ca | |
| Date: July 29 2024 | Signature of proponent, or corporate principal of corporate proponent: |
| | Printed name: Terry Hildebrand |

PRINT

RESET



MAUSER PACKAGING SOLUTIONS WINNIPEG PLANT

Environment Act Proposal

Final Report



August 2024 –24-8262



August 26, 2024

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Environmental Approvals Branch
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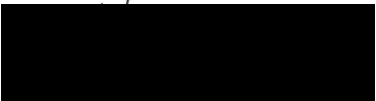
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Executive Summary

Dillon Consulting Limited (Dillon) has prepared an Environment Act Proposal (EAP) for Mauser Packaging Solutions (Mauser) as part of their requirements to Manitoba Environment and Climate Change (MEC) under the Environment Act. As directed by MEC, Mauser requires an Environment Act License for operation of their wastewater treatment system, in accordance with the *Environment Act* and Classes of Development Regulation. This EAP submission to MEC is for the Environmental Approvals Branch's review and approval of the wastewater treatment system.

Mauser is a global supplier of rigid packaging solutions and services, who have been operating the Winnipeg facility at 328 Dawson Road North in Winnipeg, Manitoba for more than 50 years under various ownerships. The Winnipeg facility supplies the Winnipeg area with new packaging as well as reconditioning services for drums and totes.

The facility operates from Monday to Friday from 7:30am-4:00pm, supplying and reconditioning 45,000 containers a year. Wastewater generated at the plant from wash runoff is treated through oil and water separation, settlement, caustic, and acid addition for pH correction, before being filtered and sent to the City of Winnipeg sewer system. The designed daily capacity of the wastewater system is estimated to be 7,700 L/day. There have been no compliance issues from effluent sampling as noted by City of Winnipeg's sewer by-law sampling since installation of the new treatment plant in 2016.

This EAP provides an introduction and background of the plant, a description of the development, site operation and environment, as well as details regarding potential environmental and human health effects, mitigations measures set in place, and follow-up plans directly related to the wastewater treatment system and associated waste management.

There are no adverse environmental effects identified nor are there any adverse effects anticipated as a result of the continued operation of the facility's wastewater system as described within this EAP.

1.0 Introduction and Background

1.1 Introduction

Dillon Consulting Limited (Dillon) has prepared an Environment Act Proposal (EAP) for Mauser Packaging Solutions (Mauser) as part of their requirements to Manitoba Environment and Climate Change (MEC) under the *Environment Act*. As directed in a letter from MEC dated March 28th, 2024, Mauser requires an Environment Act License for continued operation of their wastewater treatment plant (WWTP) in accordance with the *Environment Act* and the Classes of Development Regulation. This EAP submission to MEC is for the Environmental Approvals Branch's review and approval of the current facility. The report is compiled based on the scope provided in MEC's Environment Act Proposal Report Guidelines Information Bulletin.

1.2 Background

Mauser is a global supplier of rigid packaging solutions and services, who have a facility operating at 328 Dawson Road North in Winnipeg, Manitoba. The Winnipeg facility supplies the Winnipeg area with new packaging through reconditioning services for drums and totes. Packaging reconditioning has been happening on this site for more than 50 years under various ownerships. In 2016, Mauser purchased the former Great Western Containers Winnipeg location.

The facility produces 45,000 container units each year, mainly through package reconditioning for various companies. Packaging reconditioning allows containers to be reused and recycled rather than being thrown out. This is done through a multi step cleaning process for both drums and Intermediate Bulk Container (IBC) totes. Once the containers are cleaned, they are repackaged and returned to various companies for reuse.

1.3 Description of Previous Documentation

As part of the data collection, Dillon consulted with Terry Hildebrand, Division Manager of the Winnipeg plant, and Shawn Kerr, Regional Vice President of the Canadian Operations, to provide information and insight into the information required for the EAP. The Environment Act Proposal Report Guidelines from MEC were reviewed and followed.

2.0 Description of Development

2.1 Location

The Winnipeg Mauser facility is a 2,137m² single floor facility located at 328 Dawson Road North. A site plan sketch with the wastewater treatment plant areas highlighted is found in **Appendix A**.

2.2 Owner of Land

Mauser is currently leasing the land and building from Shift Real Estate Investments.

2.3 Existing Land Use

The site is in an urban manufacturing area surrounded by industrial developments. North-east of the facility is Gerdau Metals Recycling and Western Industrial Services. International Fur Dressers and Dyers is located east of the facility and Lavish Transport Ltd. is located south. West of the facility on the other side of the railway tracks is Breathe Easy Eco Solutions and Bituminex Asphalt Plant.

2.4 Land Use and Zoning Designation

The facility is in the M3 General Manufacturing zoning area as defined by the City of Winnipeg Zoning By-Law 200/2006, in Mission Industrial. The by-law states that “the Manufacturing Heavy (M3) district is intended to provide for light or heavy industrial development, including heavy manufacturing, storage, major freight terminals, waste and salvage, resource extraction, processing, transportation, major utilities, and other related uses, particularly those that require very large buildings, frequent heavy truck traffic for supplies or shipments, or that may require substantial mitigation to avoid sound, noise, and odour impacts to neighbouring properties”.

2.5 Site Operation

The Mauser Winnipeg facility operates from Monday to Friday from 7:30am-4:00pm. The facility produces and reconditions containers for reuse. The plant produces approximately 45,000 container units each year.

2.5.1 Facility Use

The main operation of the facility is to recondition (wash and clean) and recycle used drum barrels and IBC totes, so they can be reused for various applications. The barrel and IBC tote reconditioning are completed in separate areas in the building. Barrels and totes are delivered by various companies and stored at the facility before being washed. Mauser services a variety of customer areas such as agriculture, petrochemical, paint, and food industries. Depending on the product that remains in the container, there are different procedures to clean and recondition the containers for reuse. Containers must pass the Mauser Container Acceptance Policy before they are accepted to be cleaned. Containers

that are nonconforming are rejected and refused and continue to be the responsibility of the generator who sends it. Containers are returned to the generator at the generator's expense.

All containers must also pass inspection following acceptance and be in good condition before they are reused as well. Containers that do not pass inspection are scrapped and any plastic containers are recycled.

Accepted barrels are first sent to the pre-flush washing area where they are rinsed internally with hot water. The pre-flush runoff is drained into a closed loop collection system where it is stored and collected by Miller Environmental every few weeks; it does not get sent to the wastewater treatment system. Following the pre-flush, the barrels are washed down externally in the barrel production area of the facility. Barrels are placed on a cleaning platform and rinsed down using hot water. This water is collected by the drainage system and directed to the wastewater treatment plant (WWTP). Barrels are then taken to a third station where leak testing is performed to ensure there are no small cracks. If the barrel passes the leak test, it is either painted or wiped down, depending on condition, before being stored until they are collected by the purchasing customer. Barrels are inspected at each stage of cleaning and if they do not pass the requirements, they are scrapped. The scrapped barrel is then sent to either Industrial Metals Winnipeg (for steel) or Industrial Container Services in North Carolina (for plastic).

In the tote production area, the totes are first washed on the exterior before being sent to the vacuum station to remove any remaining liquids inside the tote (if required). The liquids that are pumped from the tote are stored separately and collected for disposal by Miller Environmental. Totes are then further washed on the interior and dried before a leak test and inspection to ensure they can be reused. The runoff from the exterior and interior wash are collected by the drainage system and directed to the WWTP. Totes are inspected at each stage of cleaning and if they do not pass the requirements, they are scrapped. Scrapped plastic totes are sent to Industrial Container Services in North Carolina.

Appendix B shows the cleaning process for the facility as a flow chart.

2.5.2 Wastewater Treatment System

In 2015, the City of Winnipeg (City) required the site to upgrade the old wastewater treatment system to remove the requirement for an overstrength wastewater discharge permit. In early 2016, the new system came into operation and was tested and approved by the City. Previously, a Pollution Prevention Plan was required by the City, however it was no longer required once the new WWTP was installed. Correspondence from the City of Winnipeg is attached as **Appendix D**. Runoff from container washing, as discussed above, is collected, and treated by the WWTP. There is one operator (the facility power engineer) for the wastewater treatment system, who is onsite everyday and was trained by the previous operator, who was trained by the wastewater treatment system supplier, ERE Inc.

The runoff wash water from both the barrel and tote production areas are first directed to a sump pit where it is transferred by a diaphragm pump through a filter that removes any large debris, and then into the oil/water separator where free oil is removed. This oil is stored with waste sludge from downstream treatment processes and collected by Miller Environmental for offsite disposal.

Separated water is then transferred to buffer tanks for pH adjustment and coagulation. Primary pH adjustment is completed via caustic and acid addition to optimize coagulation. After primary adjustment, a separate tank is used for coagulation and secondary pH adjustment. Once coagulated, water flows into clarifiers for solids settling. The clarifiers and tanks are shown in **Figure 2-1**.



Figure 2-1: WWTP Clarifier and Separation Tanks

The settled sludge from the clarifiers is pumped into a settling tank for thickening, where it is further separated by a filter press. Wastewater from the filter press and overflow from the settling tank are returned to the coagulation process tank. Sludge solids are stored with the free oil and removed by Miller Environmental. **Figure 2-2** shows the filter press that is used for the sludge.



Figure 2-2: Filter Press

As the final stage, water from clarification is sent through two filter types: a 20-micron cartridge filter and three polishing media vessels that operate in series. The media vessels remove trace organic contaminants such as hydrocarbons and phenols. Following the multi-stage filtration, the wastewater is released into the City sewers in accordance with the discharge limits outlined in the City of Winnipeg Sewer By-Law 92/2010. **Figure 2-3** shows the polishing media filters used. A process flow diagram of the system is located in **Appendix C**.



Figure 2-3: Polishing Media Filters

The chemicals used in the wastewater treatment are listed in **Table 2-1** below, along with monthly chemical usage and amount stored on site for each chemical.

Table 2-1: WWTP Product List

| Product Name | Purpose | Monthly Usage | Inventory Stored |
|-----------------------------|-------------------|----------------------|-------------------------|
| Hydrochloric Acid 22 | WWTP pH treatment | 150L | 205-410L |
| Caustic Soda | WWTP pH treatment | 350L | 410L |
| ER-UF-69202350 UltraFloc-23 | WWTP Flocculant | 5 lbs | 50lbs |
| ERE-AMP | WWTP Flocculant | 5 lbs | 50lbs |
| Ferric Chloride | WWTP Coagulant | 200L | 205-410L |

Mauser estimates the system's daily capacity to be 7,700 liters, based on measured and recorded water usage. As this treatment system has a flow of below 10,000 L/day, receives wastewater from a single commercial premise, and the wastewater is discharged directly to the City sewer system, we understand this system would be designated as a private wastewater system.

3.0 Description of Environment

3.1 Location and Climate

The Winnipeg Mauser facility is located on Dawson Road North in Winnipeg, Manitoba. The site is located within the Winnipeg Ecodistrict of the Lake Manitoba Plain Ecoregion and Prairies Ecozone. The mean monthly air temperature in the area ranges from approximately 19.8°C in July to -18.3°C in January. The average annual precipitation is approximately 504 mm (Smith et al. 1998).

