

May 2, 2005

0529240101-LTR-V0001-00

Mr. Randy Webber, Manager
Red River Region
Manitoba Conservation
Suite 160, 123 Main Street
Winnipeg, MB R3C 1A5



Dear Mr. Webber

Subject Proposed Remedial Action Plan – 2185 Logan Avenue, Winnipeg

Chisick Metals Limited has engaged Wardrop Engineering to prepare a Remedial Action Plan for the former North West Smelting property located at 2185 Logan Avenue and to present the plan to Manitoba Conservation. As you are aware, Mr. Chisick is considering the purchase of this property to facilitate the installation of a new rail spur into his business located on the adjacent lot. I understand that you have already had preliminary discussions with Mr. Chisick on this matter.

The attached Remedial Action Plan was prepared by Wardrop to address any environmental issues, associated with the lead impacted soil, that might arise as a result of the proposed rail spur installation. Mr. Chisick has requested that Wardrop discuss the proposed plan with Manitoba Conservation before he makes a final decision on submitting an offer to purchase the property at 2185 Logan Avenue. We can meet with you at your convenience to discuss the plan in greater detail if required.

It would be appreciated if you could provide a written response outlining Manitoba Conservation's opinion on whether implementation of the proposed Remedial Action Plan will be adequate to allow the rail spur construction to proceed. An early reply would be very much appreciated, as our client has to make a decision on this matter in the very near future.

Thank you for your consideration on this matter.

Sincerely

Reviewed by:

WARDROP ENGINEERING INC.

WARDROP ENGINEERING INC.

Dave Ediger, P. Eng.
Senior Environmental Engineer
DE/pp
Attachment
Copy Chisick Metals

Edward A. Wolowich, M.Sc., P.Eng.
Vice President, Oil & Gas



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February 1, 2005

0529240100-LTR-V0001-00

Mr. Cliff Chisick
Chisick Metals Limited
2141 Logan Ave
Winnipeg, MB R2R 0J3

Dear Mr. Chisick

Subject Proposed Remediation Action Plan for 2185 Logan Ave

Wardrop Engineering is pleased to present this proposed Remediation Action Plan (RAP) for the above-mentioned site. The site is currently registered with Manitoba Conservation as an "Impacted Property", due to the presence of lead impacted soil and shallow groundwater. The following RAP was developed to assist in reducing the potential for adverse impacts upon personnel or surrounding properties during the course of the proposed site redevelopment.

PROJECT BACKGROUND

Chisick Metals operates a scrap metal salvage facility at 2141 Logan Avenue. The Chisick Metals property is rectangular in shape with both the west and northern boundaries being adjacent to the inverted "L" shaped 2185 Logan Avenue property. Chisick Metals is considering purchasing the adjacent property with the idea of installing a railway spur line extension from the northwest corner of the adjacent property in to the current Chisick Metals operations site.

The area through which the proposed spur line would be constructed is between 1.2 and 2.0 m higher in elevation than the elevation of the existing spur line so excavation of a railway corridor would be required in order to maintain the appropriate grades. Based on a topographic survey of the site and the proposed site regarding plan, it is estimated that approximately 2600 m³ of soil would have to be excavated in order to bring the proposed railway corridor to the grade required. A general plan of the proposed spur line is shown as Figure 1, attached.

Site Contamination

The property at 2185 Logan Avenue, Winnipeg, was formerly owned by North West Smelting & Refining Ltd. A battery recycling operation was housed on the south end of the property in a complex of buildings that was formerly a refinery. The northern third of the property is higher in elevation than the existing adjacent property to the north and south. This area reportedly consists of clay capped debris fill from the refinery and battery recycling operation.



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ID Systems Ltd. conducted an Investigation into Lead contamination at the subject property in 1991, comprising borehole drilling, monitoring well installation, and soil and groundwater sample collection and analysis. The geology of this northern part of the property reportedly consists of grass growing in a stony topsoil overlaying 0.5 m of clayey fill, which in turn overlies 1 m of fill consisting of foundry debris, plastic battery case debris, and clayey soil. This fill overlays the original black organics and clay. The undisturbed clay was encountered at depths ranging from 2 to 3 m below grade.

