

Al Meisner Ltd.
Concrete Batch Plant

Environment Act Proposal

Date Prepared: October 17, 2014

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1.0 Introduction and Background

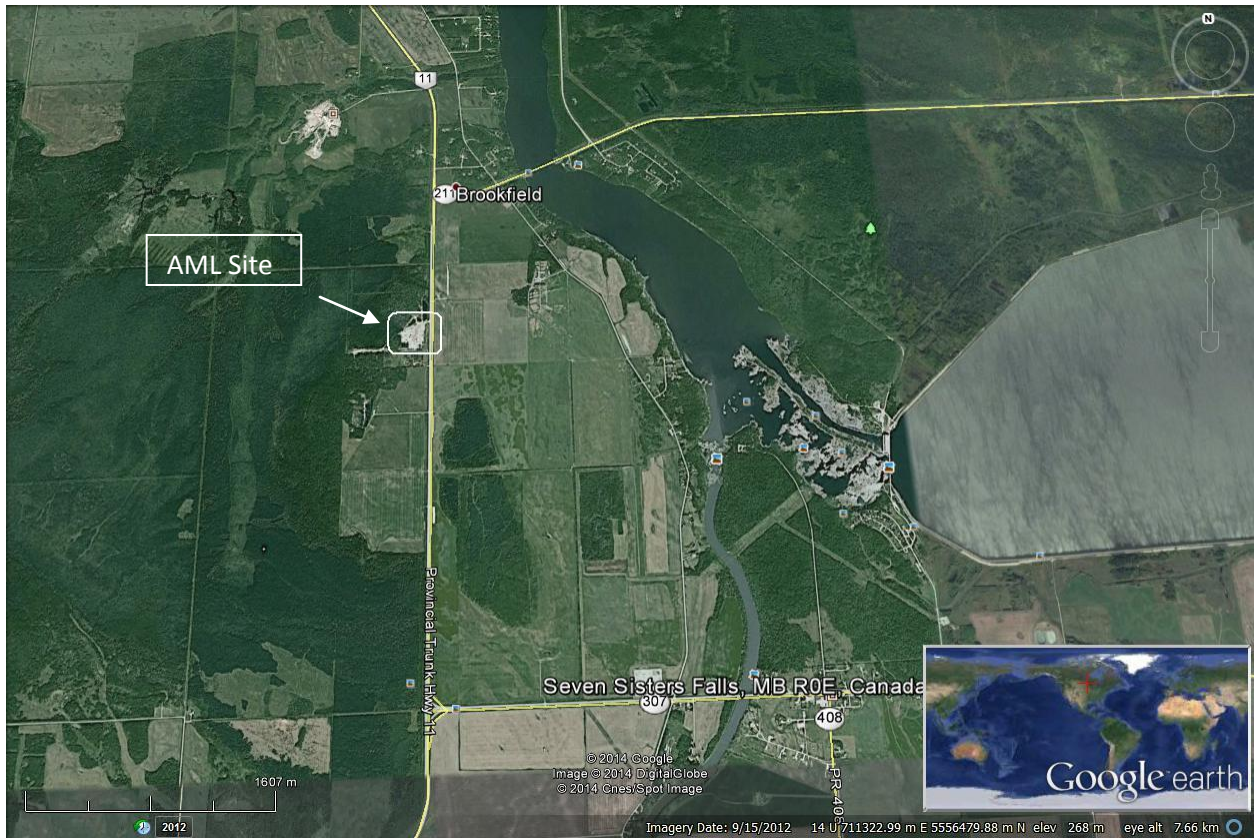
We are proposing to operate a ready-mixed concrete batch plant. Our family owned and operated business has been involved in the construction industry for over 35 years.

The plant will be used to produce concrete at the site. The concrete mix will be deposited into mixer trucks and delivered throughout southeastern Manitoba.