3.2 Topography

There are no significant topographical features on site. The site and surrounding properties are located on relative flat prairie land.

3.3 Vegetation

The native vegetation within the Winnipeg Ecodistrict consists of tall prairie grass, meadow prairie grass and meadow grass communities however all-natural vegetation has been removed due to previous development of the area (Smith et al. 1998). The small amount of vegetation on the site includes mostly grass and typical weed species.

3.4 Wildlife

Typical wildlife within the Lake Manitoba Plan Ecoregion includes white-tailed deer, coyotes, rabbits, ground squirrels and waterfowl (Smith et al. 1998). Terrestrial and avian species present within the site area would be limited to those found in urban settings. Any wildlife sensitive to human disturbance are unlikely to be present on site. No rare, threatened, or endangered species are present.

3.5 Surface Water

The site is located within the Red River watershed with the closest body of water being a drainage ditch adjacent to the property that leads to the Seine River. The Seine River is the closest major body of water to the site, located approximately 1.3 km west of the site.

4.0 Environmental and Human Health Effects

4.1 Air, Noise and Odour Impacts

The WWTP is fully located inside the building and there are no concerns regarding air quality, noise, or odour from the system.

4.2 Waste

Potential impacts on the environment from the WWTP are limited as operation occurs fully inside the facility. All solid waste and organic liquid residues generated from operation are disposed of as per the regulatory requirements. The initial liquids and wash water from the pre-flush of barrels and tote vacuum pumping are collected in a closed loop system for third-party disposal by Miller Environmental. All other wastewater from further washing and rinsing of the containers is collected by a gravity drainage system and treated in the WWTP where the treated wastewater flows into the City sewer system. Any controlled products are disposed of as per the manufacturer's safety data sheet disposal instructions and Mauser protocols.

Further information regarding waste material is detailed in the subsections below and is summarized in **Table 4-1**.

Table 4-1: Waste Summary for 2023

| Type of Waste | Volume ¹ | Sources | Collected By |
|-------------------------------------|---------------------|---|-------------------------------|
| Wastewater | 7,700 L/day | Exterior barrel wash, exterior and interior tote wash, washrooms, sinks | City of Winnipeg Sewer System |
| Wastewater Tote Vacuumed Liquids | 116 m ³ | Remaining liquids vacuum pumped out of the totes | Miller Environmental |
| Wastewater sludge and grease | 2180 kg | Sludge from filter press, oil/grease from oil and water separator | Miller Environmental |
| Tote scraping waste | 8.2 m ³ | Paint, glue, adhesives scraped from scrapped totes removed prior to recycling | Miller Environmental |

¹Volumes are based on 2023 or 2024 data.

²Mauser Dangerous Goods Generator #MBG01389

4.2.1 Organic Material

Organic material generated from the plant includes wastewater sludge and grease produced from the filter press and the oil/water separator, respectively. Both are collected by a third-party, Miller Environmental, as required. Typically, the wastewater sludge is collected monthly in bags. These materials are disposed of at the appropriate facilities in Winnipeg. **Figure 4-1** shows collected sludge in the disposal bag.



Figure 4-1: Wastewater Sludge Collection Bag

4.2.2 Wastewater

Wastewater generated at the plant is treated through oil separation followed by pH adjustment, settlement, and a multi-step filtration, as described in the previous sections. The treated wastewater is discharged into the City sewer system in accordance with the discharge limits set by the City of Winnipeg Sewer By-Law 106/2018. The facility treats and discharges approximately 7,700 L/day of wastewater. As of the WWTP upgrade in 2016, Mauser no longer requires a Pollution Prevention Plan for discharge of pollutants to the City's sewer system. **Appendix D** shows the sampling results taken in 2016 and 2023 indicating that Mauser meets the Sewer By-law limits.

4.3 Health and Safety

The potential impact to human health and safety during operation of the plant is minimal. Potential concerns involve working with and around hazardous materials including various chemical products or potential spills of hazardous materials. Mauser has a Health and Safety Plan that outlines prevention, preparedness, and response procedures for various hazards including spills (**Appendix E**) and has work breakdowns for each step of the cleaning process, with the safety procedures that must be followed. All employees receive health and safety training. A list of the chemicals used at the facility for wastewater treatment can be found in **Table 2-1**.

4.4 Wildlife, Fish, Habitat and Vegetation

Due to the location of the plant, any terrestrial and avian species present within the site area would be limited to those found in urban settings. It is unlikely that any wildlife sensitive to human disturbance would be present on site. The effect of the plant's operation on wildlife, fish, their respective habitats, and vegetation is negligible.

5.0 Mitigation Measures and Residual Effects

The following mitigation measures and management practices described below are set in place by Mauser to protect the environment and human health from operations related to the wastewater facility collection and treatment.

5.1 Containment, Storage and Handling

The plant's cleaning processes occur within the building in specific areas that collect the runoff. If any spills are to occur, it is handled as per Mauser's Health and Safety Plan (**Appendix E**). This guideline also outlines how to prevent and prepare for spills and handling hazardous material. Runoff that is generated through the cleaning process is captured and treated through the WWTP before being released into the City sewer system. These measures mitigate the risk of materials being released to the environment.

Chemicals used for wastewater treatment are stored and handled following Material Safety Data Sheet procedures and are kept in dry and well-ventilated storage locations. For all other products, Mauser follows the procedures outlined in their health and safety plan, under Section 21 – Chemical Management. Different procedures are followed depending on the product being handled. Employees receive training on the health and safety plan and the specific procedures for containment, storage, and handling of various products.

5.2 Monitoring, Sampling and Testing

ERE Inc., the company that provided and installed the treatment plant, has provided an Operation and Maintenance Manual for the WWTP. This physical manual is available on site and portions of the manual are available digitally as well.

Mauser performs daily checks of the WWTP to ensure proper function, as shown from the example checklist and work element sheet shown in **Appendix F**. The pH level of the treated wastewater prior to discharge to the sewer (post filtration) is checked daily and recorded. These daily checks have helped mitigate the release of variable pH levels as well as concentrations of substances that would not meet the City sewer by-law.

In addition, the City of Winnipeg samples the treated wastewater discharged into the sewers to determine compliance with the City of Winnipeg Sewer By-Law 92/2010. Sampling occurs on a periodical basis as determined necessary by the City. There have been no non-compliance incidents with the Sewer By-Law since the installation of the new WWTP in 2016. **Appendix D** contains the results of both sampling events.

5.3 Treatment and Final Disposal

All solid waste and organic liquid residues generated from WWTP operation are disposed of as per the regulatory requirements and Mauser container reconditioning policies. Controlled products are disposed of as per the manufacturer's safety data sheet disposal instructions. A summary of the collection and disposal of waste generated is detailed in **Section 4.2**.

5.4 Protection of Environmental and Human Health

In order to protect both the environment and their workers, Mauser has a general Health and Safety Plan and detailed Health and Safety Responsibilities for the managers, workers, supervisors, and all employees (**Appendix E**). This includes sections such as the emergency response plan, Workplace Hazardous Material Information System (WHMIS), and chemical management. Material Safety Data Sheets are available for all chemicals used.

All employees receive training for the various procedures completed on site. Training for different procedures highlights key safety and health issues that could occur, along with direction on mitigation. Mauser has a Container Acceptance Policy, which lists requirements for whether a container will be processed by the facility. Barrels and totes must also follow specific cleaning procedures (e.g., pre-flush procedures) to ensure certain products are safely removed prior to hot water cleaning. These policies ensure that the barrels and totes are being cleaned correctly with hot water before runoff is sent into the WWTP.

5.5 Follow-Up Monitoring

Mauser will continue to implement their health, safety, and container management policies to protect both the environment around the site and the health of their workers.

Currently the WWTP system is monitored daily, however, there are plans to automate the monitoring process and electronically record specific points of operation to improve efficiencies, such as pH readings, prior to the wastewater being sent to the City sewers. The City will continue to sample the system and monitor as required.

5.6 Residual Environmental Effects

From the information available, no negative residual environmental effects are anticipated through the continued operation of the facility's WWTP, based on the evaluation of the potential environmental effects and mitigation measures described above.

6.0

Conclusions

In conclusion, this EAP submission to MEC is for the Environmental Assessment Branch review and approval of the Mauser Winnipeg Facility. The wastewater treatment system at the facility requires an Environment Act License for continued operation in accordance with the Environment Act and the Classes of Development Regulation.

The facility's potential environmental and human health effects have mitigation measures in place to protect the environment and human health through existing policies and programs at Mauser. There are no adverse environmental effects identified nor are there any adverse effects anticipated as a result of the continued operation of the facility's WWTP as described within this EAP.

7.0

Limitations

This report was prepared by Dillon for the sole benefit of Mauser Packaging Solutions. The material in the report reflects Dillon's best judgement in light of the information available to Dillon at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Dillon accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

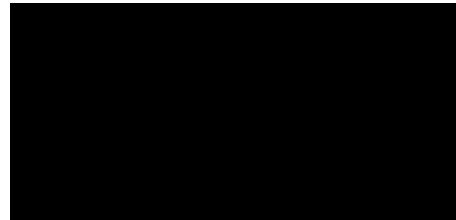
If you require clarification or follow-up, please contact the undersigned at (204) 453-2301 or via email at ymorgan@dillon.ca.