Soil samples were analyzed for total lead and leachate (concentration in extract) concentration. This investigation reported that total lead concentration varied from 37 to 197,000 µg/g and the leachate concentration varied from 0.04 to 166 mg/L. Based on these results, all test holes were found to demonstrate lead impacts above the applicable remediation criteria, with this lead contamination varying in extent with depth, and extending from grade to depths of 3.5 m below grade. Groundwater samples submitted for revealed elevated lead concentrations ranging from 0.055 to 3.0 mg/L.

These investigations indicated that the area of impacted soil extended toward the northern and western limits of the Chisick Metals site; however no investigations have been done on the Chisick Metals property to confirm the potential extent of these impacts.

REMEDIAL ACTIONS

Construction Considerations

Manitoba Conservation's view of the 2185 Logan Avenue property is that it represents a potential human health concern through soil contact and inhalation pathways. Any site development would therefore require appropriate mitigation measures to minimize these exposure pathways, either through removal of the lead impacted soil, or on-site containment.

The proposed regrading of the site would result in some disturbance of these lead impacted soils since the ID Systems reported lead concentration above the applicable criteria between 0.6 and 3.5 m below grade throughout the proposed railway corridor. It is estimated that approximately two thirds of the excavation would be in known lead impacted soils, while the remaining third would be from the Chisick Metals property, for which no analytical information is available to confirm the presence or absence of metals impacted soil.

Once exposed, the contaminated soils would become susceptible to erosion by wind, water and vehicle traffic. Contaminated soil particles could potentially impact surrounding properties and/or be a potential hazard for persons working at the property, so appropriate mitigation measures would be required throughout the excavation process.

Due to the logistical and financial implications of off-site disposal of these metal impacted soils, some of which are at hazardous waste levels, it is proposed to contain the impacted soil to the 2185 Logan Avenue property. Due to the lack of information regarding the condition of the soils to be excavated from the Chisick Metals site, it is proposed to treat these soils the same as the known impacted soil. Thus no

segregation of clean versus impacted soil will be performed during the proposed excavation. All of the excavated material would be piled in the currently vacant area to the east of the proposed spur line, resulting in a mound approximately 2.5 m higher than the existing grade sloping outwards.

Final Encapsulation

After site grading is complete, the exposed impacted soil will need to be covered to minimize the potential for future release of lead impacted soil into the surrounding environment. It is therefore recommended that a geotextile liner be placed over top of all exposed impacted soil, followed by soil or crushed rock, depending on the future site use. This liner would act as a marker to indicate the presence of impacted soil so that any future excavations would be alerted to the fact that the impacted soil has been reached, and would also assist in the erosion control.

If the mounded area is not considered to be suitable for future development, it is suggested that the geotextile liner be covered with approximately 100 mm of soil, and then revegetated, either by sod or grass seed. The revegetation would assist in minimizing surface erosion and the amount of infiltration into the deeper impacted soils.

If the area is expected to be subject to vehicular access, then the geotextile liner should be covered by approximately 150 mm of crushed rock.

The exposed slopes along the railway corridor and the ditch works proposed for the eastern side of the property would be covered by the geotextile liner and appropriate erosion control measures, as appropriate for the final grades and uses.

MITIGATION MEASURES

The lead impacted soil in its present form represents a limited risk of exposure since the vegetation limits direct contact. However, once disturbed, there is a much greater risk of exposure until appropriate encapsulation measures are again in place. During excavation works, the proposed project may be subject to conditions imposed by personnel, the surrounding environment, and/or vehicles at the site. A review of these effects and their mitigation measures are discussed below.

Personnel

The primary concern is exposure of personnel, both on-site and off-site, to lead impacted soil through either direct contact or inhalation. Proper protective personnel equipment (PPE) will therefore be required by all persons involved with the excavation works, and efforts made to minimize activities which could contribute to adverse impacts on off-site workers and the general public. PPE would consist primarily of a respirator equipped with particulate filters and disposable coveralls or work clothes, which are confined to the subject property (i.e., removed before leaving the site).

Protection of off-site personnel would involve the dust control measures described below, as well as limitations on what activities could be performed in the presence of people working outdoors in the immediate vicinity of the excavation works.

Environment

Wind - High wind velocities could cause increased dispersion of dust from the project area into the atmosphere and surrounding land, which could then lead to human exposure through both contact and inhalation. Strict dust control measures will therefore be required throughout the course of this project.

Precipitation - Heavy rain or snowmelt has the potential to create impacted soil runoff, which could increase the area of surface soils exposed to lead impacts. While runoff from the site could potentially transport lead contaminated soil particles off site, it is unlikely that the water itself would absorb enough lead from the soils to become contaminated above acceptable guidelines.

