WARDROP
A TETRA TECH COMPANY

December 1, 2010

1000070300-LTR-V0005-00

Mr. Randy Webber
Regional Supervisor
Winnipeg District
Manitoba Conservation
160 – 123 Main Street
Winnipeg, MB R3C 1A5

Dear Mr. Webber

Subject **Remedial Action Plan – Site Services and Road Works Adjacent to the Disraeli Bridge – Winnipeg, Manitoba**

Wardrop Engineering Inc. (Wardrop) is planning to proceed with the offsite disposal of potentially impacted soil excavated as part of the land-based construction activities for the new Disraeli Bridge over the Red River in Winnipeg, Manitoba. The potentially impacted soil will be removed to facilitate the relocation site services and the construction of new road works. The site services are underground utilities on the south side of the river adjacent to Gladstone Street and Rover Avenue. The new underground utilities include a 250 mm diameter watermain, a 300 mm diameter feedermain, and associated appurtenances. Portions of the existing 250 mm diameter watermain and 300 mm diameter land drainage sewer (LDS) will be abandoned in place. The new road works will consist of the relocation of a portion of Gladstone Street to intersect with Rover Avenue on the east side of Disraeli Freeway. A site plan is presented on Sheet 045, attached. Our proposed Remedial Action Plan (RAP) is detailed in the following sections.

PROJECT DESCRIPTION – DISRAELI BRIDGE PROJECT

The Disraeli Bridge project will comprise the construction of a new bridge structure spanning the Red River. The existing roadway will be realigned to the new bridge and exits and entrances will be redesigned. The new four lane bridge structure will be located to the west of the current structure. The current bridge structure will be converted to a pedestrian and cyclist bridge.

SITE BACKGROUND

Site Setting

The site of the underground utilities relocation and new road works is adjacent to the existing Disraeli Bridge and proximate to the existing Gladstone Street and Rover Avenue. The area encompasses a grassed area as well as paved portions of the streets. Surrounding land uses include the Red River to the north; Disraeli Street to the west, across which is a playground; the existing extension of Gladstone Street to the south; and commercial property to the east.

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The commercial property is occupied by Manitoba Hydro and is the location of a former manufactured gas plant (MGP).

Site Investigations

The report prepared for Manitoba Hydro by UMA Engineering Ltd. (UMA) and dated December 2003 provided a summary of the numerous investigations that have been conducted at the site of the former MGP as well as along the river bank adjacent to Rover Avenue.

The site of the underground utilities relocation and new road works is adjacent to the existing Disraeli Bridge and, as such, there has been limited investigation in the area. The nearest investigated areas include borehole MW-22 installed east of the bridge by CH2M Hill Engineering Ltd. in 1993; boreholes TH2K-17 and TH2K-18 installed north of Rover Avenue by AMEC Earth & Environmental limited in 2000; and test pits TP-2 and TP-3 installed west of the bridge by AECOM in 2007.

Site Geology

The native subsurface soils in the general area of the site are highly variable and consist of interbedded layers of low to high plastic clay, low plastic silt, and fine grained sand. Glacial till underlies the lacustrine materials at depths ranging from 8.2 m to 15.6 m below grade, and consists primarily of silt, although some gravel and sand are also present. According to the *Geological Engineering Maps and Report* produced by the former University of Manitoba Department of Geological Engineering in 1983, the carbonate bedrock in the area of the site is of the Selkirk Member and consists of mottled, fossiliferous dolomitic limestone, with abundant chert nodules in the upper limestone layer. Based on previous investigations in the vicinity of the site, bedrock is encountered at approximately 33 m below grade.

Based on a Wardrop investigation in February 2010, the site stratigraphy at the planned substructure to the west of the utility relocation area comprised clay fill from grade to a depth ranging from 0.8 m to 1.8 m below grade, underlain by silt, with varying percentages of clay to the maximum depth of the boreholes (3 m to 6 m below grade).

Site Hydrogeology

Primarily low permeability tills and glaciolacustrine silt and clay deposits dominate the area with the exception of locations along the floodplains of the river where permeabilities may be greater. Fractures in the glaciolacustrine silts and clays, as well as in the till deposit, can be a source of greater permeabilities.

The major underlying aquifer in the Winnipeg area is the upper 15 m to 30 m fractured zone of the Upper Carbonate Aquifer. The aquifer is somewhat confined by the overburden and underlying lower permeability carbonate bedrock.