2.0 Proposed Development

Property Location

The plant is located in Manitoba at DES NW 32 Township 13 Range 11E (79.54 acres). The property is west of and adjacent to Manitoba Provincial Trunk Highway 11 - approximately two kilometres north of the junction with Provincial Road 307.



3.0 Existing Land Use at the site and adjoining properties

The property has been used for the concrete batching plant for several years. The adjoining property to the south is our only residential neighbour and the house is located approximately 225 m from the plant. No complaints have been received from the abovementioned residence. The other adjacent properties are agricultural or forest.

4.0 Concrete Batch Plant Operation

An existing concrete batch plant is proposed for use. The plant is a Vince Hagan make. The plant is portable in design but is used as our permanent plant site. The plant will be used for central mixing of concrete and discharging the concrete to ready-mixed trucks for offsite use. Currently 9 mixer trucks are in operation each making on average 8 concrete deliveries per day. Concrete is delivered to construction contractors or homeowners.

The hours of operation for the plant are 7:00 a.m. to 7:00 p.m., Monday to Friday with occasional use of the plant on weekends during the construction season. The plant will remain operational for an indefinite number of years as long as it is economically and environmentally feasible.

Ready-mixed concrete components are typically coarse and fine aggregate, cement and water.

Cementitious Materials

We use approximately 2500 tonnes of cementitious product on an annual basis. A cement and fly ash mix is delivered to the site by tanker trucks. The air blower system on the tanker truck is used to blow the cement and flyash mix into the silo at the batch plant. The silo system is equipped with a baghouse to reduce any dust emissions during the loading process.

Aggregate

Gravel dump trailers deliver aggregate to the site as needed. Two or three types of stone and one type of sand will be delivered to the site on an ongoing basis. The material will be stockpiled and divided by concrete forms. Approximately 50,000 tonnes of aggregate is stored on site.

A wheeled loader is used to load the conveyor hopper with the appropriate aggregate. The conveyor will transport the material to the correct plant hopper and from there is mixed into the cement mix as controlled by the plant operator. The conveyor is located within the plant building.

Admixtures

Admixtures are usually liquid additives to control the characteristics of the concrete. Admixtures are supplied by a tanker truck in bulk liquids although smaller plastic containers may be used. All admixes are located inside the main batch plant building. BASF is the admixture supplier (we lease the admixture system from BASF). We have hardcopies of the Material Safety Data Sheets for the admixtures in the plant and office

Operation of the Plant

The ready mix truck is positioned under the load-out chute of the plant. From the control room the plant operator controls the concrete mix and quantity using the computer. The computer operates the plant. Scaling off the amount of aggregate, water, cement, and, if required chemical admixtures is done at the control of the operator. The components are added to the plant mixer drum where it is mixed and then discharged into the mixer truck for delivery offsite. The annual production for the plant is approximately 10,000 cubic meters of concrete. Unused concrete is brought back to the plant site where it is used to make concrete blocks for our use and also for sale to customers. Washouts of mixer-truck drums is done at our washout pit located in the southeast corner of the property. Two separate 2,275 litre aboveground steel tanks with diesel fuel and one 1,300 litre aboveground steel tank containing gas are used for fuel storage on site.

Water use

Well water is used for production – the well is located on the property in the north east corner. We use approximately 865,000 litres of water from our well each year. Included in the above water usage quantity is concrete production, washout of the plant mixer drum, washing out mixer drums on trucks at the end of the day, washing off load out chutes at the project site and also at the yard at the end of the day. Variable use of water includes dust suppression at the plant site and access roads on the property. Water will also be used to spray on stockpiles as dust suppression is required.

5.0 Existing Environment in the Project Area

Biophysical Environment

The site is organic soils that have been built up with clay and other materials for the plant area. The area surrounding the plant site is generally vegetated with a variety of tree species. The frontage along PTH 11 is cleared. A ditch exists along the south boundary of the property draining east to the highway drain. Neither of the drainage ditches provide fish habitat. Some low lying areas of the property likely hold water in the spring and after rain events. These aquatic areas may provide temporary habitat for some bird species and a variety of aquatic species. The forested area on the property provides terrestrial habitat benefits.

