DILLON CONSULTING

Environment Act Proposal

Juliana Manufacturing Ltd. – 355 Transport Road

2014 November Final Report – 14-1078

November 10, 2014

DILLON CONSULTING

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Environmental Approvals Branch
Manitoba Conservation and Water Stewardship
Suite 160, 123 Main Street
Winnipeg, Mantioba R3C 1A5

Attention: Tracy Braun, M.Sc.
Director

Environment Act Proposal on behalf of Juliana Manufacturing Ltd. (Juliana)

Dear Ms. Braun

Please find enclosed a copy of the Environmental Act Proposal (EAP) for Juliana's manufacturing facility located at 355 Transport Road in the Rural Municipality of Springfield, Manitoba. This EAP is being submitted with the intention of obtaining a licence as a Class 1 Development under the Environment Act. The EAP describes the site, the operations, environmental conditions, potential effects of Juliana operations, and the measures that have been or will be taken to prevent or mitigate adverse environmental effects. The Juliana facility has been operating since 1999 and continued operation is not expected to impact the environment.

As required, a $1,000 application fee is included with this EAP.

If you have any questions regarding this proposal, please contact me at (204) 453-2301.

Yours sincerely,

DILLON CONSULTING LIMITED

Francesco Zurzolo, M.Sc., E.I.T.
Project Manager

FMZ/knp

Encl.

cc:

Our file: 14-1078

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Environment Act Proposal Form

Manitoba
Conservation and Water Stewardship

Name of the development:
Juliana Manufacturing Ltd.

Type of development per Classes of Development Regulation (Manitoba Regulation 164/88):
Pet Treat Manufacturing and Wastewater Treatment

Legal name of the applicant:
Juliana Manufacturing Ltd.

Mailing address of the applicant:

Contact Person: Mark vander Meulen

City: Springfield Province: Manitoba Postal Code: R2C 2Z2

Phone Number: 204-668-9989 Fax: 204-668-9943 email: markvan@mts.net

Location of the development: 355 Transport Road.

Contact Person: Mark vanderMeulen

Street Address: 355 Transport Road.

Legal Description:

City/Town: Springfield Province: Manitoba Postal Code: R2C2Z2

Phone Number: 204-668-9989 Fax: 204-668-9943 email: markvan@mts.net

Name of proponent contact person for purposes of the environmental assessment:
Mark vanderMeulen

Phone: 204-668-9989
Fax: 204-668-9943

Mailing address: 355 Transport Road
Springfield, Manitoba, Canada
R2C 2Z2 Box 5 RR5 Group 582

Email address: markvan@mts.net

Webpage address:

Date: Sept. 3/2014

Signature of proponent, or corporate principal of corporate proponent:

Printed name: Mark vander Meulen

Executive Summary

Juliana Manufacturing Ltd. (Juliana) is a private corporation operating in the Rural Municipality (R.M.) of Springfield, Manitoba. The office and processing facility are located at 355 Transport Road in the Gunn Road Industrial Park, where Juliana processes animal offal into pet treats. This Environment Act Proposal (EAP) is submitted to support an application to obtain Manitoba Conservation and Water Stewardship approval and an operating licence under the *Environment Act* .

The parcel of land owned by Juliana is designated for heavy industrial use, which includes manufacturing, processing and storing goods or materials. Lands immediately adjacent to the site are also zoned for medium to heavy industrial uses. No land use changes will be required as a result of the works described in this EAP.

As a result of its processes, Juliana produces approximately 38 m^3 of wastewater per day which is stored in an on-site wastewater holding tank. The holding tank is pumped out three times per day and hauled to the R.M. of Springfield's wastewater treatment lagoon. De-sludging and degreasing is carried out by a third party as required. New wastewater treatment equipment has been purchesed by Juliana which will be used to pre-treat the wastewater before hauling to the lagoon. The pre-treatment system consists of screening followed by dissolved air flotation. Sludge from the process will be dewatered in a plate filter press.

The Juliana facility has operated on this site since 1999 and there are no adverse environmental effects anticipated as a result of the continued operation of the facility.

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1.0 INTRODUCTION

Juliana Manufacturing Ltd. (Juliana) is a pet treat manufacturer located in the Rural Municipality (R.M.) of Springfield in the Gunn Road Industrial Park. The facility processes raw animal offal into dog treats; the most common products being dehydrated pig ears and large bones. Approximately 10,000 kg of raw product is processed in an average week. As a result of the processes employed, the Juliana facility generates approximately 38 m^3 of wastewater per day. Juliana has recently purchased a wastewater treatment system from Ellis Corporation to pretreat the wastewater produced at the facility before hauling to the Springfield lagoon. Juliana staff will operate the wastewater treatment system.

The Juliana facility has been operating since 1999 without an Environmental Act Licence. According to the Classes of Development Regulation M.R. 164/88, both pet treat manufacturing and wastewater treatment facilities are classified as Class 1 developments and therefore require licensing under the Environment Act through Manitoba Conservation and Water Stewardship (CWS). As requested by CWS in a letter to Juliana dated August 5, 2014, this Environment Act Proposal (EAP) has been developed to support an application for an operating licence for the entire Juliana manufacturing facility, including the ongoing wastewater treatment upgrades.

2.0 SITE DESCRIPTION

2.1 Location

2.1.1 Certificate of Title

The Juliana facility is located at 355 Transport Road in the R.M. of Springfield. The land (SW1/4 15-11-4E, Block 4 Lot 6 Plan 35572) for this facility was originally purchased in 1999. A Certificate of Title for the property is included in **Appendix A**.

2.1.2 Mineral Rights

According to correspondence with the Crown Lands and Property Agency, the mines and mineral and sand and gravel rights were transferred with surface title. A copy of correspondence related to subsurface rights is included in **Appendix A**.

2.1.3 Current Land Use

The existing Juliana facility is located west of PTH 101 (Perimeter Highway) in the Gunn Road Industrial Park, which is zoned MG-1 for general industrial under the RM of Springfield *Zoning By-Law No. 08-01* and as medium to heavy industrial uses according to the R.M. of Springfield *Development Plan By-Law*. The parcel of land owned by Juliana (355 Transport Rd.) is zoned "M2-Heavy Industrial" under the *Springfield Town Planning Scheme, 1959*. Permitted uses of land include manufacturing, processing and storing goods or materials. No land use changes will be required as a result of the works described in this EAP.

Lands immediately adjacent to the site are also zoned for medium to heavy industrial uses. Neighbouring industrial uses include car restoration and sales, spray polyurethane foam and roofing, freight trucking, and industrial equipment servicing. Lands in the Gunn Road Industrial Park have been used for heavy industry since at least 1959.

2.2 Existing Building

The existing building is approximately 1,115 m^2 with an additional 280 m^2 of refrigerated and non-refrigerated container storage space. The process building and storage units account for approximately half the site footprint, while the other half of the site is primarily a compacted gravel surface used for parking and truck turnaround. A satellite image of the site and facility are shown in **Figure 1**.

FIGURE 1: SATELLITE VIEW OF 355 TRANSPORT ROAD (HIGHLIGHTED) – JULIANA MANUFACTURING FACILITY (PHOTO COURTESY OF GOOGLE MAPS, ACCESSED NOVEMBER 04, 2014)

There are no changes proposed to the structure of the existing facility. Currently the facility contains refrigerated storage containers, a rinsing drum, three dehydrators with variable frequency drive (VFD) controlled blowers, open work areas, a finished product storage area, staff washrooms, and office space. A new wastewater pre-treatment system will be installed inside the existing facility to pre-treat wastewater on-site. The existing wastewater holding tank is located underground, beneath the parking lot at the south end (front) of the building. The heating at the facility is provided through a combination of natural gas heaters and electric baseboard heaters. The dehydrators are heated with natural gas. Two private, on-site wells provide potable water and process water to the facility.

2.3 Operation

2.3.1 History

The Juliana manufacturing started operating at 355 Transport Rd. in 1999. The facility was expanded in 2002 to increase operating capacity. Installation of the wastewater pre-treatment system is currently ongoing and is expected to be completed by January 2015.

2.3.2 Current Process Overview

The Transport Road facility houses the entire production process; from collection of raw materials to production of finished goods. The facility operates 10 hours per day, five to six days per week, depending on the product run. Generally the process follows three main steps; thaw/rinse, dehydrate, and pack/ship. Deliveries of frozen animal offal (raw product) are received at the facility by transport truck approximately four times per week. The raw product is transferred to refrigerated (freezer) storage for preservation until it is used in production.

Thaw/Rinse

The frozen raw product is placed into a rinse drum where it undergoes a step-wise rinse process. The rinse process is detailed on **Table 1**. The second and third rinses are customized based on the characteristics of the raw product and the requirements of the finished product. Water is sourced from an on-site private well and the wastewater is collected and conveyed from the rinse drum directly to the wastewater storage tank via under slab piping.

TABLE 1: RINSE PROCESS

Rinse Cycle	Purpose	Rinsing Agent
First	Thaw	Hot Water
Second (optional)	Hair Removal	Water + Sodium Sulphide ($NaSO_2$)
	Meat/Fat Stripping	Water + Caustic Soda (NaOH)
Third (optional)	Disinfection	Water + Hydrogen Peroxide (H_2O_2)
Fourth	Final Rinse	Water

Following the final rinse, a liquid mould-inhibitor coating is applied to the product while it is still in the rinse drum. The food safe mould inhibitor includes the following ingredients: water, propylene glycol, tics gum, citric acid, potassium sorbate and liquid smoke. Once the mould inhibitor is applied, the product is removed from the rinse drum and moved into the dehydrators with an electric forklift.

Dehydrate

The dehydrators use low heat and high airflow to dehydrate the product over a cycle time of 24 and 48 hours depending on the product. The temperature within the dehydrators vary during the dehydration process, reaching a maximum of 94°C (200°F) at the end of the dehydration cycle. Airflow during the dehydration process is also variable. The blowers are controlled by VFDs with specific time and airflow programming for different types of product. During the initial drying phase,

the airflow runs at the maximum exhaust rate of 2360 L/s (5000 CFM). Over the course of up to 14 hours, the airflow gradually decreases to 95-236 L/s (200-500 CFM) (natural convection rate of heated air through the dehydrators). Humid air from the dehydrators is vented directly to the environment. The dehydrators are used for an average of 15 cycles per month.

Pack/Ship

Once the dehydration process is complete, the product is removed from the dehydrators and packed in bulk for transport. During regular production, product is shipped one to three times per week by semi-trailer.

At the end of each daily shift, the raw and rinsed product handling areas in the production facility are washed down with a disinfecting and cleaning agent (Eco Lab Foam Force LP).

Wastewater

The manufacturing process produces approximately 38 m^3 of wastewater per day which is heavily loaded with animal solids, fats, oils and grease (FOG), and biochemical oxygen demand (BOD). Sample characteristics of the wastewater as sampled by the R.M. of Springfield in November of 2013 are summarized in **Appendix B**. Wastewater from the rinsing process, facility maintenance, and the on-site washroom currently drains to an in-ground holding tank which is located on the Juliana property. In the wastewater holding tank, FOG is allowed to rise to the top while sludge settles on the bottom. The wastewater is collected by a third-party sewage hauler three times daily and is taken to the R.M. of Springfield lagoon for disposal. During regular daily pumping, only wastewater from the middle of the tank is removed, leaving the FOG and sludge to collect in the tank. De-sludging and degreasing of the tank is performed by a separate pumping company on an as-needed basis; approximately 3 times per year. Disposal of this sludge and FOG is carried out by the pumping company.

2.3.3 Facility Inspections and Licensing

The Juliana manufacturing facility is inspected annually by the Canadian Food Inspection Agency (CFIA) on behalf of the United States Department of Agriculture (USDA). The facility also operates under the Hazard Analysis Critical Control Point (HACCP) and Canadian Good Manufacturing Practices (GMP) guidelines. Juliana does not currently have an operating license under the Environment Act. This proposal is intended to provide an operating license as a Class 1 Development under the Environment Act.

2.3.4 Process Modifications

Juliana has recently purchased a wastewater treatment system to pretreat the wastewater produced at the facility before hauling to the Springfield lagoon. The purpose of the pre-treatment system is to decrease the organic loading to the Springfield lagoon and ultimately reduce water usage through treated water reuse.

A schematic flow diagram of the wastewater pre-treatment system is shown in **Figure 2.** Water from the rinse drum will be pumped through a side-hill screen before the pre-mix and equalization basin. In the pre-mix and equalization basin, the wastewater is mixed and chemicals are dosed to adjust pH and condition the wastewater for the dissolved air floatation (DAF) treatment. After the chemical dosing and mixing, the conditioned wastewater will enter the DAF basin. Scum and sludge will be separated from the clarified effluent in the DAF unit. The clarified effluent will flow

into the existing wastewater holding tank to be hauled to the Springfield lagoon. The screenings from the side-hill screen will be collected and sent to the Rothsay facility in Winnipeg for recycling. Sludge and scum from the DAF unit will be directed into a plate filter press unit for dewatering. Dewatered cake will be bagged and disposed of in a dumpster to be hauled to the municipal landfill. Product descriptions/specifications for the wastewater pre-treatment equipment are available upon request.

