



REQUEST FOR PROPOSALS

CONSULTANT FOR GAS FIELD MANAGEMENT - VANCOUVER LANDFILL

RFP No. PS20200721

Issue Date: October 21, 2020

Issued by: City of Vancouver (the "City")

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PART A - INFORMATION AND INSTRUCTIONS

SUMMARY

The City of Vancouver requires professional consulting services for the Landfill Gas Migration and Emission Monitoring (LFGMEM) Program. The work includes, but is not limited to, greenhouse gas reporting and verification, assistance with research for web based data management and interactive mapping system for use with the landfill gas collection system, and periodic consulting at the Cities Vancouver Landfill & Recycling Depot (Landfill), located in the City of Delta, British Columbia.

PART A – INFORMATION AND INSTRUCTIONS

1.0 THE RFP

- 1.1 Except where expressly stated otherwise in Appendix 1 of Part C of the Request for Proposals (“RFP”): (i) no part of the RFP consists of an offer by the city to enter into any contractual relationship; and (ii) no part of the RFP is legally binding on the city.
- 1.2 The City is interested in selecting an entity, which is not, by the terms hereof, barred from submitting a Proposal, and which does submit a Proposal (each such entity, a “**Proponent**”) with the capability and experience to efficiently and cost-effectively meet the objectives and requirements described in the RFP. The City currently expects to select such a Proponent and then enter into negotiations with that Proponent, which will conclude in the execution of a contract between the Proponent and the City (such a contract, an “**Agreement**”). However, the City may: (i) decline to select any Proponent; (ii) decline to enter into any Agreement; (iii) select multiple Proponents for negotiation; or (iv) enter into one or more agreements respecting the subject matter of the RFP with one or more Proponents or other entities at any time. The City may also terminate the RFP at any time.
- 1.3 The City currently intends that Proposals will be evaluated by the City in relation to their overall value, which will be assessed in the City’s sole and absolute discretion. In assessing value, the City expects to consider the factors described in Section 8.0 below, among others.
- 1.4 No bid security is required from Proponents in connection with the submission of Proposals because no Proposal will be deemed to be an irrevocable or otherwise binding legal offer by a Proponent to the City. The legal obligations of a Proponent that will arise upon the submission of its Proposal will be limited to the terms and conditions stated under the heading “Legal Terms & Conditions” in Appendix 1 to the Part C - Form of Proposal.
- 1.5 The execution of an Agreement may be contingent on funding being approved, and the relevant Proposal being approved, by the Vancouver City Council.
- 1.6 The RFP consists of four parts, plus appendices:
 - (a) **PART A - INFORMATION AND INSTRUCTIONS:** This part is intended to serve as a guide to the RFP process for Proponents.
 - (b) **PART B - SCOPE OF WORK:** This part describes the subject matter of the RFP, in respect of which the City invites Proposals.
 - (c) **PART C - FORM OF PROPOSAL:** This is the form in which the Proposal should be submitted.

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- (d) **PART D - FORM OF AGREEMENT:** This part contains a model Agreement (the “**Form of Agreement**”). Any Agreement resulting from the RFP is expected to be substantially in the form of the Form of Agreement.

2.0 KEY DATES

- 2.1 Potential Proponents should note the following key dates:

Event	Time and Date
Deadline for Enquiries	Thursday, November 12, 2020
Closing Time	3:00pm on Thursday, November 19, 2020

- 2.2 All references to time in the RFP are references to the time in the City of Vancouver, as indicated in the electronic timestamp the Proposal receives upon delivery to the email address specified herein, which is in turn synchronized to Network Time Protocol (NTP) provided by the National Research Council of Canada adjusted to local Pacific Time Zone.

3.0 CONTACT PERSON

- 3.1 All enquiries regarding the RFP must be addressed to:

Brian Brennan
brian.brennan@vancouver.ca

- 3.2 All enquiries must be made in writing and are to be directed only to the above contact person. In-person or telephone enquiries are not permitted. Any communication from potential Proponents to City staff other than the contact person regarding the content of this RFP may lead to disqualification of the Proponent from this RFP process, at the City’s sole discretion.

- 3.3 **IF A POTENTIAL PROPONENT BELIEVES THAT THE CITY MAY BE UNABLE TO SELECT IT DUE TO A CONFLICT OF INTEREST, BUT IS UNCERTAIN ABOUT THIS, THE POTENTIAL PROPONENT IS URGED TO CONTACT THE ABOVE-MENTIONED INDIVIDUAL AS SOON AS POSSIBLE WITH THE RELEVANT INFORMATION SO THAT THE CITY MAY ADVISE THE POTENTIAL PROPONENT REGARDING THE MATTER.**

4.0 SUBMISSION OF PROPOSALS

- 4.1 Proponents should submit their Proposals on or before the time and date specified in the bottom row of the table in Section 2.1 above (the “**Closing Time**”).

- 4.2 Each Proponent should submit its Proposal by email in accordance with the following:

- Subject of the file to be: PS20200721 CONSULTANT FOR GAS FIELD MANAGEMENT - VANCOUVER LANDFILL - Vendor name.
- Document format for submissions:
 - RFP Part C in PDF format - 1 combined PDF file,
 - Appendix 3 (pricing tab) in Excel format, and;

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- Any other attachments if necessary
 - Zip the files to reduce the size or email separately if needed.
 - Send your submissions to Bids@vancouver.ca; do not deliver a physical copy to the City of Vancouver.
 - Submitting the files via Drop box, FTP, or similar programs, is not acceptable.
- 4.3 To be considered by the City, a Proposal must be submitted in the form set out in Part C (the “**Form of Proposal**”), completed and duly executed by the relevant Proponent.
- 4.4 Amendments to a Proposal may be submitted via the same methods, at any time prior to the Closing Time.
- 4.5 Proposals are revocable and may be withdrawn at any time before or after the Closing Time.
- 4.6 All costs associated with the preparation and submission of a Proposal, including any costs incurred by a Proponent after the Closing Time, will be borne solely by the Proponent.
- 4.7 Unnecessarily elaborate Proposals are discouraged. Proposals should be limited to the items specified in Part C of the RFP.
- 4.8 The City is willing to consider any Proposal from two or more Proponents that wish to form a consortium for the purpose of responding to the RFP, provided that they disclose the names of all members of the consortium and all members complete and sign the first page of the Form of Proposal. Nonetheless, the City has a strong preference for Proposals submitted by a single Proponent, including a Proponent that would act as a general contractor and use subcontractors as required.
- 4.9 Proposals that are submitted after the Closing Time or that otherwise do not comply in full with the terms hereof may or may not be considered by the City and may or may not be returned to the Proponent, in the City’s sole discretion.
- 5.0 **CHANGES TO THE RFP AND FURTHER INFORMATION**
- 5.1 The City may amend the RFP or make additions to it at any time.
- 5.2 It is the sole responsibility of Proponents to check the City’s website at: <http://vancouver.ca/doing-business/open-bids.aspx> regularly for amendments, addenda, and questions and answers in relation to the RFP.
- 5.3 Proponents must not rely on any information purported to be given on behalf of the City that contradicts the RFP, as amended or supplemented in accordance with the foregoing Section 5.2.
- 6.0 **PROPOSED TERM OF ENGAGEMENT**
- 6.1 The term of any Agreement is expected to be a three-year period, with three possible one-year extensions, for a maximum total term of six years.
- 7.0 **PRICING**

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- 7.1 All prices quoted in any Proposal are to be exclusive of applicable sales taxes calculated upon such prices, but inclusive of all other costs.
- 7.2 Prices must be quoted in Canadian currency and fixed prices must be quoted for the full term of the Proponent's proposed agreement.
- 7.3 Prices are to be quoted CIP, destination (Incoterms, 2010). For the avoidance of doubt, freight, insurance, unloading at the destination designated by the City, import duties, brokerage, royalties, handling, overhead, profit and all other similar costs are to be included in quoted prices.

