

SUBMITTED TO MANITOBA CONSERVATION
ON BEHALF OF XPOTENTIAL PRODUCTS INC, OPERATING AS:

FUTURE SCRAP

ENVIRONMENT ACT PROPOSAL

Auto Wrecking Yard and Car Shredder
999 Redonda Street
Rural Municipality of Springfield

FEBRUARY, 2014

Prepared by:
D. Ediger Consulting Services

:

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FIGURES

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1.0 INTRODUCTION

XPotential Products Inc., operating as Future Scrap, is proposing to develop a new scrap processing and auto wrecking facility at 999 Redonda Street in the Rural Municipality of Springfield. The facility will consist of two components:

- An auto wrecking yard where vehicles are received for dismantling. Marketable parts will be removed for sale and remaining hulks will then be depolluted prior to shredding. The design capacity of the wrecking yard is up to 1000 vehicles.
- A 3000 hp shredder which will be used to reduce vehicle hulks, white goods and other bulk metallic products into ferrous and non-ferrous metal components.

Total throughput of the shredder is projected to be 100,000 tons annually. All scrap will be brought to the site by truck using designated truck routes from either Springfield Road or the Perimeter Highway 101. Finished products will be transported from the site by road or rail.

The development site is on a 12 hectare parcel of land classified as Industrial in the Rural Municipality of Springfield Development Plan. There are no residential developments or institutional occupancies in the immediate vicinity of the development.

2.0 DESCRIPTION OF DEVELOPMENT

2.1 PROPERTY OWNERSHIP

The Future Scrap facility will be situated on approximately 12 hectares of land on part of the property at 999 Redonda Street in the Rural Municipality of Springfield. The land is owned by XPotential Products Inc. A copy of the current Status of Title is included as Attachment 1.

2.2 LAND USE DESIGNATION

The development site and the adjoining properties are designated as Industrial under the R.M. of Springfield Development Plan (February, 2011).

2.3 ADJOINING PROPERTIES

The properties immediately adjacent to the parcel of land where the development is being proposed are described as follows:

North:	Heavy equipment storage and maintenance yard
East:	Redonda Street
South:	CPR mainline
West:	Central Manitoba Railway (Pine Falls Line)

2.4 PROXIMITY TO RESIDENCES

There are no residential developments in the immediate vicinity of the proposed facility site. Locations of residences in the general area are described below.

Springfield Road	closest individual residence: 1000 m closest development (Cox Rd): 1800 m
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Redonda Street	closest individual residence (occupancy unknown): 900 m
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Gunn Road	closest development (4 residences): 900 m
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Closest Institution:	Harold Hatcher School: 1800 m.
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2.5 SITE ACCESS

Access to the Future Scrap facility will be via two entrances gate off Redonda Street as indicated on Figure 1. Truck traffic will approach the site either on Springfield Road to Redonda or off the Perimeter Highway 101 via Gunn Road to Redonda Street. Both options are on designated truck routes on paved roads.

Traffic volumes coming to and from the site are estimated at up to 100 vehicles per day. This includes all categories of vehicles ranging for pick-up trucks to semi-trailers.

2.6 FACILITY DESIGN

The Future Scrap facility will consist of two distinct operational areas as shown on Figure 1. An existing compacted gravel road will provide access to the shredder area.

2.6.1 *AUTO WRECKING YARD*

The auto wrecking yard component of the facility will cover approximately 4 hectares of land on the east side of the property. Maximum storage capacity of the auto wrecking yard will be in the order of 1000 vehicles. The vehicles received may be insurance write-offs or end-of-life vehicles brought in by the owner or a dealer.

Vehicles will be stored on an existing compacted gravel area previously used as a product storage yard. The wrecking yard will be surrounded by a chain link fence.

2.6.2 *SHREDDER AND PROCESSING AREA*

The proposed configuration of the shredder area is shown in Figure 2.

Unprocessed scrap will be stored within reach of the crane feeding the shredder.