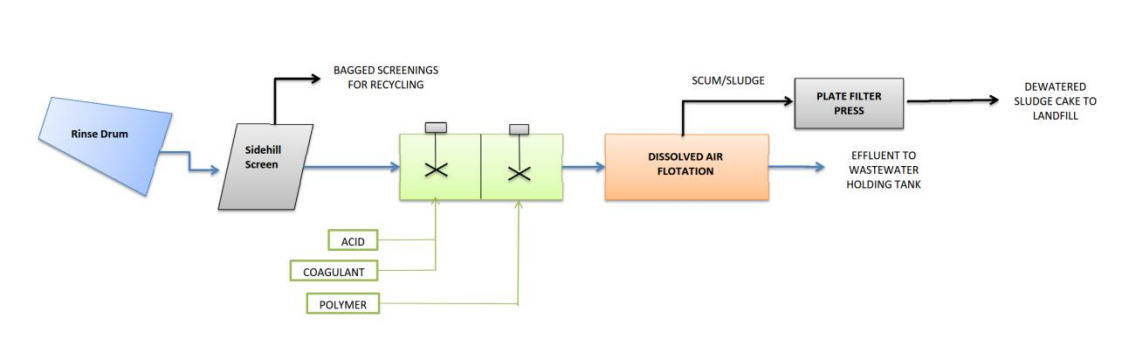

FIGURE 2: WASTEWATER PRE-TREATMENT SYSTEM – SCHEMATIC FLOW DIAGRAM

Only water from the rinse drum will be sent to the wastewater pre-treatment system. Wastewater produced in the on-site employee washroom and facility wash water will continue to flow directly to the wastewater holding tank.

Based on the treatment efficiency of the wastewater pre-treatment system, there may be potential for reuse of a portion of the clarified effluent as process water in the production line or as facility wash water. However, initial operations will require all wastewater to continue to be hauled to the R.M of Springfield lagoon. On-site water reuse has the potential to reduce water usage and overall wastewater volume production at the Juliana facility. The feasibility of this water reuse will be assessed once the wastewater pre-treatment system is operational and the process is optimized.

2.3.5 Operation and Classification of Wastewater Treatment Equipment

The wastewater pre-treatment system will be a Class 1 wastewater treatment system as per the attached facility classification form (**Appendix C**). A licensed operator will be on staff at the Juliana facility to operate and maintain the wastewater pre-treatment system. Ellis Corporation will commission the system and provide an operation and maintenance manual with associated training to the Juliana staff.

3.0 DESCRIPTION OF ENVIRONMENT AND ENVIRONMENTAL EFFECTS

The land in the Gunn Road Industrial Park, including the parcel owned by Juliana, has been used by medium and heavy industry since at least 1959. The existing environment is heavily disturbed and no new environmental impacts are anticipated as a result of Juliana's continued operations. The intent of adding the wastewater pre-treatment system to the existing Juliana process is to reduce organic loading to the Springfield lagoon. No significant environmental effects or potential effects to wildlife, fisheries, surface and ground water, forestry, heritage resources, and social and economic conditions are expected due to the continuing operation of the Juliana facility.

3.1 Regional Context

The project site is situated in the Winnipeg Ecodistrict, within the eastern portion of the Lake Manitoba Plain Ecoregion of the Prairies Ecozone. The Lake Manitoba Plain Ecoregion stretches from the border with the United States in the South to Dauphin Lake in the North, forming part of the Grassland Transition Ecoclimatic Region. The Winnipeg Ecodistrict lies along the southwestern shore of the south basin of Lake Winnipeg. It extends from the border of with the United States to 50° 30'N (Agriculture and Agri-Food Canada, 1998).

The Gunn Road Industrial Park is located at the eastern edge of the R.M. of Springfield and within the Winnipeg perimeter highway. While the eastern portion of the municipality is largely rural, the area within the perimeter is highly industrialized.

3.1.1 Climate

The climate of the Lake Manitoba Plain Ecoregion is characterized by some of the warmest and most humid weather in the Canadian prairies including short, warm summers and long, cold winters (Agriculture and Agri-Food Canada, 1998).

Environment Canada has collected climate data for several areas within Canada, including providing climate normals from 1981 to 2010. The nearest Environment Canada weather reporting station with detailed climate information is located at the Winnipeg Richardson International Airport. This station is located at Latitude 49°55' N and Longitude 97°14' W at an elevation of 238.7 m above sea level. **Table 2** summarizes the Canadian Climate Normals data from 1989 to 2010 for the Winnipeg Richardson International Airport (Government of Canada, 2014).

The Winnipeg Ecodistrict soil climate ranges from cool, subhumid Boreal to moderately cold, subhumid-humid Cryoboreal (Agriculture and Agri-Food Canada, 1998). The daily average temperature for the Winnipeg Ecodistrict is 2.4°C and the average growing season is 183 days. The mean daily temperature in January is -18.7°C while in July the mean daily temperature is about 19.8°C. The mean annual precipitation is about 504.4 mm, of which about three-quarters falls as rain and one-quarter falls as snow. Precipitation varies greatly on a yearly basis and is highest from late spring through summer. The average annual moisture deficit is nearly 200 mm (Government of Canada, 2014).

TABLE 2: CLIMATE NORMALS SUMMARY FOR WINNIPEG RICHARDSON INTERNATIONAL AIRPORT, MANITOBA (1989-2010)[1]

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average Temperature (°C)	-16.4	-13.2	-5.8	4.4	11.6	17.0	19.7	18.8	12.7	5.0	-4.9	-13.2	3.0
Daily Maximum (°C)	-11.3	-8.1	-0.8	10.9	18.6	23.2	25.9	25.4	19.0	10.5	-0.5	-8.5	8.7
Daily Minimum (°C)	-21.4	-18.3	-10.7	-2.0	4.5	10.7	13.5	12.1	6.4	-0.5	-9.2	-17.8	-2.7
Rainfall (mm)	0.2	2.7	9.7	19.2	54.1	90.0	79.5	77.0	45.5	32.7	6.9	1.5	418.9
Snowfall (cm)	24	12	16	11	3	0	0	0	0	5	20	23	114
Precipitation (mm)	19.9	13.8	24.5	30.0	56.7	90.0	79.5	77.0	45.8	37.5	25.0	21.5	521.1
Windspeed (km/h)	17.4	16.9	18.0	18.5	18.4	16.3	14.6	15.4	16.9	18.0	17.9	17.4	17.1
Most Frequent Direction	S	S	S	S	S	S	S	S	S	S	S	S	S

[1]*Environment Canada, 2012*

3.2 Terrestrial Environment

3.2.1 Physiographic Setting

The project site is located in the central lowland of the Red River Plain. Topographically, it is smooth with slopes ranging from level to gently sloping (<2%). The Gunn Road Industrial Park area is graded flat and drained with open ditches.

According to *Terrestrial Ecozones, Ecoregions, and Ecodistricts of Manitoba,* soils in the area have been characterized as imperfectly drained Gleyed Humic Vertisol and Gleyed Vertic Black Chernozems and poorly drained Gleysolic Humic Vertisols and Humic Greysols. Sediments are typically calcareous, clayey glaciolacustrine sediments (Agriculture and Agri-Food Canada, 1998). The physiographic setting at the site has been heavily disturbed by industrial development over the course of more than 50 years. No further impacts are anticipated based on continued operation at the Juliana facility as there are no discharges to the surrounding land from the operations.

3.2.2 Soils and Agriculture

Soil materials in the vicinity of the site are classified as Class 3 soils that have moderately severe limitations for arable agriculture. The soils directly on the site and within the vicinity of the site have been disturbed by industrial development and are neither suitable nor available for agricultural purposes.

3.2.3 Vegetation

Historically, vegetation in the Winnipeg Ecodistrict included tall prairie grass, meadow prairie grass, and meadow grass communities. Trees that are native to the area include bur oak, trembling aspen, snow berry, hazelnut, red-osier dogwood, white elm, basswood, cottonwood, Manitoba maple, green ash, willow, ferns and associated herbaceous plants. Because of the land uses in the vicinity of the project site, native vegetation has been removed by previous development. Potential environmental effects to vegetation as a result of works at the Juliana facility are not anticipated.

3.2.4 Wildlife

The characteristic mammals of the Lake Manitoba Plain Ecoregion include significant waterfowl, white-tailed deer, coyote, rabbit and ground squirrel (Agriculture and Agri-Food Canada, 2013). The Canada Land Inventory classifies the land around the project site as Class 5, which has moderate limitations for the production of ungulates (Natural Resources Canada, 1972). The area immediately surrounding the project site has been disturbed as a result of industrial development and significant transportation infrastructure, and therefore provides poor wildlife habitat. Potential environmental effects to wildlife as a result of works at the Juliana facility are not anticipated.

3.2.5 Species of Conservation Concern

Undisturbed areas of native vegetation have greater potential to support species of conservation concern, which may include species protected under federal and/or provincial legislation. There are no undisturbed areas of native vegetation within the vicinity of the project site. A screening of the MBCDC database in October 2014 indicated that there were no known occurrences of species of concern within the property and the project site. Chris Friesen, a Biodiversity Information Manager at the Manitoba Conservation Data Centre, also stated there were no recorded occurrences of rare species within the vicinity of Juliana's facility as of October 2014. A copy of the response is provided in **Appendix D.** No adverse effects to species of conservation concern are anticipated.

3.3 Aquatic Environment

3.3.1 Geology and Hydrogeology

The Winnipeg region sits upon stable bedrock consisting of limestones, dolomites, and calcareous shales. Periods of continental glaciations across the northern part of North America deposited the layer of till that presently overlies the bedrock in the Winnipeg area. Meltwater from the last retreating glacier formed Glacial Lake Agassiz. Lake Agassiz existed in Winnipeg until about 8,000 years ago and the sediments deposited in the lake form the Agassiz clay deposits in the Winnipeg area. Weathering of the Agassiz clay deposits, combined with depositions from periodic flooding of the Red and Assiniboine Rivers, resulted in the deposits, which include surface soils of the Winnipeg area.

The hydrogeological conditions in the City of Winnipeg are controlled by three main lithologic units. The upper unit consists of glaciolacustrine clay deposits with occasional silt horizons that contain variable shallow "perched" water table conditions created by infiltration of surface waters. A complex till zone with intertill sand and gravel deposits underlies the clays. The bedrock is

composed of carbonate deposits and occurs at a depth of approximately 25 m regionally. The bedrock aquifer is confined with the dominant groundwater flow direction towards the centre of the Winnipeg draw down cone near the confluence of the Red and Assiniboine Rivers.

Toward the northeast of the Winnipeg Area, where the Gunn Road Industrial Park is located, there are small, sand and gravel aquifers that provide limited amounts of groundwater (Agriculture and Agri-Food Canada, 1998). The Juliana facility, along with the many of the other businesses in the Gunn Industrial Park, uses this groundwater as the water source for process and potable water. Groundwater is accessed through two private wells on the Juliana property. There are no discharges of water or waste to the surrounding environment from the Juliana facility therefore continued operation of the Juliana facility is not expected to impact the groundwater in the area.

3.3.2 Surface Water

Surface water in the Gunn Road Industrial Park is drained to the Cordite Ditch which flows northwest to a municipal holding pond and then continues along Bunn's Creek to the Red River. The Cordite ditch is a part of a larger stormwater management network; connecting the retention ponds in Kilcona Park and Harbour View and the All Seasons retention pond. The lands along the Cordite ditch became part of a municipal trail system in the City of Winnipeg and are therefore maintained in a more natural state for recreational purposes. Bulrushes and other emergent plants grow along the banks of the ditch and provide habitat for waterfowl, hawks, and smaller predatory mammals such as foxes and skunks. There is no outdoor storage of product that could result in contaminated runoff from the site and there is no process water discharge from the Juliana facility to land or water; therefore no impacts to surface water are anticipated.

3.4 Air

Humid air is discharged from the dehydrators during the product drying process. There are no known contaminants present in the dehydrator air flow. During the initial drying stages, a noticeable odour similar to cooking meat is present in the immediate area of the facility; however, to date Juliana has not received any odour complaints.

3.5 Noise

The City of Winnipeg's Neighbourhood Liveability By-law (2011) restricts industrial noise emissions within 150 m of residential developments. As the nearest residences are located over 500 m to the south, off-site noise impacts are not considered to be of concern.

3.6 Waste

Current operations produce wastewater which is hauled to the R.M. of Springfield lagoon and non-hazardous solid waste products, including plastics, paper, discarded product, and other manufacturing wastes. The solid waste is collected in a typical auto bin type dumpster and is hauled off-site for disposal in a licensed landfill by a third party contractor.

The future operation of the wastewater pre-treatment system, including the side-hill screen and plate filter sludge press, will create two additional waste streams: a screenings stream and a dewatered sludge cake stream. The screenings will be primarily fat and meat that have been dislodged from the product during rinsing. The screenings will be bagged and stored in a bin for

regular collection and recycling by Rothsay Winnipeg. This beneficial reuse of the screenings is an improvement over the current process where these solids collect in the sludge and scum layer in the wastewater storage tank and are eventually landfilled.

The dewatered sludge cake produced from the plate filter press will be bagged and landfilled. This process is similar to the existing operation previously described except the dewatered sludge volume will be significantly reduced compared to the wet volume currently drawn periodically from the wastewater storage tank. Actual volume of sludge produced from the wastewater pre-treatment and sludge dewatering process will be variable (based on product type and treatment performance), but it is estimated that approximately 0.5 m^3 of dewatered sludge cake at 30% solids content will be produced per day during regular operation.