Sincerely,

DILLON CONSULTING LIMITED



Yvette Morgan, EIT
Project Manager

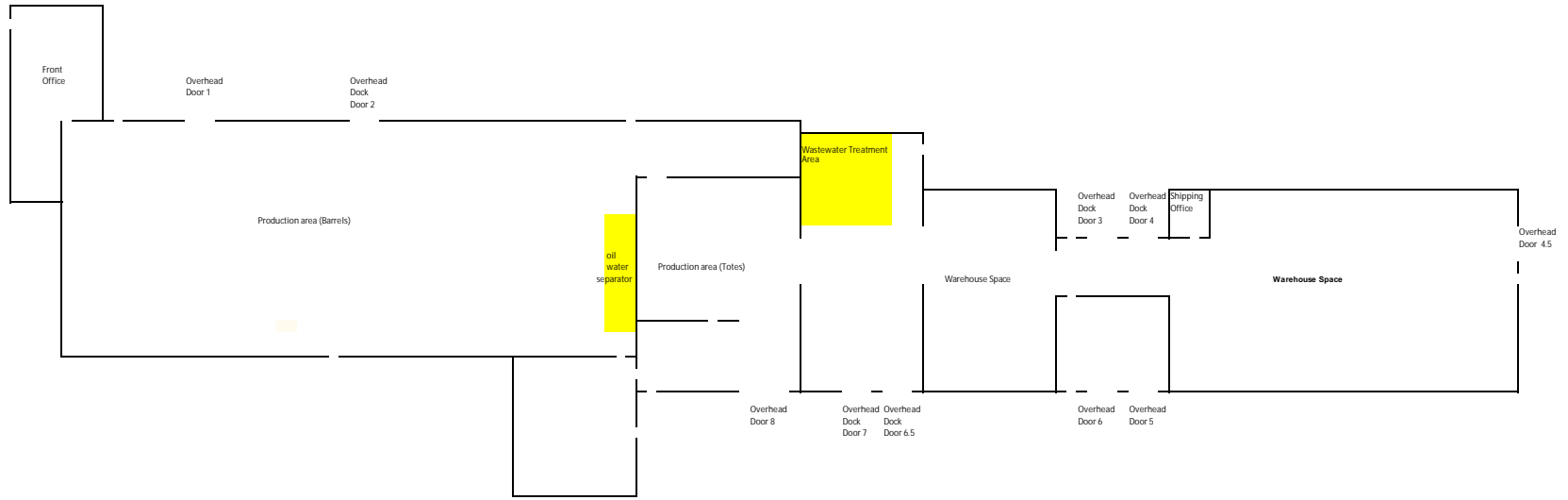


Dennis Heinrichs, M.Sc., P.Eng.
Partner Emeritus

Appendix A

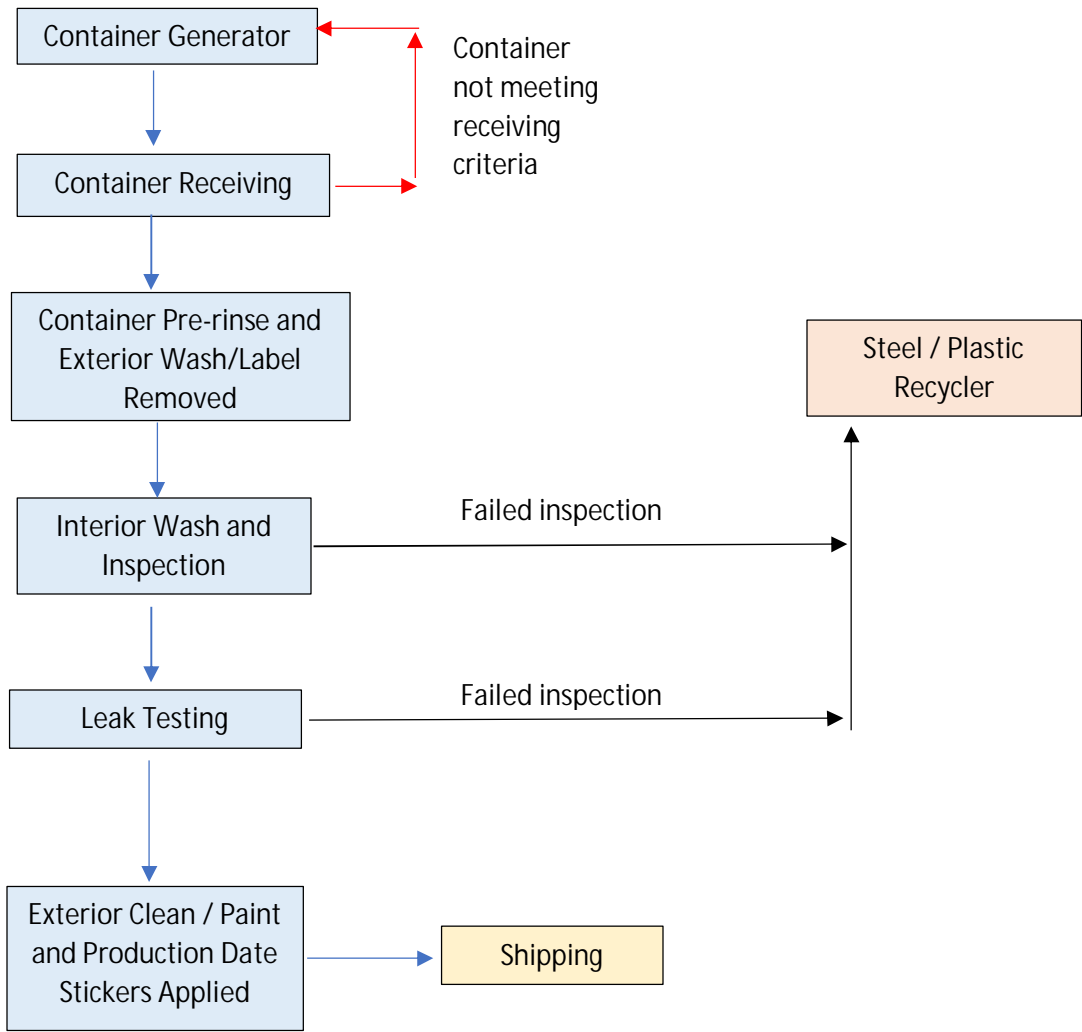
Site Plan

Dawson Road



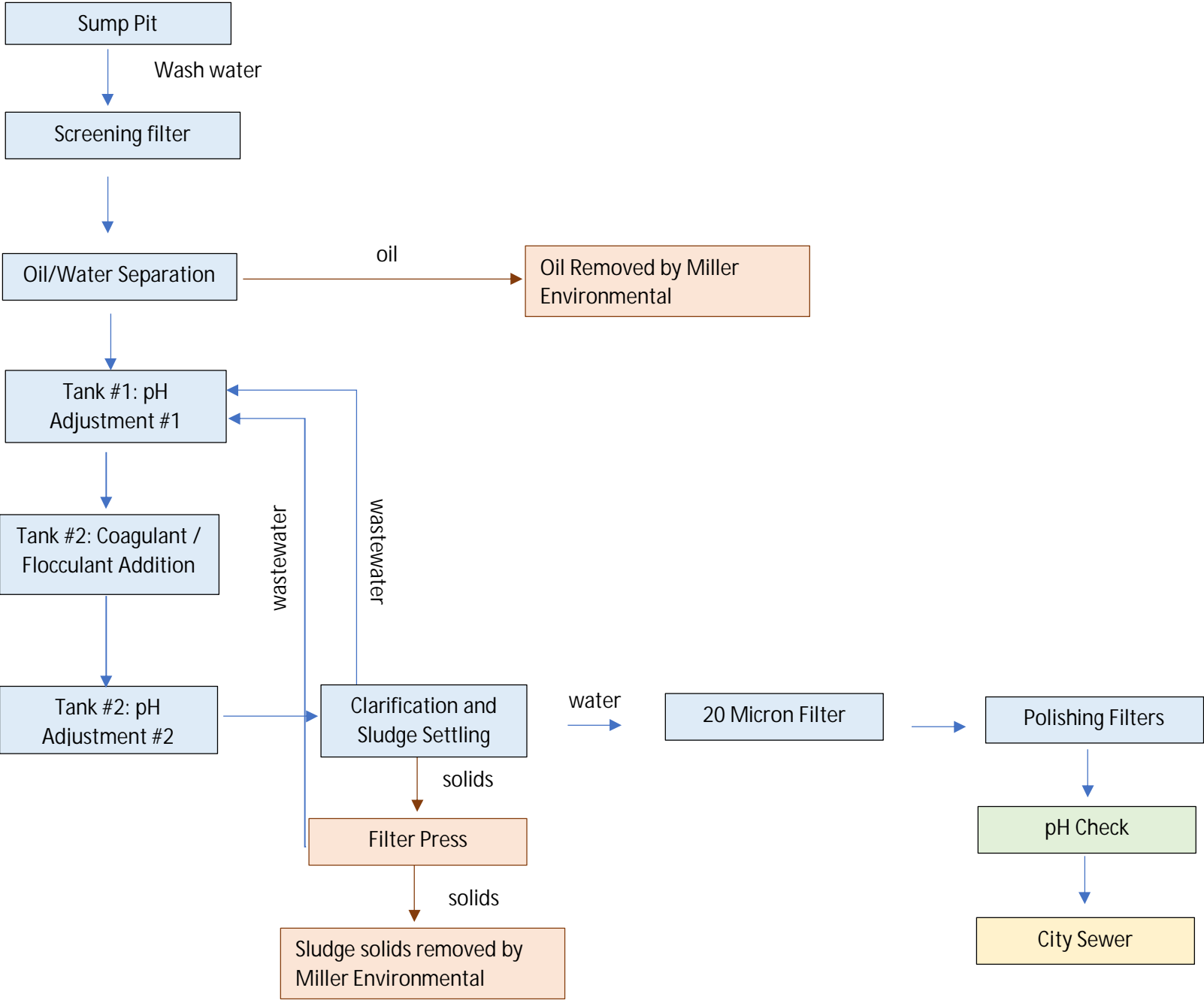
Appendix B

Cleaning Process Flow Chart



Appendix C

Process Flow Diagram



Appendix D

City of Winnipeg Wastewater Sampling Results



Water and Waste Department • Service des eaux et des déchets

September 22, 2016

TERRY HILDEBRAND
GREAT WESTERN CONTAINERS
328 DAWSON RD N
WINNIPEG MB R2J 0S7

Document ID: IWSB-PP-971
NAICS Code: 332439

**Sewer By-law No. 92/2010
Pollution Prevention Plan No Longer Required**

Dear Terry Hildebrand:

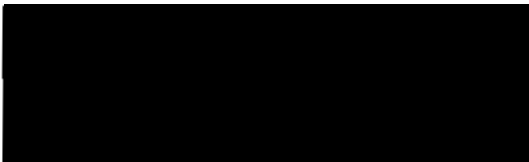
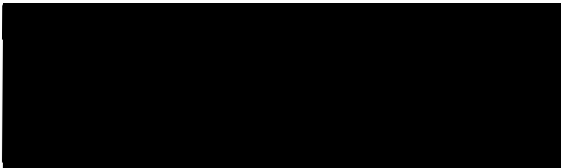
Based on the analytical results from our inspection at 328 Dawson Rd N on September 07, 2016, we no longer require Great Western Containers to prepare and submit Pollution Prevention Planning documents.

Analysis of the sample we collected shows that your wastewater is within the limits set out in the Schedules of the by-law. Please see the attached table for the results of our analysis.

We will continue to periodically monitor the wastewater discharges from 328 Dawson Rd N. If the discharges exceed any of the limits in Schedules A, B, C, and D, we will re-evaluate the requirement for Great Western Containers to participate in the Pollution Prevention Planning Program.

Information on Pollution Prevention Planning, including form templates, is available on our website at winnipeg.ca/waterandwaste/sewage/pollutionprevention

If you have any questions, please contact one of our Pollution Prevention Program Inspectors.