8.0 EVALUATION OF PROPOSALS

- 8.1 The City may open or decline to open Proposals in such manner and at such times and places as are determined by the City.
- 8.2 The City currently intends that all Proposals submitted to it in accordance with the RFP will be evaluated by City representatives, using quantitative and qualitative tools and assessments, as appropriate, to determine which Proposal or Proposals offer the overall best value to the City. In so doing, the City expects to examine:

Evaluation Criteria	Evaluation Weighting
Technical	65%
Financial	30%
Sustainability (Environmental and/or Social)	5%
Total	100%

- 8.3 The City will retain complete control over the RFP process at all times until the execution and delivery of an Agreement or Agreements, if any. The City is not legally obligated to review, consider or evaluate Proposals, or any particular Proposal, and need not necessarily review, consider or evaluate Proposals, or any particular Proposal in accordance with the procedures set out in the RFP. The City may continue, interrupt, cease or modify its review, evaluation and negotiation process in respect of any or all Proposals at any time without further explanation or notification to any Proponents.
- 8.4 The City may, at any time prior to signing an Agreement, discuss or negotiate changes to the scope of the RFP with any one or more of the Proponents without having any duty or obligation to advise the other Proponents or to allow the other Proponents to vary their Proposals as a result of such discussions or negotiations.
- 8.5 The City may elect to short-list Proponents and evaluate Proposals in stages. Short-listed Proponents may be asked to provide additional information or details for clarification, including by attending interviews, making presentations, supplying samples, performing demonstrations, furnishing technical data or proposing amendments to the Form of Agreement.

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The City will be at liberty to negotiate in parallel with one or more short-listed Proponents, or in sequence, or in any combination, and may at any time terminate any or all negotiations.

- 8.6 The City may also require that any proposed subcontractors undergo evaluation by the City.
- 8.7 For the avoidance of doubt, notwithstanding any other provision in the RFP, the City has in its sole discretion, the unfettered right to: (a) accept any Proposal; (b) reject any Proposal; (c) reject all Proposals; (d) accept a Proposal which is not the lowest-price proposal; (e) accept a Proposal that deviates from the requirements or the conditions specified in the RFP; (f) reject a Proposal even if it is the only Proposal received by the City; (g) accept all or any part of a Proposal; (h) split the scope of work between one or more Proponents; and (i) enter into one or more agreements respecting the subject matter of the RFP with any entity or entities at any time. Without limiting the foregoing, the City may reject any Proposal by a Proponent that has a conflict of interest, has engaged in collusion with another Proponent or has otherwise attempted to influence the outcome of the RFP other than through the submission of its Proposal.

9.0 CITY POLICIES

- 9.1 The City's Procurement Policy, Ethical Purchasing Policy and related Supplier Code of Conduct found at <http://vancouver.ca/doing-business/selling-to-and-buying-from-the-city.aspx> align the City's approach to procurement with its corporate social, environmental and economic sustainability values and goals. They evidence the City's commitment to maximize benefits to the environment and the community through product and service selection, and to ensure safe and healthy workplaces, where human and civil rights are respected. Each Proponent is expected to adhere to the supplier performance standards set forth in the Supplier Code of Conduct. The Ethical Purchasing Policy shall be referred to in the evaluation of Proposals, to the extent applicable.
- 9.2 The City's Alcohol, Controlled Drugs and Medications Policy applies to all contractors doing work on behalf of the City and can be found at <https://policy.vancouver.ca/ADMIN011.pdf>. The policy is intended to set expectations regarding the use of alcohol, medication and controlled drugs that may render an employee unfit for work, impair performance or cause risk of harm to health and safety. The successful Proponent will be required to ensure compliance with the policy by its employees when doing work for the City.

10.0 LIVING WAGE EMPLOYER

- 10.1 Effective May 1, 2017, the City of Vancouver became a "Living Wage Employer". As such, the City requires all firms that are contracted by the City to provide services on City-owned and leased properties to pay employees who perform those services on City property a Living Wage as calculated by the Living Wage for Families Campaign.

Please see the Living Wage for Families Campaign website for the current Living Wage for Vancouver:

http://www.livingwageforfamilies.ca/living_wages_in_bc_and_canada

The Living Wage includes the value of any non-mandatory benefits such as paid sick leave, employer-paid Medical Services Plan premiums and extended health benefits.

The Living Wage for Families has created a Living Wage Calculator to assist with the calculation of an employee's hourly rate with benefits. The Living Wage Calculator can be found at the following website:

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<http://www.livingwageforfamilies.ca/employers/living-wage-calculator/>

Proponents should refer to the Form of Agreement attached as Part D to this RFP for the specific requirements related to the Living Wage, which include:

- (a) paying the Living Wage to all employees who perform services pursuant to the Agreement on City property during the term of the Agreement; and
- (b) ensuring that all subcontractors pay the Living Wage to their employees who perform services on City property during the term of the Agreement.

Failure to comply with the Living Wage requirement will entitle the City to terminate the Agreement.

11.0 CERTAIN APPLICABLE LEGISLATION

11.1 Proponents should note that the City of Vancouver is subject to the *Freedom of Information and Protection of Privacy Act* (British Columbia), which imposes significant obligations on the City's consultants or contractors to protect all personal information acquired from the City in the course of providing any service to the City.

11.2 Proponents should note that the *Income Tax Act* (Canada) requires that certain payments to non-residents be subject to tax withholding. Proponents are responsible for informing themselves regarding the requirements of the *Income Tax Act* (Canada), including the requirements to qualify for any available exemptions from withholding.

12.0 LEGAL TERMS AND CONDITIONS

12.1 The legal obligations of a Proponent that will arise upon the submission of its Proposal are stated in this Appendix 1 to the Form of Proposal. Except where expressly stated in these Legal Terms and Conditions: (i) no part of the RFP consists of an offer by the City to enter into any contractual relationship; and (ii) no part of the RFP is legally binding on the City.

POTENTIAL PROPONENTS MUST REVIEW THESE LEGAL TERMS AND CONDITIONS CAREFULLY BEFORE SUBMITTING A PROPOSAL.

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APPENDIX 1 TO PART A



FINANCE RISK AND BUSINESS PLANNING

Supply Chain Management

RE: REQUEST FOR PROPOSALS NO. PS20200721 CONSULTANT FOR GAS FIELD MANAGEMENT - VANCOUVER LANDFILL

To acknowledge your intent to attend the Information Meeting and to ensure that you receive the required information, please submit this form to the person identified below in accordance with the RFP:

Brian Brennan
City of Vancouver
Email: brian.brennan@vancouver.ca

Proponent's Name: _____

Address: _____

Key Contact Person: _____

Telephone: _____

E-mail: _____

Our company WILL ☐ / WILL NOT ☐ attend the information meeting for Request for Proposals No. PS20200721 CONSULTANT FOR GAS FIELD MANAGEMENT - VANCOUVER LANDFILL.

Signature

Name of Signatory

E-mail Address

Date

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PART B - CITY REQUIREMENTS

PART B – SCOPE OF WORK

The scope of work stated in this Part B (collectively, the “**Scope of Work**”) IS current as of the date hereof, but may change or be refined in the course of the evaluation of Proposals or otherwise.

Unless otherwise stated, if, and wherever, the Scope of Work states a brand name, a make, the name of a manufacturer, a trade name or a vendor catalogue number, it is for the purpose of establishing a grade or quality of materials, goods or equipment only. It is not intended to rule out the use of other equivalent materials, goods or equipment. If, however, products other than those specified are proposed in any Proposal, the Proposal must explicitly include under the heading “Alternative Solutions” the names of such products and their manufacturers, any trade names and any applicable vendor catalogue numbers, and the City may request that the Proponent provide specific evidence of equivalency. Evidence of quality in the form of samples may also be requested.

To the extent that the Scope of Work expresses estimates of quantities or volumes of goods or services expected to be required by the City, the City cannot offer any assurances that such quantities or volumes will in fact be required.

1. Introduction

The City requires the professional services of a Consultant to provide the following for the Cities Vancouver Landfill & Recycling Depot (Landfill):

- Conduct the Landfill Gas Migration and Emission Monitoring (LFGMEM) Program;
- Complete and submit the required Provincial and Federal annual greenhouse gas reports;
- Subcontract an accredited third party Greenhouse Gas (GHG) Emission Reporting Verifier to conduct annual GHG reporting verification as required by the Province of BC;
- Research web based data management and interactive mapping systems for storing and analyzing landfill gas field data;
- Perform well field monitoring services at the request of the City; and
- Provide periodic consulting as requested by the City.