The facility will include a 3000 hp shredder to break down vehicle hulks and other large scrap metal items. Feedstock will be fed into the shredder by a crane. The shredder input capacity is rated at 50 tons per hour.

A 200 hp fan system and high efficiency cyclone will be used to draw off shredder residue (ASR) during the shredder operation. Shredded metal will be conveyed to a downstream separation system yielding ferrous and non-ferrous components. The separated metals will be stored on an asphalt pad pending final preparation for shipment off site by rail, truck and/or sea containers.

Heavy gauge unshreddable steel will be processed using a crane mounted hydraulic shear operating outdoors.

2.6.3 MATERIAL STORAGE AREAS

All hazardous materials removed from incoming vehicles and appliances will be stored in accordance with applicable regulatory requirements until they are shipped off site. These products will include used oil, fuel, antifreeze, batteries, mercury switches, catalytic converters and ozone depleting substances (ODS).

- Used oil will be stored in a double walled aboveground storage tanks in compliance with applicable regulatory requirements
- Gasoline and diesel fuel drained from vehicles will be stored in Fire Code compliant containers
- Batteries will be placed on pallets, shrink wrapped, strapped and stored outdoors on an asphalt pad.
- Recovered ozone depleting substances will be stored in a storage shed in containers compliant with the Ozone Depleting Substances Act.
- Mercury switch pellets will be stored in secured 20 litre capped containers
- Antifreeze will be stored in 200 liter containers

All fluids, with the exception of used oil, will be kept in a enclosed structure with a paved floor adjacent to the vehicle depolluting area in the wrecking yard..

Shredded ferrous and non-ferrous metals will be stored separately on asphalt pads.

Auto Shredder Residue will be stored outdoors on an asphalt pad.

2.6.4 RADIATION DETECTORS

Radiation detectors will be installed at both the truck and rail scales. All scrap loads entering the shredder area will be monitored. A hand held radiation detector will also be available on site to monitor loads more closely if the scale detectors are activated.

2.7 STAFF FACILITIES

Approximately 25 staff will be employed at the Future Scrap facility. Staff facilities will be located within the main processing building. Potable water supply will be provided from an on-site well. A septic tank and field will be installed on site for disposal of domestic wastewater.

2.8 FIRE PROTECTION

Fire protection will be provided by existing wells on the property, using high pressure pumps to provide water to strategic locations. One fire fighting station will be located next to the ASR storage pad for rapid response in the event of fire in the stored material. A fire plan will be developed in consultation with the Springfield Fire Department and additional fire fighting equipment will be located as required.

3.0 SITE OPERATION

3.1 SCREENING OF INCOMING LOADS

3.1.1 *PREPROCESSED VEHICLES*

Regular suppliers of scrap metals will be required to sign an agreement whereby they will comply with Future Scrap's "Acceptance Criteria" regarding the removal of hazardous materials prior to shipment to Future Scrap

3.1.2 *UNPROCESSED VEHICLES*

Vehicles to be placed in the auto wrecking yard will not be screened for hazardous materials at the time of receipt.

Vehicles that have not been preprocessed in accordance with Future Scrap guidelines, and which are either going directly to the shredder or are being moved from the wrecking yard to the shredder, will be individually depolluted in the wrecking yard prior to being moved to the shredder. The depolluting process will include:

- removal of any remaining fuel
- removal of crankcase oil
- removal of mercury switches
- removal of catalytic converters
- extraction of ODS from air conditioning units
- removal of lead acid batteries
- draining antifreeze from radiators
- checking trunks and interiors for hazardous materials (e.g. propane tanks) which may have been left in the vehicle

3.1.3 *WHITE GOODS*

All incoming white goods and vehicles not tagged and/or certified as "ODS Removed", compliant with industry standards, will be placed in a designated spot in the auto wrecking area where the freon will be removed by a certified technician and pumped into compliant containers. Crushed vehicles and white goods will only be accepted from suppliers who certify ODS has been removed as part of Future Scrap's Acceptance Criteria

3.1.4 *OTHER PRODUCTS*

All other metallic scrap products will be taken directly to the shredder staging area.