Prior to the development of the aqueduct system which supplies the City of Winnipeg with potable water, the Upper Carbonate Aquifer was an important source of water for both municipal and industrial use. The Upper Carbonate Aquifer remains a potable water source in areas bordering the City (east of the Red River) and for some industrial use within Winnipeg. It is known that the Red River supplied process water to the former MGP.

The Lower Carbonate Aquifer occurs in the bottom 7.5 m to 15 m of the Red River formation, along the interface of the upper shale unit of the Winnipeg Formation. This aquifer is of limited use for potable water supply. The Winnipeg Formation contains an upper sandstone aquifer which ranges in thickness from 6 m to 12 m and a lower sandstone aquifer approximately 3 m thick. Both sandstone aquifers contain non-potable saline waters.

NATURE AND EXTENT OF IMPACT

Overview of Site Impact

Based on information presented in 1994 CH2M Hill report, the 2000 AMEC Earth & Environmental Ltd. Report and the 2010 AECOM report, 2003 and 2006 UMA reports, the potential impact in the area of the utilities relocation activities can be summarized as follows:

- Maximum historical naphthalene concentration of 0.0156 mg/kg in borehole MW-22 (located east of the site) at 14.32 m to 14.63 m below grade, which is well below the expected 2.5 m depth of the utilities relocation.
- Maximum historical benzo(a)pyrene concentration of 9.86 mg/kg and a maximum historical naphthalene concentration of 154 mg/kg in borehole TH2K-17 (located north of the site) at 6.1 m to 6.4 m below grade, which is below the expected 2.5 m depth of the utilities relocation.
- Maximum historical benzo(a)pyrene concentration of 4.01 mg/kg and a maximum historical naphthalene concentration of 47.1 mg/kg in borehole TH2K-18 (located north of the site) at 4.88 m to 5.18 m below grade, which is below the expected 2.5 m depth of the utilities relocation.
- Maximum historical benzo(a)pyrene concentration of 0.77 mg/kg at 2.4 m below grade and a maximum historical naphthalene concentration of 0.61 mg/kg at 1.8 m in test pit TP-2 (located north of the site).
- Maximum historical benzo(a)pyrene concentration of 0.01 mg/kg at 0.6 m below grade in test pit TP-3 (located west of the site).

The historic analytical results are summarized on Table 1, attached.

REMEDIAL ACTION PLAN

Exposure Pathways

The UMA report prepared for Manitoba Hydro in 2006 and entitled: *Comprehensive Environmental Management Plan for Residuals from Historical Operations at the Sutherland Avenue Former Gas Plant* identified three major human health exposure pathways:

- Direct exposure to PAH-impacted soil (i.e. dermal contact, soil ingestion, and particle inhalation);
- Exposure to volatile components of subsurface coal tar impact in the outdoor environment; and,
- Exposure to volatile components of subsurface coal tar impact via soil vapour intrusion into the indoor environment.

The underground utility relocation activities for the new Disraeli Bridge will not change the identified exposure pathways. Since the new bridge construction activities will not involve an indoor environment, only the first two exposure pathways are considered applicable for this RAP. Land-based activities related to the underground utility relocation will involve soil removal for pipe installation. The road works will involve soil excavation for the relocation of Gladstone Street. Access to the construction area will be restricted to authorized personnel. Authorized personnel will be aware of encountering potentially impacted soil in the excavations. Unnecessary exposure to authorized personnel will be avoided through the use of protective clothing and respirators; and decontamination after working in the excavations exposing potentially impacted soil.

Description of Remedial Action Plan

The purpose of the RAP is to address the potentially impacted soil that may be removed during the underground utilities relocation activities and road works on the south side of the river adjacent to Gladstone Street and Rover Avenue. The remedial action will consist of the following:

- Removal of potentially impacted soil to facilitate installation of a new 250 mm diameter watermain, 300 mm diameter feedermain and associated appurtenances on the south side of the river adjacent to the existing Gladstone Street and Rover Avenue.
- Removal of potentially impacted soil to facilitate the relocation of Gladstone Street to intersect Rover Avenue on the east side of Disraeli Freeway.
- Off-site disposal of potentially impacted soil containing chemicals of concern at concentrations exceeding the applicable Canadian Council of Ministers of the Environment (CCME) guidelines.
- Backfilling around appurtenances with compacted "clean" excavated material, pending confirmatory analytical results indicating that concentrations of chemicals of concern do not exceed the applicable CCME guidelines, and/or imported clean backfill.
- Backfilling the road works excavation with "clean" imported sub-base material and paving.