2. Background

The Landfill is situated within the City of Delta and serves approximately 70% of the Metro Vancouver region. It has been in operation since 1966. Its existence and operations are authorized under provincial law and under the BC Ministry of Environment and Climate Change Strategy's (MOE) Operational Certificate (OC) and Metro Vancouver's *Integrated Solid Waste and Resource Management Plan* (ISWRMP) (<http://www.metrovancouver.org/services/solid-waste/SolidWastePublications/ISWRMP.pdf>).

The current operating agreements with Metro Vancouver and the City of Delta will expire in 2037. Additional information on the Landfill can be found in the Landfill's annual report at <http://vancouver.ca/home-property-development/annual-reports-for-landfill-and-solid-waste-divisions.aspx>

The City installed the original landfill gas control system (LFGCS) in 1991 to collect the landfill gas (LFG) produced when refuse decomposes in an anaerobic environment. The LFGCS collects LFG by creating a vacuum in the LFG piping system and extraction wells via LFG blowers installed at the Gas Conditioning and Flare Station (GCFS). Part of the collected LFG is conveyed to Village Farms Clean Energy (VFCE) for their use, and a small portion is used to heat the operations and engineering buildings. Excess LFG is currently burned in on-site high destruction efficiency enclosed flares at the GCFS to minimize greenhouse gas emissions. FortisBC is planning the construction of a renewable natural gas (RNG) facility adjacent to the GCFS to make beneficial use of the excess LFG starting in 2023.



Figure 1 - City of Vancouver Gas Field Layout as of Dec 2020

3. Summary of Requirement

The City requires professional services of a Consultant to plan and execute the scope summarized in Table 1.

It is important to note that separate bundles of related work will be occurring for the Gas Flare Planning and Maintenance Services - Vancouver Landfill project (Table 2), and Landfill Gas Well Field System Documentation Planning and Management, but the work in Table 2 is not in scope for this project.

Table 1 Gas Field Management - Vancouver Landfill

4.1 Landfill Gas Migration and Emissions Monitoring (LFGMEM)
4.2 Greenhouse Gas Annual Reporting
4.3 Greenhouse Gas Annual Verification (Sub-Contract)
4.4 Web Based Data Management and Interactive Mapping System Market Sounding
4.5 Periodic Well Field Monitoring
4.6 Periodic Consulting

Table 2 Gas Flare Planning and Maintenance Services and Landfill Gas Well Field System Documentation Planning and Management (OUT OF SCOPE)

Bundle 1 - Gas Flare Planning and Maintenance Services
Flare Station, Air Compressor, Building Gas Pipeline System and Dryer System
Building Methane Monitoring
Periodic Consulting
Bundle 2A - Landfill Gas Well Field System Documentation Planning and Management

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PART B - CITY REQUIREMENTS**

Landfill Gas Well Field System Documentation Review and Update
Consolidate Record Drawings
Periodic Consulting

4.0 Work Scope

The Consultant shall have experience or knowledge in the following areas:

- Municipal solid waste landfills;
- Landfill gas collection, flaring and utilization systems;
- Landfill and gas system health and safety;
- Annual reporting and greenhouse gas reporting for large municipal landfills;
- Verification of greenhouse gas reporting at large municipal landfills; and
- Applicable regulations, industry standards, and codes.

Be able to provide staff for periodic well field monitoring who have experience:

- working at active landfills and around heavy equipment;
- using a GEM 5000+ for landfill gas monitoring;
- making LFG field adjustments;
- working with explosive gases;
- following a detailed safety protocol including procedures/PPE to minimize exposure to landfill gas;
- conducting minor repairs (mechanical aptitude); and
- taking direction and/or following standard operating procedures.

4.1 Landfill Gas Migration and Emission Monitoring (LFGMEM)

The Consultant shall review, update and implement the Landfill Gas Migration and Emission Monitoring Program at the Landfill. Prior to implementation of any changes, the Consultant shall obtain approval of the City.

The LFGMEM was put in place at the Landfill in 1999. Markers are set at 100 m intervals around the property boundary of the Landfill buffer zone as the monitoring locations (see Figure 2). The monitoring done at these locations is used to check for odours and landfill gas migration beyond the property boundary.

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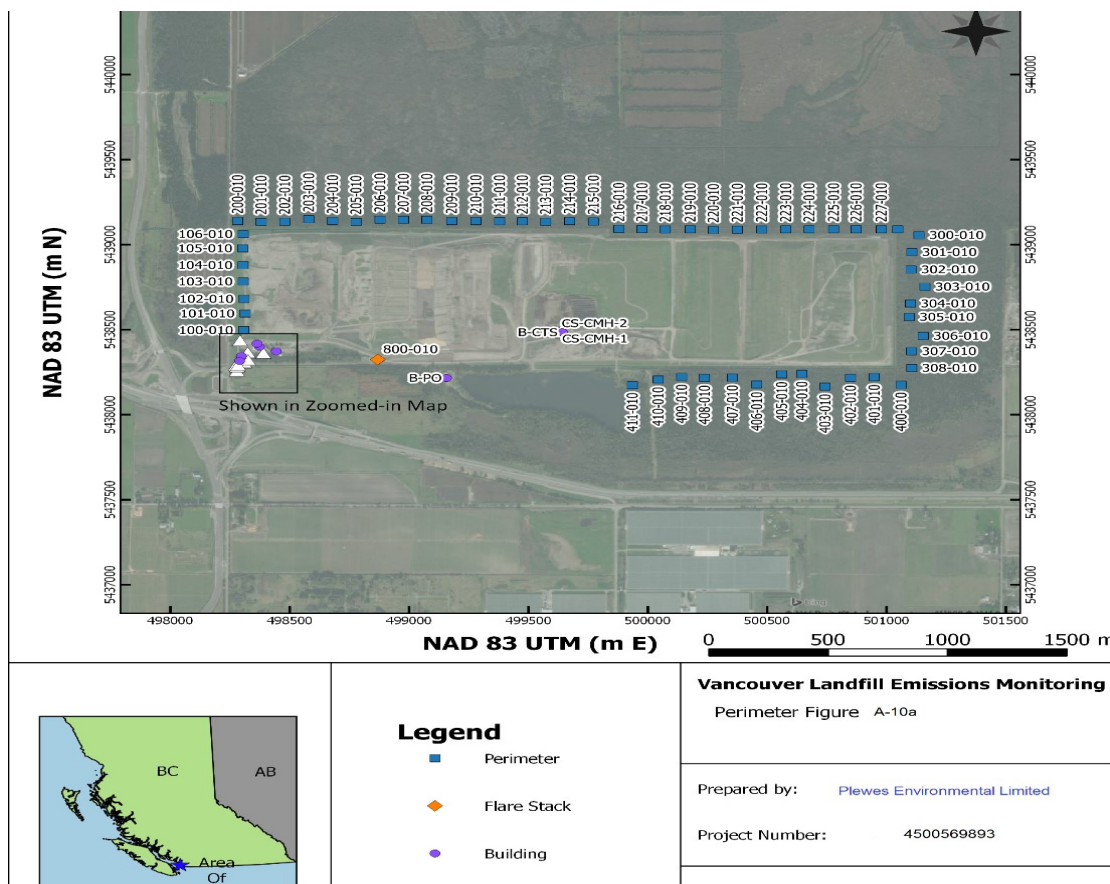


Figure 2 City of Vancouver Perimeter Ambient Air Monitoring Stations

There are four types of gases of primary interest to the City: Methane (CH_4), Oxygen (O_2), Carbon Dioxide (CO_2), and Hydrogen Sulphide (H_2S). Since methane cannot be measured directly, total organic carbon (TOC) concentrations are currently used as an indicator of LFG migration. H_2S is measured as a surrogate for the odorous compounds typically found in municipal solid waste landfills. The human nose can detect H_2S at a concentration of less than 1 ppm with a Recognition Threshold of 0.0047 ppm or 4.7ppb H_2S . The Recognition Threshold is the concentration at which 50% of humans can identify the odourant. The City uses the Recognition Threshold as their limit in an effort to better check for odours.