Vehicle Traffic

The heavy equipment vehicles used during grading operations will come into contact with lead impacted soil. The soil can adhere to wheels, tracks, blades and bodies of these vehicles. Movement of these vehicles along site roadways could potentially spread impacted soils onto areas that do not contain any impacted soils. Care should be taken to ensure that any vehicle that may come into contact with impacted soil is properly decontaminated before it is allowed to leave the project site. This also applies to any other smaller equipment used during the project.

Potential adverse affects on the project and their mitigation measures are outlined in more detail in Table 1. General construction considerations for implementing these mitigation measures have also been prepared and are attached.

We trust that the above information meets with your requirements. If you have any questions or comments, please contact myself, Mr. Gord Steiss or Ms. Jarvis King at 956-0980. Thank you for this opportunity to be of service to Chisick Metals Ltd.

Sincerely

WARDROP ENGINEERING INC.



Brent K. Horning, B.Sc. (G.E.), P.Eng.
Manager, Hydrogeology/Environmental

BKH/ld

Attachments

TABLE 1
Summary of Potential adverse Effects on the Project

	Potential Adverse Effect	Mitigation Measure
Wind	Dispersion of dust to the atmosphere and surrounding land.	When dust is visibly observed blowing off-site, the project will be stopped. Exposed areas of impacted soil will be covered with tarps to prevent erosion by wind. When wind velocities reduce to a level where no dust can be observed blowing off-site, the project will restart.
Precipitation	Erosion of impacted soil to drainage ditches.	During periods of heavy rain, the project will be stopped. Exposed areas of impacted soil will be covered with tarps to prevent erosion by rainfall.
Vehicle Traffic	Impacted soil may adhere to vehicle wheels, track, blades, bodies, etc. This soil may then be released onto a non-impacted area or roadway when the vehicle leaves the project area. Fuel, oil or fluid leak could release contaminants, which could effect soil, surface water and groundwater.	A decontamination area will be set up, whereby any vehicles coming into contact with impacted soil can be cleaned before leaving the project site. Contaminated material accumulating in the decontamination area will be returned to the impacted areas, or disposed of appropriately. A spill kit will be kept on-site. Minor spills will be covered with absorbent material and excavated to the point where no evidence of the contaminant remains on the ground. Contaminated material will be properly disposed of. Major spills will be reported to Manitoba Conservation.

**CHISICK METALS
CONSTRUCTION CONSIDERATIONS
REMEDIAL ACTION PLAN**

PART 1 GENERAL

1.1 References

- .1 Contaminated Sites in Manitoba, Submission of Remedial Action Plans, Information Bulletin 96-02E, January 1996, Revised January 2004.

1.2 Regulatory Requirements

- .1 Provide erosion and sediment control in accordance with Province of Manitoba regulations.
- .2 Comply with federal, provincial and local anti-pollution laws, ordinances, codes and regulations when disposing of waste materials, debris and rubbish.

1.3 Sequencing and Scheduling

Do not commence Work involving contact with potentially impacted material until decontamination facilities are operational.

1.4 Soil Stockpiling Facilities

- .1 Provide, maintain, and operate impacted storage/stockpile area(s) as required.
- .2 Equip site with tarps capable of covering impacted material until the impacted material is properly covered with a geotextile liner, and either clean fill or crushed rock.

1.5 Vehicular Access and Parking.

- .1 Maintenance and use:

Prevent contamination of access roads. Immediately scrape up debris or material on access roads which is suspected to be impacted; return impacted soil to the excavation area. Clean access roads at least once per shift.

1.6 Dust and Particulate Control

- .1 Execute Work by methods to minimise raising dust from construction operations.
- .2 Implement and maintain dust and particulate control measures as determined necessary during construction. Ensure they are in accordance with Province of Manitoba Regulations.
- .3 Provide positive means to prevent airborne dust from dispersing into atmosphere. Use potable water for water misting system for dust and particulate control, if required.
- .4 As a minimum, use appropriate covers on trucks hauling fine or dusty materials.

