



April 30, 2015

Manitoba Conservation and Water Stewardship
Programs and Strategies
1007 Century Street
Winnipeg, MB R3H 0W4

E-mail: warren.rosnad@gov.mb.ca

Attention: Warren Rosnad

Re: Remedial Plan

515 Munroe Avenue, Winnipeg, MB
Pinchin File: 96012.002

Pinchin Ltd. (Pinchin) is pleased to submit this Remedial Plan to Manitoba Conservation and Water Stewardship, Programs and Strategies (Manitoba Conservation) for approval. The Remedial Plan details a management strategy for 515 Munroe Avenue, Winnipeg, MB (Site).

Pinchin has been retained by Frank Laba on behalf of Elite Self Storage (Client) to obtain approval of the management strategy prior to the divestiture of the Site. The current owner of the Site is:

Frank Laba
Box 263
Whitemouth, MB R0E 2E0
204-771-0610
frank_laba@hotmail.com

1.1 Previous Reports

Pinchin completed a Phase I ESA at the Site, the findings of which are provided in the following report:

- Report entitled "Phase I Environmental Site Assessment, 515 Munroe Avenue, Winnipeg, Manitoba", prepared by Pinchin for the Client, dated June 18, 2009.

Based on the findings of the Phase I ESA completed by Pinchin, the following could result in potential subsurface impacts at the Site:

- A Radio Oil Refinery, with numerous aboveground storage tanks (ASTs) of varying sizes, was located approximately 20 metres (m) south of the Site in the 1961 Fire Insurance Plan (FIP), the 1948, 1960, 1968 and 1979 aerial photographs and city directories from the early 1950s to the late 1970s;
- An underground storage tank (UST) was located on the Canada Dry Bottling Plant property located north of the Site;



- A railway spur line was located on-Site on the north side of the former manufacturing plant;
- A 10,000 gallon fuel oil AST was located on the south side of the former manufacturing plant located on-Site;
- Hazardous wastes were formerly generated at the Site;
- A 2,727-Litre (L) gasoline UST located on-Site identified in the FIP and Property Underwriter Report;
- Hydrocarbon odours were detected in four of the six boreholes advanced at the Site during a previous investigation completed by M. Block, which may indicate the potential presence of petroleum hydrocarbon (PHC) impacted soils at the Site;
- The storage of asphalt on the northeast portion of the Site; and
- An automotive repair/servicing facility has operated immediately adjacent to the north of the Site from 1990 until the time of the Phase I ESA in 2009.

Based on the findings noted above, Pinchin recommended completing a Phase II ESA at the Site.

Pinchin completed the following Phase II ESAs to identify and delineate impacts related to the Site:

- Report entitled "Phase II Environmental Site Assessment, 515 Munroe Avenue, Winnipeg, MB", prepared by Pinchin for the Client, dated November 14, 2014;
- Report entitled "Supplemental Phase II Environmental Site Assessment, 515 Munroe Avenue, Winnipeg, MB", prepared by Pinchin for the Client, dated April 28, 2015; and
- Report entitled "Supplemental Phase II Environmental Site Assessment, 515 Munroe Avenue, Winnipeg, MB", prepared by Pinchin for the Client, dated April 30, 2015.

Pinchin has advanced a total of 36 boreholes to identify and delineate impacts associated with the Site. Thirty-three boreholes were advanced on-Site and three boreholes were advanced on the City of Winnipeg boulevard south of Munroe Avenue. Twenty-three boreholes were completed as groundwater monitoring wells, twenty on-Site and three on the City of Winnipeg Boulevard south of Munroe Avenue. Boreholes ranged in depth from 1.5 metres below ground surface (mbgs) to 4.6 mbgs.

Select "worst case" soil samples collected during the borehole drilling program were submitted for laboratory analysis of petroleum hydrocarbons (PHCs) in the F1 to F4 fraction ranges (F1-F4), benzene, toluene, ethylbenzene and xylenes (BTEX), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and/or metals. Groundwater samples collected from the newly installed monitoring wells were submitted for laboratory analysis of PHCs (F1-F4), BTEX, VOCs and/or PAHs.



Based on Site-specific information, the soil quality was assessed based on Canadian Council of Ministers of the Environment (CCME) "Environmental Quality Guidelines" accessed on the CCME web site (CCME Guidelines). Groundwater quality for non-potable groundwater conditions was assessed based on Ontario Ministry of the Environment and Climate Change (MOECC) "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011 (MOECC Groundwater Guidelines).

The findings of the Phase II ESA and Supplemental Phase II ESAs identified the following soil impacts:

- Soil sample BH3 S1 collected at borehole BH3 (MW3) exceeded the CCME Soil Guidelines for PHCs (F1) (730 milligrams per kilogram (mg/kg) vs. the CCME Soil Guideline of 320 mg/kg) and PHCs (F2) (7,000 mg/kg vs. the CCME Soil Guideline of 260 mg/kg);
- Soil sample BH5 S1 collected at borehole BH5 (MW5) exceeded the CCME Soil Guidelines for barium (2,040 mg/kg vs. the CCME Soil Guideline of 2000 mg/kg);
- Soil sample BH22-S1 collected at borehole BH22 (MW22) exceeded the CCME Soil Guidelines for PHCs (F1) (750 mg/kg vs. the CCME Soil Guideline of 320 mg/kg) and PHC (F2) (4,500 mg/kg vs. the CCME Soil Guideline of 260 mg/kg); and
- Soil sample BH22-S2 collected at borehole BH22 (MW22) exceeded the CCME Soil Guideline for PHCs (F2) (1,200 mg/kg vs. the CCME Soil Guideline of 260 mg/kg).