The addition of the wastewater pre-treatment system is expected to significantly improve the quality of wastewater hauled to the Springfield lagoon with respect to solids loading, organic loading, and overall wastewater volume. The final quality of the treated effluent is projected to be a minimum BOD reduction of 70% and FOG reduction of 80%**.** If disinfected effluent reuse is found to be feasible, the effect of this practice will be to reduce the volume of wastewater shipped off-site from the facility.

3.7 Heritage Resources

There is no construction proposed at the Juliana site. The site is located in an existing industrial park. Therefore, there are no impacts to heritage resources are anticipated as a result of the continued operation of this facility.

3.8 Socioeconomics

Juliana has been operating since 1999 and is located on existing industrial lands in the R.M. of Springfield. Juliana plays a positive role in the local, regional and provincial economy through direct and indirect employment. Currently, Juliana manufacturing supports a staff of approximately 10 full-time employees. The addition of a wastewater treatment system will require hiring or training a Class 1 operator, which is a skilled position. It is anticipated that the employment resulting from operations at Juliana will continue to have a positive socio-economic impact in the area.

4.0 MITIGATION AND RESIDUAL EFFECTS

4.1 Chemical Storage

Chemicals used in the production process are detailed in **section 2.3.2**. The caustic soda and sodium sulphide are used in dry pellet form and are stored in single use bags away from sources of heat and moisture. The hydrogen peroxide and mould inhibitor are stored in closed, bulk liquid containers on spill containment bases. Petroleum based chemicals, flammable liquids, or other hazardous chemicals are not used at the Juliana facility.

The wastewater pre-treatment system will require the use of additional chemicals at the facility; hydrochloric acid (for pH control), poly aluminum chloride, and a proprietary anionic flocculant called Superfloc 4818. All chemicals will be stored in bulk liquid form; in sealed drums or totes. Separate spill containment bases will be provided for each chemical. By ensuring physical containment and separated storage of the products, the possibility of chemical incompatibility or spills resulting in environmental impacts and the area of potential impacts is minimized.

4.2 Monitoring

4.2.1 Current Practices

No regular soil, air, or water quality monitoring programs are in place at the Juliana facility.

4.2.2 Proposed Monitoring Regime

Wastewater quality monitoring will be performed according to the requirements of the receiving facility; in this case the R.M. of Springfield lagoon. It is anticipated that annual wastewater quality analysis will be required. Additional monitoring is not proposed at this time.

5.0 DECOMMISSIONING

No decommissioning of the Juliana facility is planned. If decommissioning of Juliana should be required at some future time, site decommissioning would be undertaken in a manner consistent with up-to-date environmental standards and legislation, as well as a consideration of the intended future use(s) at the site.

At least three months prior to decommissioning, Juliana would inform CWS of its intent to shut down operations at the site. Based on the consideration of the intended future uses(s) of the site, Juliana would develop a detailed closure plan for the facility in consultation with CWS and other affected stakeholders.

6.0 LIMITATIONS

This report was prepared by Dillon Consulting Limited for the sole benefit of Juliana Manufacturing Limited. The material in this report reflects Dillon's best judgement in light of the information available to Dillon at the time of preparation. Dillon accepts no responsibilities for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Respectfully submitted,

Dillon Consulting Limited

Francesco Zurzolo, M.Sc., E.I.T.
Project Manager

Dennis Heinrichs, P.Eng., M.Sc.
Senior Technical Review

References

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Natural Resources Canada. (1972, January 1)*. Land Capability for Ungulates. Retrieved October 15, 2014, from Canada Land Inventory: http://geogratis.gc.ca/api/en/nrcan-rncan/ess-sst/fbf9108e-74a4-57b9-b6d7-9ec01b02dcd1.html*

City of Winnipeg. March 8, 2008. *The City of Winnipeg Zoning By-law 200/06. Available at: http://www.winnipeg.ca/ppd/bylaws/Bylaw200/By-law_200.2006.htm. Accessed on November 4, 2014.*

Appendix A
Land and Mineral Rights Title

DILLON CONSULTING

Sunstrum, Mary <msunstrum@dillon.ca>

355 Transport Road - Mines and Mineral Rights

Little, Karen (CLPA) <Karen.Little@gov.mb.ca> Wed, Oct 22, 2014 at 3:58 PM
To: "Sunstrum, Mary" <msunstrum@dillon.ca>

Mary – according to The Crown Land Registry System this date:

SW 15-11-4 EPM – The Dominion of Canada originally granted this ¼ section to Adam Black in January 1897 along with the mines & minerals and sand & gravel. The Crown kept no interests.

- According to Title 1668370/1 there are no exceptions therefore ownership remains the same as when the land was originally granted therefore the mines & minerals and sand & gravel continue to be with this surface title.

Sincerely,

Karen Little

Supervisor of Crown Lands Registry

Crown Lands and Property Agency

308 - 25 Tupper Street North

Portage la Prairie MB R1N 3K1

P 204-239-3805 F 204-239-3560

Toll Free 1-866-210-9589

karen.little@gov.mb.ca

CLPA

An Agency of the Manitoba Government

mail and all attachments from your system.

From: Sunstrum, Mary [mailto:msunstrum@dillon.ca]
Sent: October-22-14 2:08 PM
To: Little, Karen (CLPA)
Subject: Re: 355 Transport Road - Mines and Mineral Rights

[Quoted text hidden]

image001.jpg
20K

PITBLADO
BARRISTERS & SOLICITORS
Commodity Exchange Tower
2500 – 360 Main Street
Winnipeg, Manitoba, Canada, R3C 4H6
Tel: (204) 956-0560
Fax: (204) 957-0227
E-mail: firm@pitblado.com

Fax Transmission

Name	Firm	City	Telephone	Fax
John van der Meulen	Juliana Manufacturing	Winnipeg	668-9989	668-9943

From: Murray W. Froese **Direct Line:** 956-3547

Date: October 17, 2002 **No. of Pages** *(including cover):* 10 **File Number:** 27994/3

Message:

PERSONAL & CONFIDENTIAL

Please see attached documents.

If you experience any problems, please call (204) 956-0560, ext. 600 as soon as possible.

Rural Municipality of Springfield

P.O. Box 219
628 Main Street
Oakbank, Manitoba
R0E 1J0
Phone (204) 444-3321
Fax (204) 444-2137

October 17, 2002

Office of the Fire Commissioner
Dennis Beacham P.Eng
508 Norquay Building
401 York Ave
Winnipeg, Manitoba R3C 0P8

VIA FAX 948-2089

Attn.: Mr. Beacham

Re: Addition to the existing Juliana Manufacturing Building
DX 2002/42
SW ¼ 15-11-4E, Lot 6 Block 4 Plan 35572, # 355 Transport Rd
Roll 71068

Mr. John Vander Meulen of Juliana Manufacturing submitted plans for the construction of an addition to the existing F2 Industrial Building located on Lot 6 Block 4 Plan 35572 within the SW ¼ 15-11-4E on 355 Transport Rd. This parcel is zoned "M2" Heavy Industrial District under the Springfield Town Planning Scheme 1959. I would like to thank Mr. John Vander Meulen of Juliana Manufacturing and Mr. Murray Froese of Pitbiado Barristers and Solicitors for the information pertaining to the agreement between the purchaser and the developer.

This letter is to advise you that this complies with the zoning regulation for this area.

Conditions of the Development Permit are as follows:

1. Approval for a building permit from the Office of the Fire Commissioner

Rural Municipality of Springfield

Dan Doucet, C.E.T.
Development Officer

p.c. Mr. John Vander Meulen, Juliana Manufacturing VIA FAX 668-9943
p.c. Mr. Murray Froese, Pitbiado Barristers and Solicitors VIA FAX 957-0227

PITBLADO
BARRISTERS & SOLICITORS

2500 - 360 Main Street
Winnipeg, Manitoba
Canada R3C 4H6

Tel. (204) 956 0560
Fax (204) 957 0227
E-mail firm@pitblado.com

Reply to:
Murray W. Froese
Direct (204) 956 3547
froese@pitblado.com

File No. 27994/3

Sent by Fax

October 16, 2002

Rural Municipality of Springfield
Oakbank, MB R0E 1J0

Attention: Mr. Dan Doucet

Dear Sir:

Re: Juliana Manufactoring Ltd.

Further to our discussions concerning this matter enclosed herewith please find the copy of the Offer to Purchase wherein Juliana purchased the subject property from the developer, Mr. McDonald. You will note that the offer is specifically subject to the condition that "the Purchaser can operate a pet food manufacturing business". On the back of the Offer to Purchase which we also fax, we note that there is a specific reference to the fact that the offer is "subject to Agriculture Canada approving import of raw pig ears from the United States. Arrangements with AG Canada must be satisfactory to Purchaser". We understand that all of those conditions were met and the property was purchased and the building was subsequently constructed.

We note in particular that there is no prohibition under the subdivision agreement with respect to the manufacturing of pet treats which is in fact the business of Juliana Manufacturing.

Should there be any difficulty with this matter please do not hesitate to contact the writer.

Yours very truly,

PITBLADO

per:

ORIGINAL SIGNED BY

Murray W. Froese
MWF/co

Enclosure
cc: Juliana Manufactoring Ltd.
Attention: John van der Meulen

686267\01\27994.3

ATT'N: JENNETT

OFFER TO PURCHASE REAL ESTATE

I/We JULIANA MANUFACTURING of the CITY of WINNIPEG, in the Province of Manitoba, BUSINESSMAN (Occupation)

hereby offer and agree to purchase through NA (Broker's Name) as agent for the Vendor, the land and premises known as

Street address or legal description or both.

LOT 6, BLOCK 4 PLAN 35572 clear of all encumbrances and encroachments unless hereinafter stated, and subject to the property being in compliance with all existing building restrictions, at and for the price of $ 24,000.00 payable as follows:

A deposit of $ 1,000.00 to be applied towards the cash payment on this Offer (to be refunded if this offer is not accepted) $

A further cash payment of $ on or before possession and adjustment date $

The balance as follows: PAYMENT OF BALANCE ON DATE OF POSSESSION

Total Purchase Price

All Adjustments of taxes, rentals, insurance premiums and any other adjustments to be made as of the 1st day of AUG. 1999.

Possession date JULY 1, 99 (State whether vacant or otherwise) VACANT

The purchase price to include electric light fixtures, heating and plumbing fixtures as installed, screen windows and doors now on the premises which are clear of all encumbrances except NA.

If no promise, undertaking or guarantee — State none

Any promise, undertaking or guarantee made by the Broker or salesman must be attached to and form part of this offer. (If no promise or guarantee — State none.) NONE

The property, until date of possession, shall remain at the risk and responsibility of the Vendor.

In signing this agreement I rely entirely upon my personal inspection and knowledge of the property independent of any representation made by or on behalf of the owner. This agreement, when accepted by the owner, shall constitute a binding contract of purchase and sale, and time shall, in all respects be of the essence thereof.

I hereby make a cash deposit of $ in trust on account of this purchase payable to the the said agents, which deposit is to be returned to me without deduction or interest if the Vendor does not accept this offer by the day of , 19

Insert date (if any)

After the offer has been accepted by the Vendor the deposit shall become part of the purchase price and shall be held by the vendor's agent, in trust, for the Vendor to be paid over to him when he carries out his obligation under this agreement, but to be returned to me should he fail to do so.

Should I/We fail to comply with the terms of this offer, the Vendor may (at his option) cancel this agreement and retain the deposit as liquidated damages and not as a penalty, or take what other remedies he, the Vendor, may have at law.

If further space is needed use reverse side or attach separate sheet.

This offer is subject to the following conditions (if any). THE PURCHASER CAN OPERATE A PET FOOD MANUFACTURING BUSINESS. SCHEDULE (A) ATTACHED

WITNESS my hand and seal this 7 day of JAN. 1999.

Witness

Signature of Purchaser

(Name of Purchaser's Solicitors, if any)

Address

ACCEPTANCE

I/We hereby accept the above offer and agree to and with to duly complete this sale on the terms and conditions above mentioned. Should I fail to do so the purchaser may (at his option) cancel this agreement and withdraw his deposit, or take what other remedies he, the purchaser, may have at law.

State in terms of percentage or dollars.

I/We also agree to pay NA my Broker's commission of NA and direct and authorize them to retain and apply the cash deposit or so much thereof as is required to pay the said commission as and when such deposit becomes properly payable to me. I hereby irrevocably direct and authorize my solicitors to promptly pay any unpaid commission out of the sale proceeds.

Any alternative commission arrangements must be stated.

WITNESS my hand and seal this 7 day of JAN. 1999

Signature of Vendor

SLADEN ADLEMAN

(Name of Vendor's Solicitor, if any)

1300 PLESSIS

Address

2. Subject to AGRICULTURAL CANADA APPROVING IMPORT OF RAW PIGS EARS FROM THE UNITED STATES.

ARRANGEMENTS WITH AG. CANADA MUST BE SATISFACTORY TO PURCHASER.

BASTIN & SHEPHERD

MANITOBA LAND SURVEYORS

RICHARD O. BASTIN, M.L.S., C.L.S., B.C.L.S.
WILLIAM W. SHEPHERD, M.L.S., C.L.S.