3.2 AUTO WRECKING YARD

Vehicles still containing marketable parts will be placed in the auto wrecking yard where customers will remove parts on a “self-serve” basis. Vehicles will stay in the wrecking yard until the remaining salvage value is minimal. At that stage the vehicle will be processed as described in section 3.1.2 and moved to the shredder staging area. In the event that the wrecking yard is filled to capacity, part of the existing inventory will be depolluted and moved to the shredder as new inventory is received.

3.3 SHREDDER OPERATION

All material to be shredded will be staged in an area adjacent to the shredder. A crane equipped with a grapple is used to feed material into the shredder.

3.4 DOWNSTREAM PROCESSING

Shredded metal will travel down a conveyor through a series of automated detection and sorting processes which will separate ferrous from non-ferrous metals.

Shredded ferrous scrap will continue on the conveyor to a storage area on an asphalt pad.

3.5 SHREDDER RESIDUE MANAGEMENT

Light automobile shredder residue (ASR) is drawn from the shredder by a high efficiency cyclone. The ASR captured in the cyclone drops into a collection bin below the unit. All drop chutes will be skirted to minimize air borne particulate emissions. When the collection bin is full, a loader will be used to remove the ASR and deposit it on an asphalt storage pad.

Heavier density ASR will be physically removed in the non-ferrous processing system. This material will also be moved with a loader to the ASR holding pad.

Arrangements will be made with a licensed Class 1 waste disposal ground for disposal of the ASR in compliance with the Special Waste (Shredder Residue) Regulation under the Manitoba Dangerous Goods Handling and Transportation Act. ASR will be transported to the landfill in covered shipping containers.

3.5.1 *RESIDUE TESTING*

Upon initial start-up of the operation the ASR produced will be stored on the asphalt pad until the volume is sufficient to conduct initial sampling and analysis using established methods to ensure that samples are representative of the overall volume generated. Plans for any additional periodic sampling will be developed in consultation with Manitoba Conservation staff.

3.6 PREPARATION FOR SHIPPING

A front-end loader will load shredded ferrous and non-ferrous metals off the asphalt pad into trucks, rail cars and containers. Heavy steel cut by the crane mounted hydraulic shear will be loaded using a crane mounted magnet into trucks and rail cars.

ASR will be loaded into covered trailers for shipment to landfill.

3.7 OPERATING HOURS

Future Scrap proposes to operate the facility on the following schedule:

Scrap Processing

- Monday to Friday 7:00 a.m. to 11:00 p.m.
- Saturday 7:00 a.m. to 5:00 p.m.

Auto Wrecking

- 9:00 a.m. to 8:00 p.m. seven day per week

4.0 ENVIRONMENTAL SETTING

4.1 TOPOGRAPHY

The proposed development site and adjoining properties are relatively flat prairie with no significant elevation fluctuations. Surface drainage patterns are poorly defined, based on visual observations.

4.2 SUBSURFACE DESCRIPTION

Based on well logs produced for various water wells drilled on the property, the average subsurface profile consists of:

- 11.5 m clay
- 3m till/rubble
- Limestone

Several example well logs are included in Appendix B

4.3 PREVIOUS LAND USE

The site of the proposed Future Scrap development was used previously by XPotential Products Inc. as an ASR storage site and for storage of finished products from the XPotential Products recycling plant. The bermed ASR storage cells and a holding pond were decommissioned in 2010. Soil sample analytical results from all cells were submitted to Manitoba Conservation. The department confirmed that the property was acceptable for occupancy as an industrial site.

Prior to XPotential's acquisition of the property, the land was used for agriculture.

4.4 GROUNDWATER POLLUTION HAZARD

The site of proposed development is not identified as being in an aquifer pollution hazard area in a report on groundwater resources in the R.M of Springfield. (Manitoba Natural Resources, M. Rutulis, January, 1990)

4.5 SITE DESIGNATIONS

Based on information on the Government of Manitoba website, the proposed Future Scrap site is not in the vicinity of any designated protected areas or historic sites.