Regards,



Glen Hagen
Industrial Waste Services Branch Head
Environmental Standards Division

Wastewater Sampling Results

Company: Great Western Containers

Sample Name: GREA5

Sample Location: Discharge line of wastewater treatment system

Sample Type: Grab

Date Sampled: 07-Sep-16

| Parameter | Sewer By-Law Limit (mg/L) | Sample Result (mg/L) | Comments |
|---------------------------------------|---------------------------|----------------------|----------|
| Aldrin / dieldrin | 0.0002 | <0.0020** | |
| Aluminum (total) | 50 | 0.0124 | |
| Antimony (total) | 5 | <0.00020 | |
| Arsenic (total) | 1 | 0.00432 | |
| Benzene | 0.5 | <0.00050 | |
| Biochemical oxygen demand* | 300 | 76 | |
| Cadmium (total) | 0.7 | <0.000010 | |
| Chlordane (cis plus trans isomers) | 0.1 | <0.0020 | |
| Chromium (hexvalent) | 2 | <0.010 | |
| Chromium (total) | 4 | <0.0010 | |
| Cobalt (total) | 5 | 0.00907 | |
| Copper (total) | 2 | 0.00081 | |
| Cyanide (total) | 2 | <0.0020 | |
| 1,1,2,2 Tetrachloroethane | 1.4 | <0.00050 | |
| 1, 2 - dichlorobenzene | 0.05 | <0.00050 | |
| 1,4 - dichlorobenzene | 0.08 | <0.00050 | |
| 3,3 - dichlorobenzidine | 0.002 | <0.0020 | |
| Dichlorodiphenyltrichloroethane (DDT) | 0.0001 | <0.0020 | |
| Cis - 1, 2 - dichloroethylene | 4 | <0.00050 | |
| Ethyl benzene | 0.16 | <0.00050 | |
| Fluoride | 10 | <0.0010 | |
| Hexachlorobenzene | 0.0001 | <0.00020** | |
| Hexachlorocyclohexane (Lindane) | 0.1 | <0.0010 | |
| Lead (total) | 1 | <0.000090 | |
| Manganese (total) | 5 | 0.130 | |
| Mercury (total) | 0.01 | <0.000020 | |
| Methylene chloride | 2 | <0.0020 | |
| Mirex | 0.1 | <0.0010 | |
| Molybdenum (total) | 5 | 0.0106 | |
| Nickel (total) | 2 | 0.0175 | |
| Nitrogen (total)* | 60 | 3.7 | |
| Nonylphenols | 0.02 | <0.0010 | |
| Nonylphenol ethoxylates | 0.2 | <0.0020 | |
| Animal or vegetable oil | 100 | <5.0 | |

Wastewater Sampling Results

Company: Great Western Containers

Sample Name: GREA5

Sample Location: Discharge line of wastewater treatment system

Sample Type: Grab

Date Sampled: 07-Sep-16

| Parameter | Sewer By-Law Limit (mg/L) | Sample Result (mg/L) | Comments |
|---|---------------------------|----------------------|----------|
| Mineral or synthetic oil | 15 | <5.0 | |
| Pentachlorophenol (PCP) | 0.01 | <0.0025 | |
| Phenolics (total by 4AAP method) | 1 | 0.0126 | |
| pH | 5.5 to 11 | 7.30 | |
| Phosphorus (total)* | 10 | 0.501 | |
| Polychlorinated biphenyls (PCBs) | 0.001 | <0.00015 | |
| Polycyclic aromatic hydrocarbons (PAHs) | 0.005 | <0.0049 | |
| Selenium (total) | 1 | <0.0010 | |
| Silver (total) | 5 | <0.00010 | |
| Sulphate (total) | 1500 | 224 | |
| Sulphide | 1 | <0.020 | |
| Suspended Solids (total)* | 350 | <5.0 | |
| Tetrachloroethylene | 1 | <0.00050 | |
| Tin (total) | 5 | <0.00020 | |
| Titanium (total) | 5 | <0.00050 | |
| Toluene | 0.024 | 0.00241 | |
| Total Purgeable Hydrocarbons | 10 | <0.10 | |
| Total Semivolatile Hydrocarbons | 100 | <0.10 | |
| Trichloroethylene | 0.4 | <0.00050 | |
| Xylenes (total) | 1.4 | <0.0015 | |
| Zinc (total) | 2 | <0.0020 | |

Notes: * - Discharges exceeding these limits may be eligible for inclusion into the overstrength wastewater discharge program.

** - Detection limit greater than By-law limit due to matrix effects.



**Water and Waste
Eaux et déchets**

Terry Hildebrand
Mauser Packaging Solutions
328 Dawson Rd N
Winnipeg, MB R2J 0S7

September 22, 2023

Document ID: IWSB-PP-1456
NAICS Code: 332439

**Sewer By-law No. 106/2018
Pollution Prevention Plan Not Required**

Dear Terry Hildebrand,

Mauser Packaging Solutions at 328 Dawson Rd N is not required to submit a Pollution Prevention Plan at this time.

We will continue to periodically monitor the wastewater discharges from 328 Dawson Rd N. If any discharge contravenes Schedules A, B, C, or D, we will take enforcement action as set out in the By-law.

Information on Pollution Prevention Planning is available on our website at winnipeg.ca/waterandwaste/sewage/pollutionprevention.

If you have any questions, please contact us by phone at 204-986-6455 or by email at pollutionprevention@winnipeg.ca.

Regards,

Industrial Waste Services Branch
Environmental Standards Division



Sampling Results

Company: Mauser Packaging Solutions

Sample Location: final discharge from treatment system

Sample Type: Grab

Date Sampled: 12-Sep-23

| Parameter | Bylaw Limit (mg/L) | Result (mg/L) | Comments |
|---------------------------------------|--------------------|---------------|----------|
| Aldrin / dieldrin | 0.0002 | <0.00011 | |
| Aluminum (total) | 50 | 0.0311 | |
| Antimony (total) | 5 | 0.00018 | |
| Arsenic (total) | 1 | 0.00237 | |
| Benzene | 0.5 | <0.0005 | |
| Biochemical oxygen demand* | 300 | 3.8 | |
| Cadmium (total) | 0.7 | 0.0000753 | |
| Chlordane (cis plus trans isomers) | 0.1 | <0.000011 | |
| Chromium (hexavalent) | 2 | <0.0005 | |
| Chromium (total) | 4 | <0.0005 | |
| Cobalt (total) | 5 | 0.00149 | |
| Copper (total) | 2 | 0.00158 | |
| Cyanide (total) | 2 | <0.0050 | |
| 1,1,2,2 Tetrachloroethane | 1.4 | <0.0005 | |
| 1,2 - dichlorobenzene | 0.05 | <0.0005 | |
| 1,4 - dichlorobenzene | 0.08 | <0.0005 | |
| 3,3 - dichlorobenzidine | 0.002 | <0.0004 | |
| Dichlorodiphenyltrichloroethane (DDT) | 0.001 | <0.00001 | |
| Cis - 1,2 - dichloroethylene | 4 | <0.0005 | |
| Ethyl benzene | 0.16 | <0.0005 | |
| Fluoride | 10 | 0.308 | |
| Hexachlorobenzene | 0.0001 | <0.000008 | |
| Hexachlorocyclohexane (Lindane) | 0.1 | <0.000008 | |
| Lead (total) | 1 | 0.000159 | |
| Manganese (total) | 5 | 0.629 | |
| Mercury (total) | 0.01 | <0.000005 | |
| Methylene chloride | 2 | <0.001 | |
| Mirex | 0.1 | <0.000008 | |
| Molybdenum (total) | 5 | 0.00499 | |
| Nickel (total) | 2 | 0.0302 | |
| Nitrogen (total)* | 60 | 6.19 | |
| Nonylphenols | 0.02 | <0.001 | |
| Nonylphenol ethoxylates | 0.2 | <0.002 | |
| Animal or vegetable oil | 100 | 8.0 | |

Appendix E

Mauser Health and Safety Plan

Section 6

EMERGENCY PREPAREDNESS

Purpose

The purpose of the Emergency Response Plan (ERP) is to provide procedures and guidelines to be followed for serious accidents, emergencies and disasters involving the welfare of personnel or the operation of facilities and equipment. These procedures apply to fire, accidents, bomb threats, death, serious injury, tornado, utility outages, severe weather, or any occurrence that significantly impacts business.

Scope: The Company will enforce mandatory evacuation of their facility during emergencies as required. Management will ensure safe practices are in place to prevent loss to person, property and the environment during evacuations. Emergency Response Plans apply to all persons (employees, contractors, visitors) within the applicable facility. Never jeopardize your own safety or that of anyone else to perform any of the responsibilities outlined in this policy.

Emergencies

Pre-planning is essential to minimize confusion and delay in handling the emergency. Emergency response plans must be developed, communicated and practiced at all facilities to ensure the safety of all employees and visitors during emergencies.

The site specific Emergency Response Plan (ERP) must be posted throughout the facility in conspicuous places for all to read.

All employees must be trained on the ERP for their location, and must be familiar with what to do in the event of an emergency.

The manager will ensure:

- Potential emergencies are identified
- Procedures for dealing with the identified emergencies are developed
- Fire protection requirements are identified
- The workers who will supervise evacuation procedures in an emergency are identified
- Emergency procedures are available to workers
- Emergency procedures are tested on an annual basis
- All workers are instructed and trained in the emergency procedures
- All employees, contractors and visitors of the facility are familiar with the above-mentioned procedures and their responsibilities

Some examples of emergencies:

- Fire
- Inclement Weather
- Serious Incident
- Violence
- Power or other Utilities Failure
- Harassment
- Spills

Having an Emergency Plan Will:

- Help ensure the health and safety of workers, emergency responders and the public.
- Reduce the potential for destruction of property or further losses of product.
- Reduce the risk of environmental damage.
- Assist response personnel to determine and perform proper remedial actions quickly.
- Reduce recovery times and costs.
- Inspire confidence in employees, response personnel, and the public.

In the Event of an Emergency:

During Regular Hours:

- Notify your supervisor, manager or assigned designate who will assess the severity of the emergency and respond appropriately.

After Hours:

Notify Division Manager, Canada Safety Advisor or Head Office or Executive Office personnel. Use emergency evacuation map contact list for phone numbers.

Review of Emergency Plan

The Emergency Response Plan will be reviewed annually by management and the Safety Committee to accommodate any changes to the business or building. Review the evacuation map and contact list annually.

Evacuation maps shall be posted in all areas of the facility, for employee and visitor viewing.

In the Event of an Emergency

- Determine the nature of the emergency
- Signal for appropriate emergency response (i.e. pull fire alarm, shout for help, sound air horn or other alarm, page for first aider, call 911 etc).
- Evacuate or follow the direction of the Supervisor or Manager.
- Assemble at muster point or alternate point, as necessary.
- Receptionist or designated person will take visitor register, emergency contact list, and first aid kit if available, to muster point.
- Supervisors will do a head count at muster point/shelter of employees, contractors, visitors.
- Gas and electrical shut offs will be done as needed, by a designated person.

Responsibilities

Each location has personnel responsible for the evacuation of their respective floor areas.

On – Scene Coordinators – Division Manager and Plant Supervisor or Manager:

- Diagrams including evacuation routes, muster point/shelter areas and contact phone numbers are posted throughout the plant, plant offices and warehouse.
- Evacuate the building out the safest exit and assemble at the muster point, out of the way of emergency vehicles. Have a secondary muster point in the event the first one is unsafe or unavailable.

Emergency Drills

Each location will hold an emergency drill at least once annually.

A written record on the specifics of the evacuation, and items that need correction must be kept. This record must be available for safety auditors, Fire Department, or Occupational Health and Safety personnel when requested.



Drills should include scenarios for serious injury, multiple injuries, chemical spills, severe storm or tornado damage.

Fire Protection

Prevention

- All employees shall be constantly on the alert for, and report immediately any conditions that might contribute to a fire
- Oily rags, waste material, paint filters, paper and other combustible materials shall be stored in metal containers. These containers shall be emptied regularly.
- Use only approved solvents or other combustible liquids.
- Internal combustion engines must be located outside a hazardous location.