Applicable Guidelines/Standards

The UMA (2006) report referenced the CCME (2002) Residential/Parkland soil quality guidelines as applicable for the locations surrounding the MGP site and the riverbank. For the purposes of this RAP, the current CCME *Canadian Environmental Quality Guidelines* (2007), *Canada-Wide Standard for Petroleum Hydrocarbons (PHC) in Soil* (2008), and the *Carcinogenic and Other Polycyclic Aromatic Hydrocarbons* (2008) soil quality guidelines have been used for comparison purposes.

It is not the intent to remediate, beyond the limits of the utilities relocation and road works, any impacted soil that may be encountered during the land-based construction activities. The purpose is only to address impacted soil that may be removed during the land-based construction activities.

Excavation of Potentially Impacted Soil

Land-based activities related to the new Disraeli Bridge underground utilities relocation will involve soil removal for the installation the new 250 mm diameter watermain pipe, 300 mm

diameter feedermain pipe, and associated appurtenances. The piping will be installed approximately 2.5 m below grade. An estimated volume of 415 m^3 of soil will be removed for the piping and appurtenances installation. Based on readily available historic information, the estimated 415 m^3 of soil are potentially impacted.

Construction activities related to the relocation of Gladstone Street will involve excavation to a depth of approximately 0.8 m below grade for sub-base preparation and paving. An estimated volume of 550 m^3 of soil will be excavated for the new road works. Based on readily available historic information and the limited depth of excavation, the volume of potentially impacted soil is expected to be minimal.

During soil removal for site services and road works, the soil will be assessed in the field based on visual observations, headspace vapour concentrations measured with GasTECH™ combustible gas indicator, noticeable odours, and available analytical results from previous investigations. Soil assessed in the field to be "clean" (i.e., no visual evidence of impact and no noticeable odour) will be stockpiled on the site for later use as backfill material, pending confirmatory analytical results. The "clean" soil will be stockpiled on polyethylene sheeting adjacent to the excavation from which the soil was removed.

Excavated soil assessed in the field to be impacted (i.e., visual evidence of impact and/or noticeable odours) will be loaded directly onto trucks or into roll-off bins for offsite disposal. In the event that trucks or bins are not immediately available, the soil will be temporarily stockpiled on polyethylene sheeting adjacent to the excavation from which it was removed. The stockpile will also be covered with polyethylene sheeting until it is removed for offsite disposal. Any stockpile will be located within a fenced area accessible only to authorized personnel.

Excavated material assessed in the field to be coal tar or coal tar-saturated (i.e. visual evidence of coal tar) will be loaded directly onto roll-off bins for temporary storage on the site. The bins will be located within a fenced area accessible only to authorized personnel. The bins will remain on the site until a sufficient quantity of the coal tar or coal tar-saturated soil has been collected for offsite disposal.

Abandoned Pipe Decommissioning

Land-based activities related to the new Disraeli Bridge underground utilities relocation will include the decommissioning of portions of a 300 mm diameter LDS and a 250 mm watermain pipe. In accordance with the City of Winnipeg specifications, the abandoned 300 mm diameter LDS will be filled with a cementitious flowable fill and a 1 m thick plug of 20 mpa sulphate resistant concrete will be placed at each limit of the piping.

The abandoned 250 mm diameter watermain will be filled with a cementitious flowable fill and a concrete plug will be placed at each limit of the piping.

Site Restoration

The work areas will be backfilled with clean compacted fill material to either existing grade or to the design grade set out by the new bridge construction. Any subsequent finish grading, landscaping or paving will be in accordance with the new bridge construction.

Off-Site Disposal

Based on the readily available historic analytical results, the potentially impacted soil will be suitable for disposal at MidCanada Environmental Services treatment facility in Ile des Chenes, Manitoba. Disposal of the impacted soil at MidCanada will require approval from the Director of Manitoba Conservation. The approval will be requested by MidCanada.

Coal tar and coal tar-saturated soil will be transported to Clean Harbor's hazardous landfill in Lambton, Ontario.