5.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

5.1 NOISE

5.1.1 *POTENTIAL IMPACTS*

The primary concern related to noise emissions from the proposed development would be impacts on the quality of life at residential locations in the area as listed in Section 2.4.

The major sound sources for the proposed operation will be the diesel engine on the in-feed crane and the fan on the cyclone system. At the time of submission of this proposal a supplier had not been confirmed for either of these pieces of equipment and, therefore, specific sound level data cannot be provided.

Sound levels for the crane operation will be in the same range as heavy equipment operation. A report issued by the U.S. Department of Transportation (Construction Noise Handbook, rev 2011) states that sound levels from crane operation are typically in the 81-85 dBA range, measured 15 m for the source.

Sound levels from the operation of the cyclone fan will be dependent on the choice of equipment and final configuration of the unit.

In addition to the sound levels from the operation of the facility, vehicle shredding operations have the potential to experience occasional explosions resulting from fuel tanks with flammable vapours remaining in them or from compressed gas cylinders that may have been left in the vehicle. While an explosion will only produce sound for relatively short duration, the sound intensity has the potential to carry farther than the other sound sources discussed above.

5.1.2 *MITIGATION*

The key factor that will mitigate potential noise impacts from the on-going operation on surrounding occupants is the location of the development in relation to the receptors. Residential developments are more than 900 to 1800 away from the site and the closest individual occupied residential lot is 900 metres away. Any sound generated at the site would be expected to dissipate significantly at those separation distances.

The potential disturbance to neighbouring properties resulting from an explosion in the shredder will be mitigated by minimizing the potential for the explosion to occur. This will be accomplished by implementing multiple checks to ensure that fuel tanks are removed or totally purged of vapors before the vehicle is delivered to the shredder staging area. All intact vehicles will be depolluted as described in Section 3.1.2. Vehicles that have been depolluted prior to being shipped to the Future Scrap facility will be checked initially upon receipt at the site and will be re-checked prior to shredding to ensure that the potential sources of shredder explosions have been effectively removed.

5.2 AIRBORNE PARTICULATE

5.2.1 *POTENTIAL IMPACTS*

The potential sources for airborne particulate emissions include:

- surface dust from the auto wrecking yard and the shredder access road
- emissions from the operation of the shredder

Dust from the yard and road could result from traffic passing over the surface. The existing access road has a gravel surface. The area designated for the wrecking yard is a former storage area that was filled with crushed rock and concrete rubble. Both areas may be prone to generating dust from traffic in their present condition, particularly during dry conditions.

The operation of the shredder will generate non-metallic particulate matter as the scrap pieces are broken up. The rate of particulate generation and the physical characteristics of the particulate will be dependent on the condition and type of material being shredded. In the absence of air pollution controls, the lighter fractions of the particulate could be released to atmosphere from the shredder unit as fugitive emissions.

Particulate emissions from either source could result in nuisance dust levels impacting other properties close to the development.

5.2.2 *MITIGATION*

The potential for dust from the auto wrecking yard and the shredder access road will be minimized by covering both surfaces with crushed limestone. Typically the limestone surface will retain enough moisture to maintain a solid packed traffic area. During excessively dry periods water will be applied to the surfaces.

Particulate emissions from the shredder will be managed through the use of a high efficiency cyclone system. A 200 hp fan will draw air for the shredder through the cyclone. The cyclone will be designed and fabricated locally to specifications developed by Future Scrap. The unit will be designed to achieve at least 90% capture

of particulate matter greater than 10 microns. Shredder residue will be released from the cyclone through a rotary airlock valve which will drop ASR into a holding bin. Exhaust air from the cyclone will be discharged to atmosphere.

5.3 GROUNDWATER

5.3.1 *POTENTIAL IMPACTS*

Potential groundwater contaminants resulting from the operation of the development consist primarily of fluids contained in the vehicles brought on to the site. Fluids could be released accidentally during the depolluting of vehicles or while the fluids are in storage pending removal from the site.