The scope of work for the LFGMEM program shall include the following items:

4.1.1 Site Specific Safety Plan (SSSP)

The Consultant shall provide a Site-Specific Safety Plan (SSSP) for only Task 4.1 where they are designated as Prime Contractor. The SSSP must include a minimum of the following:

- A list of those responsible parties for implementation of the plan;
- A hazard identification/risk assessment process for work to be completed by the Consultant;
- standard operating procedures (SOPs);
- A pre-task hazard assessment process for quarterly field work completed by the Consultants staff, such as a Field Level Hazard Assessment (FLHA) or similar document outlining the task, hazards and mitigations for the work;
- A procedure for reporting and investigating incidents and near misses, including flash reporting;

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PART B - CITY REQUIREMENTS**

- Details on how first aid coverage will be provided for their staff; and
- A procedure for working alone on site (call in procedure between worker and Consultant).

The City requires an approach that is best industry practice and meets WorkSafeBC standards. The Consultant shall update the SSSP annually and submit it electronically to the City.

4.1.2 Regulatory Scan

The Consultant shall conduct an annual regulatory scan of the current applicable regulations, guidelines, standards and industry best practices to ensure the continuous improvement of the LFGMEM. The Consultant will identify and propose any recommendations to the LFGMEM.

4.1.3 Monitoring

Monitoring Locations and Parameters

The Consultant shall conduct quarterly monitoring and reporting of ambient air quality at the following stations:

- Existing Property Boundary Stations (~57 existing stations at two heights each -10cm and 200cm) - for Total Organic Carbon as CH₄ and H₂S.

Monitoring Equipment

- TOC concentrations will be determined using a Flame Ionization Detector (FID) or equivalent.
- Hydrogen Sulphide concentrations will be determined using an ambient air monitor (e.g. Jerome J631X hydrogen sulphide analyser or equivalent) with a detection limit of 1 ppb.

Detailed Monitoring Procedure

The Consultant shall:

- Supply, use and maintain the necessary ambient air and personal monitoring equipment/devices;
- Calibrate all instruments used and record/supply record of calibration results;
- Convert log sheet data into specified electronic format, compatible with MS Excel or other as directed by the City;
- Report immediately via email to the Landfill Manager or designate, any elevated monitoring results beyond established limits, and recommend corrective actions;
- Identify any hazardous conditions, work practices, etc., correct where possible and immediately notify via email the Landfill Manager, or the designate, of such issues;
- Property boundary sampling shall be completed under the following conditions whenever possible:

A clear cool day
Normal wind speeds less than 3.2 km/hr
No wind gusts greater than 16 km/hr
Should not be raining

- Sampling at both the 0.1 and 2.0-meter sample markers is required at each station;
- The proposed cost shall be based on routine monitoring of the Existing Property Boundary Stations only; and
- The following additional parameters should be recorded when sampling outdoors:

Wind speed and direction
Temperature

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PART B - CITY REQUIREMENTS**

Barometric pressure
Precipitation events

4.1.4 Reports

The Consultant shall prepare Quarterly Summary Reports which shall summarize the LFGMEM in its current state, report any results over established limits, and detail any changes compared to the previous quarters, methods and results. The Consultant shall attach the calibration certificate for the monitoring devices used to this quarterly report. The reports and all monitoring data shall be submitted electronically to the City in pdf format and the monitoring data also in excel spreadsheet format or as directed by the City. Please see example in the Attachment: "Landfill Gas Migration and Emissions Monitoring Program: 2020 Second Quarter Report".

The Consultant shall prepare one Annual Summary Report which shall summarize the LFGMEM in its current state, present and summarize the year's monitoring results, report any results over established limits, detail any changes compared to the previous year's regulations, methods and results, and recommend changes for the following year's monitoring as necessary. The reports shall be submitted electronically to the City in PDF format and the monitoring data also in excel spreadsheet format or as directed by the City.

The Consultant shall prepare a map showing all of the sample locations around the perimeter of the Landfill. The Consultant shall append the map to all quarterly and annual reports. The City shall provide the GPS coordinates of the sample locations, an air photo for underlay, and the existing AutoCAD drawing of the monitoring locations.

Deliverable for Task 4.1:

Task 4.1.1 SSSP

- i. Draft (Word format) and final (Word and PDF) SSSP submitted electronically to the City for the City's review and acceptance
- ii. Draft (Word format) and final (Word and PDF formats) annual updated SSSP submitted electronically to the City

Task 4.1.2 Regulatory Scan

- iii. Memo submitted electronically to the City in PDF format of the Regulatory Scan

Task 4.1.3 Monitoring

- iv. Four (4) Quarterly site visits to complete monitoring of perimeter stations

Task 4.1.4 Reports

- v. Four (4) Quarterly monitoring Reports submitted electronically to the City in PDF format and data as an excel spreadsheet and
- vi. Draft (MS Word and PDF formats) and final (PDF format) Annual report submitted electronically to the City
- vii. Draft (AutoCAD and PDF formats) final (AutoCAD and PDF formats) map submitted electronically to the City

4.2 Greenhouse Gas Annual Reporting

The Consultant will complete a review of the *City of Vancouver LFG Annual Report*, and fulfill the greenhouse gas reporting requirements for the Provincial and Federal governments, on behalf of City.

The City is currently regulated by and has reporting requirements to:

- BC Landfill Gas Management Regulation, B.C Reg. 391/2008
- BC GHG Emission Reporting Regulation, B.C Reg. 249/2015
- Environment and Climate Change Canada Greenhouse Gas (ECCC GHG)

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PART B - CITY REQUIREMENTS**

- Emissions Reporting Program, Section 46 of Canadian Environmental Protection Act (CEPA 1999)
- National Pollutant Release Inventory (NPRI), Canadian Environmental Protection Act (CEPA 1999)

The key scope of the GHG/NPRI reporting includes:

4.2.1 Kick off Meeting

In the week of January 10 of the given year, the Consultant shall conduct a phone or in person kick off meeting to review and set the dates for the City and Consultant deliverables for the year.

4.2.2 Regulations Review

The Consultant shall review all of the regulations listed above to make sure there have been no changes, no new or additional requirements in the existing regulations, and that the City does not fall under any new regulations with reporting requirements.

An electronic letter report shall be submitted to the City by January 31 of the year, or as set in the kick off meeting, summarizing what is needed for reporting compliance for these regulations. The letter report shall outline the reporting requirements for each of the above regulations:

- Advising the City of any changes to the regulations or reporting requirements;
- Outlining what information the City is required to submit;
- Requesting any further information required from the City to comply with any changes to the legislation or any new legislation;
- Confirming the calculations for emission factors and/or methods to estimate emissions; and
- Confirming other requirements such as uncontrolled gas released to atmosphere, leachate analysis requirements, road dust estimation, aggregate handling, pollution prevention etc.

4.2.3 LFG Annual Report Review

In March of the given year, on the dates set in the January meeting, the Consultant shall review the City's Landfill Gas Annual Report (LFG Annual Report). The Consultant shall ensure that the LFG Annual Report meets all of the reporting requirements as set out in the regulations listed as well as the following:

- Requirements under the *Landfill Gas Generation Assessment Procedure Guidance*
- Waste categorization calculations
- Landfill gas generation calculations
- Landfill gas collection efficiency calculations based on the Ministry of Environment and Climate Change Strategy model and the Landfill's site specific model

The Consultant shall advise the City if the LFG Annual Report is or is not meeting regulatory requirements, and work with the City to rectify. A one page letter is to be submitted electronically to the City electronically at the date as set in the January meeting. This letter shall state what was reviewed by the Consultant and if/that the LFG Annual Report complies with all of the requirements. This letter will be appended to the LFG Annual Report which will

be submitted by the City to the Ministry of Environment and Climate Change Strategy on or before March 31.

4.2.4 Preliminary Single Window Information Management Report

Environment and Climate Change Canada's Single Window Information Management (SWIM) system integrates data collected through provincial and federal programs into one streamlined system.

For information on this program, how to report using this program and what data is required, please check the government website at the link below:

<https://www.canada.ca/en/environment-climate-change/services/reporting-through-single-window.html>

The Consultant is required to use the data provided by the City to complete a preliminary SWIM Report, completing all calculations and categorizations of the data as required.