5th FLOOR, 115 BANNATYNE AVENUE
WINNIPEG, MANITOBA R3B 0R3
TELEPHONE 956-2356
FAX 942-0765

FILE NO 3801/98/253

Mr. Ken MacDonald
Box 15 Grp. 525 R.R. #5
Winnipeg, Manitoba
R2C 2Z2

Dear Sir:

Re: Staking Certificate--Lot 6 Block 4 Plan 35572 WLTO in W½ 15-11-4 EPM

Registered Owner: Gunn Road Industrial Park Ltd.

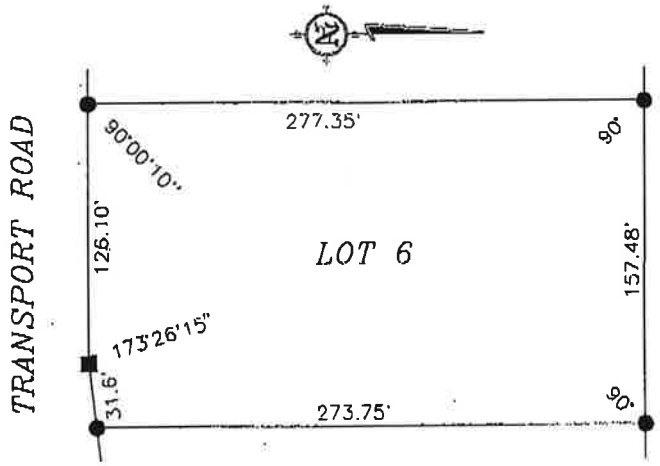
Certificate of Title: 1552134 –searched October 30, 1998

Legal Description: Lot 6 Block 4 Plan 35572 WLTO in W½ 15-11-4 EPM

Encumbrances: Instruments 2041497, 2093680 and 2310727 . Encumbrances noted herein are provided for information purpose only and have not been investigated as to their intent or extent.

As requested, this is to certify that we have staked or referenced the boundaries of the above described land. Refer to the sketch below. This survey was made on the 21st day of September, 1998.

There are no encroachments above ground level onto the above described land by buildings from adjoining properties.

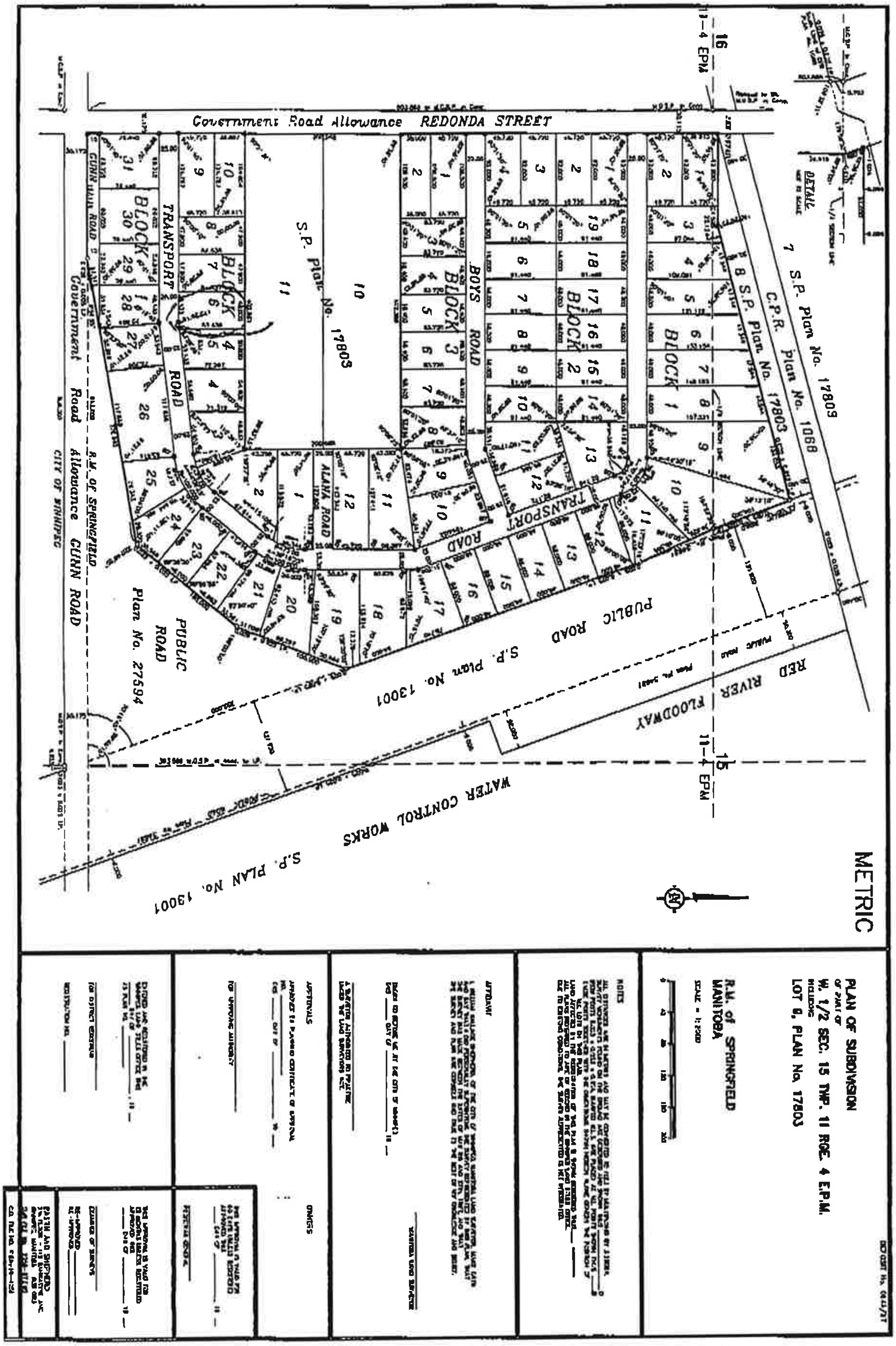


● Denotes 1/2" x 1/2" iron post

■ Denotes 1" x 1" iron post

Signed and sealed this 11th day of January, 1999.

William W. Shepherd, M.L.S.,C.L.S.


Government Road Allowance REDONDA STREET
S.P. Plan No. 17803
7 S.P. Plan No. 17809
C.P.R. Plan No. 1068
8 S.P. Plan No. 17803
BLOCK 1
BLOCK 2
BLOCK 3
BLOCK 4
BOYS ROAD
TRANSPORT ROAD
ALANA ROAD
GUNN ROAD
R.M. of SPRINGFIELD
CITY OF WINNIPEG
Government Road Allowance GUNN ROAD
PUBLIC ROAD
Plan No. 27594
PUBLIC ROAD
S.P. Plan No. 13001
RED RIVER FLOODWAY
WATER CONTROL WORKS
S.P. PLAN No. 13001
METRIC
PLAN OF SUBDIVISION
W. 1/2 SEC. 15 TWP. 11 RGE. 4 E.P.M.
LOT 8, PLAN No. 17803
R.M. of SPRINGFIELD
MANITOBA

SCHEDULE 11

Rural Municipality of Springfield

P.O. Box 219
628 Main Street
Oakbank, Manitoba
R0E 1J0
Phone (204) 444-3321
Fax (204) 444-2137

July 9, 2002

Owners of all Lots in Gunn Road Industrial Park

Re: Subdivision Agreement
and Land Use Restrictions
Gunn Road Industrial Park Ltd.

Enclosed herewith is a copy of Schedule "E" to an agreement made between the Rural Municipality of Springfield and Gunn Road Industrial Park Ltd. respecting the lands you currently occupy.

In particular we draw your attention to the following clauses:

3.1	minimum front, rear and side yard clearances
3.3	prohibiting storage of any goods or materials in the front yard or within 50 feet of any public right of way
3.4	landscaping of front, rear and side yards
5.1	fencing and height restrictions for outside storage areas
7.3	obligations run with the land

This correspondence is being sent to all landowners in an effort to make surroundings more aesthetically pleasing and is not to be interpreted as being an opinion in respect to your particular premises.

We are also in contact with the original developer in an effort to determine when outstanding obligations in respect to roads and ditches will be fulfilled to further enhance your neighbourhood.

If you have any concerns in this respect please do not hesitate to advise.

Yours truly,

C Draper

Eric Towler,
Chief Administrative Officer

ET/cd
Encl.

cc. Building Inspector
Public Safety Officer

Schedule "E" to Agreement between The Rural Municipality of Springfield and ~~Kenneth H.~~ GUNN RD INDUSTRIAL PARK LTD ~~MacDonald~~ in the matter of Subdivision Application No. 4189-96-4256.

Subdivision Agreement and Land Use Restrictions

THIS AGREEMENT made in triplicate this 10th day of FEB, A.D. 1998.

BETWEEN:

THE RURAL MUNICIPALITY OF SPRINGFIELD,
(hereinafter called "the Municipality"),
OF THE FIRST PART,

- and -

GUNN RD INDUSTRIAL PARK LTD.
~~KENNETH HAROLD MACDONALD of Winnipeg in Manitoba~~,
(hereinafter called "the Developer"),
OF THE SECOND PART.

WHEREAS;

(a) The Developer has applied for approval of a plan of subdivision of land hereinafter described; and

(b) The Municipality in so far as it has jurisdiction has recommended approval of the subdivision subject to the execution and the provisions of this agreement.

NOW THEREFORE in consideration of that recommendation of approval by the Municipality and the covenants hereinafter contained, the Municipality and the Developer covenant and agree that:

1.0 AREA AFFECTED

1.1 The land affected by this agreement is described as:
SP Lot 9 Plan 17803 WTLO together with all that portion of SW 1/4 15-11-4E excepting:
Firstly: Special Plot Plan 17803 WLTO;
Secondly: All that portion lying to the East of the West limit on Public Road Plan 7674 WLTO; and
Thirdly: Public Road Plan 27594 WLTO.

2.0 LAND USES

2.1 No uses shall be permitted on the land other than for those uses listed as "Permitted Uses" in Table V "The Industrial Use and Bulk Table" of Springfield Zoning By-Law which uses shall include any permitted or conditional uses listed in Table III (General Commercial Use and Bulk Table) and Table IV (Highway Commercial Use and Bulk Table) as set forth in the Springfield Zoning By-Law (By-Law 85-26) other than the prohibited uses identified hereunder.

2.2 The following uses are prohibited and shall not be permitted on the land:

1. automobile wrecking establishments;
2. junk, scrap, and salvage operations;
3. fuel yards (not including gas bars & truck stops);
4. drive in eating establishments, banks, laundries, and theatres;
5. hotels, motels, taverns, lounges and pubs;
6. bowling alleys;
7. private clubs, dance halls, recreation halls, banquet halls and auditoriums;
8. dry cleaning establishments;
9. automobile laundry;
10. bus terminal or bus depot;
11. churches;
12. dwellings
13. manufacture, sale, storage or distribution of fertilizers, explosives, chemicals, gases, or other dangerous goods;
14. stock yards and livestock auction markets;
15. processing of agricultural, milk, meat and food products;
16. rendering plants, abattoirs, and dead livestock removal;
17. mineral extraction operations;
18. racetracks;

19. airports and heliports;
20. waste disposal grounds;
21. power generating plants;
22. recycling operations not conducted entirely within a wholly enclosed building.

3.0 YARDS AND ALIGNMENTS

3.1 Notwithstanding the yards and alignments referred to in Tables III, IV, & V of Springfield Zoning By-Law (By-Law 85-26) all buildings and structures established on the land, excepting fences and walls shall provide the following minimum yards:

a)	Front Yard depth	75'	
b)	Side Yards	10'	
c)	Rear Yards	25'	except in the case of Lots 10 to 31 in Block 1 where the rear yard shall be a minimum of 75'.

3.2 No building or structure exceeding a height of 35', measured vertically from grade level to the highest point of the roof, shall be established on the land.

3.3 No storage of goods or materials of any kind shall be permitted in the front yard of any zoning site nor within 50' of the right of way of any public road, lane, street, freeway or thoroughfare.

3.4 All land set aside for front, side, and rear yards shall be landscaped and kept maintained to a standard consistent with other zoning sites within the planned area.

4.0 SIGNS

4.1 Up to two identification signs may be located on each lot within the Planned Area provided;

(a) the area of, or combined area of the sign(s), on a single site, shall not exceed 64 sq. feet; and
(b) each identification sign erected on the land shall be located at a distance inside the front and side property lines equal in distance to the height of that sign or 10 feet which ever is the greater distance.

5.0 OUTSIDE STORAGE

5.1 No outside storage shall be allowed, be located, be established, be permitted or be maintained on the land unless enclosed by light proof fencing constructed in accordance with a design and to a height submitted to and approved by the Council of the Rural Municipality of Springfield and further:

(a) no materials shall be stored within such storage area exceeding the height of the approved fence, except stockpiles of topsoil, gravel or sand; and
(b) the approved fencing shall be constructed before any goods, materials or merchandise are located within such approved storage area; and
(c) all such fencing shall be maintained in good condition at all times and in accordance with the approved plans during the existence of any such outside storage area.