Confirmatory Sampling

Since it is not the intent to remediate, beyond the limits of the utilities relocation activities, any impacted soil that may be encountered during the land-based construction activities, no confirmatory sampling at the limits of the excavations is proposed.

Equipment Decontamination

Excavating or coring equipment that comes in contact with impacted soil will be decontaminated prior to that equipment leaving the site. Loose or visible soil will be scraped or brushed off the equipment. The equipment will then be pressured washed. The wash water will be collected on the site for subsequent disposal pending analytical results. Soil and solids from the decontamination process will be disposed at the MidCanada facility.

Closure Report

Following the completion of the site activities, Wardrop will prepare a closure report summarizing the site activities and including any soil analytical data.

Please contact Andrew Eason at (204) 954-6843 if you have any questions or comments.

Sincerely

WARDROP ENGINEERING INC.

Andrew Eason, P.Eng.
Senior Environmental Engineer

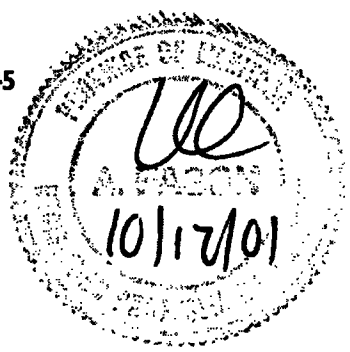
Reviewed by

WARDROP ENGINEERING INC.

for Michel Gregoire, P.Eng., P.Geo.
Senior Environmental Engineer

AE/ew

Attachments: Sheet 045
Table 1



APEGM
Certificate of Authorization
Wardrop Engineering Inc.
No. 195 Date: April 30, 2011

REFERENCES

AECOM, 2010. *Pipe and Ground Seep Supplemental Investigation River Bank Adjacent to the Disraeli Bridge.*

AMEC Earth & Environmental Limited, 2000. *Closure Report, Centra Gas Operations Facility, 35 Sutherland Avenue, Winnipeg, Manitoba.*

Canadian Council of Ministers of Environment, 2007. *Canadian Environmental Quality Guidelines.*

Canadian Council of Ministers of Environment, 2007. *Canada-Wide Standard for Petroleum Hydrocarbons (PHC) in Soil.*

Canadian Council of Ministers of Environment, 2008. *Canadian Soil Quality Guidelines, Carcinogenic and Other Polycyclic Aromatic Hydrocarbons (PAHs).*

CH2M Hill Engineering Ltd., 1994. *Environmental Health and Safety Assessment of the Sutherland Avenue Operations Facility in Winnipeg, Manitoba.*

UMA Engineering Ltd., 2003. *Manitoba Hydro Former Manufactured Gas Plant, 35 Sutherland Avenue, Winnipeg, Manitoba, Supplemental Environmental Site Investigation.*

UMA Engineering Ltd., 2006. *Comprehensive Environmental Management Plan for Residuals From Historic Operations at Sutherland Avenue Former Manufactured Gas Plant.*

LIMITATIONS

The scope of this report is limited to the matters expressly covered and is intended solely for the client to whom it is addressed. Wardrop makes no warranties, expressed or implied, including without limitation, as to the marketability of the site, or fitness for a particular use. The assessment was conducted using standard engineering and scientific judgement, principles and practices, within a practical scope and budget. It is partially based on the observations of the assessor during the site visit, in conjunction with archival information obtained from a number of sources, which is assumed to be correct. Except as provided, Wardrop has made no independent investigations to verify the accuracy or completeness of the information obtained from secondary sources or personal interviews. Generally, the findings, conclusions, and recommendations are based on a limited amount of data (e.g., the number of boreholes drilled, and the number of water samples submitted for laboratory analyses) interpolated between sampling points, and the actual conditions (e.g., the type, level, and extent of impacted media) on the property may vary from that described above. Any findings regarding site conditions different from those described above upon which this report is based, will consequently change Wardrop's conclusions and recommendations.