At the beginning of April of the given year, the City will send the Consultant all of the data/documents requested by the Consultant in Task 0. These documents have in the past included:

- GHG/NPRI reports from all onsite contractors on a City template. There are typically 5 (five) onsite contractors who submit these reports monthly to the City;
- Diesel usage from City vehicles on site;
- Propane usage by City on site;
- Landfill gas used for building heat;
- Traffic over the scale and types of material carried;
- Leachate sample results (excel spreadsheet);
- Landfill gas sample analysis lab report;
- Estimates of distance travelled by onsite traffic;
- All annual report data;
- Calibration certificates for hand held landfill gas quality and flow measurement devices; and
- Calibration certificates for all flow meters used for landfill gas volume numbers.

An accredited third party Verification Body (the "Verifier") shall be subcontracted by the Consultant. Refer to Task 4.3 below.

4.2.5 GHG and NPRI Report Submission

The Consultant shall submit all of the reports on behalf of the City following review by the Verifier on or before their due dates as determined by the regulations, including:

- Single Window Information Manager (SWIM) Report;
- BC Greenhouse Gas Emissions Report (BC GHG) Emissions Report Submission;
- Environment and Climate Change Canada Greenhouse Gas Emissions Reporting Program (ECCC GHG) Emissions Report Submission; and
- Environment and Climate Change Canada National Pollutant Release Inventory (ECCC NPRI) Report Submissions.

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Deliverables for 4.2

Task 4.2.1 Kickoff Meeting:

- i. Hold kickoff Meeting with Consultant and City Staff
- ii. Minutes of the kick-off meeting submitted electronically to the City in PDF format
- iii. Schedule of deliverable dates for the given year submitted electronically to the City in an email

Task 4.2.2 Regulations Review:

- iv. Letter report submitted electronically to the City in PDF format

Task 4.2.3 LFG Annual Report Certification:

- v. One-page signed certification document submitted electrically to the City in PDF format

Task 4.2.4 Preliminary SWIM Report:

- vi. Preliminary SWIM report to be submitted electronically to the City and GHG/NPRI verifier in PDF or excel format, and/or as requested by the verifier, on date agreed upon in the January meeting
- vii. Participate in Verifier Review process as needed (City and Consultant)

Task 4.2.5 Report Submission:

- viii. Submit all of the following required GHG and NPRI reports on or before the due date (currently May 30) in the format required by the regulator (Provincial and Federal) using the SWIM interface (access to be organized between the City and the Consultant):
 - BC Greenhouse Gas Emissions Report (BC GHG) Emissions Report Submission
 - Environment and Climate Change Canada Greenhouse Gas Emissions Reporting Program (ECCC GHG) Emissions Report Submission
 - Environment and Climate Change Canada National Pollutant Release Inventory (ECCC NPRI) Report Submission
 - Any other new reports that are required as identified in the annual scan

4.3 Greenhouse Gas Annual Verification

Under the BC Greenhouse Gas Emissions Reporting Regulation, BC Reg. 249/2015, the City is required to include with its greenhouse gas emissions report (as submitted through the SWIM system), a Verification Statement prepared by an accredited third party Verification Body.

Verification entails a detailed compliance assessment of the greenhouse gas emissions report, with an approach and rigour similar to that of a financial audit. Third-party verification helps ensure that emissions data and reports are accurate, consistent, compatible and in accordance with BC and international standards.

4.3.1 Subcontracting Verification Body

The Consultant will subcontract the Verifier to complete the verification of the greenhouse gas emissions report annually for the duration of the contract. Proponents shall list their sub-contractor Verifier in their Proposal.

Verification of the emissions must follow the Key Elements of Verification as given in the Government of BC's website and comply with the requirements specified in the BC *Greenhouse Gas Reduction Reporting Regulation*.

http://www.bclaws.ca/civix/document/id/lc/statreg/249_2015

The Verifier must be:

- Accredited under ISO-14065;
- Accredited by either The Standards Council of Canada (SCC) or the American National Standards Institute (ANSI); and

- Independent both of the Consultant (doing the GHG Reporting), reporting operation (City of Vancouver) and the government (Province of BC).

4.3.2 Kickoff Meeting

The Verifier shall hold an annual kickoff meeting with the Consultant and the City setting dates usually on the first business day in April for delivery of:

- All of the data required to fill in the reports from the City;
- The delivery date for the preliminary SWIM Report from the Consultant;
- The site visit with the City;
- The Verifier's internal review process;
- A period for response to questions the Verifier may have for the Consultant and the City;
- A draft verification report to be submitted to the Consultant and the City for review; and
- A final verification report to be submitted to Consultant and the City.

4.3.3 Verification

The Verifier will review all of the data given by the City to the Consultant in Task 4.2. Following the review, the Verifier may ask for additional documents and or clarification as necessary. The Consultant shall be available during this time to answer any questions the Verifier may have e.g. how the data was categorized or how the calculations were completed.

The Verifier will submit their draft and final verification reports to the Consultant and the City. The Verifier's report shall be included with the reporting submissions done by the Consultant.

Deliverables for Task 4.3:

Task 4.3.2 Kickoff Meeting

- i. Kickoff Meeting to set dates between City, Consultant and Verifier - first week of April

Task 4.3.3 Verification

- ii. City to provide data to Consultant and Verifier - first week of April
- iii. Site Visit - late April
- iv. Verifier to provide list of findings - second week of May
- v. Address all corrective actions - 3rd week of May
- vi. Submit draft verification documents to the City - May 24th or next business day TBD jointly each year
- vii. Exit meeting - May 26th or next business day TBD jointly each year
- viii. Upload final verification documents - May 30th or sooner

4.4 LFG Database and Mapping System

4.4.1 Detailed Requirements

The Consultant shall set up a meeting with the City (through videoconference or in person at the Landfill) to review the pros and cons of the current LFGMS database system being used by City staff.

The Consultant shall research all/any other database management systems available that they feel would meet the requirements of the City. The City understands that no one system may meet all their requirements. The Consultant, Landfill staff, and staff from the City's Supply

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Chain Management department will develop market sounding questions, and engage LFGMS database system providers to set up info/demonstration sessions. The City will use the information gathered as a result of the market soundings to develop a scope of work for a separate procurement of a LFGMS database system which is outside the scope of Services.

Ideally, the City would like the LFGMS to meet the following performance requirements:

- Well name/identification (e.g. P03-V111, P04H213E);
- Installation date and removal/decommission date;
- Location (northing and easting);
- Current device model (e.g. QED, Flowing, Landtec);
- Current device size (e.g. 1.25", 2", 3");
- Current orifice plate size (e.g. 0.95", 0.40", 2.10");
- Dates of past orifice plate or device size/model changes (e.g. from 2"QED, 1.40" orifice plate, to 3"Flowing, 2.10" orifice plate, on March 5, 2019);
- Length of installed perforated screen (entered once from as-built drawings);
- Ability to upload GAM file from Landtec to update current device size and orifice plate;
- Well condition including fouling, flooding, well collapse;
- Available perforated screen, i.e. the part of the screen that is not flooded or below a well collapse or impacted by fouling, to be adjusted yearly after filming of the wells;
- Deployed pump;
- Deployed permanent temperature sensors;
- Deployed permanent water level sensor (bubbler);
- City specified limits for all parameters to cause a rescan, i.e. different parameters are used than NSPS guidelines/the system should be customizable for the City specific standards (e.g. wells above 125°F high temperature flagged automatically);
- Line graphs showing trends over time for all collected parameters and customizable to highlight/show only those selected;
- Contours of water level elevations above sea level with customizable intervals;
- GIS-based mapping structure so more than one parameter can be displayed at a time on one map;
- Ability to import .csv files to update well heights or other parameters as a group;
- On the map, at-a-click customizable binning changes, (e.g. wells below 45% methane red, wells 45-49% methane orange, wells above 50% methane green, etc.);
- Customizable PDF printing area (the Landfill is 3 km long by 800 m wide, which makes it difficult to print while still being legible), movable location of title block, parameters legend, north arrow;
- Customizable reports/work sheets by month and Landfill phase;
- Ability to integrate components inventory/maintenance spreadsheet. The spreadsheet will be provided by the City after award of the contract. These sheets list all the bits and parts on the wells and is used for reordering/keeping things in stock. (e.g. P03-V111: 4" system side riser, 4x2 fernco, 2" plug, yellow hose, 2x yellow hose clamps, 2" QED device, 1.40 orifice plate, 3 white quick connects, 1 temperature port labcock, 2" hose clamp to support post, 6x2 metal 5 port well head adaptor);
- Photo of and/or drawing associated with well ID;
- Ability to remove decommissioned wells from maps, but retain location data and ability to print historical location and parameters;

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- Ability to have some categories of monitoring points displayed or not. For example, pressure relief (PR) wells, condensate traps (CTs) etc. are not generally monitored so they don't need to be displayed. However, when they are monitored, this layer of the map can be turned on;
- Ideally a map with the option to hover the cursor over a well, an info box pops up showing data like: components, install date, photo or drawing, and graph of 1 year chosen parameters;
- Drop down menu for map to show not only parameters (CH₄, balance gas etc.) but also components (e.g. fernco size, well head adaptor type) or history (when orifice/device changes were done); and
- Ability to electronically transfer all City owned data to the City at the end of the Contract. The data shall be transferred in an acceptable format to the City.