6.0 SITE DEVELOPMENT PLANS

6.1 No building or structure, including free standing signs, and no parking areas shall be constructed, established, located, built or erected on the land unless and until site development plans, including the location and design of all proposed buildings, structures, fences, sufficient off street parking areas for owners, employees, visitors and/or customers, loading areas, outside storage areas, free standing signs, garbage containers, garbage enclosures, trees, shrubs and grassed areas have been submitted to and approved by the Municipality and no buildings, structures or works of any kind shall be constructed or placed on the land except in strict compliance with the approved plans and any amendments subsequently approved by the Municipality.

7.0 INCIDENTAL MATTERS

7.1 Nothing in this agreement shall restrict or affect the power of the Municipality to approve any further plan of subdivision or re-subdivision of the land or to amend, repeal or vary regulations applicable to the land or to enact a zoning by-law rezoning the land

and it is understood by the Developers that the execution of this agreement by the Municipality cannot operate to effect any variance or operate to relieve against compliance with any other by-law or regulation of the Municipality;

7.2 If any provision of this agreement conflicts with a provision of any variance now existing or made in future the most restrictive provision shall apply;

7.3 This agreement shall run with and be filed as a caveat against the land and shall bind the Developers, their heirs, executors, administrators, successors and assigns;

7.4 Time shall be the essence of this agreement.

EXECUTED by the Municipality and the Developer effective as of the date first above written.

ANN RD INDUSTRIAL PARK LTD

RURAL MUNICIPALITY OF SPRINGFIELD

Per: _____
Kenneth H. MacDonald

Per: _____
John Nicol -
Reeve

Per: _____
Eric Towler -
Chief Administrative Officer

DATE: 1999/10/27
TIME: 12:49
POST

MANITOBA

STATUS OF TITLE

TITLE NO: 1668370
PAGE: 1

STATUS OF TITLE..... ACCEPTED
ORIGINATING OFFICE..... WINNIPEG
REGISTERING OFFICE..... WINNIPEG
REGISTRATION DATE..... 1999/08/05
COMPLETION DATE..... 1999/08/13

PRODUCED FOR: PITBLADO, BUCHWALD, ASPER
BY: M.DERKSEN
LTO BOX NO: 111

LEGAL DESCRIPTION:

JULIANA MANUFACTURING LTD.

IS REGISTERED OWNER SUBJECT TO SUCH ENTRIES RECORDED HEREON, IN THE FOLLOWING DESCRIBED LAND:

LOT 6 BLOCK 4 PLAN 35572 WLTO
IN W 1/2 15-11-4 EPM

ACTIVE TITLE CHARGES:

2310727 WPG ACCEPTED CAVEAT REG'D: 1998/10/07
DESCRIPTION: EASEMENT
FROM/BY: THE MB. HYDRO-ELECTRIC BOARD & MTS COMMUNICATIONS INC.
TO:
CONSIDERATION: NOTES: AFF: WTN LTS R/W PL 36373

ACCEPTED THIS 5TH DAY OF AUGUST, 1999
BY C.DRYDEN FOR THE DISTRICT REGISTRAR OF
THE LAND TITLES DISTRICT OF WINNIPEG.

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA STORAGE SYSTEM ON 1999/10/27 OF TITLE NUMBER 1668370 .
THIS IS NOT A DUPLICATE TITLE.

X _____
FOR THE DISTRICT REGISTRAR

********** END OF STATUS OF TITLE FOR TITLE 1668370 WPG **********

BASTIN & SHEPHERD

MANITOBA LAND SURVEYORS

FILE NO 380I/98/253

RICHARD Q. BASTIN, M.L.S., C.L.S., B.C.L.S.
WILLIAM W. SHEPHERD, M.L.S., C.L.S.

5th FLOOR, 115 BANNATYNE AVENUE
WINNIPEG, MANITOBA R3B 0R3
TELEPHONE 956-2356
FAX 942-0785

Mr. Ken MacDonald
Box 15 Grp. 525 R.R. #5
Winnipeg, Manitoba
R2C 2Z2

Dear Sir:

Re: Staking Certificate--Lot 6 Block 4 Plan 35572 WLTO in W½ 15-11-4 EPM

Registered Owner: Gunn Road Industrial Park Ltd.

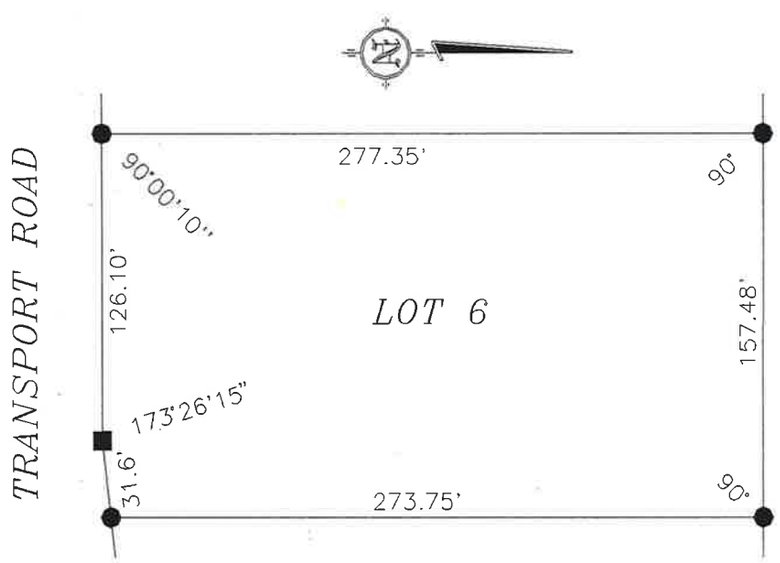
Certificate of Title: 1552134 --searched October 30, 1998

Legal Description: Lot 6 Block 4 Plan 35572 WLTO in W½ 15-11-4 EPM

Encumbrances: Instruments 2041497, 2093680 and 2310727 . Encumbrances noted herein are provided for information purpose only and have not been investigated as to their intent or extent.

As requested, this is to certify that we have staked or referenced the boundaries of the above described land. Refer to the sketch below. This survey was made on the 21st day of September, 1998.

There are no encroachments above ground level onto the above described land by buildings from adjoining properties.



● Denotes 1/2" x 1/2" iron post

■ Denotes 1" x 1" iron post

Signed and sealed this 11th day of January, 1999.

William W. Shepherd, M.L.S.,C.L.S.

Appendix B
Wastewater Sampling Analysis

RM of Springfield
ATTN: GREG ELSON
PO Box 219
Oakbank MB R0E 1J0

Date Received: 11-NOV-13
Report Date: 25-NOV-13 15:46 (MT)
Version: FINAL

Client Phone: 204-444-2241

Certificate of Analysis

Lab Work Order #: L1390333

Project P.O. #: NOT SUBMITTED
Job Reference: SPRINGFIELD/355 TRANSPORT RD
C of C Numbers:
Legal Site Desc:

Craig Riddell
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1390333-1 355 TRANSPORT							
Sampled By: Calvin Charles on 11-NOV-13							
Matrix: Sewage/Waste Water							
City of Winnipeg Schedule B							
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	3910		600	mg/L		13-NOV-13	R2743787
CCME Total Hydrocarbons							
F1-BTEX	0.62		0.10	mg/L		21-NOV-13	
F2-Naphth	17.6		0.25	mg/L		21-NOV-13	
Total Hydrocarbons (C6-C50)	136		0.44	mg/L		21-NOV-13	
Chromium +6 - Low Level							
Chromium, Hexavalent	<10	DLM	10	ug/L		13-NOV-13	R2740740
Cyanide, Total							
Cyanide, Total	0.0036	DLM	0.0020	mg/L		13-NOV-13	R2740316
Note: DL needs to be rased to 0.004 mg/L							
EPA 8270 Extractables							
1-Chloronaphthalene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
1-Methylnaphthalene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
1,2-Dichlorobenzene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
1,2,3-Trichlorobenzene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
1,2,4-Trichlorobenzene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
1,3-Dichlorobenzene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
1,4-Dichlorobenzene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2-Chloronaphthalene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2-Chlorophenol	<3.0	DLA	3.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2-Methylnaphthalene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2-Methylphenol	30.3	DLA	5.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2-Nitrophenol	<5.0	DLA	5.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2,3,4-Trichlorophenol	<5.0	DLA	5.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2,3,4,5-Tetrachlorophenol	<5.0	DLA	5.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2,3,4,6-Tetrachlorophenol	<5.0	DLA	5.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2,3,5-Trichlorophenol	<5.0	DLA	5.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2,3,5,6-Tetrachlorophenol	<5.0	DLA	5.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2,4-Dichlorophenol	<3.0	DLA	3.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2,4-Dimethylphenol	5.2	DLA	5.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2,4-Dinitrophenol	<10	DLA	10	ug/L	20-NOV-13	25-NOV-13	R2747133
2,4-Dinitrotoluene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2,4,5-Trichlorophenol	<5.0	DLA	5.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2,4,6-Trichlorophenol	<5.0	DLA	5.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2,6-Dichlorophenol	<5.0	DLA	5.0	ug/L	20-NOV-13	25-NOV-13	R2747133
2,6-Dinitrotoluene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
3,3'-Dichlorobenzidine	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
3&4-Methylphenol	214	DLA	50	ug/L	20-NOV-13	25-NOV-13	R2747133
4-Bromophenyl phenyl ether	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
4-Chloro-3-methylphenol	<5.0	DLA	5.0	ug/L	20-NOV-13	25-NOV-13	R2747133
4-Chloroaniline	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
4-Chlorophenyl phenyl ether	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
4-Nitrophenol	<6.0	DLM	6.0	ug/L	20-NOV-13	25-NOV-13	R2747133
4,6-Dinitro-2-methylphenol	<20	DLA	20	ug/L	20-NOV-13	25-NOV-13	R2747133
5-Nitroacenaphthene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Acenaphthene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Acenaphthylene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Anthracene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Benzo(a)anthracene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Benzo(a)pyrene	<0.50	DLA	0.50	ug/L	20-NOV-13	25-NOV-13	R2747133
Benzo(b)fluoranthene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1390333-1 355 TRANSPORT							
Sampled By: Calvin Charles on 11-NOV-13							
Matrix: Sewage/Waste Water							
EPA 8270 Extractables							
Benzo(ghi)perylene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Benzo(k)fluoranthene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Biphenyl	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Bis(2-chloroethoxy)methane	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Bis(2-chloroethyl)ether	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Bis(2-chloroisopropyl)ether	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Bis(2-ethylhexyl)phthalate	<20	DLA	20	ug/L	20-NOV-13	25-NOV-13	R2747133
Butylbenzyl phthalate	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Camphene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Chrysene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Di-n-butylphthalate	<20	DLA	20	ug/L	20-NOV-13	25-NOV-13	R2747133
Di-n-octylphthalate	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Dibenzo(a,h)anthracene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Dibenzofuran	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Diethylphthalate	2.2	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Dimethylphthalate	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Diphenyl ether	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Diphenylamine	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Fluoranthene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Fluorene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Hexachlorobenzene	<0.40	DLA	0.40	ug/L	20-NOV-13	25-NOV-13	R2747133
Hexachlorobutadiene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Hexachlorocyclopentadiene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Hexachloroethane	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Indeno(1,2,3-cd)pyrene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Indole	44	DLA	40	ug/L	20-NOV-13	25-NOV-13	R2747133
Isophorone	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
N-Nitroso-di-n-propylamine	<40	DLA	40	ug/L	20-NOV-13	25-NOV-13	R2747133
Naphthalene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Nitrobenzene	<4.0	DLA	4.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Pentachlorophenol	<5.0	DLA	5.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Perylene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Phenanthrene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Phenol	252	DLA	50	ug/L	20-NOV-13	25-NOV-13	R2747133
Pyrene	<2.0	DLA	2.0	ug/L	20-NOV-13	25-NOV-13	R2747133
Surrogate: 2-Fluorobiphenyl	87.7		30-130	%	20-NOV-13	25-NOV-13	R2747133
Surrogate: 2,4,6-Tribromophenol	56.7		40-150	%	20-NOV-13	25-NOV-13	R2747133
Surrogate: Nitrobenzene d5	N/A	SMI	50-130	%	20-NOV-13	25-NOV-13	R2747133
Surrogate: p-Terphenyl d14	N/A	SMI	50-150	%	20-NOV-13	25-NOV-13	R2747133
Surrogate: Phenol d5	N/A	SMI	30-130	%	20-NOV-13	25-NOV-13	R2747133
Note: DLM: Detection limit raised due to observed background interferences.							
F2-F4 PHC method							
F2 (C10-C16)	17.6		0.25	mg/L	12-NOV-13	12-NOV-13	R2740920
F3 (C16-C34)	96.0		0.25	mg/L	12-NOV-13	12-NOV-13	R2740920
F4 (C34-C50)	21.6		0.25	mg/L	12-NOV-13	12-NOV-13	R2740920
Surrogate: 2-Bromobenzotrifluoride	102.9		65-135	%	12-NOV-13	12-NOV-13	R2740920
Fluoride by Ion Chromatography							
Fluoride	<1.0	DLM	1.0	mg/L		12-NOV-13	R2741270
Mercury Total							
Mercury (Hg)-Total	<0.00020	DLM	0.00020	mg/L	13-NOV-13	13-NOV-13	R2741369
Nitrate as N by Ion Chromatography							