- .5 Prevent dust from spreading to adjacent property sites.
- .6 Stop work at any time when the Contractor's control of dusts and particulates is inadequate for wind conditions present at site.
- .7 If Contractor's dust and particulate control is not sufficient for controlling dusts and particulates into atmosphere, stop work. Contractor must identify procedures that Contractor proposes to resolve problem. Make all necessary changes to operations prior to resuming any excavation, handling, processing, or any other work that may cause release of dusts or particulates.

1.7 Pollution Control

- .1 Provide methods, means, and facilities to prevent contamination of soil, water and atmosphere from discharge of noxious toxic substances and pollutants produced by construction operations.
- .2 Be prepared to intercept, clean up, and dispose of spills or releases that may occur whether on land or water. Maintain materials and equipment required for cleanup of spills or releases readily accessible on site.
- .3 Promptly report spills and releases potentially causing damage to the environment to:
 - .1 Authority having jurisdiction or interest in spill or release including any conservation authority, water supply authorities, drainage authority, road authority, and fire department.
 - .2 Site supervisor.
- .4 Take immediate action using available resources to contain and mitigate effects on environment and personnel from spill or release.

1.8 Equipment Decontamination

- .1 Decontaminate equipment after working in potentially contaminated work areas and prior to subsequent work or travel on clean areas.
- .2 Perform equipment decontamination on Contractor- constructed equipment decontamination pad.
- .3 At minimum, perform the following steps during equipment decontamination: mechanically remove packed dirt, grit, and debris by scraping and brushing without using steam or high pressure water to reduce amount of water needed and to reduce amount of contaminated rinsate generated. Use high-pressure, low-volume, hot water or steam supplemented by detergents or solvents as appropriate and as approved by supervisor. Pay particular attention to tire treads, equipment tracks, springs, joints, sprockets and undercarriages. Scrub surfaces with long handle scrub brushes and cleaning agent. Rinse off and collect cleaning agent. Air dry equipment in Clean Zone before removing from site or travelling on clean areas. Perform assessment to determine effectiveness of decontamination.

- .4 Maintain inspection record on site which includes: equipment descriptions with identification numbers; time and date entering decontamination facility; time and date exiting decontamination facility; and name of inspector with comment stating that decontamination was performed and completed.
- .5 Each piece of equipment will be inspected by supervisor after decontamination and prior to removal from site and/or travel on clean areas. Supervisor will have right to require additional decontamination to be completed if deemed necessary.
- .6 Take appropriate measures necessary to minimise drift of mist and spray during decontamination including provision of wind screens.
- .7 Collect decontamination wastewater and sediments which accumulate on equipment decontamination pad. If required, transfer wastewater to designated wastewater storage tank.
- .8 Transfer sediment accumulated on decontamination pad to area containing impacted soil.
- .9 Furnish and equip personnel engaged in equipment decontamination with protective equipment including suitable disposable clothing, respiratory protection, and face shields.

1.9 Water Control

- .1 Maintain excavations free of water.
- .2 Protect site from puddling or running water.
- .3 Control surface water runoff which has come into contact with stockpiled soil or uncovered excavation area through use of temporary weir in existing surface water drainage system to limit sediment transport.
- .4 Prevent precipitation from infiltrating or from directly running off stockpiled materials. Cover stockpiled materials with an impermeable liner during periods of work stoppage including the end of each working day and as directed by the supervisor.
- .5 Direct surface waters that have not contacted potentially contaminated materials to existing surface drainage systems.
- .6 Control surface drainage including ensuring that gutters are kept open, water is not directed across or over pavements or sidewalks except through approved pipes or properly constructed troughs, and runoff from unstabilized areas is intercepted and diverted to suitable outlet.
- .7 Dispose of water in manner not injurious to public health or safety, to property, or to any part of Work completed or under construction.
- .8 Provide, operate, and maintain necessary equipment appropriately sized to keep excavation, staging pads, and other work areas free from water.

1.10 Dewatering

- .1 Dewater various parts of Work area as required.
- .2 Employ construction methods, procedures and precautions that ensure Work, including excavations, are stable, free from disturbance, and dry.
- .3 Provide sufficient and appropriate labour, and equipment necessary to keep work free of water.
- .4 If required, test and analyze water generated from dewatering activities to ensure it meets required discharge or disposal criteria.