In Case of Fire:

- Put your safety and that of others first.
- Shout "Fire" to alert others in the immediate area.
- Pull the nearest fire alarm pull station.
- Shut down any equipment that may trap or injure firefighters.
- Shut down gas or steam valves if possible and if time allows.
- **Size up the fire.** If there is doubt as to whether it can be controlled with available personnel and equipment, evacuate the area immediately via the nearest safe exit and meet at the muster point area.
- Never use water on fixtures that contain live electrical circuits, such as an electrical breaker panel.

**IF YOU ARE NOT PLACING YOURSELF IN DANGER AND CAN MAKE A DIFFERENCE,
HELP TO CONTROL THE SITUATION.**

EVACUATE IMMEDIATELY ANY TIME THE SITUATION IS BEYOND YOUR CONTROL

When fighting a fire, position yourself between the fire and an exit.

Hold extinguisher upright and using the PASS method: PULL – AIM – SQUEEZE - SWEEP

Pull the Pin, breaking the plastic seal. (do not squeeze handle while pulling the pin, it may prevent you from removing the pin).

Aim – stand back from the fire (minimum distance stated on the name plate) and aim at the base of the fire.

Squeeze the handles together to discharge the extinguisher

Sweep from side to side. Move closer as the fire is extinguished but not so close as to scatter the burning material or liquid.

When the fire is out, back away while watching for possible re-ignition.

Evacuate and ventilate the area immediately. Fumes and smoke from a fire may be hazardous, and deadly.

The ABC's of Fires and Extinguisher Types

A – is for Ash – wood, paper, cloth, trash, and other ordinary combustible materials

B – is for Barrel – gasoline, grease, oil, paint, and other Flammable Liquids

C – is for Circuit – may be used on fires involving live electrical equipment, without danger to



the operator

D – Class for Combustible Metal or Lithium fires

K – Class for Grease and Oil fires in Commercial Restaurants

- ABC - This is the multipurpose dry chemical extinguisher. The ABC type is filled with monoammonium phosphate, a yellow powder that leaves a sticky residue that may be damaging to electrical appliances such as a computer
- Dry chemical extinguishers have an advantage over CO₂ extinguishers since they leave a non-flammable substance on the extinguished material, reducing the likelihood of re-ignition.
- Carbon Dioxide (CO₂) extinguishers are used for class B and C fires. CO₂ extinguishers contain carbon dioxide, a non-flammable gas, and are highly pressurized. The pressure is so great that it is not uncommon for bits of dry ice to shoot out the nozzle. They don't work very well on class A fires because they may not be able to displace enough oxygen to put the fire out, causing it to re-ignite.
- CO₂ extinguishers have an advantage over dry chemical extinguishers since they don't leave a harmful residue - a good choice for an electrical fire on a computer or other electronic device such as a stereo or TV.
- It is vital to know what type of extinguisher you are using. Using the wrong type of extinguisher for a fire can be life-threatening.

Inspection and Care of Fire Extinguishers

- Inspect fire extinguishers at least once a month (more often in severe environments). Use the Mauser Packaging Solutions fire extinguisher inspection checklist.
- Ensure that:
- The extinguisher is not blocked by equipment or other objects that could interfere with access in an emergency.
- The fire extinguisher is hung up or in a bracket – not just sitting on the floor. It should be about 1m to 1.5m from the floor.
- The pressure is at the recommended level. On extinguishers equipped with a gauge the needle should be in the green zone.
- The nozzle or other parts are not hindered in any way.
- The pin and tamper seal (if it has one) are intact.
- There are no dents, leaks, rust, chemical deposits and/or other signs of abuse/wear. Wipe off any corrosive chemicals, oil, gunk etc. that may have deposited on the extinguisher.
- If the extinguisher is damaged or needs recharging, replace it immediately!
- **IMPORTANT:** Recharge all extinguishers immediately after use regardless of how much they were used.

Note: Even if the fire extinguisher handle was only engaged only briefly, it could cause the extinguisher to depressurize – always have it checked and recharged if necessary, by a professional before putting it back into service.

When the Fire Alarm System sounds:

- Shut down any equipment you are using.
- Evacuate the building via the nearest safe exit.
- Meet in the muster point area and report to your supervisor for a head count.
- Do not leave the muster area, do not make or send any phone calls or messages.
- Wait for the all-clear sign to re-enter the building.
- The all-clear will be given by the fire department or On-Scene Coordinator

Evacuation Procedure

- Employees should familiarize themselves with evacuation routes from their work areas to the muster point.
- Exits routes, stairs and doorways are to be kept clear at all times
- Office staff will take the visitor sign in book to assist in roll call and contact information.
- If the situation warrants, a first aid kit should also be taken to the muster point.
- Proceed to the Muster Point
- Managers and Supervisors will account for their employees at the Muster Point.
- Account for visitors and report to supervisors.
- Do not leave the Muster Point area unless instructed by On Site Coordinator or emergency personnel
- Do not make phone calls or send emails during the evacuation.
- Refer all media enquiries to a member of the Executive Team.

Fire Suppression Equipment

- Shall be inspected and maintained as per legislation
- Site fire suppression equipment such as fire extinguishers and hoses will be added to the site preventive maintenance program to ensure compliance.
- Fire extinguishers will be checked by internal checklist and signed off monthly.
- Management will arrange for a qualified outside supplier to perform an annual inspection and maintenance of fire suppression and other emergency equipment such as alarm systems and emergency lighting.
- Inspections and maintenance will be in accordance with the National Fire Code and jurisdictional legislation.

Serious Incidents

A **serious incident** is when a person requires immediate medical attention resulting hospitalization due to an accident or illness.

- It is the responsibility of site's first aiders to take charge of the emergency by:
- Attending and applying first aid to affected employee.
- Notifying Emergency Services.
- Notifying site management.
- Securing the site and equipment (Lock out Tag out) at the location of the incident/illness.
- Directing pedestrians away from the secured area.
- Flagging and guiding in First Responders.
- Contact OH&S to report the incident.
- Completing first aid and incident report.

Spills

- Identify the spilled product and its exposure hazards.
- Check Safety Data Sheet (SDS) for information on exposure, first aid, and clean up procedures
- If the product is considered to be hazardous, evacuate the area and assemble at muster point, consider wind direction



- Equip cleanup personnel with proper protective clothing and equipment.
- Eliminate all sources of ignition, including static charges.
- Ventilate the area.
- Dike drains to prevent chemicals from entering the sewer.
- Use absorbent material around the spill.
- Dispose of absorbent materials in accordance with the Safety Data Sheet Sheet (SDS).

Important: If an employee's clothing and/or skin are contaminated with a flammable or combustible liquid or material, the employee must:

- Avoid any activity where a spark or open flame may be created or exist
- Remove the clothing
- Ensure the clothing is decontaminated before it is used again
- If a worker's skin is contaminated the worker must wash the skin at the earliest possible (Refer to Chemical Exposure Response procedure).

Violence

Mauser Packaging Solutions takes all reports of Violence or potential for Violence seriously and will investigate all complaints of Workplace Violence. It is the responsibilities of Management, Supervisors and Employees to report and address Violence in the workplace in accordance with the company's formal process of reporting and investigating. Management will work with the Safety Advisor and Human Resources Advisor to determine root cause, and resources to implement corrective actions.

RESPONSIBILITIES:

Employees will:

- Treat co-workers with respect.
- Participate in Company led training.
- Adhere to the Work practices designed to make the workplace safe.
- Report potential or existing violence to their immediate supervisor.

Supervisors will:

- Adhere to the Work practices designed to make the workplace safe.
- Report potential or existing violence to Management and Human Resources
- Investigate any reports of Violence.
- Be supportive to employee during investigation.
- Identify root cause of complaint.
- Develop corrective actions to address issue.
- Maintain confidentiality.

Management will:

- Identify all potential sources of violence and eliminate and/or minimize these risks.
- Implement and maintain Workplace Anti-Violence policy and procedure.
- Ensure that all policies and procedures are clearly communicated and understood by all employees through site specific training.
- Perform annual review of the program.
- Adhere to the Work practices designed to make the workplace safe.
- Participate in the investigation of report of violence or potential violence.
- Provide resources required to complete the investigation and implement the Corrective Actions.
- Maintain confidentiality.

PROCEDURE:

- Management will identify potential sources.
- Management will develop strategies to eliminate and/or minimize identified hazards.
- Management, Human Resources, Safety Advisor and Supervisor will participate in communicating the Anti-Violence policy and procedure through training and posting of policy and procedure.
- Management, Human Resources, Safety Advisor and Supervisors and Joint Health and Safety Committee will participate in an annual review of the program.
- Employees who have been affected by Violence or feel that there is potential for Violence need to report this to their immediate supervisor immediately.
- The Supervisor will complete an Incident Investigation form with the employee.
- The completed report is forwarded to Management and Human Resources who will review the facts and determine the best course of action to address the complaint.
- Management/Human Resources will notify Joint Health and Safety Committee and the Committee will review the procedure and training.

If a Threat is received by telephone, notify the manager or most senior person immediately and follow their instructions. If possible, record the following information:

- Time of the call.
- Why this company or person?
- What was said? Who is calling?
- Is the caller male or female, young or old?

Share the information with the site manager who will provide further guidance.

Outside Threats

In the event of an outside threat such as suspicious person(s), or person(s) with weapon(s) alert the Division Manager, or Management in charge; who will determine give the signal to call 9-1-1 and determine if the situation requires assembling employees in the designated shelters. Should assembly be required the Division Manager or Management in charge will blow the air horn to notify all employees that they are to head to the shelter immediately.

Do not approach the person(s) with the weapon(s). Remain calm and try to remove yourself and others from the area.

The Division Manager, Manager in Charge and Supervisor will notify employees when it is safe to assemble in the lunch room for roll call and debriefing.

Bomb Threat

If the threat is about a Bomb try asking the following questions:

- Where is the bomb?
- When is it set to go off?
- What type of bomb is it?
- What does it look like?
- Why has it been planted?
- Who planted it?
- What will make it explode?

Keep the line open – do not hang up. Use a separate phone line, or email to notify the Division Manager, or Management in charge.

Should evacuation be required; the Manager in charge will direct all employees to evacuate the building and assemble at the muster point using the intercom system.

Suspicious Packages

Following is a guideline to address any suspicious package that arrives at the site:

- Minimize air turbulence in areas where mail is handled and opened.
- Notify Division Manager or Manager in charge who will determine if the threat could be real and if the Police needs to be contacted and if evacuation of personnel is required.
- Use vinyl or neoprene gloves while handling suspicious mail.
- Have available large zip lock bags or other containers to isolate suspicious or threatening mail.
- Do not open, shake, smell, or disturb suspicious or threatening mail.
- Carefully peel off gloves, turning them inside out and seal them in a Ziploc bag.
- Make a note of all employees who may have been exposed to the article.
- Affected personnel shall wash hands and face with warm soapy water.
- If warranted all work surfaces may be cleaned with a 10% bleach solution.

Definition of Workplace Harassment

Workplace Harassment is a form of discrimination and can create an intimidating, threatening, coercive or hostile work environment. It may involve unwelcome or offensive comments, conduct or display concerning a person's age, sex (including pregnancy), race, religious beliefs or creed, colour, ancestry, place of origin or nationality, marital or family status, sexual orientation, physical or mental disability, conviction for which a pardon has been granted, political beliefs, physical attributes or in retaliation for a complaint made against the employer.