Socioeconomic Environment

Public safety is not being negatively impacted by the development. Aggregate and other material delivery will be intermittent and the 9 mixer trucks at peak operations will make a total of approximately 50 concrete deliveries each day during the construction season (May to November).

Based on the limited traffic currently in the areas our traffic should not impact public safety.

We will have in place practices to limit any mud tracking onto the roadways. Our proposed controls to protect the environment will also provide safety measures such as our dust suppression techniques.

Protected Areas

There are no protected areas in the immediate vicinity of the proposed development location. The Milner Ridge and Lee River Areas of Special Interest are in the area but a significant distance (10 km or more) from the batch plant location.

Heritage Resources

There are no heritage resource sites in the immediate vicinity of the development. Bannock Point in the Nutimik/Betula area and the Old Pinawa dam on PR 520 are the nearest Heritage sites to the concrete batch plant site.

First Nation Communities

The nearest First Nation communities is Sagkeeng First Nation approximately 40 km north and west of the plant site.

6.0 Environmental Hazards and Controls

This section identifies the environmental effects, referred to here as environmental hazards, created by the work activities during installation and operation of the concrete batch plant. The hazard controls we will use to mitigate the environmental effects are also discussed in this section. The controls we've outlined below have been identified from the Best Environmental Management Practices for Redi-Mix Concrete Plants prepared by the Manitoba Heavy Construction Association and the Canadian Ready Mixed Concrete Association Environmental Management Practices for Ready Mixed Concrete Operations in Canada.

6.1 Concrete Batch Plant Operations

Work Activity:	Loading Silos with Portland Cement
Environmental Hazards:	Dust emissions
Hazard Controls	<ol style="list-style-type: none">1. Following bulk tanker load-out procedure – purchase from reputable suppliers with acceptable load out procedures2. Proper operation and maintenance of baghouse – daily inspection of silo vent operation. Any torn or damaged filter bags will be replaced as soon as is practicable.3. worker training and awareness of dust emission concerns and how to estimate dust emission rates (visual opacity observation)

Work Activity:	Front end loader material handling
Environmental Hazards:	Dust emissions
Hazard Controls	<ol style="list-style-type: none"> 1. follow Front-end loader safe work practices 2. Water down stockpiles if dust becomes excessive – use water hose 3. water down travel routes for loader – water truck/spray bar 4. visual qualitative monitoring of dust emissions (visual opacity observations) – plant operator and loader operator

Work Activity:	Concrete Batch Plant Operation
Environmental Hazards:	Dust Emissions – cement and aggregate
Hazard Controls	<ol style="list-style-type: none"> 1. Proper operation and maintenance of baghouse 2. worker training and awareness of dust emission in order to address hazards if dust emissions worsen 3. visual qualitative monitoring of dust emissions – plant operator 4. conduct any needed maintenance or repair as soon as practicable

Work Activity:	Feeding hoppers with aggregate and movement of aggregate by conveyor and deposit to elevated bins/weigh hoppers - – concrete batch plant
Environmental Hazards:	Dust Emissions
Hazard Controls	<ol style="list-style-type: none"> 1. Watering aggregate stockpiles 2. conveyor belt speeds that help reduce dust emissions 3. reduce drop heights from loader into hoppers/bins 4. worker training and awareness of dust emission concerns and potential problems – loader operators 5. visual qualitative monitoring of dust emissions – plant operator and loader operator 6. aggregate conveyor is confined within the plant building