Deliverables for Task 4.4:

Task 4.4.1 Detailed Requirement

- i. Meeting with City to review current LFGMS
- ii. Meeting(s)/ Info or Demo sessions with proposed LFGMS providers
- iii. Minutes from the Meetings and Demo sessions submitted electronically to the City in PDF format

4.5 Periodic Well Field Monitoring

The Consultant shall supply a field technician to assist City LFG field staff, as and when needed, to perform monthly well field monitoring and to aid in other monthly duties for a set hourly rate (Task 4.5.1). The field technician will be required to work only during regular working hours 7:00 AM to 3:00 PM Monday to Friday. The City of Vancouver shall remain Prime Contractor for this work. Other monthly duties (Task 4.5.2) may include: minor well repairs, part replacements in the field, well water level monitoring, pump maintenance and gas well filming.

The Consultant's field staff will be required to complete the City's Site Safety Orientation before beginning work at the site and participate with City Staff in completing the FLHA on a daily basis. The Consultant is required to provide a cell phone for communication on site and vehicle for transportation to/from and on site.

The Consultant shall provide an hourly rate for the field technician for the periodic field monitoring.

The City will provide the following to the Consultant's field staff:

4.5.1 Main Task - LFG Field Monitoring

- Daily FLHA to exchange hazards of the Consultant's work and any work the City or its subcontractors are performing nearby.
- Maps showing well locations with well identifications.
- GEM5000+ Portable LFG Analyzer.
- Draeger personal gas detector.
- Well adjustment guidelines.
- Standard Operating Procedure for monitoring.
- Parameter 'red flags' that require immediate notification by cell phone.
- On the job training to familiarize the field staff with the overall layout of the Landfill and observe/aid them with monitoring the wells to meet City standards.
- Training in GEM5000+ calibration at the City calibration station, which the field staff will do at the start of each day they will be monitoring.

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- Phone numbers so that whenever they are on site there will be someone available to answer questions as they arise.

4.5.2 Other Tasks

Other monthly duties may include: minor well repairs, part replacements in the field, well water level monitoring, pump maintenance and gas well filming.

- Standard Operating Procedures for the other tasks for pre-reading before coming to site.
- Daily FLHA (City template) to exchange hazards of the Consultant's work and any work the City or its subcontractors are performing nearby.
- On the job training in how to complete the tasks and phone numbers so that whenever the field staff is on site there will be someone available to answer questions as they arise.
- This work is provisional and will be based on the hourly rates.

Deliverables for Task 4.5:

- i. The Consultant field staff shall provide a field report for work performed and any recommendations for improvement.

4.6 Periodic Consulting

From time to time and upon written request from the City, the Consultant shall provide periodic consulting services over the contract period to address:

- a) Any issues arising from landfill gas field data;
- b) recommendations associated with or related to other project work;
- c) unplanned events; or
- d) other related questions.

At the completion of the task, the Consultant shall submit a technical memo electronically to the City. The Consultant will circulate (electronically) the draft technical memo. On receipt of the City's feedback, the Consultant will finalize the memo.

For the purposes of this RFP, Proponents are to assume 50 hours of periodic consulting annually.

Deliverables for Task 4.6:

- i. Draft (MS Word format) and final (MS Word and PDF formats) technical memo

City Provided

Following the execution of any Agreement, the City will provide all the documentation listed in the sections above which are not already included by reference in the City's Requirements. On request, the City will provide site access, data and electronic templates as necessary to complete the Services.

- FLHA (City template)
- Field Report (City template)

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Deliverables and Schedule

The following Table 3 provides a summary of the deliverables for the contract.

Table 3 - Deliverables, Milestones and Target Date

Task	Item	Deliverables and Milestones	Target Date
		Agreement Execution	December 17, 2020
		Kick-Off Meeting	Week of January 10, 2021
4.1 Landfill Gas Migration and Emission Monitoring (LFGMEM)			
Task 4.1.1 SSSP	i.	Draft (Word format) and final (Word and PDF) SSSP submitted electronically to the City for the City's review and acceptance	During First Quarter 2021 before the First Site Visit
	ii.	Draft (Word format) and final (Word and PDF formats) annual updated SSSP submitted electronically to the City	Annually, Week of January 31 and February 28
Task 4.1.2 Regulatory Scan	iii.	Memo submitted electronically to the City in PDF format of the Regulatory Scan	Annually (starting January 2021)
Task 4.1.3 Monitoring	iv.	Four (4) Quarterly site visits to complete monitoring of perimeter stations	Quarterly, Last Month of each Quarter
Task 4.1.4 Reports	v.	Four (4) Quarterly monitoring Reports submitted electronically to the City in PDF format and data as an excel spreadsheet and	10 Business Days following Quarterly Site Visit
	vi.	Draft (MS Word and PDF formats) and final (PDF format) Annual Report submitted electronically to the City	Annually, Week of January 31 and February 28
	vii.	Draft (AutoCAD and PDF formats) and final (AutoCAD and PDF formats) map submitted electronically to the City	During First Quarter 2021 before the First Site Visit
4.2 Greenhouse Gas Annual Reporting			
Task 4.2.1 Kickoff Meeting	i.	Hold kickoff Meeting with Consultant and City Staff	Annually, Week of January 10

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	ii.	Minutes of the kick-off meeting submitted electronically to the City in PDF format	Annually (starting January 2021) - Last business day in January
	iii.	Schedule of deliverable dates for the given year submitted electronically to the City in an email	Annually - Last business day in January
Task 4.2.2 Regulations Review	iv.	Memo submitted electronically to the City in PDF format	Annually - Last business day in January
Task 4.2.3 LFG Annual Report Certification	v.	One-page signed certification document submitted electrically to the City in PDF format	Annually - on date as determined in kickoff meeting, no later than March 30th
Task 4.2.4 Preliminary Swim Report	vi.	Preliminary SWIM report to be submitted electronically to the City and GHG/NPRI verifier in PDF or excel format, and/or as requested by the verifier, on date agreed upon in the January meeting	Annually - By end of first week in April
	vii.	Participate in Verifier Review process as needed (City and Consultant)	Annually - First business day in May
Task 4.2.5 Report Submission	viii.	Submit all of the following required GHG and NPRI reports on or before the due date (currently May 30) in the format required by the regulator (Provincial and Federal) using the SWIM interface (access to be organized between the City and the Consultant): <ul style="list-style-type: none"> ▪ BC Greenhouse Gas Emissions Report (BC GHG) Emissions Report Submission ▪ Environment and Climate Change Canada Greenhouse Gas Emissions Reporting Program (ECCC GHG) Emissions Report Submission ▪ Environment and Climate Change Canada National Pollutant Release Inventory (ECCC NPRI) Report Submissions ▪ Any other new reports that are required as identified in the annual scan 	Annually - Beginning of April to mid of May
4.3 Greenhouse Gas Reporting Annual Verification			
Task 4.3.2 Kickoff Meeting	i.	Kickoff Meeting to set dates between City, Consultant and Verifier	Annually - First week of April
Task 4.3.3 Verification	ii.	City to provide data to Consultant and Verifier	Annually - First week of April
	iii.	Site Visit	Annually - Late April (TBD)

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	iv.	Verifier to provide list of findings	Annually - Second week of May
	v.	Address all corrective actions	Annually - Third week of May
	vi.	Submit draft verification documents to the City	Annually - May 24th, TBD each year, nearest office day
	Vii	Exit meeting	Annually - May 26th, TBD each year, nearest office day
	viii.	Upload final verification documents	Annually - May 30th
4.4 LFG Database and Mapping System			
Task 4.4.1 Detailed Requirement	i.	Meeting with City to review current LFGMS	Once at the start of the contract, before April 1, 2021
	ii.	Meeting(s)/ Info Sessions	Before April 1, 2021
	iii.	Minutes from the Meetings	Five Business Days following Meetings
4.5 Periodic Well Field Monitoring			
4.5 Periodic Well Field Monitoring	i.	The Consultant field staff shall provide a field report for work performed and any recommendations for improvement.	Five Business Days following completion of tasks.
4.6 Periodic Consulting			
4.6 Periodic Consulting	i.	Draft (MS Word format) and final (MS Word and PDF formats) technical memo	On an as needed basis, assume 50/hours per year for Proposal.