5.3.2 *MITIGATION*

- The depth of clay cover over the limestone aquifer under the site provides a significant degree of protection from any contaminants released on the ground surface.
- Fluids will be stored in appropriate containers as described in Section 2.6.3
- The emergency plan to be developed for the facility will include procedures for responding to spills. Absorbent and/or neutralizing products to contain and recover spilled materials before they can impact the environment will be kept available on site.

5.4 SURFACE WATER

5.4.1 *POTENTIAL IMPACTS*

Runoff water on the site of the development can potentially carry contaminants from the areas where scrap metals and other material associated with the site operation are stored. The most probable contaminants are metals and hydrocarbons. Metals could be introduced into surface runoff as corrosion products from metal storage areas and in particulate matter from the shredder operation.

Sources of hydrocarbons that could potentially impact surface run-off would include leakage from vehicles in the wrecking yard and spillage during handling of oil, fuels and other fluids during the depollution process.

5.4.2 *MITIGATION*

Surface runoff from the wrecking yard and shredder staging area will be directed through swales to shallow holding ponds designed to allow particulate matter to settle out before the water leaves the property. The ponds will be designed to discharge to a ditch along the north property line as indicated on Figure 1. The ditch empties into a municipal drain on the west side of Redonda Street which carries water north on Redonda, and then west along Springfield Road to the Cordite Ditch. Total flow

distance from the Future Scrap property line to the discharge point into the Cordite Ditch is over 5 km.

Hydrocarbons will be effectively managed to prevent accumulations on the ground surface which could result in surface runoff contamination. Fluids removed from vehicles will be handled and stored using best management practices. Absorbent material will be kept in areas where fluids are being handled and all spilled liquid will be contained and recovered before it can potentially be washed into surface water.

Paved storage pads will be sloped to direct runoff water to the settling pond prior to release from the site.

6.0 FIRE

One or more wells on site will be designated for fire service. A qualified well driller will be engaged to conduct tests to confirm that the current pumping rate of the designated wells is sufficient for firefighting purposes.

As a minimum, fire hose reel stations are proposed adjacent to the shredder, the ASR storage pile and in the main building. Fire hose reels will be located in heated enclosures on site which can be quickly accessed and deployed in case of a fire event. Discussions will be held with the Springfield Fire Department on the fire plan for the facility and the need for additional firefighting equipment on the site.

Site security will be provided on a 24 hour basis using either Future Scrap staff or a private security firm. Security staff will be directed to conduct regular inspections of all storage areas to check for any indication of a fire incident.

7.0 EMERGENCY PLANNING

An Emergency Response Plan (ERP) will be prepared for the facility. As a minimum the plan will address:

- Fire
- Hazardous materials spills

The first step in developing the plan will be to conduct a risk assessment of all phases of the operation to identify any risk factors that could potentially result in an incident requiring an immediate emergency response.

The MIAC Industrial Emergency Response Planning Guide will be used as the reference for preparing the ERP.

All Future Scrap employees working at the facility will be trained on the contents of the ERP. The ERP will be reviewed and updated as required on an annual basis.

8.0 DECOMMISSIONING

A preliminary decommissioning plan will be prepared shortly after the facility is operational. The plan will identify the key areas to be addressed including potential environmental impacts and restoration of the site to its previous condition. The decommissioning plan will generally follow the procedures described in the National Guidelines for Decommissioning Industrial Sites (CCME, 1991).

DISCLAIMER

This report was prepared by D. Ediger Consulting Services. Although all reasonable efforts were made to ensure the scientific accuracy and completeness of the information provided, D. Ediger Consulting Services makes no warranty, expressed or implied, as to the overall impact of the Development described in this proposal.