Work Activity:	Haul Roads and Yard travel routes for aggregate and cement deliveries to the site, mixer truck departures, mixer truck returns for reloading or end of day washouts, loader movements in yard area
Environmental Hazards:	Dust Emissions
Hazard Controls	<ol style="list-style-type: none"> 1. apply water to road surface or general travel routes in the yard (no contaminated water will be used in road applications – batch plant process water or settling pond waters) 2. Assign and enforce a speed limit in the yard area – initial consideration is for a 15 kph limit. 3. Create a Worker/Driver awareness of dust emissions resulting from their vehicle operation on roads and in the yard. 4. visual qualitative monitoring of dust emissions – plant operator, loader operator, drivers 5. shutdown during excessive winds and/or increase watering efforts on haul roads and yard area – consider use of an environmentally responsible surfactant if water is not acceptably controlling dust emissions from the site. 6. maintain treed buffer around perimeter of property to stop dust release outside of property

Work Activity:	Stockpiling of Aggregate – use of stacking conveyors and general storage of stockpiles
Environmental Hazards:	Dust emissions
Hazard Controls	<ol style="list-style-type: none"> 1. Watering stockpiles. 2. Drop heights from stacking conveyor – manage heights to reduce dust kicked up by dropped aggregate material. 3. Site location for stockpiles considering exposure to winds.

Work Activity:	Mixing water for batching concrete loads, truck water tank filling for use in checking slump and chute wash downs, washing down the truck chute at worksite, washing the truck drum and chute at the end of the day, water for dust suppression
Environmental Hazards:	Water consumption/excess usage
Hazard Controls	<ol style="list-style-type: none"> 1. worker awareness of the impacts of excess water usage 2. We will review the options for enhancing the site drainage plans to capture and reuse storm water and process water. 3. We will also review the potential use of water-reducing chemical admixtures for batching and also the use of hydration stabilization admixtures to reduce the volume of water used for truck washouts at the end of the day.

Work Activity:	End of Day Washout of Mixer Drums at batch plant – mixer trucks and plant mixer
Environmental Hazards:	Release of washout liquid to the environment – surface and subsurface water contamination and soil contamination
Hazard Controls	<ol style="list-style-type: none"> 1. ensure settling ponds are functioning and no leaks or structural failures have occurred – through daily inspection 2. worker training and awareness of the potential impacts of releasing concrete wash to the environment – visual inspection of the settling ponds and ensure all washout material enters the ponds 3. ensure plant process water and plant mixer water are captured by the settling ponds – paved surface, grading and curbing towards the settling ponds 4. liquid from settling basins pumped out and taken to pollution treatment center for proper disposal. 5. settling basins emptied out once at 75% capacity 6. Follow requirements for MR 282/87, MR55/2003, MR175/87 and MR139/99 – use professional hazardous waste disposal company – become registered as a generator through the disposal company services.

Work Activity:	Washing of trucks at concrete batch plant
Environmental Hazards:	Surface and ground water contamination
Hazard Controls	<ol style="list-style-type: none"> 1. washing is to be done in the designated area. 2. Continue using environmentally responsible wash chemical – or similar alternative.

Work Activity:	Handling returned concrete in truck mixer drums
Environmental Hazards:	Improper handling/disposal resulting in soil or water contamination
Hazard Controls	<ol style="list-style-type: none"> 1. returned concrete will be used to make pre-cast products for use in aggregate pile management, or; 2. we will review the feasibility of using hydration stabilization admixtures so that returned concrete can be reused in pours the next day (up to 72 hours or longer after return to the yard) 3. if feasible, we will assess the option of re-using the returned concrete 4. small amounts of returned concrete will be washed out into the settling basins

Work Activity:	General operations at the concrete batch plant
Environmental Hazards:	Noise pollution
Hazard Controls	<ol style="list-style-type: none"> 1. maintain equipment to reduce noise increases from worn parts 2. limit hours and days of operation 3. installation of pumps and motors on rubber mounts where feasible 4. minimal free fall height of aggregates 5. use reputable suppliers of cement – using truck equipped with intake and exhaust muffles on bulk tankers. 6. treed buffer around the property reduces noise off the property 7. Lock and secure all mixer truck chutes to reduce the amount of rattle and bang during travel 8. use a controlled rate of depressurization of the truck mounted air and water tanks