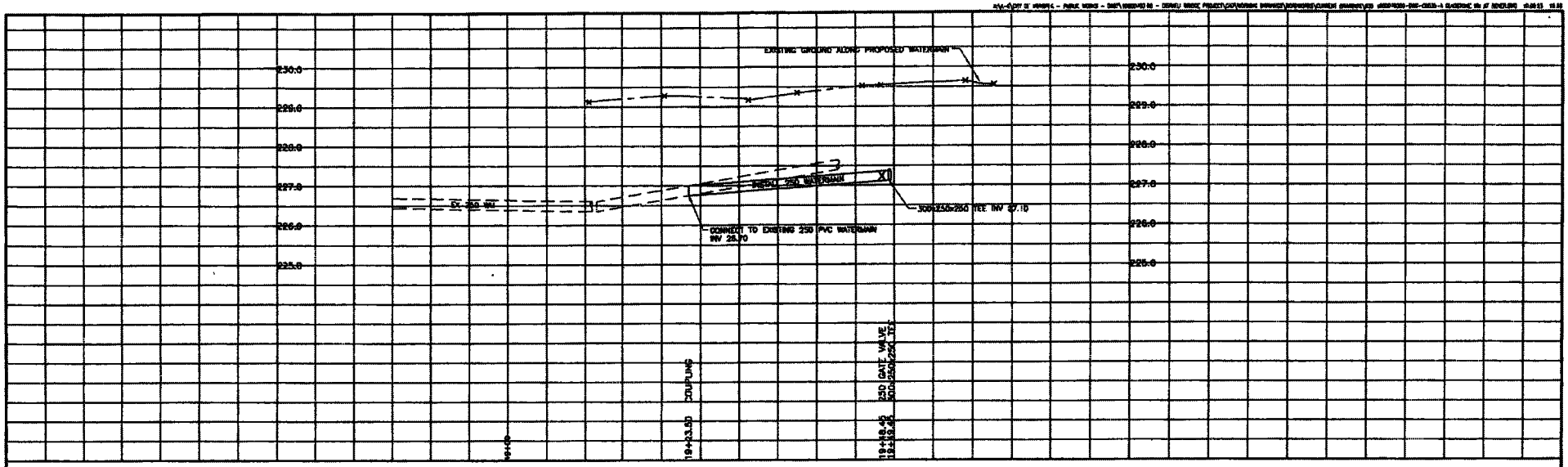
DISCLAIMER

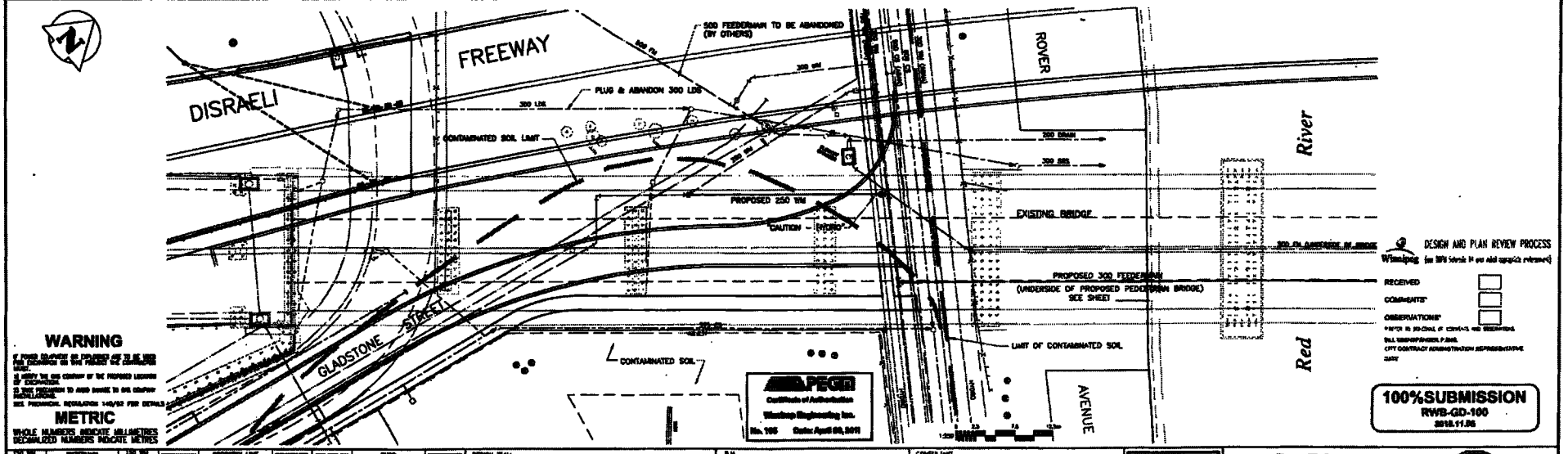
This Wardrop Engineering report has been prepared in response to specific requests for services from the client to whom it is addressed. The content of this document is not intended for the use, nor is it intended to be relied upon, by any person, firm, or corporation other than the client of Wardrop Engineering to whom it is addressed. Wardrop denies any liability whatsoever to other parties who may obtain access to this Document by them, without express prior written authority of Wardrop Engineering and its client who has commissioned this Document.