FIGURES



LEGEND

- Security Fence
- Gate
- Road

Figure 1
FUTURE SCRAP
 999 Redonda St.
Site Location

ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE

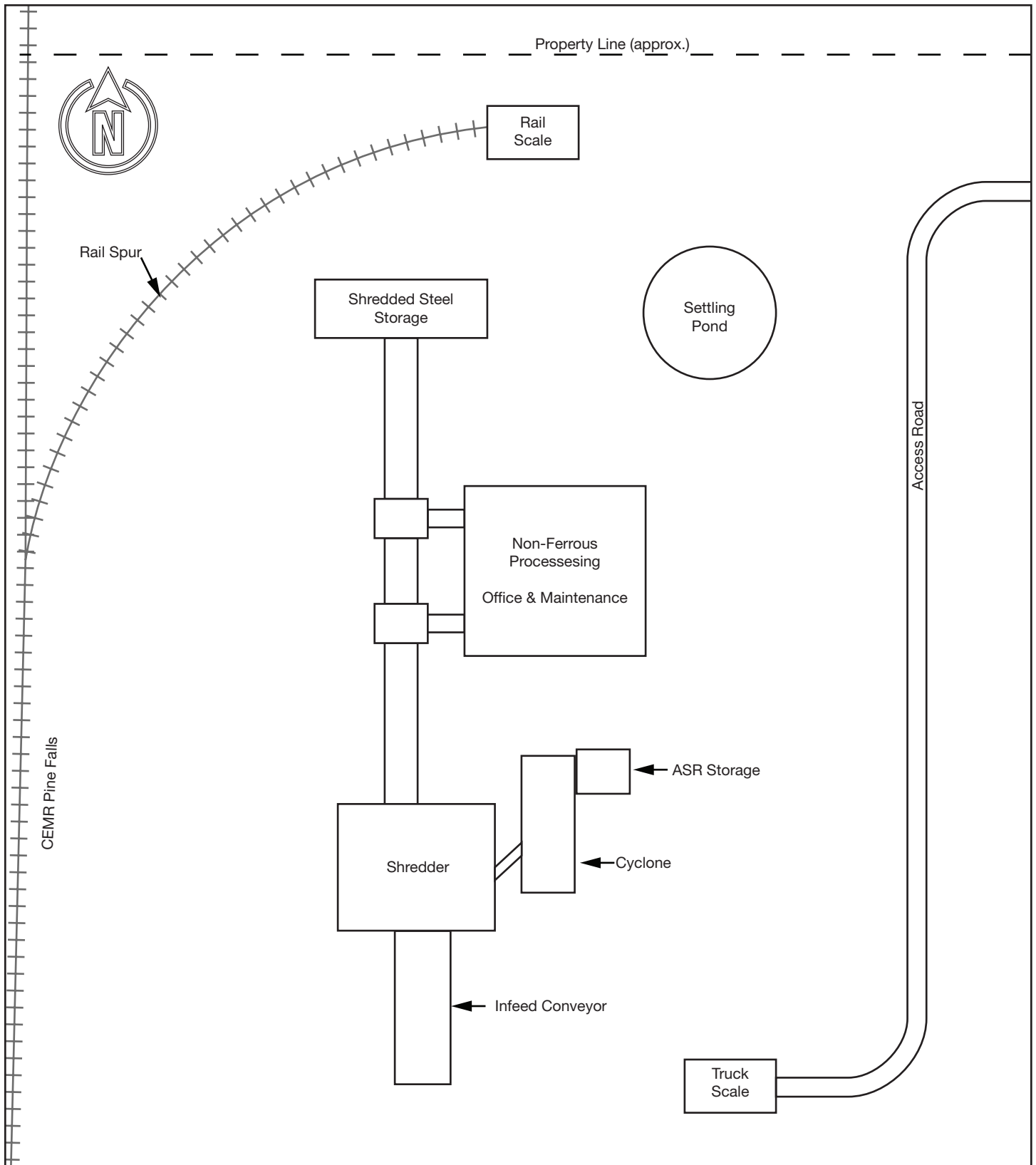


Figure 2
FUTURE SCRAP
Proposed Shredder Facility
 999 Redonda St.
Preliminary Site Layout