Work Activity:	On-site storage and transfer of Admixtures
Environmental Hazards:	Storage container spills and leaks during transfer or storage
Hazard Controls	<ol style="list-style-type: none"> 1. Proper container use as provided by manufacturer – corrosion-proof and reinforced plastic tanks. 2. Proper storage area – inside plant, no freezing, lighting 3. Spill kit at storage site; worker training with spill kits, follow spill response plan, secure the site for potential vandalism, equipment collision, etc.; proper disposal of affected soil and clean up material (hazardous waste pick-up), notify Manitoba Conservation if any spills occur - at 204- 944-4888 24 hours. 4. WHMIS training – proper labelling, handling techniques, MSDSs will be available – ensure incompatible products are stored separately 5. on-going visual inspection of containers – immediately replace container if damaged 6. Follow good housekeeping practices

Work Activity:	Fuel and Lubricant Storage
Environmental Hazards:	Spills and/or fires at storage area/Soil and water contamination
Hazard Controls	<ol style="list-style-type: none"> 1. Appropriate storage site away from surface water 2. spill kit at storage site; worker training with spill kits, follow spill response plan, grounding tanks, secure the site for potential vandalism, equipment collision, etc.; proper disposal of affected soil and clean up material (hazardous waste pick-up), notify Manitoba Conservation if any fuel spills greater than 100 L - at 204- 944-4888 3. monitor fuel use 4. WHMIS training – annual refresher and specific to hazardous products on-site, safe handling reviewed at WHMIS training and through toolbox talks and safe work practices 5. Proper security precautions – locking valves to prevent access or vandalism by unauthorized persons. 6. Routine inspections of the fuel tanks and other lubricant containers. 7. Follow good housekeeping practices 8. Comply with MR55/2003 and MR188/2001

Work Activity:	Fuel Transfer
Environment Hazards:	Spills and/or fires during transfer
Hazard Controls	<ol style="list-style-type: none"> 1. worker training and enforce fuel transfer safe work practice – worker is to be at the nozzle at all times during transfer 2. fuel appropriate distance from water bodies 3. fuel at designated site that doesn't drain to watercourse; 4. spill kit at designated site and/or on all vehicles with slip tanks; worker training on fuel transfer and spill kits; follow spill response plan, proper disposal of affected soil and clean up material (hazardous waste pick-up), notify Manitoba Conservation if any spills occur greater than 100 L- at 204- 944-4888 24 hours. 5. Follow good housekeeping practices

Work Activity:	Maintenance of Machinery at concrete batch plant – mobile and stationary equipment
Environmental Hazards:	oils, hydraulic fluid spills and leaks; soil contamination
Hazard Controls	<ol style="list-style-type: none"> 1. single maintenance area to be used – equipment to be moved to maintenance area as soon as possible 2. daily equipment inspections before use 3. immediate response and repair of leaks 4. drip pans/sheets used during maintenance activities 5. spill kit at maintenance area; immediate clean up of spills, worker training with spill kits; follow spill response plan, proper disposal of affected soil and clean up material (hazardous waste pick-up), notify Manitoba Conservation if any spills occur - at 204-944-4888 24 hours 6. clean up maintenance materials including fluid pails, etc. 7. worksite inspections to ensure proper work practices and housekeeping at maintenance area

Work Activity:	Non-hazardous waste accumulation
Environmental Hazards:	Litter and wastes
Hazard Controls	<ol style="list-style-type: none"> 1. Clean up site on daily basis 2. Maintain designate waste collection site and removal of waste on a regular basis or as needed 3. good housekeeping 4. worksite inspections 5. Recyclable material to be recycled – oil containers, plastics, paper, wood 6. green purchasing – consider packaging, etc.