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1390333-1 355 TRANSPORT							
Sampled By: Calvin Charles on 11-NOV-13							
Matrix: Sewage/Waste Water							
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.50	DLM	0.50	mg/L		12-NOV-13	R2741270
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.71		0.71	mg/L		14-NOV-13	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.50	DLM	0.50	mg/L		12-NOV-13	R2741270
Nonyl phenols and ethoxylates-LC/MS-MS							
Nonylphenol	<20	DLM	20	ug/L		18-NOV-13	R2745244
Nonylphenol Monoethoxylates	<40	DLM	40	ug/L		18-NOV-13	R2745244
Nonylphenol Diethoxylates	<2.0	DLM	2.0	ug/L		18-NOV-13	R2745244
Octylphenol	<20	DLM	20	ug/L		18-NOV-13	R2745244
Octylphenol Monoethoxylates	<10	DLM	10	ug/L		18-NOV-13	R2745244
Octylphenol Diethoxylates	<2.0	DLM	2.0	ug/L		18-NOV-13	R2745244
Bisphenol A	<4.0	DLM	4.0	ug/L		18-NOV-13	R2745244
Total Nonylphenol Ethoxylates	<2.0		2.0	ug/L		18-NOV-13	R2745244
Total Octylphenol Ethoxylates	<2.0		2.0	ug/L		18-NOV-13	R2745244
PCB							
Aroclor 1016	<0.00010	DLM	0.00010	mg/L	14-NOV-13	15-NOV-13	R2742423
Aroclor 1221	<0.00010	DLM	0.00010	mg/L	14-NOV-13	15-NOV-13	R2742423
Aroclor 1232	<0.00010	DLM	0.00010	mg/L	14-NOV-13	15-NOV-13	R2742423
Aroclor 1242	<0.00010	DLM	0.00010	mg/L	14-NOV-13	15-NOV-13	R2742423
Aroclor 1248	<0.00010	DLM	0.00010	mg/L	14-NOV-13	15-NOV-13	R2742423
Aroclor 1254	<0.00010	DLM	0.00010	mg/L	14-NOV-13	15-NOV-13	R2742423
Aroclor 1260	<0.00010	DLM	0.00010	mg/L	14-NOV-13	15-NOV-13	R2742423
Aroclor 1262	<0.00010	DLM	0.00010	mg/L	14-NOV-13	15-NOV-13	R2742423
Aroclor 1268	<0.00010	DLM	0.00010	mg/L	14-NOV-13	15-NOV-13	R2742423
Surrogate: Decachlorobiphenyl	57.0		50-150	%	14-NOV-13	15-NOV-13	R2742423
Pesticides, Organochlorine							
Aldrin	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
a-chlordane	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
g-chlordane	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
alpha-BHC	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
beta-BHC	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
delta-BHC	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
o,p-DDD	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
pp-DDD	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
o,p-DDE	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
pp-DDE	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
op-DDT	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
pp-DDT	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
Dieldrin	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
alpha-Endosulfan	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
beta-Endosulfan	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
Endosulfan Sulfate	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
Endrin	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
Endrin Aldehyde	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
Hexachlorobenzene	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
Heptachlor	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
Heptachlor Epoxide	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
Lindane	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
Methoxychlor	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
Mirex	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177
Oxychlordane	<10	DLA	10	ug/L	15-NOV-13	21-NOV-13	R2745177

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1390333-1 355 TRANSPORT							
Sampled By: Calvin Charles on 11-NOV-13							
Matrix: Sewage/Waste Water							
Pesticides, Organochlorine							
Surrogate: 2-Fluorobiphenyl	N/A	SDO:RNA	30-130	%	15-NOV-13	21-NOV-13	R2745177
Surrogate: d14-Terphenyl	N/A	SDO:RNA	50-150	%	15-NOV-13	21-NOV-13	R2745177
Phenol (4AAP)							
Phenols (4AAP)	1.31		0.0010	mg/L	13-NOV-13	13-NOV-13	R2740741
Phosphorus, Total							
Phosphorus (P)-Total	38.0	DLA	0.20	mg/L		13-NOV-13	R2740367
Speciated Oil and Grease-Gravimetric							
Animal/Veg Oil & Grease	265		1.0	mg/L	13-NOV-13	13-NOV-13	R2742524
Oil and Grease, Total	267		2.0	mg/L	13-NOV-13	13-NOV-13	R2742524
Mineral Oil and Grease	2.2		1.0	mg/L	13-NOV-13	13-NOV-13	R2742524
Sulfate by Ion Chromatography							
Sulfate	56.4		5.0	mg/L		12-NOV-13	R2741270
Sulphide							
Sulphide	3.51		0.020	mg/L	13-NOV-13	13-NOV-13	R2740639
TOTAL PAH's							
Total PAHs	<9.0		9.0	ug/L		25-NOV-13	
Total Kjeldahl Nitrogen							
Total Kjeldahl Nitrogen	440	DLA	50	mg/L	13-NOV-13	19-NOV-13	R2745075
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.054	DLM	0.050	mg/L	13-NOV-13	13-NOV-13	R2741010
Antimony (Sb)-Total	<0.0020	DLM	0.0020	mg/L	13-NOV-13	13-NOV-13	R2741010
Arsenic (As)-Total	<0.0020	DLM	0.0020	mg/L	13-NOV-13	13-NOV-13	R2741010
Barium (Ba)-Total	0.0139	DLM	0.0020	mg/L	13-NOV-13	13-NOV-13	R2741010
Beryllium (Be)-Total	<0.0020	DLM	0.0020	mg/L	13-NOV-13	13-NOV-13	R2741010
Bismuth (Bi)-Total	<0.0020	DLM	0.0020	mg/L	13-NOV-13	13-NOV-13	R2741010
Boron (B)-Total	<0.10	DLM	0.10	mg/L	13-NOV-13	13-NOV-13	R2741010
Cadmium (Cd)-Total	<0.00010	DLM	0.00010	mg/L	13-NOV-13	13-NOV-13	R2741010
Calcium (Ca)-Total	8.2	DLM	1.0	mg/L	13-NOV-13	13-NOV-13	R2741010
Cesium (Cs)-Total	<0.0010	DLM	0.0010	mg/L	13-NOV-13	13-NOV-13	R2741010
Chromium (Cr)-Total	<0.010	DLM	0.010	mg/L	13-NOV-13	13-NOV-13	R2741010
Cobalt (Co)-Total	<0.0020	DLM	0.0020	mg/L	13-NOV-13	13-NOV-13	R2741010
Copper (Cu)-Total	0.0193	DLM	0.0020	mg/L	13-NOV-13	13-NOV-13	R2741010
Iron (Fe)-Total	<1.0	DLM	1.0	mg/L	13-NOV-13	13-NOV-13	R2741010
Lead (Pb)-Total	0.00372	DLM	0.00090	mg/L	13-NOV-13	13-NOV-13	R2741010
Lithium (Li)-Total	<0.020	DLM	0.020	mg/L	13-NOV-13	13-NOV-13	R2741010
Magnesium (Mg)-Total	7.28	DLM	0.10	mg/L	13-NOV-13	13-NOV-13	R2741010
Manganese (Mn)-Total	0.0150	DLM	0.0030	mg/L	13-NOV-13	13-NOV-13	R2741010
Molybdenum (Mo)-Total	0.0022	DLM	0.0020	mg/L	13-NOV-13	13-NOV-13	R2741010
Nickel (Ni)-Total	<0.020	DLM	0.020	mg/L	13-NOV-13	13-NOV-13	R2741010
Phosphorus (P)-Total	8.2	DLM	1.0	mg/L	13-NOV-13	13-NOV-13	R2741010
Potassium (K)-Total	37.0	DLM	0.20	mg/L	13-NOV-13	13-NOV-13	R2741010
Rubidium (Rb)-Total	0.0357	DLM	0.0020	mg/L	13-NOV-13	13-NOV-13	R2741010
Selenium (Se)-Total	<0.010	DLM	0.010	mg/L	13-NOV-13	13-NOV-13	R2741010
Silicon (Si)-Total	1.66	DLM	0.50	mg/L	13-NOV-13	13-NOV-13	R2741010
Silver (Ag)-Total	<0.0010	DLM	0.0010	mg/L	13-NOV-13	13-NOV-13	R2741010
Sodium (Na)-Total	51.9	DLM	0.30	mg/L	13-NOV-13	13-NOV-13	R2741010
Strontium (Sr)-Total	0.0502	DLM	0.0010	mg/L	13-NOV-13	13-NOV-13	R2741010
Tellurium (Te)-Total	<0.0020	DLM	0.0020	mg/L	13-NOV-13	13-NOV-13	R2741010
Thallium (Tl)-Total	<0.0010	DLM	0.0010	mg/L	13-NOV-13	13-NOV-13	R2741010
Thorium (Th)-Total	<0.0010	DLM	0.0010	mg/L	13-NOV-13	13-NOV-13	R2741010
Tin (Sn)-Total	<0.0020	DLM	0.0020	mg/L	13-NOV-13	13-NOV-13	R2741010
Titanium (Ti)-Total	<0.0050	DLM	0.0050	mg/L	13-NOV-13	13-NOV-13	R2741010

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1390333-1 355 TRANSPORT							
Sampled By: Calvin Charles on 11-NOV-13							
Matrix: Sewage/Waste Water							
Total Metals by ICP-MS							
Tungsten (W)-Total	<0.0010	DLM	0.0010	mg/L	13-NOV-13	13-NOV-13	R2741010
Uranium (U)-Total	<0.0010	DLM	0.0010	mg/L	13-NOV-13	13-NOV-13	R2741010
Vanadium (V)-Total	<0.0020	DLM	0.0020	mg/L	13-NOV-13	13-NOV-13	R2741010
Zinc (Zn)-Total	0.355	DLM	0.020	mg/L	13-NOV-13	13-NOV-13	R2741010
Zirconium (Zr)-Total	<0.0040	DLM	0.0040	mg/L	13-NOV-13	13-NOV-13	R2741010
Total Nitrogen Calculated							
Total Nitrogen	440		50	mg/L		19-NOV-13	
Total Polychlorinated Biphenyls (PCBs)							
Total Polychlorinated Biphenyls	<0.00030		0.00030	mg/L		15-NOV-13	
Total Suspended Solids							
Total Suspended Solids	875		5.0	mg/L		12-NOV-13	R2740340
Total Trihalomethanes (THMs)							
Total THMs	<0.0010		0.0010	mg/L		21-NOV-13	
VOC plus F1 by GCMS							
Acetone	0.245		0.020	mg/L		19-NOV-13	R2745872
Benzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Bromobenzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Bromochloromethane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Bromodichloromethane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Bromoform	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Bromomethane	<0.0010		0.0010	mg/L		19-NOV-13	R2745872
n-Butylbenzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
sec-Butylbenzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
tert-Butylbenzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Carbon disulfide	<0.0010	DLM	0.0010	mg/L		19-NOV-13	R2745872
Carbon Tetrachloride	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Chlorobenzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Chloroethane	<0.0010		0.0010	mg/L		19-NOV-13	R2745872
Chloroform	0.00080		0.00050	mg/L		19-NOV-13	R2745872
Chloromethane	<0.0010		0.0010	mg/L		19-NOV-13	R2745872
2-Chlorotoluene	<0.020		0.020	mg/L		19-NOV-13	R2745872
4-Chlorotoluene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Dibromochloromethane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,2-Dibromo-3-chloropropane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,2-Dibromoethane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Dibromomethane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,2-Dichlorobenzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,3-Dichlorobenzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,4-Dichlorobenzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Dichlorodifluoromethane	<0.0010		0.0010	mg/L		19-NOV-13	R2745872
1,1-dichloroethane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,2-Dichloroethane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,1-dichloroethene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
cis-1,2-Dichloroethene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
trans-1,2-Dichloroethene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Dichloromethane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,2-Dichloropropane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,3-Dichloropropane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
2,2-Dichloropropane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,1-Dichloropropene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
cis-1,3-Dichloropropene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
trans-1,3-Dichloropropene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1390333-1 355 TRANSPORT							
Sampled By: Calvin Charles on 11-NOV-13							
Matrix: Sewage/Waste Water							
VOC plus F1 by GCMS							
Ethylbenzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
F1	0.63		0.10	mg/L		19-NOV-13	R2745872
Hexachlorobutadiene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Hexane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
2-Hexanone (Methyl butyl ketone)	<0.020		0.020	mg/L		19-NOV-13	R2745872
Isopropylbenzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
4-Isopropyltoluene	0.00377		0.00050	mg/L		19-NOV-13	R2745872
MEK	0.026		0.020	mg/L		19-NOV-13	R2745872
MIBK	<0.020		0.020	mg/L		19-NOV-13	R2745872
MTBE	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Naphthalene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Styrene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,1,1,2-Tetrachloroethane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,1,2,2-Tetrachloroethane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Tetrachloroethene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Toluene	0.00697		0.00050	mg/L		19-NOV-13	R2745872
1,2,3-Trichlorobenzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,2,4-Trichlorobenzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,1,1-Trichloroethane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,1,2-Trichloroethane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Trichloroethene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Trichlorofluoromethane	<0.0010		0.0010	mg/L		19-NOV-13	R2745872
1,2,3-Trichloropropane	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,2,4-Trimethylbenzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
1,3,5-Trimethylbenzene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Vinyl Chloride	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
M+P-Xylenes	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
o-Xylene	<0.00050		0.00050	mg/L		19-NOV-13	R2745872
Xylenes	<0.00070		0.00070	mg/L		19-NOV-13	R2745872
Surrogate: 4-Bromofluorobenzene (SS)	89.0		70-130	%		19-NOV-13	R2745872
Surrogate: 1,4-Difluorobenzene (SS)	100.9		70-130	%		19-NOV-13	R2745872
pH							
pH	7.17		0.10	pH units		13-NOV-13	R2740894

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLA	Detection Limit Adjusted For required dilution
DLM	Detection Limit Adjusted due to sample matrix effects.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRQC	Refer to report remarks for information regarding this QC result.
SDO:RNA	Surrogate diluted out:% recovery not available
SMI	Surrogate recovery could not be measured due to sample matrix interference.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
625-WT	Water	EPA 8270 Extractables	SW846 8270

Aqueous samples are extracted and extracts are analyzed on GC/MSD.