APPENDIX A

Certificate of Title

DATE: 2013/12/24
TIME: 10:57

MANITOBA

STATUS OF TITLE

TITLE NO: 2005569/1

PAGE: 1

STATUS OF TITLE.....	ACCEPTED	PRODUCED FOR..	FILLMORE RILEY LLP
ORIGINATING OFFICE...	WINNIPEG	ADDRESS.....	1700-360 MAIN ST.
REGISTERING OFFICE...	WINNIPEG		WINNIPEG MB R3C 3Z3
REGISTRATION DATE....	2004/03/15	LTO BOX NO....	51
COMPLETION DATE.....	2004/03/22	CLIENT FILE...	420947-21/GRP
		PRODUCED BY...	M.DERKSEN

LEGAL DESCRIPTION:

XPOTENTIAL PRODUCTS INC.

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

LOT 1 PLAN 29953 WLTO
IN E 1/2 16-11-4 EPM

ACTIVE TITLE CHARGE(S):

240829/1	ACCEPTED	CAVEAT	REG'D: 1976/09/09
	FROM/BY:	MANITOBA TELEPHONE SYSTEM	
	TO:		
	CONSIDERATION:	NOTES:	AFF: ELY 25 FEET PERP

2606108/1	ACCEPTED	MORTGAGE	REG'D: 2001/06/14
	FROM/BY:	XPOTENTIAL PRODUCTS INC.	
	TO:	JACOB LAZARECK	
	CONSIDERATION:	\$10,000,000.00	NOTES:

ADDRESS(ES) FOR SERVICE:

EFFECT	NAME AND ADDRESS	POSTAL CODE
ACTIVE	XPOTENTIAL PRODUCTS INC. 999 REDONDA STREET WINNIPEG, MB	R3C 3R9

ORIGINATING INSTRUMENT(S):

REGISTRATION NUMBER	TYPE	REG. DATE	CONSIDERATION	SWORN VALUE
2960481/1	TREQ	2004/03/15	\$0.00	\$0.00
	PRESENTED BY:	THOMPSON DORFMAN SWEATMAN		
	FROM:	XPOTENTIAL PRODUCTS INC.		
	TO:			

FROM TITLE NUMBER(S):

1601932/1 ALL

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA
STORAGE SYSTEM ON 2013/12/24 OF TITLE NUMBER 2005569/1

***** STATUS OF TITLE 2005569/1 CONTINUED ON NEXT PAGE *****

DATE: 2013/12/24
TIME: 10:57

MANITOBA
STATUS OF TITLE

TITLE NO: 2005569/1

PAGE: 2

STATUS OF TITLE.....	ACCEPTED	PRODUCED FOR..	FILLMORE RILEY LLP
ORIGINATING OFFICE...	WINNIPEG	ADDRESS.....	1700-360 MAIN ST.
REGISTERING OFFICE...	WINNIPEG		WINNIPEG MB R3C 3Z3
REGISTRATION DATE....	2004/03/15		
COMPLETION DATE.....	2004/03/22	LTO BOX NO....	51
		CLIENT FILE...	420947-21/GRP
		PRODUCED BY...	M.DERKSEN

LAND INDEX:

LOT	BLOCK	SURVEY PLAN
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1		29953
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NOTE:

ACCEPTED THIS 15TH DAY OF MARCH, 2004
BY A.GWIZON FOR THE DISTRICT REGISTRAR OF
THE LAND TITLES DISTRICT OF WINNIPEG.

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA
STORAGE SYSTEM ON 2013/12/24 OF TITLE NUMBER 2005569/1.