Work Activity:	Hazardous waste collection, storage and disposal
Environmental Hazards:	Spills, soil and water contamination
Hazard Controls	<ol style="list-style-type: none"> 1. Regular pick up of hazardous wastes – do not allow hazardous waste storage onsite for long periods of time – used oil and lubricants, antifreeze, lead acid batteries, solvents, paints, 2. spill kit at hazardous waste storage area; worker training on spill kit use; follow spill response plan, proper disposal of affected soil and clean up material (hazardous waste pick-up), notify Manitoba Conservation if any spills occur - at (204) 944-4888 24 hours; 3. registration as hazardous waste generator (and carrier if transporting hazardous waste to appropriate facility) – use professional hazardous waste transporter for pickup and disposal 4. Follow Transportation of Dangerous Goods Act requirements – MR55/2003

Work Activity:	General vehicle and heavy equipment movement
Environmental Hazards:	Rutting in sensitive areas
Hazard Controls	<ol style="list-style-type: none"> 1. Repair rutting outside normal work area 2. worker awareness of the site and negative impacts of rutting and benefits of maintaining the existing vegetation on the site

Work Activity:	General vehicle and heavy equipment movement
Environmental Hazards:	<p>Greenhouse gas emissions</p> <p>Noise Pollution</p>
Hazard Controls	Reduced idling and well maintained equipment (engine/exhaust)

6.3 Concrete Delivery – Mixer Trucks

Work Activity:	Mixer truck travel on public roadways
Environmental Hazards:	Traffic accident and potential spill of wet concrete and and/or diesel fuel - surface water or soil contamination
Hazard Controls	<ol style="list-style-type: none"> 1. emergency plan in place for roadway accidents and spills 2. spill kits are available on mixer trucks and train workers in emergency spill response - 3. cement is to be recovered from the mixer truck as soon as possible

Work Activity:	Washing down mixer truck chute at work site/delivery site
Environmental Hazards:	Surface water and soil contamination
Hazard Controls	<ol style="list-style-type: none"> 1. washout at designated site – not allowing runoff of the washout water – high alkalinity of the water makes it a hazardous waste and will kill fish and contaminate soils – appropriate washout sites will be lined pits or designated tanks to wash the chute water into. 2. If an appropriate designate site is not available the mixer truck operator will use a form fitting chute cover to allow the truck to return to the yard for a wash down of the chute.

7.0 Other General Environmental Mitigation Measures

Washout Settling Basin

A settling basin is provided to collect end of day truck washouts and chute washouts.

The settling basin is excavated into clay fill and is approximately 15 m x 15 m with a depth of approximately 3 metres. The mixer trucks will washout into the settling basin where the heavier components of the cement slurry will settle to the bottom of the basin. The settling basin will be cleaned out as needed by an excavator. The solid materials will eventually harden and be removed from the site to be crushed and reused.

Traffic Flow around the site

The traffic flow will be designed to be efficient and safe but also consider the environment by not allowing vehicle movement through standing water or sheet runoff of storm water. Keeping vehicles out of the water we can reduce the chance of introducing hydrocarbons to the aquatic environment.

8.0 Greenhouse Gas Emissions

Using a greenhouse gas emissions conversion factor of 2.66 for burning diesel fuel and following Environment Canada guidelines we are able to estimate our greenhouse gas emissions.

Emissions for Concrete Batch Plant Operation and Mixer Trucks

It is estimated the plant and associated equipment including mixer trucks will consume on average 2500L of diesel fuel/day and the plant will be operating for approximately 180 days of the year resulting in the consumption of approximately 21,000L of diesel fuel per year. $450,000\text{L/year} \times 2.66 = 1,197,000 \text{ kg of CO}_{2e}$ annually.

9.0 Residual Environmental Effects

There should be no residual environmental effects of the proposed development after implementation of the mitigation measures. We are proposing many of the best practices as suggested by the Canadian Ready-Mixed Concrete Association and Manitoba Heavy Construction Association. The dust suppression and collection practices will reduce our impacts to air quality and public health. The environmental management practices we're following will also minimize our impacts to vegetation, wildlife and aquatic organisms.