1.11 Erosion and Sediment Control

- .1 Plan and execute construction by methods to control surface drainage from cuts and fills. Prevent erosion and sedimentation.
- .2 Minimise amount of bare soil exposed at one time. Stabilise disturbed soils as quickly as practical. Remove accumulated sediment resulting from construction activity from adjoining surfaces and drainage. Repair any damage caused by soil erosion and sedimentation.
- .3 Provide and maintain temporary measures which may include, but are not limited to, hay or strawbales, ditches, geotextiles, drains, berms, dikes, and any other construction required to prevent erosion and migration of potentially contaminated silt, mud, sediment, and other debris off site or to other areas of site where contamination might result, or that might otherwise be required by laws and Regulations.

1.12 Progress Cleaning

- .1 Maintain cleanliness of Work and surrounding site to comply with federal, provincial, and local fire and safety laws, ordinances, codes, and regulations.
- .2 Co-ordinate cleaning operations with disposal operations to prevent accumulation of dust, dirt, debris, rubbish, and waste materials.

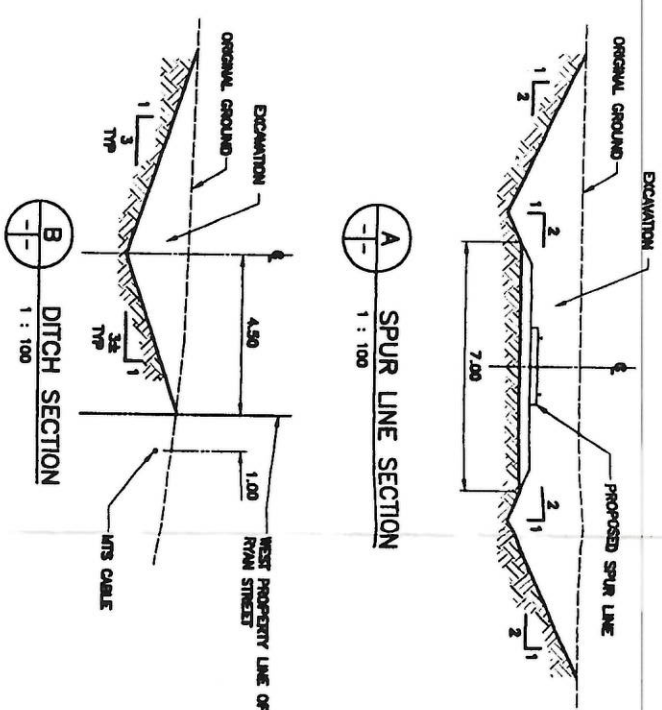
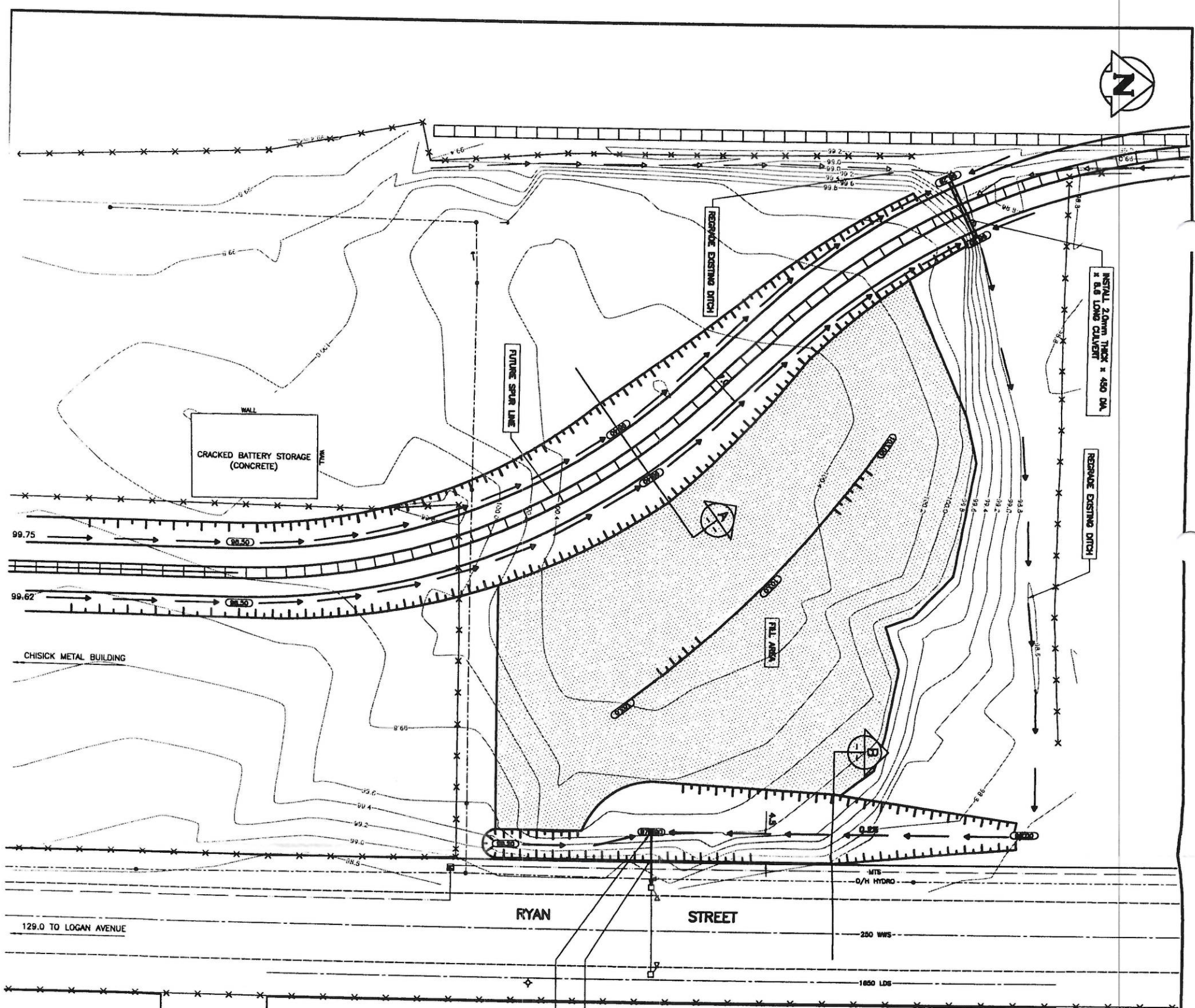
1.13 Final Decontamination