Attachments:

- Vancouver Landfill Site Safety Orientation/Agreement
- Transfer & Landfill Operations (TLO) Contractor Safety Absolutes
- Owner's List of Known Workplace Hazards
- Landfill Gas Migration and Emissions Monitoring Program: 2020 Second Quarter Report



LANDFILL GAS MIGRATION AND EMISSIONS MONITORING PROGRAM 2020 SECOND QUARTER REPORT

CITY OF VANCOUVER
4500569893



Plewes Environmental Limited

Vancouver, B.C.

plewesenvironmental.com

**Attention: Ms. Hanna Musslick
Engineering Assistant**

Project: PS 4500569893

Subject: City of Vancouver Landfill Gas Migration and Emissions Monitoring Program 2020

Dear Ms. Musslick,

Please find enclosed the 2020 Second Quarter Report for the Landfill Gas Migration and Emissions Monitoring program.

We trust that the information contained herein meets your requirements. Should you have any questions, please do not hesitate to contact me by telephone at 236.868.3895 or by email at david.plewes@plewesenvironmental.com.

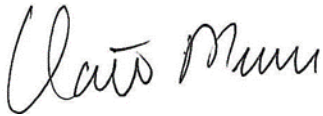
Yours truly,
Plewes Environmental Limited

Per: David Plewes
LFGMEM Project Manager
Plewes Environmental

PREPARED FOR

Ms. Hanna Musslick
Engineering Assistant
LFGMEM 4500569893
Project Manager
City of Vancouver
Vancouver, British Columbia.

PREPARED BY



David Plewes
LFGMEM Project Manager
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1

INTRODUCTION

On June 29th, 2020, Plewes Environmental Limited conducted the second quarter test session (Test 2, 2020) of the 2020 landfill gas migration and emissions monitoring (LFGMEM) program at the City of Vancouver's Landfill, located at 5400 72nd Street, Delta, B.C.

The purpose of the monitoring program is to collect data on landfill gas emissions and gas migration, once per quarter, at the Vancouver Landfill. Monitoring was conducted at 114 landfill buffer perimeter sample stations. An aerial map showing sample locations is provided in Figures 12 in the Appendix.

The test parameters are detailed in this introduction and the sampling methods detailed in Section 2. The monitoring results are in Section 3, including a comparison of the current test session results with the previous two test sessions.

Details of all sampling stations and the 2020 LFGMEM monitoring results to date are presented in the Appendix of this report in Tables 2 and 3 and Figures 3 to 10. Table 15 provides the station identification coding system.

1.1 TEST PARAMETERS PER LOCATION

The boundary perimeter sites were tested for H₂S ppb and total organic carbon (TOC) as methane (CH₄) in ppm.

2

SAMPLING METHODS

2.1 BOUNDARY PERIMETER AND LANDFILL GAS (LFG) FLARE STATION

Monitoring of the buffer perimeter for Total Organic Carbon (as methane) and hydrogen sulphide is to be conducted every quarter during the LFGMEM program.

For the 2020 tests, H₂S measurements continue to be conducted at the parts per billion (ppb) level, whereas up to June 2011 H₂S measurements were conducted at the parts per million (ppm) detection levels. This change from ppm to ppb in the measurement criteria was undertaken by the City of Vancouver to more precisely monitor landfill odours.

H₂S is measured as a surrogate for the odorous compounds typically found in MSW landfills. The human nose can detect H₂S at a concentration of less than 1 ppm with a Recognition Threshold of .0047 ppm or 4.7ppb H₂S. The Recognition Threshold is the concentration at which 50% of humans can identify the odourant.

For the buffer perimeter stations, a Thermo Fisher Scientific TVA-2020 (toxic vapour analyzer) equipped with a Flame Ionization Detector (FID), in accordance with EPA Method 21, and the Jerome J631X hydrogen sulphide analyser were used to collect perimeter sample data.

Calibration of the TVA was conducted prior to the field tests using laboratory certified calibration 100ppm methane span gas. The TVA had regular monthly maintenance and inspection.

Sampling was conducted during conditions free from significant wind at the sample points listed in the Appendix tables. To confirm these conditions were present during sampling, meteorological data was recorded on a regular basis during testing from sample locations within the landfill (Appendix Table 14) and confirmed after the tests with Environment Canada data from its Delta Burns Bog meteorological station.

Measurements were taken at each of the buffer perimeter stations at 10 cm and 200 cm above ground height.

3

RESULTS AND DISCUSSION

3.1

OUTLINE

Any threshold exceedances during the June 29th, 2020 monitoring round are presented in Section 3.2, Table 1.

Precipitation for the 2020 monitoring rounds is presented in Section 3.3 as background to the June 29th, 2020 results of the boundary perimeter in Section 3.4.

The detailed test data for the 114 sample stations per quarter from is provided in the Appendix in Tables 2 and 3 and Figures 3 to 10. Meteorological data for all test dates are in Figure 11 and Table 4 in the Appendix. Table 5 provides the station identification coding system. Finally, Geographical Information System maps of the test locations are in Figure 12 in the Appendix.

3.2 THRESHOLD EXCEEDANCES JUNE 29TH 2020

Table 1 provides the % LEL, % O₂ and/or H₂S threshold exceedances at any sampling stations during the June 29th 2020 LFGMEM program test session.

Test locations outside of the City's response settings for LEL, TOC, H₂S, CO₂ and/or O₂ are detailed below in Table 1. Any exceedances are marked-up in red.

Table 1 Threshold Exceedance June 29th 2020

During this survey there were no test locations outside of the City's response settings for TOC (ppm) or H₂S (pbb).

JUNE 29, 2020	% LEL	O ₂ %	H ₂ S (PPB)
	<20 %	<19.5 or >23 %	<5000 ppb

3.3 METEOROLOGY - PRECIPITATION

Meteorology can have an affect on LFG emissions. Meteorological conditions are presented as a general background to the presentation of the respective test session results. Meteorological conditions are detailed in the Appendix - Table 11.

Precipitation during testing can affect the instruments while wind can affect the emissions, from diffusion. Cumulative precipitation can affect LFG emissions. Meteorology was tracked, and the data collected prior to and during sampling to mitigate potential effects on instruments and emission diffusion.

Figure 1 provides the cumulative precipitation in the 14 days prior to the current and previous monitoring rounds.