The findings of the Phase II ESA and Supplemental Phase II ESAs identified the following groundwater impacts:

- The groundwater sample collected from monitoring well BH1 (MW1) exceeded the MOECC Groundwater Guidelines for benzene (540 micrograms per litre (µg/L) vs. the MOECC Groundwater Guideline of 430 µg/L);
- The groundwater sample collected from monitoring well BH11 (MW11) exceeded the MOECC Groundwater Guidelines for PHCs (F2) (960 µg/L vs. the MOECC Groundwater Guideline of 150 µg/L) and PHCs (F3) (920 µg/L vs. the MOECC Groundwater Guideline of 500 µg/L);
- The groundwater sample collected from monitoring well BH11 (MW11) was resampled on February 4, 2015 and exceeded the MOECC Groundwater Guidelines for benzene (1,300 µg/L vs. the MOECC Groundwater Guideline of 430 µg/L) and PHCs (F2) (340 µg/L vs. the MOECC Guideline of 150 µg/L);

- The groundwater sample collected from monitoring well BH21 (MW21) exceeded the MOECC Groundwater Guidelines for PHCs (F2) (3,200 µg/L vs. the MOECC Groundwater Guideline of 150 µg/L), and PHCs (F3) (2,100 µg/L vs. the MOECC Groundwater Guideline of 500 µg/L);
- The groundwater sample collected from monitoring well BH23 (MW23) exceeded the MOECC Groundwater Guidelines for benzene (680 µg/L vs. the MOECC Groundwater Guideline of 430 µg/L) and PHCs (F2) (230 µg/L vs. the MOECC Guideline of 150 µg/L);
- The groundwater sample collected from monitoring well BH24 (MW24) exceeded the MOECC Groundwater Guidelines for benzene (1,500 µg/L vs. the MOECC Groundwater Guideline of 430 µg/L) and PHCs (F2) (390 µg/L vs. the MOECC Groundwater Guideline of 150 µg/L);
- The groundwater sample collected from monitoring well BH28 (MW28) exceeded the MOECC Groundwater Guidelines for benzene (1,200 micrograms per litre (µg/L) vs. the MOECC Groundwater Guideline of 430 µg/L) and PHCs (F1) (1,900 µg/L vs. the MOECC Groundwater Guideline of 750 µg/L); and
- The groundwater sample collected from monitoring well BH30 (MW30) exceeded the MOECC Groundwater Guidelines for PHCs (F2) (390 µg/L vs. the MOECC Groundwater Guideline of 150 µg/L).

All previous reports are provided with this Remedial Plan.

2.0 MANAGEMENT STRATEGY

The findings of the Phase II ESAs identified PHC-impacted soil and groundwater and zinc impacted soil on-Site. The Client requests that impacted soil and groundwater remains on-Site for the following reasons:

- The facility has controlled access in the form of perimeter fencing which limits access;
- All soil samples collected at the Site met the human health direct contact pathway including soil ingestion and soil dermal contact guidelines;
- The asphalt is in good condition and covers approximately 1,960 m² of the Site that has identified subsurface soil and groundwater impacts thus eliminating the ecological contact pathways in these areas;



- Gravel fill covers approximately 50 m² of the impacted area. Gravel fill covers metal impacted soil on the north portion of the Site. The gravel area is not vegetated and would not be conducive to supporting ecological life nor would this area support significant carbon cycling and nitrogen mineralization by soil biota;
- The Site Buildings that are located within the impacted area are storage lockers that are not intended to be occupied for any appreciable length of time and therefore do not represent exposure scenarios consistent with those considered in the development of guidelines protective of vapour inhalation in commercial buildings. A Site office is located on the west portion of the Site in an area where no impacts have been identified;
- All soil samples collected at the Site met the off-Site migration check/guideline values;
- Potable water for the Site and surrounding area is supplied by the City of Winnipeg and as such, groundwater is not a potable source on-Site or in the vicinity of the Site;
- The Site is located more than 30 m from the nearest water body, therefore the freshwater aquatic life pathway is not applicable to the Site.
- No free phase PHCs were observed within soil or groundwater samples on-Site and impacts were not at concentrations that would be considered explosive hazards.. and
- The measured concentration of all volatile and semi-volatile exceedances noted in groundwater samples (i.e., BTEX and PHC (F1-F4)) are below guideline components protective of vapour inhalation for industrial/commercial properties as documented in the MOECC "Rationale for the Development of Soil and Ground Water Standards for use at Contaminated Sites in Ontario" dated April 15, 2011.

Based on the above information, the Client is requesting that impacts be allowed to remain on Site. The Client (current owner) and potential purchaser both understand that there are soil and groundwater impacts on-Site. They agree that no soil will be excavated or removed from the Site without first contacting Manitoba Conservation for approval by way of a modified Remedial Plan for the Site. The Site operations will remain the same after the divestiture of the Site. The potential purchaser understands that if the future use of the Site changes, that a modified Remedial Plan/management strategy will need to be approved by Manitoba Conservation.



3.0 CLOSING

We trust that the information provided herein is sufficient for Manitoba Conservation to approve the Remedial Plan. If you have any questions, or require additional information, please do not hesitate to contact the undersigned.

Sincerely,

Pinchin Ltd.

Prepared by:

Reviewed by:

W2015-033

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cc: Frank Laba c/o Elite Self Storage

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