***** END OF STATUS OF TITLE 2005569/1 *****

APPENDIX B

Well Logs

Well PID: 111324
 Location: NE16-11-4E
 UTMX:644608.1 UTM Y:5532407.8 XY Accuracy:No Accuracy
 Owner: X-POTENTIAL
 Driller: Paul Slusarchuk Well Drilling LTd.
 Well Name: 12 INCH SUPPLY WELL
 Date Completed: 1998 Jul 15
 Well Use: PRODUCTION
 Water Use: Industrial
 Well Status: ACTIVE Aquifer: LIMESTONE OR DOLOMITE

REMARKS:

999 REDONDA, WATER USED FOR INDUSTRIAL COOLING

WELL LOG (Imperial units)

From To(ft.) Log

0.0 45 CLAY

45.0 55 TILL

55.0 148 LIMESTONE, MAJOR FRACTURE ZONE 59-65 FEET

WELL CONSTRUCTION

Inside Outside Slot

From	To(ft)	Const.Method	Dia.(in)	Dia.(in)	Size(in)	Type	Material
0.0	58.0	CASING	12.0			STEEL	
58.0	148.0	OPEN HOLE	11.0				
0.0	40.0	CASING GROUT				CEMENT	

58.0 148.0 OPEN HOLE 11.0

0.0 40.0 CASING GROUT CEMENT

Top of Casing: 2.0 ft. above ground

PUMPING TEST

Date : 1998 Jul 20 Pumping 641.0 Imp. gallons/minute

Water level before test : 37.0 ft below ground

Water level at end of test : 50.7 ft below ground

Test duration: 24:00:00

Test Zone: from 58.0 ft to 148.0 ft

Well PID: 110162
Location: NE16-11-4E
UTMX:644608.1 UTM Y:5532407.8 XY Accuracy:No Accuracy
Owner: X POTENTIAL
Driller: Paul Slusarchuk Well Drilling LTd.
Well Name: RETURN WELL #8
Date Completed: 1998 Aug 06
Well Use: RECHARGE
Water Use: Industrial
Well Status: ACTIVE Aquifer: LIMESTONE OR DOLOMITE

REMARKS:

99 REDONDA, FRACTURE START AT 52-56 FT

WELL LOG (Imperial units)

From To(ft.) Log

0.0 36 CLAY
36.0 47 TILL
47.0 50 LIMESTONE RUBBLE
50.0 148 LIMESTONE

WELL CONSTRUCTION

			Inside	Outside	Slot		
From	To(ft)	Const.Method	Dia.(in)	Dia.(in)	Size(in)	Type	Material
0.0	51.0	CASING	7.0			STEEL	
51.0	148.0	OPEN HOLE	6.3				
0.0	45.0	CASING GROUT				CEMENT	
45.0	51.0	CASING GROUT				BENTONITE	

Top of Casing: 2.0 ft. above ground

PUMPING TEST

Date : 1998 Aug 12 Pumping 360.0 Imp. gallons/minute
Water level before test : 33.7 ft below ground
Water level at end of test : 40.2 ft below ground
Test duration: 4:00:00

Well PID: 111323
Location: NE16-11-4E
UTMX:644608.1 UTM Y:5532407.8 XY Accuracy:No Accuracy
Owner: X-POTENTIAL
Driller: Paul Slusarchuk Well Drilling LTd.
Well Name: 12 INCH SUPPLY WELL
Date Completed: 1998 May 26
Well Use: TEST WELL
Water Use: Industrial
Well Status: ABANDONED Aquifer: LIMESTONE OR DOLOMITE

REMARKS:

999 REDONDA, PULLED CASING ON TEST HOLE & 12 INCH WELL INSTALLED

WELL LOG (Imperial units)

From To(ft.) Log

0.0 45 CLAY

45.0 55 TILL

55.0 138 LIMESTONE

WELL CONSTRUCTION

Inside Outside Slot

From	To(ft)	Const.Method	Dia.(in)	Dia.(in)	Size(in)	Type	Material
0.0	56.0	CASING	5.0				GALVANIZED
56.0	138.0	OPEN HOLE	4.5				

Top of Casing: 2.0 ft. above ground

PUMPING TEST

Date : 1998 May 26 Pumping 80.0 Imp. gallons/minute

Water level before test : 34.7 ft below ground

Water level at end of test : 35.3 ft below ground

Test duration: 1:00:00

Test Zone: from 56.0 ft to 138.0 ft