Harassment and Prohibited Conduct

Harassment and prohibited conduct can be viewed as:

- Unwanted actions;
- Derogatory comments, jokes, slurs,
- Offensive literature, e-mail,
- Visual objects such as pictures,
- Innuendoes based on a person's age, sex (including pregnancy), race, religious beliefs, creed, colour, ancestry, place of origin or nationality, marital or family status, sexual orientation, physical or mental disability, conviction for which a pardon has been granted, political beliefs, physical attributes
- Retaliation for a complaint made against the employer.

Sexual Harassment includes, but is not limited to:

- Sexist jokes causing embarrassment or offence, told after the joker has been advised that they are embarrassing or offensive, or that are by their nature, clearly embarrassing or offensive;
- Unwelcome sexual flirtations, advances, propositions;

- Leering, whistling or sexual innuendo;
- Any display of sexually offensive material (including any display on any company computer and/or system);
- Suggestive or offensive e-mails;
- Sexually degrading words used to describe an individual;
- Suggestive physical contact or unwanted touching;
- Outright demands for sexual favours or physical assault;
- Derogatory or degrading remarks directed towards members of a particular sex or sexual orientation;
- Sexually suggestive or obscene comments or gestures.

Definition of Personal Harassment

Personal Harassment is also prohibited by this policy. It is defined as a course of continuous conduct that a reasonable person would find unwelcome, degrading and offensive and includes repeated:

- Unjustified, unfair criticism or ridicule;
- Insults, mocking, belittling or abusive comments and behaviour such as bullying especially in front of others;
- Behaviour that is rude, intimidating or vindictive.
- Repeated pattern of behaviour intended to intimidate, offend, degrade or humiliate a particular group or person.
- The assertion of power through aggression, targeting the competence level of the person being bullied.

Bullying acts include, but are not limited to:

- Spreading malicious rumours, gossip or innuendo;
- Excluding someone socially;
- Intimidating a person;
- Acts of “rankism”: the abuse of power inherent in superior rank; abusive, discriminatory, or exploitive behaviour towards people because of their rank in a particular hierarchy;
- Undermining or impeding someone’s work;
- Physically abusing or threatening abuse;
- Stealing credit for work or ideas;
- Withholding, or not providing information where it is needed by another person;
- Intruding on a person’s privacy by pestering, spying or stalking;
- Insulting or putting down a person (either verbally or by email);
- Making offensive jokes – verbally or by in writing.

Roles and Responsibilities

The following outlines the roles and responsibilities assumed by those involved.

Employer:

- Do not engage in workplace harassment and discrimination;
- Ensure that a policy is developed, implemented and maintained;



- Ensure that procedures are developed and implemented for reporting incidents and complaints;
- Make commitment to prevent and stop workplace harassment and discrimination and are ultimately the final authority to ensure every employee complies to the policy;
- Inform employees of policy;
- Support supervisors;
- Initial training of all employees and supervisors, as well as new employees regarding policy and procedure;
- Training employees and supervisors to recognize the potential for harassment and discrimination;
- Ensure that an annual review is done of the policy and procedures.

Supervisors:

- Not engaging in the harassment or discrimination of other employees, supervisors, employer, or persons acting on behalf of the employer (such as a member of the public, a customer, or anyone that the employee comes into contact with at the workplace);
- Make employees aware of the responsibility of everyone to make their work environment free from harassment and discrimination;
- Applying and complying with the employer's policies and procedures on harassment and discrimination;
- Detect risk factors, preferably with the cooperation of employees;
- Intervene informally to resolve risk situations;
- Support any investigation of harassment and discrimination.

Employees:

- Not engaging in the harassment or discrimination of other employees, supervisors, employer, or persons acting on behalf of the employer (such as a member of the public, a customer, or anyone that the employee comes into contact with at the workplace);
- Respect all employees that are working with them;
- Report if harassment and discrimination is observed or experienced in the work place;
- Applying and complying with the employer's policies and procedures on harassment and discrimination;
- Support any investigation of harassment and discrimination.

Procedure

Employee should bring the matter to the attention of the person responsible for the conduct and tell them to stop as the action is unwelcome.

If the conduct continues, the employee should notify the supervisor who will document the complaint and commence an investigation by interviewing both the alleged harasser and the complainant (independently) involving the assistance of the Human Resource Advisor.

The complainant and alleged harasser will both be informed of the process and progress of the investigation.

Power Failure

- In a power failure the fire alarm will be out of service.
- Emergency lighting will be activated and last approximately ½ to 1 hour.

- Switch off any equipment that may be damaged or create a hazard once the power returns.
- Proceed to the lunchroom and wait for further instructions from your supervisor.
- If you are unable to see to safely exit your work area to go to the lunchroom, wait and call out for assistance.

Incllement Weather

Tornado

- Stay away from windows entirely.
- Seek shelter in designated area, which should be an interior room so as to put as many walls as possible between you and an approaching tornado.
- Inside rooms that may be safe are washrooms, storage rooms or locker rooms in the plant and office areas.
- If on the second floor of a building, go to the main floor and find an inside room to shelter in.
- Take first aid kits with you to the shelter.
- The worst injuries are usually from flying and falling debris so shield yourself.
- If possible lie face down and cover your head and neck with your hands and arms or a jacket.
- Wait for all clear signal from Division Manager/Plant Supervisor.
- A head count must be taken after the dangerous situation is past.
- Call 911 to alert authorities to injuries and damage.
- Be Aware of Your Surroundings - Ensure immediate area is safe from dangerous debris, fallen electrical wires, fire, chemical or gas leaks before moving around or shifting debris.
- Attend to those needing first aid if it is safe to do so.
- If extrication is needed, have someone remain nearby to reassure the injured person.
- If the damage is widespread, emergency services may not be able to reach your location immediately.
- Keep calm.

Heat Stress

Working in excessive heat for long a long period of time can result I employees showing signs of heat stress.

It is managers and supervisors responsibility to recognize heat stress and implement the following safeguards when air temperatures exceed 30 degrees Celsius and a humidex of 35.

Managers and supervisors need to ensure that:

- Potable water is available for employees to consume
- Additional breaks in cool areas are scheduled
- Identify employees showing signs of heat stress
- Provide assistance to employees affected by heat stress
- Provide fans in temperatures below 35 degrees Celsius; using fans in temperatures above 35 degrees Celsius results in hot air being recirculated with no cooling
- Investigate and address any reported heat stress issues
- Determine if Medical Aid/Ambulance is required

Signs of heat stress include:

- Heat Cramps
- Fainting
- Heat Exhaustion
- Heat Stroke

Heat Cramps: is muscle pain in arms, legs or stomach. This is a result of a salt imbalance due to sweating. It is advisable to:

- Move to a cool area
- Loosen clothing
- Gently massage affected area
- Drink cool, slightly salted water or a beverage that contains electrolytes
- Avoid caffeinated beverages

Heat Rash: occurs when the body releases heat through sweat and the sweat ducts become plugged resulting in an uncomfortable rash. These rashes can become infected if not treated.

- Rest in a cool area
- Wash the skin
- Allow skin to dry
- Seek medical attention, if infected
- Regularly bathe and dry skin

Fainting: is a result of fluid loss and not drinking enough water. Indicators can be cool, moist skin or a weak pulse. Responses:

- **Get medical attention**
- Move employee to a cool area
- Loosen clothing
- Get them to lie down
- Get them to sip some water
- Move around to circulate blood

Heat Exhaustion: is the result of a breakdown of the body's cooling system. Signs include heavy sweating; cool, moist skin; weak pulse; tired and weak; nausea and vomiting; very thirsty; panting or breathing rapidly, and blurred vision. Employees that show signs of heat exhaustions should not be left alone, while medical assistance is being requested.

- Moved to a cooler area
- Loosen or remove clothing
- Get them to drink water

Heat Stroke: is the result of a breakdown of the body's cooling system and can result in irreversible damage to organs in the body. Signs of heat stroke include a fast pulse; headache or dizziness; passing out; weakness; confusion; acting strangely; hot, dry, red skin or profusely sweating. Response:

- **Call an ambulance**
- Remove excessive clothing
- Have them drink water
- Soak clothing with cool water
- Fan body vigorously



- **Never leave employee unattended**

Employees are responsible:

- Stay hydrated by drinking water throughout the day
- Check on coworker(s) noting any unusual behavior
- Report any heat related issues to your supervisor immediately

First Aiders are responsible:

- Assist employees affected by heat related illness
- Report employee condition to supervisor
- Follow supervisor's instructions

EMERGENCY EQUIPMENT

Eye Wash Station

Eye wash stations are located throughout the plant and the path to them must be clear of debris to ensure easy and quick access.

Eye wash stations should be checked monthly to ensure they are clean and working.

Eye wash bottles must be clean, current and available for use.

Emergency Showers

Showers will be inspected monthly to ensure they are clean in good working order.

The path to the shower or eyewash station must be clear of debris to enable quick and easy access.

First Aid Kits

Each site has the required type and number of kits as required by Occupational Health and Safety Legislation in their region.

CHEMICAL AND GASES

Storage and Handling of Flammable Materials

All flammable materials must be used and stored in a manner that will prevent contact with ignition sources, and in accordance with regulated guidelines including WHMIS (Workplace Hazardous Materials Information System) and TDG (Transportation of Dangerous Goods) regulations.

Flammable substances stored or used at the work area:

- Will not be stored in sufficient quantity to produce an explosive atmosphere if inadvertently released
- Must not be stored within 30 meters of an underground shaft
- Must not be stored in the immediate vicinity of the air intake of:
 - A ventilation supply system
 - An internal combustion engine
 - The fire box of a fired heater or furnace

Compressed and Liquefied Gases

All persons, employees and contractors that work with or are in proximity of compressed and liquefied gas within company properties, will follow the practices summarized in this Safe Work



Practice. Compressed and liquefied gases will include but not be limited to propane, air, oxygen, oxy acetylene, carbon dioxide, nitrogen and argon.

Practices

Ensure appropriate Personal Protective Equipment (PPE) is being used by workers. Check the SDS for information.

Ensure all persons are restricted from the hazardous area where compressed or liquefied gas is being used.

Ensure equipment being used is designed for the application being performed.

Caution: compressed gases, including but not limited to compressed air, must never be used to blow debris or dust off any person's body or to blow debris or dust towards other people. Serious and potentially fatal injuries can occur if a person's skin is exposed to compressed and liquefied gases (air embolism)

When work is not in progress, ensure the compressed and liquefied gas valves are turned off, caps are in place and pressure in the hoses is released.

When working with, receiving or being in proximity of compressed and liquefied gas, review and familiarize yourself with the Material Safety Data Sheet (MSDS) for each product you may come into contact with.

When working with or receiving compressed components (cylinders, valves, valve stems, handles, hoses), be sure to inspect for:

- Leaking (cuts, cracks)
- Missing parts (valve protection cap)
- Damaged parts (broken, bent, dented, bulged)
- Corrosion or rust
- Oil and grease
- Clearly identifiable supplier labels

Note: Never accept or put into service compressed and liquefied gas components that do not meet your inspection requirements. Note deficiencies, tag and remove cylinder from service until repaired or replaced. Notify your supervisor or manager as soon as possible. Pressure regulators and relief devices must be in place to ensure correct pressures are maintained.