- .1 Perform final decontamination of construction facilities, equipment, and material that may have come in contact with potentially contaminated materials prior to removal from site.
- .2 Perform decontamination as specified to satisfaction of Supervisor. Supervisor will direct Contractor to perform additional decontamination if required.

1.14 Removal And Disposal

- .1 Dispose of non-contaminated waste materials, litter, debris, and rubbish off site.
- .2 Do not burn or bury rubbish and waste materials on site.

- .3 Do not dispose of volatile or hazardous wastes such as mineral spirits, oil or paint thinner in storm or sanitary drains.
- .4 Do not discharge wastes into streams or waterways.
- .5 Dispose of following materials at appropriate off-site facility: Debris including excess construction material, non-contaminated litter and rubbish; disposable PPE worn during final cleaning; and all other non-controlled waster materials.



- LEGEND - EXISTING FEATURES**

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| | DITCH |
| | CUNB |
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| | HIDRANT |
| | WAPPOLE |
| | HINDO POLE |
| | HINDO POLE AND |
| | GUTTER INLET |
| | MIS BOX |
| | DATE POST |
| | FENCE |
| | SPIAL LINE |
| | PROPERTY LINE |
| | SEWER |
| | HINDO OVERHEAD |

- LEGEND - PROPOSED**
- | | |
|---|-----------|
|  | DITCH |
|  | SLOPE |
|  | SPUR LINE |
|  | ELEVATION |

1. BENCHMARK: NAIL IN WEST BULLEVAARD HYDRO POLE OF
BENCH STREET, ON SOUTH OF NORTH PROPERTY LINE.
ELEVATION = 100.00m.
2. WARDON ENGINEERING FIELD BOOK No. 208A.
3. DATE OF SURVEY: JANUARY 10, 2005.
4. ALL EXCAVATED MATERIAL (APPROX. 3100 m³) TO BE
STOCKPILED ON SITE.

HALF SIZE REDUCTION

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THE INFORMATION CONTAINED ON THIS DRAWING HAS BEEN PREPARED SOLELY FOR THE OWNER FOR USE ON THIS PROJECT AND IS CORRELATED AND UNAUTHORIZED USE OF THE INFORMATION IS A BREACH OF CONTRACT AND WILL BE PENALIZED AS SUCH. USE OF THE INFORMATION ON THIS DRAWING IN WHOLE OR IN PART OTHER THAN FOR THE INTENDED PURPOSE IS AT THE SOLE RISK OF THE USER.