BOD-WP	Water	Biochemical Oxygen Demand (BOD)	APHA 5210 B

The sample is incubated for 5 days at 20 degrees Celcius. Comparison of dissolved oxygen content at the beginning and end of incubation provides a measure of biochemical oxygen demand. If carbonaceous BOD is requested, TCMP is added to the sample to chemically inhibit nitrogenous oxygen demand. If soluble BOD is requested, the sample is filtered prior to analysis. Surface waters have a DL of 1 mg/L. Effluents are diluted according to their history and will have a sample DL of 6 mg/L or greater, depending on the dilutions used.

CN-TOT-WP	Water	Cyanide, Total	ISO 14403 (modified)

Total or strong acid dissociable (SAD) cyanide in aqueous matrices is determined by sample distillation and colourimetric detection.

CR-CR6-PWQO-IC-WT	Water	Chromium +6 - Low Level	EPA 7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

ETL-N-TOT-ANY-WP	Water	Total Nitrogen Calculated	Calculated
F-IC-WP	Water	Fluoride by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

F1-F4-CALC-WP	Water	CCME Total Hydrocarbons	CCME CWS-PHC DEC-2000 - PUB# 1310-L

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.
In samples where BTEX and F1 were analyzed , F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:
1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:
1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F2-F4-WS-WP	Water	F2-F4 PHC method	EPA 3510/8000

This is the determination of the Petroleum Hydrocarbon fractions in water (F2, F3 and F4). A water sample volume of 200 mL in a 250 mL glass amber bottle is shaken with 10 mL hexane for two hours on a wrist action shaker, and then sonicated for 5 minutes. After extraction, the solvent layer is drawn off and analyzed against C10, C16 and C34 standards on a gas chromatograph equipped with a flame ionization detector.

HG-T-CVAF-WP	Water	Mercury Total	EPA245.7 V2.0

Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.			
N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	Quickchem method 10-107-06-2-E Lachat
Samples are digested with a sulphuric acid solution, cooled, diluted with water, and analyzed for ammonia. Total Kjeldahl nitrogen is the sum of free-ammonia and organic nitrogen compounds which are converted to ammonium sulphate through this digestion process. Analysis is performed by Flow Injection Analysis (FIA). The pH of the digested sample is raised to a known, basic pH by neutralization with a concentrated buffer solution. This neutralization converts the ammonium cation to ammonia. The ammonia produced is heated with saliclyate and hypochlorite to produce blue colour which is proportional to the ammonia concentration.			
NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-WP	Water	Nitrite as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-IC-WP	Water	Nitrate as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NP,NPE-LCMS-WT	Water	Nonyl phenols and ethoxylates-LC/MS-MS	LC/MS-MS
OGG-SPEC-WT	Water	Speciated Oil and Grease-Gravimetric	APHA 5520 B
Sample is extracted with hexane, sample speciation into mineral and animal/vegetable fractions is achieved via silica gel separation and is then determined gravimetrically.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
PAH-SUM-CALC-WT	Water	TOTAL PAH's	CALCULATION
Total PAH represents the sum of all PAH analytes reported for a given sample. Note that regulatory agencies and criteria differ in their definitions of Total PAH in terms of the individual PAH analytes to be included.			
PCB-SUM-CALC-WP	Water	Total Polychlorinated Biphenyls (PCBs)	Calculation
Total Polychlorinated Biphenyls (PCBs) represents the sum of all PCB analytes analyzed for in a given sample. For the purpose of calculation, results less than the detection limit (DL) are treated as zero.			
PCB-WP	Water	PCB	EPA 8082A (modified)
A one litre sample of water is extracted with dichloromethane using separatory funnel techniques. Extracts are concentrated and solvent exchanged with 2,2,4-TMP. PCBs are analyzed by GC-ECD.			
PEST-OC-WT	Water	Pesticides, Organochlorine	SW846 8270
Pesticides are extracted from an aqueous sample at neutral pH using three separate aliquots. The extracts are combined, concentrated down to a known volume and analyzed on the GC/MSD.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
PHENOLS-4AAP-WT	Water	Phenol (4AAP)	EPA 9066
An automated method is used to distill the sample. The distillate is then buffered to pH 9.4 which reacts with 4AAP and potassium ferricyanide to form a red complex which is measured colorimetrically.			
SO4-IC-WP	Water	Sulfate by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
SOLIDS-TOTSUS-WP	Water	Total Suspended Solids	APHA 2540 D (modified)
Total suspended solids in aquesous matrices is determined gravimetrically after drying the residue at 103 105°C.			
SULPHIDE-WT	Water	Sulphide	APHA 4500S2D

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
THM-SUM-CALC-WP	Water	Total Trihalomethanes (THMs)	CALCULATION

Total Trihalomethanes (THMs) represents the sum of bromodichloromethane, bromoform, chlorodibromomethane and chloroform. For the purpose of calculation, results less than the detection limit (DL) are treated as zero.

VOC+F1-HSMS-WP	Water	VOC plus F1 by GCMS	EPA Method 8260C, Revision 3

In this method samples are analyzed using a headspace autosampler interfaced to a dual column gas chromatograph with MS and Flame Ionization detectors.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

12 - 1329 Niakwa Rd. E.
Winnipeg, Manitoba R2J 3T4
Tel: (204) 255-9720

L1390333-COFC

Chain of Custody / Analytical Request Form

CHEMISTRY INFO: (204) 255 9739
MICRO INFO: (204) 255 9740 OR (204) 255 9737

WORK ORDER NO: L1390333

FOR LABORATORY USE
Sample Condition Upon R[illegible] TABLE
☐ Frozen ☐ Cold ☐ Amb[illegible] mple Container 3°C
COMMENT:

LAB NO.:
DATE RECEIVED: 12/11/2013
TIME RECEIVED: 9:30 am
BY: TI

Date Sampled: Nov 11/13 Time: 12 : 00 A.M. ☐ P.M. ☑
Location: Springfield / 355 Transport Rd.
(Town, Community, City)

Date Required:
Submitter's Name Printed: Calvin Charles
Sample Submitted By:

Community Code Number:
Rural Municipality/LGC/UVD: Springfield

SAMPLE TYPE

DRINKING WATER
- ☐ Untreated Well
- ☐ Treated Well
- ☐ Treated Municipal
- ☐ Non-Treated Municipal
- ☐ Water-Surface-Raw
- ☐ Water-Surface-Treated

PURPOSE OF TEST
☐ Private ☐ Real Estate ☐ Water Main

PLEASE PRINT & PRESS FIRMLY

NON-DRINKING WATER
- ☑ Sewage/Waste Water
- ☐ Lake/River
- ☐ Swimming Pool
- ☐ Whirl Pool
- ☐ Other

City of Winnipeg
Schedule B

NOTES & CONDITIONS
1. Quote number must be provided to insure proper pricing.
2. Failure to properly complete all portions of this form may delay analysis.
3. ALS's liability limited to cost of analysis.

SERVICE REQUESTED
☑ REGULAR ☐ PRIORITY (50% SURCHARGE) ☐ EMERGENCY (100% SURCHARGE)

LAB NUMBER	SAMPLE IDENTIFICATION
	355 Transport - Oil + grease
	355 Transport - SVOC
	" " - Ethoxylates
	" " - Nonylphenols
	" " PAH's (HL)
	355 Transport - PAH/EPH/F2-F4
	" " "
	" " - Phenols
	" " (BTEX/VOC) x 3
	" " Mercury
	" " Cyanide
	" " BOD
	" " Hexavalent
	355 Transport Metals
	" " Sulphide
	" " Nutrients
	" " Routine

ALS CUSTOMER #: QUOTE #:

REPORT TO BE SENT TO
NAME: Greg Elson
COMPANY: RM Springfield
ADDRESS: Box 219
CITY/TOWN: Oakbank / PROV.: MB
POSTAL CODE: R0E 1J0
PHONE: 444-2241
BY: MAIL ☐ FAX ☐ (FAX NUMBER)
PICKUP ☐ E-MAIL ☑ gelson@rmofSpringfield.ca (EMAIL ADDRESS)

CC
NAME:
ADDRESS:
CITY/TOWN: / PROV.:
POSTAL CODE:
PHONE:
BY: MAIL ☐ FAX ☐ (FAX NUMBER)
PICKUP ☐ E-MAIL ☐ (EMAIL ADDRESS)

Analyses required

SAMPLING INSTRUCTIONS ON REVERSE SIDE

BILLING ADDRESS SAME AS REPORT TO ☐
NAME:
COMPANY:
ADDRESS:
CITY/TOWN: / PROV.:
POSTAL CODE:

PAYMENT PARTICULARS
- ☐ INVOICE NEEDED / CLIENT'S P.O. NO.
- ☐ INTERAC
- ☐ CASH Subtotal $
- ☐ CHEQUE G.S.T. $
- ☐ VISA / MASTERCARD Total $

* OUR POLICY IS NOT TO ACCEPT SAMPLES FROM THE PRIVATE CITIZEN WITHOUT PREPAYMENT

ENTERED IN LIMS BY: Cal Chas

Manitoba Technology Centre Ltd.
Part of the **ALS Laboratory Group**
12 - 1329 Niakwa Rd. E., Winnipeg, MB Canada R2J 3T4
Phone: +1 204 255 9720 Fax: +1 204 255 9721 **www.alsglobal.com**
A Campbell Brothers Limited Company

SUBMITTER COPY

Appendix C
Facility Classification Form

Water & Wastewater Facility Operators Certification Program

Manitoba Conservation

Application for Wastewater Treatment Facility Classification

also available online at http://www.manitoba.ca/certification

Please print clearly or type and follow the instructions on the application form.
NOTE: If using Adobe Reader text can be inserted into form and tab between fields.

This application is pursuant to the Water and Wastewater Facility Operators Regulation issued under The Environment Act.

Name of Facility:	Juliana Manufacturing Ltd.
Name of Facility Owner: (Municipality/Commission/ Company/Individual/etc)	John Van der Meulen
Civic Address of Facility:	355 Transport Road, Box 5, Group 582, RR#5, Winnipeg MB
Mailing Address of Owner:	same as above

Postal Code: R2C 2Z2	Telephone: (204) 668-9989
Contact Person: John Van der Meulen	Position: Owner

Cell or Pager:	Fax: (204) 668-9943	Email: johnjm@mymts.net

Is this a REAPPLICATION? ○ Yes ◉ No

Please complete the following. The information provided will be used to classify the wastewater treatment facility under the Water and Wastewater Facility Operators Regulation. In some cases actual numbers or answers must be supplied, but in most cases it will only be necessary to check the appropriate criteria.