TABLE 1
Historic Soil Sample Laboratory Analytical Results
Diversité Bridge - South River Bank near Rover Avenue

Laboratory Analyses	Laboratory Analytical Results (mg/kg)														Environmental Quality Guidelines [1, 2, 3] (mg/kg)
	MW22	TH8K-17		TH8K-18	TP2	TP2	TP2	TP2	TP2	TP3	TP3	TP3	TP3	TP3	
	14.32 m - 14.63 m	5.18 m - 5.49 m	0.1 m - 0.4 m	4.88 m - 5.18 m	0.6 m	1.2 m	1.8 m	2.4 m	3	0.6 m	1.2 m	1.8 m	2.4 m	3	
	CH2M Hill	AMEC		AMEC	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	
	1993	2000		2000	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	
BTEX															
Benzene	--	--	--	--						<0.005	<0.005	<0.005	<0.005	<0.005	60 / 1.0
Toluene	--	--	--	--						<0.1	<0.1	0.02	<0.1	<0.1	110 / 0.10
Ethylbenzene	--	--	--	--						<0.1	<0.1	<0.1	<0.1	<0.1	120 / 50
Xylenes	--	--	--	--						<0.03	<0.03	<0.03	<0.03	<0.03	60 / 37
CCME Fractions															
F1 - BTEX ($>nC_6-nC_{10}$)	--	--	--	--						<5	<5	<5	<5	<5	210 / 970
F2 ($>nC_{10}-nC_{16}$)	--	--	--	--						<5	<5	<5	<5	<5	150 / 150
F3 ($>nC_{16}-nC_{34}$)	--	--	--	--						8	11	16	11	8	1300 / 300
F4 ($>nC_{34}$)	--	--	--	--						6	<5	8	<5	<5	5600 / 2800
Polycyclic Aromatic Hydrocarbons (PAHs)															
Acenaphthene	0.0142	*1.26*	*5.69*	*2.87*	--	--	--	--	--	--	--	--	--	--	0.29
Acenaphthylene	0.0415	0.18	25.2	*2.84*	--	--	--	--	--	--	--	--	--	--	320
Acridine	--	--	--	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NG
Anthracene	0.0421	3.37	*12.4*	*3.69*	--	--	--	--	--	--	--	--	--	--	2.5
Benzo(a)anthracene	0.0441	2.08	*6.65*	3.29	1.50	0.18	0.37	0.42	0.23	0.01	0.01	<0.01	<0.01	<0.01	6.2
Benzo(a)pyrene	0.0517	2.22	*6.66*	*4.61*	*2.60*	0.44	0.47	0.77	0.32	0.01	<0.01	<0.01	<0.01	<0.01	0.6
Benzo(b)fluoranthene	0.0653	1.42	6.37	2.70	3.60	0.67	0.97	1.30	0.67	0.01	<0.01	<0.01	<0.01	<0.01	6.2
Benzo(ghi)perylene	0.0886	0.89	4.02	1.820	--	--	--	--	--	--	--	--	--	--	NG
Benzo(k)fluoranthene	--	1.64	*6.48*	2.36	0.90	0.14	0.22	0.26	0.13	0.01	0.01	0.01	0.01	0.01	6.2
Chrysene	0.0445	1.98	*6.69*	3.21	--	--	--	--	--	--	--	--	--	--	6.2
Dibenzo(ah)anthracene	0.00286	0.30	0.30	0.40	0.62	0.16	0.21	0.22	0.11	<0.01	<0.01	<0.01	<0.01	<0.01	1.0
Fluoranthene	0.109	5.03	*20.8*	9.33	--	--	--	--	--	--	--	--	--	--	15.4
Fluorene	0.0276	*2.09*	*10.4*	2.77	--	--	--	--	--	--	--	--	--	--	0.3
Indeno(1,2,3 cd)pyrene	0.0309	*1.66*	*4.36*	*1.920*	2.10	0.74	0.89	0.98	0.39	<0.01	<0.01	<0.01	<0.01	<0.01	1.0
1-Methyl Naphthalene	--	5.97	21.4	5.140	--	--	--	--	--	--	--	--	--	--	NG
2-Methyl Naphthalene	--	8.35	33.7	8.470	--	--	--	--	--	--	--	--	--	--	NG
Naphthalene	*0.0150*	*46.5*	*184*	*47.1*	0.34	0.02	0.06	0.04	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.013
Phenanthrene	*0.166*	*14.3*	*46.6*	16.2	*10.60*	0.06	0.27	0.30	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	0.046
Pyrene	0.139	*7.76*	*28.6*	12.3	*11.00*	0.35	0.63	0.74	0.46	0.01	0.01	<0.01	<0.01	<0.01	7.7
Quinoline	--	--	--	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NG
Grain Size															
<75 um	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NG
>75 um	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NG
Moisture Content (%)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NG