Storage and Handling

- Store in a cool, dry and well-ventilated area away from potential ignition sources.
- Separate and identify Empty and Full cylinders and post No Smoking signs.
- Properly secure cylinders in upright position in a designated storage area and secured with the attached chain or bracket to a solid structure to prevent them being knocked or falling over.
- Oxygen and fuel gas cylinders in storage should be separated by at least 6m (20ft) or by a 1.5m(5ft) wall with a ½ hour fire resistance rating.
- Single cylinders of oxygen and fuel gas that are mounted on an appropriate cylinder cart or that are attached securely against a wall at a workstation are not considered to be in storage and need not be separated by the distance or barrier described above.
- Protect cylinders from ground contact, ice, snow, water, salt and high temperatures.
- Never use a flame or boiling water to thaw a frozen valve, use warm water. Valves or cylinder heads contain fusible plugs which can melt as low as 74degrees C (165F) on some cylinders.
- Store and transport cylinders with the valve end up and valve covers in place.
- Store with regulators removed and protective valve caps in place.



- Ensure cylinders have identifying labels. Do not use a cylinder if the label is missing or not legible. Never guess the contents from the paint color or otherwise.
- Do not place cylinders where they might become part of an electrical circuit. Never use them for a ground connection.
- When disconnecting hoses or changing tools, ensure the pressure has been turned off and the line pressure is bled down.
- When connecting or disconnecting gas components or opening valves, use of excessive force may cause stripping of connection threads and cause leaks. If this occurs, contact your supervisor immediately.
- Never try to refill a cylinder or mix gases in a cylinder.
- Ensure all compressed air hose connectors are of the quick disconnect pressure release type
- Flashback – when the flame burns back into the torch. It is accompanied by a loud hissing or squealing noise.
- Ensure all compressed Oxygen Fuel Systems have a flashback device at both regulators.
- Ensure that a back flow prevention device is installed at the torch end.
- When shutting down:
 - Close valves at the torch, then close the cylinder valve.
 - Then open the torch valves to release pressure in the lines, and close again.
 - Next, release the pressure adjusting screw on the regulator (turn counterclockwise).
 - Check that the inlet gauge pressure is at zero and the cylinder valve is closed.

Transporting Cylinders

Caution: During transport, never drag or risk dropping a cylinder. For short distances roll them on the base.

- Use an approved cylinder cart when transporting cylinders and secure with the attached chain.
- Do not transport leaky cylinders.
- Do not move cylinders until valves are closed and caps are in place, unless they are securely mounted on a cart designed for use as a portable welding outfit.
- Never use cylinders as rollers or supports.

Spill

Definition

A chemical spill is an uncontrolled release of a hazardous chemical, either as a solid, liquid or a gas. Spills can be categorized into two types: Major spills and Minor spills.

Major spills involve:

- Fire or potential for fire or explosion.
- An immediate danger to life or health.
- Injuries requiring medical attention.

Note: Major spills require an external emergency response.

Minor spills are spills that do not involve characteristics of a major spill and can normally be dealt with by site knowledgeable personnel.

Procedure

Report any spill to your supervisor and warn all other employees in the area.



- Secure the scene and move employees not involved in clean up out of the area. Identify the substance spilled and refer to MSDS for appropriate safety procedures.
- Find out which chemicals have been spilled and check the MSDS sheets medical alerts and treat any injuries to workers first (Follow Chemical Exposure Procedure).
- Conduct Hazard Assessment and implement Controls.
- Have all workers involved with clean-up put on proper PPE.
 - Start containment procedures by shutting off any sewer access ways.
 - Use absorbent compounds (in Spill containment kit) to soak up the material and to contain to the immediate area.
 - Add neutralizer to the spill and test ph levels.
 - Once ph levels are safe, start to scoop the material into secured drums.
 - When material is contained in drums check with supervisor as to the type of disposal procedure.
 - Wash the area with water to prevent further contamination.
- Fill out any spill reports that are required and contact the city if any product is suspected of being release into the sewer systems.
- Major spills require contacting authorities and provide the following information:
 - Date and time of spill
 - Type of chemical spilled
 - Quantity spilled
 - Cause of spill
 - Actions taken to clean up spill
 - Name of person in charge of spill containment

Complete an Incident Investigation to identify Root Cause and to develop Corrective Actions to current processes.

SECTION 20

WHMIS

(WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM)

Purpose

The Workplace Hazardous Materials Information System, or WHMIS, is a Canada –wide system designed to give employers and workers information about hazardous materials used in the workplace. WHMIS is implemented by a combination of federal and provincial legislation developed jointly by labor, industry and federal, provincial and territorial governments.

The company has a responsibility to provide relevant safety and health information on hazardous materials to all workers in the form of Material Safety Data Sheets (M.S.D.S.'s). Employees, who use, store, handle and dispose of hazardous materials in the workplace must have access to current M.S.D.S.'s so that they can take the necessary precautions to avoid injury and illness.

Affected employees will be trained prior to commencement of their job duties on the hazards of the workplace and how to use WHMIS to protect them in the workplace. Training will include labeling requirements of hazardous materials and the location of M.S.D.S. sheets in the plant.

All Contractors and their employees must have WHMIS training. Contractors must have prior permission and provide information on any hazardous material(s) they bring onto the worksite before they commence work. All Contractors will be made aware of any hazardous material(s) that they may come in contact with while on company property.

Definitions

Controlled Product: A substance that meets the criteria of one or more of the hazard classes set out in the controlled products regulation under the federal hazardous products act.

Material Safety Data Sheet (MSDS): An information bulletin summarizing relevant technical information on a substance, including a list of hazardous ingredients, potential hazards, safe handling procedures and first aid measures. Up to date MSDS books must be kept on site and readily available.

Supplier Label: A WHMIS label attached to the controlled product prior to shipment by the manufacturer or distributor and meeting the requirements of the federal controlled products regulation, under the hazardous products act.

Workplace Label: A label produced in the workplace and attached to a controlled product when it is dispensed into containers other than the original supplier container or when a supplier label becomes illegible. A workplace label contains a product identifier, information on the safe handling of the material and a reference to the material safety data sheets.

Responsibilities

Management will ensure that:

- All established WHMIS policies are administered and enforced.
- A current MSDS is obtained from the supplier when receiving a controlled product on site.



- All MSDS are filed in readily accessible areas to all employees. MSDS must be updated every 3 years.
- WHMIS training is provided to all employees.

**Workers Shall:**

- Attend WHMIS training as required
- Use WHMIS related information and training to protect the health and safety of themselves and others on the job.
- Bring to their supervisor's attention any concerns about controlled products (damaged labels, outdated material safety data sheets, defective personal protective equipment, and health and safety concerns associated with product use).

Training

- Training provides an overview of WHMIS and includes:
- Labels - the information required the purpose of the information and the significance of the information
- MSDSs – the information required the purpose of the information and the significance of the information.
- Procedures for the safe use, storage, handling and disposal of a controlled product.

SECTION 21

CHEMICAL MANAGEMENT

Management will assess the workplace to ensure that employees' exposure to any chemical or biological substance is as low as reasonably achievable and does not exceed Occupational Exposure Limits (OEL's) established by the American Conference of Government Industrial Hygienists (ACGIH). (Schedules, Tables and Appendices of applicable provincial OH & S Acts, Regulations and Codes)

- This assessment should involve monitoring the presence and identification of substances and the worker exposure levels to those substances.
- Monitoring will be done by a qualified person in accordance with National Institute Occupational Safety & Health (NIOSH) or the US OSHA (Occupational Safety and Health Administration) methods and equipment.
- If possible, substitute a less hazardous or harmful substance for the procedure or process.

Managers will:

- Develop, implement and enforce work procedures and processes that make it as safe as reasonably practicable for workers for the handling, use, storage, production and disposal of chemical and biological substances.
- Inform workers of the nature and degree of effects to their health and safety, if they are or may be exposed to any hazardous or harmful chemical or biological substance
- Develop and maintain an up to date list of all hazardous and controlled chemical and biological products that are regularly handled, used, stored, produced or disposed of in the course of work, and make the list available to workers.
- Provide workers with adequate training in work procedures and processes to minimize exposure, and in the proper use of any PPE required by regulations, including respiratory equipment use and codes of practice.
- Make monitoring and exposure results available to workers testing results and keep monitoring results for 30 years after the monitoring
- Inform workers of any steps taken to reduce the contamination and reduce or eliminate exposure to workers
- Ensure workers do not eat, drink or smoke tobacco in an area of the work site contaminated by a harmful substance

Workers will:

- Use the procedures and PPE appropriately and apply the training they receive on controlled and hazardous products.
- Not eat, drink or smoke tobacco in an area of the work site contaminated by a harmful substance

Many factors affect total exposure, including:

- The potential for absorption into the body by inhalation, ingestion or skin absorption
- The duration of exposure
- The effect of simultaneous exposure to multiple substances

A substance enters the body through three main routes:

- inhalation – the most common route of entry. Most OEL's are based on exposure from inhaling substances, as a gas, vapor, or aerosol such as a dust, mist or fume.
- dermal – by being absorbed through the skin
- ingestion or oral - by being swallowed, often through contaminated food, nail-biting or smoking materials

Individual susceptibility to adverse effects differs in individuals. A small percentage may feel discomfort at or below the OEL. Genetic factors, smoking or alcohol use, drugs or medications, pre-existing health conditions or previous exposure can all make a difference in how an individual reacts to exposure.

Short Term Exposure Limit (STEL) – concentrations of a substance to which it is believed that most workers may be exposed for a short period of time without suffering from adverse health effects. The worker should not be physically impaired to a degree that would increase the likelihood of an injury, impair self-rescue or reduce work efficiency. The STEL is not a separate exposure limit, it supplements the 8 hour OEL.

Employers must comply with the following:

- Worker exposure over any 15 minute period must not exceed the 15 minute OEL.
- If a exposure is over successive 15 minute periods, at a concentration above the 8 hour OEL, but at or below the 15 minute OEL, the exposure must not happen more than 4 times per day. There must be at least 60 minutes between successive exposure periods in this concentration range and the 8 hr OEL may not be exceeded for the work shift.
- Worker exposure must never exceed ceiling levels, denoted in the ACGIH tables. (Schedule 3 of AB OHS Code)

Worker Overexposure

- If a worker might be contaminated by a harmful substance the employer must provide shower or eye wash facilities that are immediately accessible to remove the contamination before the worker leaves the site
- Contaminated articles and clothing cannot be taken from the work site by the worker until they have been cleaned or decontaminated.