10.0 Decommissioning the Plant

Prior to permanent closure of the concrete batch plant a formal decommissioning plan for the site will be developed and submitted to Manitoba Conservation for approval.

11.0 Monitoring and Reporting

We will continually monitor for our potential impacts on the environment.

We will be implementing accepted management practices and evaluating their success. As new information and environmental management techniques come available we will assess applicability and feasibility for our operations.

We will be holding toolbox talks every two weeks during operation. During the toolbox talks we discuss safety and environment. We will also be conducting documented worksite inspections every two weeks – during these worksite inspections we will be looking for needed improvements in both safety and environment.

The abovementioned worksite inspections are in addition to our daily inspections of the silo vent, settling ponds, fuel and chemical storage tanks, and daily equipment inspections.

We will also be able to show our maintenance records for all the machinery and equipment in use at the concrete batch plant.

We will be required to provide data to the National Pollutant Release Inventory for the concrete batch plant.

We will also provide the sampling data and reports to Manitoba Conservation as required by the Director.

12.0 Conclusions

We will implement the environmental mitigation measures outlined in this proposal and it is believed the environmental effects will be negligible.

Appendix A

- Status of Title
- Concrete Batch Plant pictures and information (separate attachment with electronic file of the proposal)

DATE: 2014/10/07
TIME: 15:02

MANITOBA
STATUS OF TITLE

TITLE NO: 2069882/1
PAGE: 1

STATUS OF TITLE.....	ACCEPTED	PRODUCED FOR..	CANDACE
ORIGINATING OFFICE...	WINNIPEG	ADDRESS.....	BOX 595
REGISTERING OFFICE...	WINNIPEG		LAC DU BONNET
REGISTRATION DATE....	2005/02/15		MB ROE 1A6
COMPLETION DATE.....	2005/02/18	CLIENT FILE...	NA
		PRODUCED BY...	M.DERKSEN

LEGAL DESCRIPTION:

AL MEISNER LIMITED

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

ALL THAT PORTION OF SLY 1947.4 FEET PERP OF NW 1/4 32-13-11 EPM WHICH LIES WEST OF WESTERN LIMIT OF PUBLIC ROAD PLAN 6073 WLTO EXC FIRSTLY: ALL THAT PORTION OF SLY 417.4 FEET PERP WHICH LIES EAST OF A LINE DRAWN WEST OF PARALLEL WITH AND PERP DISTANT 1043.6 FEET FROM SAID WESTERN LIMIT
SECONDLY: PUBLIC ROAD PLAN 15035 WLTO AND
THIRDLY: ALL MINES AND MINERALS

ACTIVE TITLE CHARGE(S):

3226731/1	ACCEPTED	CAVEAT	REG'D: 2005/12/06
	DESCRIPTION:	SECURITY FOR REPAYMENT OF A LOAN	
	FROM/BY:	SOUTH INTERLAKE CREDIT UNION LIMITED	
	TO:		
	CONSIDERATION:		NOTES:

ADDRESS(ES) FOR SERVICE:

EFFECT	NAME AND ADDRESS	POSTAL CODE
ACTIVE	AL MEISNER LIMITED BOX 595 LAC DU BONNET MB	ROE 1A0

ORIGINATING INSTRUMENT(S):

REGISTRATION NUMBER	TYPE	REG. DATE	CONSIDERATION	SWORN VALUE
3096138/1	T	2005/02/15	\$36,000.00	\$36,000.00
	PRESENTED BY:	BELLAN, WASYLIN & ASSOCIATES		
	FROM:	ALLAN ALVIN MEISNER		
	TO:	AL MEISNER LIMITED		

FROM TITLE NUMBER(S):

1143293/1 ALL



View of plant from south



View of plant from north



Excess concrete used for concrete blocks