Notes:
[1] CCME, *Canadian Environmental Quality Guidelines* (2007), Residential / Parkland, fine-grained / coarse-grained, eco soil contact and groundwater check (aquatic life).
[2] CCME, *Canada-Wide Standard for Petroleum Hydrocarbons in Soil* (2008), Residential, fine-grained / coarse-grained, eco soil contact and protection of aquatic life.
[3] CCME, *Carcinogenic and Other Polycyclic Aromatic Hydrocarbons (PAHs)* (2008), Residential / Parkland, soil contact and protection of freshwater life.
NG = No Guideline
-- = not tested / not reported
Bold Text = Laboratory analytical results in excess of the referenced guidelines





WARNING

IF ANY DISCREPANCY OR CONFLICT OF ELEVATIONS OR DIMENSIONS ON THE PLANS OR DRAWINGS

1) VERIFY THE EXISTENCE OF THE PROPOSED LOCATION OF EXCAVATION

2) TAKE PRECAUTION TO AVOID DAMAGE TO EXISTING FACILITIES

SEE PROVINCIAL REGULATION 140/93 FOR DETAILS

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED
WAT 150	WATERMAIN	WAT 150		PROPERTY LINE			CURB	
FDR 300	FEEDERMAIN	FDR 300		HYDRO			SIDEWALK RAMP	
SAN 1200	SAN SEWER 1200	SAN 1200		GAS			SIDEWALK	CONCRETE
SAN 1200	MANHOLE/SAN SEWER	SAN 1200		WATER SIGNALS			ASPHALT	ASPHALT
SAN 675	COMBINED SEWER	SAN 675		MANHOLE			CONCRETE	CONCRETE
STM 750	FEEDERMAIN	STM 750		CATCHBASIN				
	JUNCTIONS			CURB & GUTTER INLET				
	HYDRANT			HYDRO POLE				
	VALVE			LIGHT STANDARD				
	GEODETIC BENCHMARK			ELEVATION	GEOID			
	SURVEY BM							

DESIGN TEAM

WARDROP — A TETRA TECH COMPANY

STANTEC

KEYSTONE RUSSELL

NO.	REVISIONS	DATE	BY
	R.M. ELEV.		

CONSULTANT: WARDROP — A TETRA TECH COMPANY

DESIGNED BY: CWC
DRAWN BY: GMD
CHECKED BY:
APPROVED BY
AUTHORIZED BY
HOR. SCALE: 1 : 250
VERTICAL: 1 : 50

PRELIMINARY DRAWING
NOT TO BE USED FOR CONSTRUCTION

CONSULTANT DRAWING NO. 1000070300-SHB-GD100-0

DESIGN AND PLAN REVIEW PROCESS
Winnipeg
RECEIVED
COMMENTS*
OBSERVATIONS*
CITY CONTRACT ADMINISTRATION REPRESENTATIVE
DATE

100%SUBMISSION
RWB-GD-100
2018.11.26

Plenary Roads — PCL CONSTRUCTION CANADA

DISRAELI BRIDGES PROJECT
ROADWORKS – PART B

CITY DRAWING NUMBER

PACKAGE NO. RWB-GD

NEW WATERMAIN & SEWER ABANDONMENT AT ROVER AVENUE

SHEET NO. 045