Storage of Harmful Substances

- Substances or their containers must be clearly identified
- The use and storage of the substances must not be a hazard to workers
- Check MSDS and manufacturer's instructions for storage information

Exposure to Multiple Substances

- Independent – each substance creates its own toxic effects without influence from others. E.g. A mix of xylene and asbestos
- Additive – substances with similar toxicity produce a response equal to the sum of effects produced by each individual substance. The sum of the standardized exposures must not exceed the value of 1.
- e.g. a mixture of xylene and toluene is an example of two substances that produce additive effects.
- Antagonistic – the toxicity of one chemical is reduced by exposure to another chemical. Antagonistic effects cannot be used as a basis for decreasing exposure limits.
- Potentiating – when a substance that does not have a toxic effect on a certain organ but when combined with exposure to another substance, the first substance becomes much more toxic.
- Synergistic – two substances act together to produce toxic effects that are greater than the effects produced by either substance alone.

- If there is exposure to more than one chemical at a time and there is a potential for synergistic or potentiating effects, the enhancement of the toxic effect must be reflected in the allowable exposure. There is no model to adjust exposure limits, the easiest solution is to avoid the effect by substitution.

Exposure During Shifts Longer Than 8 Hours

- OELs are based on the assumption that the exposure occurs over an 8 hour period, followed by 16 hours of recovery time with no exposure.
- Limits of exposure can be adjusted downward to accommodate longer periods of exposure, but cannot be adjusted upward to accommodate shorter periods of exposure.
- If a worker will be exposed to a hazardous substance during a single shift that is longer than 8 hours, the employer must ensure that equivalent protection is achieved by adjusting the 8 hour exposure limit using the Brief and Scala model or another recognized scientific principle approved by a Director of Occupational Hygiene.
- Consult the Canada Safety Advisor for assistance.
 - For more information: http://employment.alberta.ca/documents/whs/whs-pub_ch055.pdf

Benzene – is a widely used chemical formed from natural and human activities. It is clear, colourless with a characteristic aromatic hydrocarbon odor. Natural sources include volcanoes and forest fires as well as crude oil. Benzene is used to make other chemicals that are used for making plastics, resins, nylon and synthetic fibers, as well as some types of lubricants, rubbers, dyes, detergents, drugs, and pesticides. It can contain small amounts of toluene and xylene, which are also harmful products.

Benzene is also known as coal naphtha, benzol, carbon oil, cyclohexatriene, and phenyl hydride. Benzene is extremely flammable and can accumulate static electrical charge by flow or agitation. Benzene vapor is heavier than air, and since it can float long distances, distant ignition and flashback are possible.

Liquid benzene can float on water, and may spread fire. At high temperatures benzene can decompose forming toxic gases.

Exposure to Benzene – A major source of benzene exposure is tobacco smoke.

Outdoor air contains low levels of benzene from gas stations, hazardous waste sites, motor vehicle exhaust and industrial emissions. Leaks from underground storage tanks or waste sites containing benzene can contaminate well water.

Indoor air generally contains higher levels of benzene than outdoor air. Benzene exposure indoors comes from products containing glues, paints, furniture wax and detergents.

How Benzene Affects You – benzene causes cells to not work correctly and can affect blood and bone marrow as well as cause skin and eye irritation. Swallowing or vomiting of liquid benzene may cause aspiration into the lungs. Benzene is considered a Cancer Hazard, and a Mutagen (may cause genetic damage).

First Aid – see MSDS for individual products containing benzene. In general, if benzene is released into the air, leave the area and seek fresh air. If clothing has been exposed to benzene, remove and double bag using protective gloves, and rapidly wash entire body with soap and water. If eyes are burning or vision is blurred, rinse with plain water for 10 to 15 minutes, remove and do not replace any contact lenses.

Read MSDS (Material Safety Data Sheet) before using any product. If at all possible, use other products that are less harmful and less flammable. Avoid generating mists or vapors or releasing them into the air. Dispense in areas approved for flammable liquids and ground drums and transfer vessels, hoses and piping. Label all containers, and keep them closed when not in use. Never perform welding, cutting or other hot work around areas likely to have liquid or vapors.

Use chemical safety goggles, chemical resistant gloves, NIOSH approved and fit tested respirators, coveralls and boots. Additional resistant clothing such as aprons, gauntlets and face shields may be advisable. Change work clothing frequently and launder. *Canadian Centre for Occupational Health and Safety* <http://www.ccohs.ca>

Hexavalent Chromium – is a toxic form of the element chromium

Industrial Sources

- Chromate pigments in dyes, paints, inks, plastics
- Chromates added as anti-corrosive agents to paints, primers and other surface coatings
- Chrome electro-plating
- Particles released during smelting of ferrous chromium ore
- Fume from welding stainless steel or non-ferrous chromium alloys
- May be present in some welding rods
- Impurity present in Portland cement
- Metal finishing, wood preservatives and fungicides.

Inhaling airborne hexavalent chromium may negatively affect a worker's health over time and is classified as a carcinogen which may increase the risk of lung cancer when inhaled.

Welding gases and fumes do not normally cause immediate health problems. However, years of welding work that exposes workers to levels of hexavalent chromium greater than the TLV increases a worker's likelihood in developing health problems such as lung cancer.

Irritation or damage to nose, throat and respiratory tract can occur if hexavalent chromium is breathed at high levels. Repeated or prolonged exposure can cause sores, nosebleeds, a hole in the nasal septum, or even asthmatic allergic symptoms.

Irritation or damage to eyes and skin if high concentrations of hexavalent chromium touch eyes or skin (contact dermatitis)

The threshold limit value (TLV) defined by current ACGIH (American College of Governmental Hygienists) standards is 0.01mg/m³ for an 8 hour time weighted average.

Engineering Controls

- Reduce exposure levels by using enclosures and improving ventilation

Administrative Controls

- Provide and train workers on safe work practices such as appropriate worker hygiene and use of ventilation
- Provide current MSDS and training in WHMIS

Personal Protective Equipment (PPE)

- Respirators appropriate for the hazard will be provided to the exposed workers.
- Respirators will be selected and fit tested to CSA Standard Z94.4.4.
- Train workers on the use, storage requirements and maintenance of the respirators selected
- Check with manufacturer or supplier for respirator selection

Worker Responsibilities

- Take every reasonable precaution to protect his/her own occupational health and safety and that of other workers
- Report health and safety hazards immediately to a supervisor or manager
- Follow required safe work procedures and instructions
- Wear the PPE that the employer determines necessary to protect workers from hazards
- Cooperate with any medical surveillance program the employer deems appropriate

Cadmium Awareness

Cadmium is an element occurring naturally, and what it is combined with is important when assessing the risk of adverse health effects.

Sources:

- The largest increase is due to burning of fossil fuels such as coal
 - Use of phosphate fertilizers and industrial processes.
 - Cadmium in the environment is increased by volcanoes and forest fires.
 - Industrial uses include:
 - Electrodes of nickel cadmium batteries (alkaline batteries do not contain cadmium)
 - Production of pigments and dyes
 - Stabilizers in plastics
 - Welding and soldering
 - Electroplating of other metals such as steel, iron, copper
 - Used in alloys with copper, nickel, gold, silver and aluminum for coating other materials
 - Cadmium compounds have other industrial uses such as in printing, textiles, photography, lasers, semiconductors, solar cells, scintillation counters, dental amalgams, florescent lamps, making steel, cement, and in superphosphate fertilizers and pesticides
 - Household waste disposal sites
 - People can be exposed to cadmium sources through eating shellfish, kidney and liver meats, and through drinking water
 - Cigarette smoke contains a large amount of cadmium and smoking can double the amount of cadmium taken in per day
 - In people who smoke, cigarettes are the greatest source of cadmium
 - People can be exposed by breathing air near where fossil fuels are burnt or near waste plants
 - Any adverse health effects depend on several factors, including amount of exposure (dose), the type of exposure (ingestion, inhalation), the duration of the exposure, the form of the chemical and if there was exposure to other chemicals.
 - Exposure to cadmium over a long period via food, water, or air can cause kidney and lung damage.
- Cadmium and its compounds are considered carcinogenic in humans when breathed in the air.

Appendix F

Wastewater Treatment Plant Daily Checklist



ICS Great Western.
 Winnipeg Recon
 328 Dawson Rd North
 Winnipeg MB R2J0S7

SECTION:
 REVISION #:

F.000.4
 1

APPROVED BY: Terry Hildebrand /Division Manager

WASTE WATER TREATMENT DAILY CHECK LIST

PURPOSE:

To make sure that waste water treatment facility is functioning good while running.

INSTRUCTIONS:

Note any repairs, fixes or replacements that can be made at the time of inspection.

Record the fix, repair, or replacement parts in Maintenance Repair log sheet.

Sign check list when checks completed.

| Daily Task | Checked | Checked | Checked | Comments |
|--|---------|---------|---------|----------|
| | AM | LUNCH | PM | |
| 1. Check for any alarms. | | | | |
| 2. Check and record PH reading of out going water. | | | | |
| 3. Check and mix sludge tank clarifier. | | | | |
| 4. Check water treatment chemical level. | | | | |
| 5. Check all pumps and mixer functionality. | | | | |
| 6. Check all tanks for leak. | | | | |
| 7. Check filter 2 condition. | | | | |
| 8. Check filter 1 condition. | | | | |
| 9. Check oil separator condition. | | | | |
| 10. Check BT1 and BT2 tank level condition. | | | | |
| 11. Check BT2 diaphragm pump for proper operation. | | | | |

Mechanics Signature: _____

Date: _____(YMD)

QPS-No.

WIN PLANTOP

Work Sequence No:

3

Work Element:

Water Treatment

Main Process Description:

Plant Operation

| Seq. No. | Work Elements Which work is performed ? | Time Elements | | Key Symbols | Key Issues What is to be considered? | Reason Why must the key issues be performed that way? |
|----------|--|---------------|---------------|-------------|---|--|
| | | man. | auton. / move | | | |
| 1 | Wear gloves, ear plugs, safety glasses, steel toe boots and hard hat. | X | | + | | |
| 2 | | | | | | |
| 3 | Start up | | | | | |
| 4 | Turn on air compressor. | X | | | Supply of air needed to run equipment | Most of the pump are operated by air. |
| 5 | Turn on all switches needed for starting the operation. | X | | | | Needed to treat production wash water |
| 6 | Mixed the sludge container once a day (when pumping sludge mix tank 3 X a day) | X | | | Needed for proper operation of the sludge press | Only 1 is open during water treatment. |
| 7 | Clean all PH level sensor. | X | | | | To maintain accurate reading on controller module. |
| 8 | Check chemical level on all drums. | X | | | Ensuring having enough chemicals. | Place order for more chemical if running low |
| 9 | Check filter press and empty when full | X | | | Keep the sludge tanks form getting too full | |
| 10 | Check CF filter. | X | | | When the pressure reach 30 PSI. | Need to change filters. |
| 11 | Check BT2 filler bag. | X | | | When the pressure reach 30 PSI. | Need to change filter bag. |
| 12 | Monitor ph levels and water clarity throughout the day. Make adjustments to chemical levels as needed to ensure proper treatment of water. | X | | | To get optimal treatment of waste water | |
| 13 | | | | | | |

| | | | | | | | |
|----|------------------------------------|---|--|--|--|----------------------------|----------------------------------|
| 14 | Shutdown | | | | | | |
| 15 | Turn off all pre arranged switches | X | | | | | |
| 16 | Be sure that main power still on. | X | | | | Need power on other pumps. | To avoid water from overflowing. |
| 17 | Turn off air compressor. | X | | | | | |

Illustration:

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