Forward the completed form to:

Director
Environmental Assessment & Licensing Branch
Manitoba Conservation
160 – 123 Main Street
Winnipeg MB R3C 1A5

Please direct questions to:

Certification Program Coordinator
Phone: (204) 945-7065
Fax: (204) 945-5229

FOR MANITOBA CONSERVATION USE ONLY

Operation ID # _____

Stakeholder ID # _____

Approval ID # _____

EO/DWO _____

Application for Wastewater Treatment Facility Classification

SYSTEM *(choose all that apply)*			
1.	New or proposed Facility seeking classification	☑	
	Proposed start of operations (month / year) 03/03/2015		
	Existing Facility seeking classification (in operation prior to December 31, 2005)	☐	
	Facility has been in operation since (approximate month/year)		
2.	The facility **WILL** employ mechanical treatment processes	◉	
	The facility **WILL NOT** employ mechanical treatment processes	○	

SIZE *(refer to Supplemental Information for point designation) (2 point minimum to 20 point maximum)*				
1.	Maximum population or part served, peak day	#		1-10
2.	Design flow average day **Estimated** or **Actual** (Circle volume option & units) ◉ ○ **OR** Peak month's flow average day **Estimated** or **Actual** ○ ○	38 ◉ m^3/day ○ gal/day ○ m^3/day ○ gal/day		1-10

VARIATION IN RAW WASTE[1] *(choose all that apply) (0 point minimum to 6 point maximum)*			
1.	Variations do not exceed those normally or typically expected	☐	0
2.	Recurring deviations or excessive variations of 100-200% in strength	☑	2
	Recurring deviations or excessive variations of 100-200% in flow	☐	
	Recurring deviations or excessive variations of 100-200% in strength and flow	☐	
3.	Recurring deviations or excessive variations of more than 200% in strength	☐	4
	Recurring deviations or excessive variations of more than 200% in flow	☐	
	Recurring deviations or excessive variations of more than 200% in strength and flow	☐	
4.	Raw wastes subject to toxic waste discharges	☐	6
5.	Septage or truck-hauled waste discharge is accepted at the facility.	☐	0 - 4
	Estimated number of loads per day in peak haul times		

Application for Wastewater Treatment Facility Classification

PRELIMINARY TREATMENT *(choose all that apply)*			
1.	Facility pumping of main flow	☐	3
2.	Screening or comminution	☑	3
3.	Grit removal	☐	3
4.	Equalization	☑	1

PRIMARY TREATMENT *(choose all that apply)*			
1.	Clarifiers	☐	5
2.	Anaerobic treatment with biogas flare	☐	10
3.	Anaerobic treatment with biogas utilization facility	☐	15

SECONDARY TREATMENT *(choose all that apply)*			
1.	Fixed-film reactor	☐	10
2.	Activated sludge	☐	15
3.	Stabilization ponds without aeration (ie: sewage lagoon)	☐	5
4.	Stabilization ponds with aeration	☐	8

TERTIARY TREATMENT *(choose all that apply)*			
1.	Polishing ponds for advanced waste treatment	☐	2
2.	Chemical / physical advanced waste treatment without secondary treatment	☐	15
3.	Chemical / physical advanced waste treatment following secondary treatment	☐	10
4.	Biological or chemical / biological advanced waste treatment	☐	12
5.	Nitrification by designed extended aeration only	☐	5
6.	Ion exchange for advanced waste treatment	☐	10
7.	Reverse osmosis, electrodialysis and other membrane filtration techniques	☐	10
8.	Advanced waste treatment chemical recovery, carbon regeneration	☐	4

Application for Wastewater Treatment Facility Classification

9.	Media filtration	☐	5

ADDITIONAL TREATMENT PROCESSES *(choose all that apply)*			
1.	Chemical addition: *(Please list chemicals used, 2 pts per chemical to max. of 6)* coagulant (alum), polymer	☑	0 - 6
2.	Dissolved air floatation (other than for sludge thickening)	☑	8
3.	Intermittent sand filter	☐	2
4.	Recirculating intermittent sand filter	☐	3
5.	Microscreens	☐	5
6.	Generation of oxygen	☐	5

SOLIDS HANDLING *(choose all that apply)*			
1.	Storage (other than for stabilization)	☐	2
2.	Stabilization by storage (including any storage afterwards)	☐	4
3.	Gravity thickening	☐	2
4.	Mechanical dewatering	☑	8
5.	Anaerobic digestion of solids	☐	10
6.	Utilization of digester gas for heating or cogeneration	☐	5
7.	Aerobic digestion of solids	☐	6
8.	Air-drying of sludge	☐	2
9.	Solids reduction (including incineration and wet oxidation)	☐	12
10.	Disposal in landfill	☑	2
11.	Solids composting	☐	10
12.	Land application of biosolids by contractor	☐	2
13.	Land application of biosolids by facility personnel	☐	10

Application for Wastewater Treatment Facility Classification

DISINFECTION *(choose all that apply) (0 point minimum to 10 point maximum)*			
1.	Chlorination	☐	5
	Ultraviolet irradiation	☐	
2.	Ozonization	☐	10

EFFLUENT DISCHARGE *(choose all that apply) (0 point minimum to 10 point maximum)*			
1.	Discharge to surface water (ditch or lake or _____)	☑	0
2.	Mechanical post-aeration	☐	2
3.	Direct recycling and reuse	☐	6
4.	Land treatment and surface or subsurface disposal		4

INSTRUMENTATION *(choose one) (0 point minimum to 6 point maximum)*			
1.	SCADA or similar instrumentation systems are used to provide:		
	• Data with no process operation	◉	0
	• Data with limited process operation	○	2
	• Data with moderate process operation	○	4
	• Data with extensive or total process operation	○	6

LABORATORY CONTROL[2] *(choose all that apply) (0 point minimum to 15 point maximum)*			
1.	Bacteriological / Biological *(0 point minimum to 5 point maximum)*		
	• Lab work done outside the facility	☑	0
	• Membrane filter procedures	☐	3
	• Use of fermentation tubes or any dilution method of fecal coliform determination	☐	5
2.	Chemical / Physical *(0 point minimum to 10 point maximum)*		
	• Lab work done outside the facility	☑	0

Application for Wastewater Treatment Facility Classification

	• Push button or visual methods for simple tests such as pH or settleable solids *(List tests)*	☐	3
	• Additional procedures such as DO, COD, BOD, gas analysis, titration, solids content or volatile content *(List tests)*	☐	5
	• More advanced determinations such as specific constituents, nutrients, total oils or phenols *(List tests)*	☐	7
	• Highly sophisticated instrumentation such as atomic absorption or gas chromatograph *(List tests)*	☐	10

APPLICANT VERIFICATION	
I HEREBY DECLARE THAT ALL INFORMATION IN THIS APPLICATION IS TRUE.	
Name of Applicant[3]: (Print) Dennis Heinrichs,	
Title: P.Eng.	
Telephone: (204) 453-2301	Fax:
Email: dheinrichs@dillon.ca	
Signature of Authorized Representative:	Date: 11/06/2014

[1]The key concepts are frequency or intensity of deviation, or excessive variation from normal or typical fluctuations. The deviations in strength, toxicity, ratio of infiltration to inflow, or shock loads.

[2] The key concept is to credit laboratory analyses done on-site by facility personnel under the direction of an operator-in-charge with points from 0-15.

[3] Applicant must be an authorized representative of the owner/operating authority (i.e. manager, P. Eng., or overall responsible operator).

Print Application Form

Wastewater Treatment Form Supplemental Information

This is supplemental information for completing the Application for Wastewater Treatment Facility Classification Form only.

For exact definitions and text refer to Manitoba Regulation 77/2003, Water and Wastewater Facility Operators Regulation and amendment M.R. 162/2005, under The Environment Act (C.C.S.M. c E125).

A copy of the regulation is available by following the link for Manitoba Regulations at: http://www.gov.mb.ca/conservation/envapprovals/publs/index.html

Facilities are classified as follows:

Small system class
A wastewater treatment facility that otherwise meets the criteria of a class 1 wastewater treatment facility shall be classified in the small system class if

a) it treats wastewater from a population of no more than 500; and
b) no mechanical treatment processes are employed at the facility.

Classes 1 to 4
Wastewater treatment facilities shall be classified in classes 1 to 4 in accordance with the following table, on the basis of the number of classification points assessed under the classification point system set out in the Water and Wastewater Facility Operators Regulation.

Range of Classification Points	Classification
0 to 30	Class 1
31 to 55	Class 2
56 to 75	Class 3
76 or more	Class 4

Size

Points for size: (2 point minimum to 20 point maximum)

Maximum population or part served, peak day (1 point minimum to 10 point maximum). Points are assigned at 1 point per 10,000 population or part.

Design flow average day or peak month's flow average day, whichever is larger (1 point minimum to 10 point maximum). Points are assigned at 1 point per 4.5 megalitres per day or part.

Authorized Representative

Signatures for the Applicant Verification section must be an individual recognized by the Owner of the facility as able to sign official documentation (i.e. P.Eng., Manager, CAO, etc).

Appendix D

Manitoba Conservation Correspondance

Manitoba
Conservation and Water Stewardship
Environmental Compliance and Enforcement Branch
123 Main Street, Suite 160 (Box 60)
Winnipeg, Manitoba R3C 1A5
T 204-945-7100 **F** 204-948-2338
www.manitoba.ca

August 5, 2014

Mike Van der Meulen
Juliana Manufacturing Ltd.
355 Transport Road
Box Mr 452
Winnipeg MB R2C 2Z2

RE: Requirement for Juliana Manufacturing Ltd. to Apply for Licensing Pursuant to *The Environment Act*

Dear Mr. Van der Meulen:

Based on a visit to your facility on July 15, 2014, Manitoba Conservation and Water Stewardship would like to inform you that pet treat manufacturing and wastewater treatment are both Class 1 Developments under the *Classes of Development Regulation M.R. 164/88* and therefore require licensing under *The Environment Act.*

Please submit your Environment Act Proposal application **by September 30, 2014** to the following address:

Environmental Approvals Branch
Manitoba Conservation and Water Stewardship
Box 80, 123 Main Street
Winnipeg MB R3C 1A5
Attention: Tracey Braun, Director

A copy of *The Environment Act* proposal form and guide can be found at:
http://www.gov.mb.ca/conservation/eal/publs/index.html

If you have any questions regarding the above, please contact the undersigned at marguerite.reimer@gov.mb.ca or (204) 945-7016.

Sincerely,

Marguerite Reimer, Environment Officer
Environmental Compliance and Enforcement

cc: Tracey Braun, Director, Environmental Approvals Branch
Yvonne Hawryliuk, Regional Supervisor, Environmental Compliance and Enforcement

A complete **Environment Act Proposal (EAP)** consists of the following components:

- **Cover letter**
- **Environment Act Proposal Form**
- **Reports/plans supporting the EAP** (see "Information Bulletin - Environment Act Proposal Report Guidelines" for required information and number of copies)
- **Application fee** (Cheque, payable to Minister of Finance, for the appropriate fee)

Per Environment Act Fees Regulation (Manitoba Regulation 168/96):

Class 1 Developments	$1,000
Class 2 Developments	$7,500
Class 3 Developments:	
Transportation and Transmission Lines	$10,000
Water Developments	$60,000
Energy and Mining	$120,000

Submit the complete EAP to:

Director
Environmental Approvals Branch
Manitoba Conservation and Water Stewardship
Suite 160, 123 Main Street
Winnipeg, Manitoba R3C 1A5

For more information:
Phone: (204) 945-8321
Fax: (204) 945-5229
http://www.gov.mb.ca/conservation/eal

DILLON CONSULTING

Sunstrum, Mary <msunstrum@dillon.ca>

Juliana Manufacturing Environment Act Proposal

Friesen, Chris (CWS) <Chris.Friesen@gov.mb.ca> Thu, Oct 30, 2014 at 11:55 AM
To: "Sunstrum, Mary" <msunstrum@dillon.ca>

Mary

Thank you for your information request. I completed a search of the Manitoba Conservation Data Centre's rare species database and found no occurrences at this time for your area of interest.

The information provided in this letter is based on existing data known to the Manitoba Conservation Data Centre at the time of the request. These data are dependent on the research and observations of CDC staff and others who have shared their data, and reflect our current state of knowledge. An absence of data in any particular geographic area does not necessarily mean that species or ecological communities of concern are not present; in many areas, comprehensive surveys have never been completed. Therefore, this information should be regarded neither as a final statement on the occurrence of any species of concern, nor as a substitute for on-site surveys for species as part of environmental assessments.

Because the Manitoba CDC's Biotics database is continually updated and because information requests are evaluated by type of action, any given response is only appropriate for its respective request. Please contact the Manitoba CDC for an update on this natural heritage information if more than six months pass before it is utilized.

Third party requests for products wholly or partially derived from Biotics must be approved by the Manitoba CDC before information is released. Once approved, the primary user will identify the Manitoba CDC as data contributors on any map or publication using Biotics data, as follows as: Data developed by the Manitoba Conservation Data Centre; Wildlife Branch, Manitoba Conservation and Water Stewardship.

This letter is for information purposes only - it does not constitute consent or approval of the proposed project or activity, nor does it negate the need for any permits or approvals required by the Province of Manitoba.

We would be interested in receiving a copy of the results of any field surveys that you may undertake, to update our database with the most current knowledge of the area.

If you have any questions or require further information please contact me directly at (204) 945-7747.

Chris Friesen
Biodiversity Information Manager
Manitoba Conservation Data Centre
204-945-7747
chris.friesen@gov.mb.ca
http://www.gov.mb.ca/conservation/cdc/

-----Original Message-----
From:
Sent: October-20-14 2:17 PM
To: Friesen, Chris (CWS)
Subject: WWW Form Submission

Below is the result of your feedback form. It was submitted by WWW Information Request () on Monday, October 20, 2014 at 14:16:41

DocumentID: Manitoba_Conservation

Project Title: Juliana Manufacturing Environment Act Proposal

Date Needed: 2014/10/31

Name: Mary Sunstrum

Company/Organization: Dillon Consulting Limited

Phone: 519-438-1288 x 1282

Email: msunstrum@dillon.ca

Project Description: An Environment Act Proposal is being filled out for Juliana Manufacturing Ltd., which is an existing manufacturing facility that is adding a wastewater treatment system. The information obtained from the COnservation Data Centre will be used in the EAP to describe species of conservation concern that are located at the project site.

Information Requested: Please scan the Manitoba Conservation Data Centre's rare species database and advise of any rare species occurrences in the area of the project site.

Format Requested: Please send a Microsoft Word or Excel document by email.

Location: The project site is 355 Transport Road in the RM of Springfield MB. The legal address for the site is SW ¼ 15-11-4E, Lot 6 Block 4 Plan 72355 and Lot 6, Block 2, Plan 35572 in the RM of Springfield.

action: Submit