34

CHISICK METALS LTD

WARDROP | Engineering Inc.

PROJECT NAME
PROPOSED SPUR LINE DEVELOPMENT
2141 LOGAN AVENUE

SITE REGRADING

DESIGNED BY:	DRAWN BY:	CHECKED BY:
GS	CHD	
APPROVED BY:		
SCALE:		DATE:
1 : 300		05.01.13
DRAWING NO.	REV.	

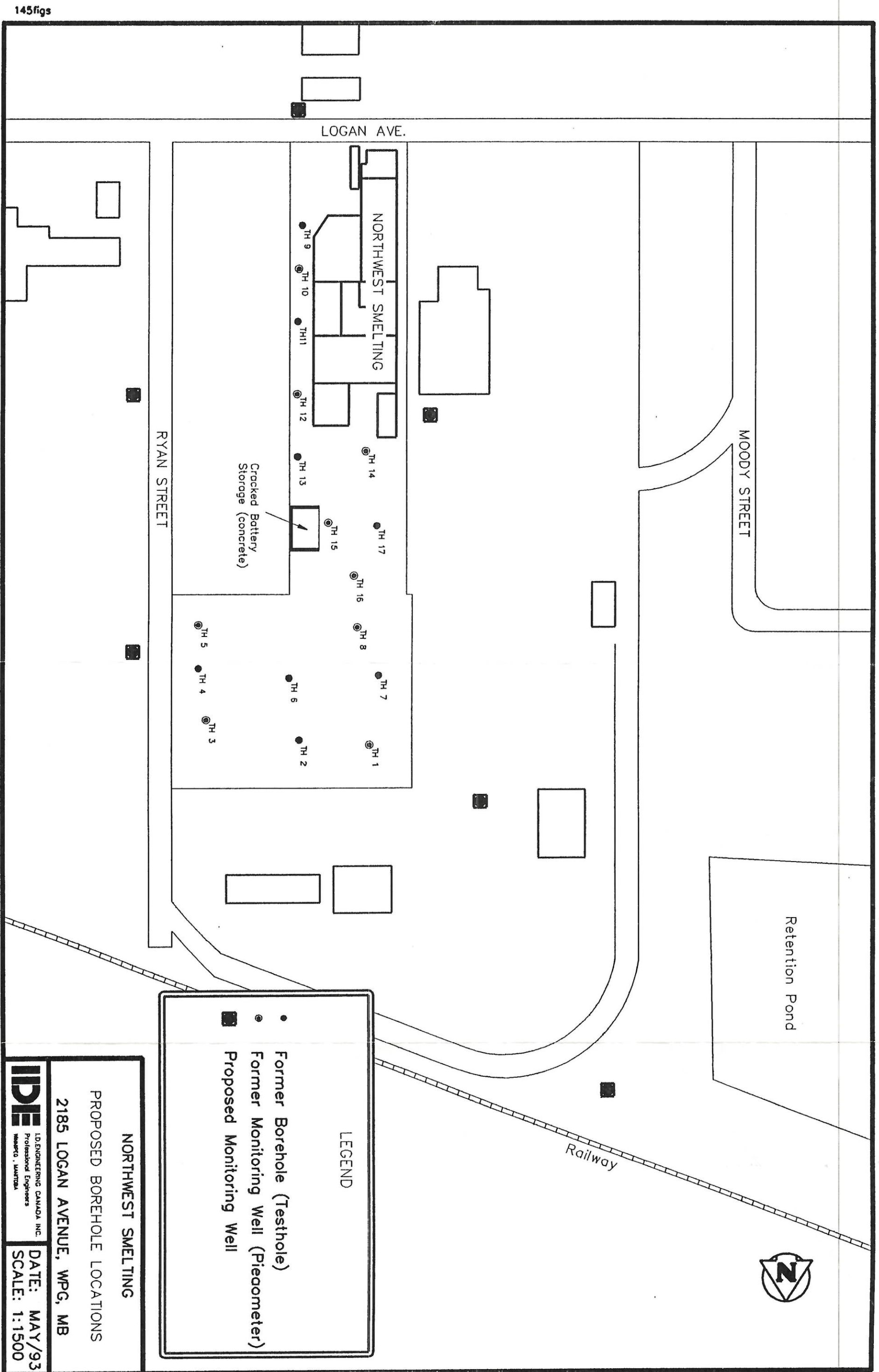


FIGURE 1