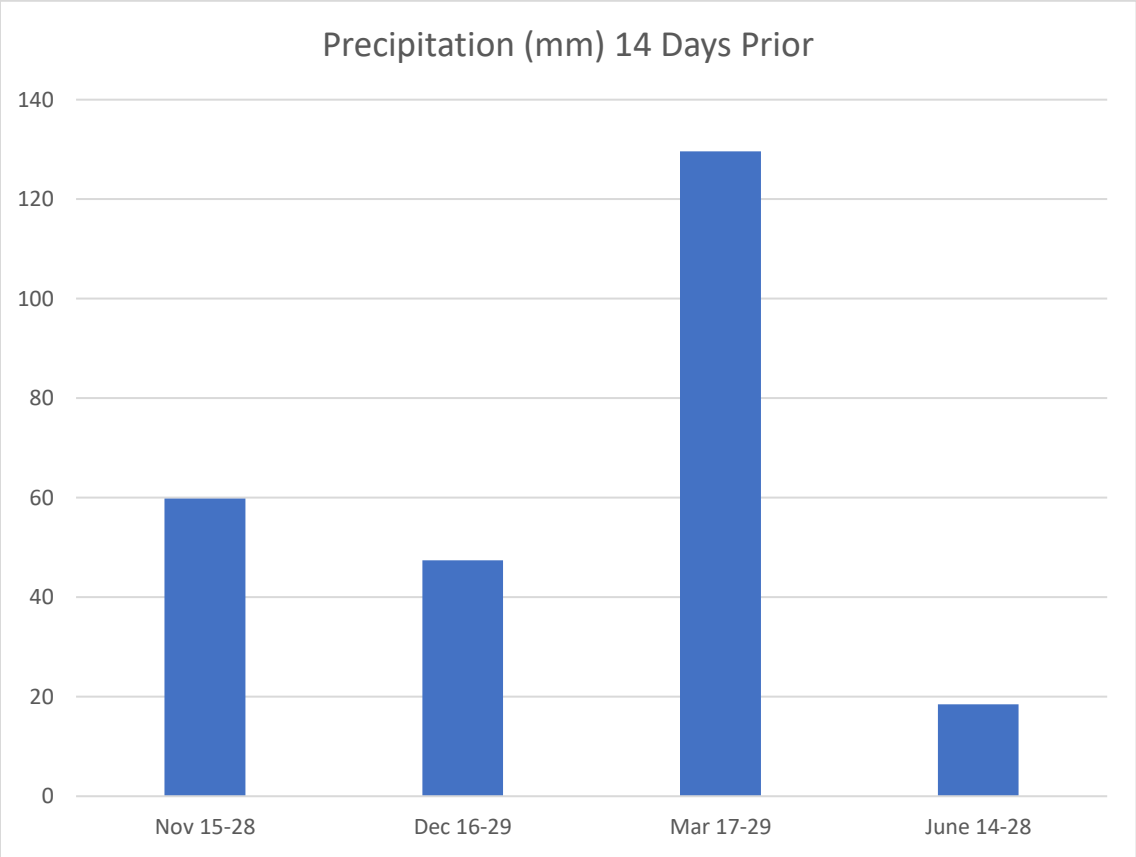


Figure 1 Cumulative Precipitation 14 Day Pre-Test Period Comparison

3.4 BOUNDARY PERIMETER

Below is a list of the City of Vancouver response criteria for the buffer/perimeter of the landfill:

- >50 ppm TOC
- >1 ppb H₂S for odor and >10000 ppb H₂S for safety

No perimeter stations exceeded the Response Setting of >50 ppm TOC (as methane) during the June 29th, 2020 test session. The boundary perimeter sampling sites recorded concentrations of TOC of 1–2 ppm, with an average of 2.67 ppm.

Historically, there is a pattern of higher readings along the mid-north sample stations. In terms of pattern, the June 29th, 2019 results exhibited this historic pattern of higher readings along the mid-north, although only marginally so at 2 ppm.

The wind direction during this test was generally from the south at ~170°.

The cumulative precipitation in the 14 days prior to this test session was 129.6 mm.

The current Perimeter TOC average for 2020 is now 2.67 ppm. This is lower than the historical annual average of ~8-10 ppm perimeter TOC measurements.

There were no measurable H₂S readings.

The June 29th, 2020 average H₂S of the perimeter sample points was 0.0 ppb.

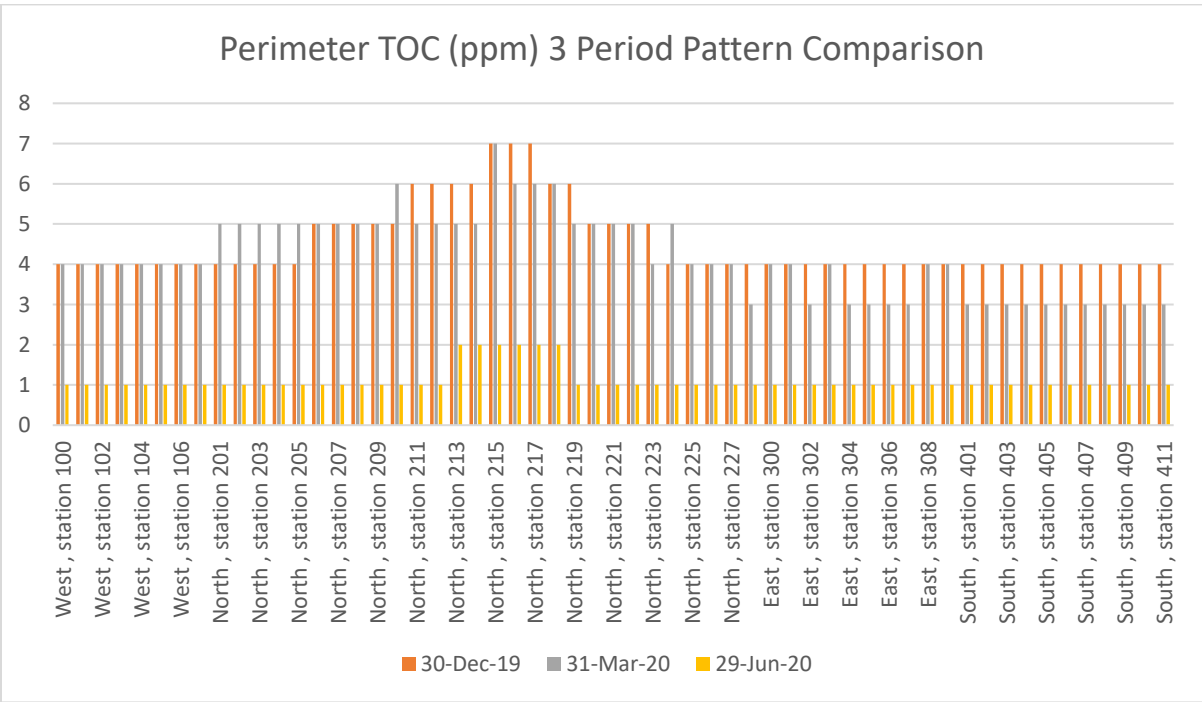


Figure 2 Perimeter TOC ppm – 3 Period Pattern Comparison

APPENDIX

DATA TABLES AND CHART

Table 2 Boundary Perimeter TOC ppm

TOC Response Setting: >50ppm

West Stations					
Station ID	31-Mar	29-Jun	27-Sep	27-Nov	Average
100-010	4	1			2.5
100-200	4	1			2.5
101-010	4	1			2.5
101-200	4	1			2.5
102-010	4	1			2.5
102-200	4	1			2.5
103-010	4	1			2.5
103-200	4	1			2.5
104-010	4	1			2.5
104-200	4	1			2.5
105-010	4	1			2.5
105-200	4	1			2.5
106-010	4	1			2.5
106-200	4	1			2.5
Average	4.0	1.0			2.5
North Stations					
Station ID	31-Mar	29-Jun	27-Sep	27-Nov	Average
200-010	4	1			2.5
200-200	4	1			2.5
201-010	5	1			3.0
201-200	5	1			3.0
202-010	5	1			3.0
202-200	5	1			3.0
203-010	5	1			3.0
203-200	5	1			3.0
204-010	5	1			3.0
204-200	5	1			3.0
205-010	5	1			3.0
205-200	5	1			3.0
206-010	5	1			3.0

206-200	5	1			3.0
207-010	5	1			3.0
207-200	5	1			3.0
208-010	5	1			3.0
208-200	5	1			3.0
209-010	5	1			3.0
209-200	5	1			3.0
210-010	6	1			3.5
210-200	6	1			3.5
211-010	5	1			3.0
211-200	5	1			3.0
212-010	5	1			3.0
212-200	5	1			3.0
213-010	6	2			4.0
213-200	5	2			3.5
214-010	5	2			3.5
214-200	5	2			3.5
215-010	7	2			4.5
215-200	7	2			4.5
216-010	6	2			4.0
216-200	6	2			4.0
217-010	6	2			4.0
217-200	6	2			4.0
218-010	6	2			4.0
218-200	6	2			4.0
219-010	5	2			3.5
219-200	5	1			3.0
220-010	5	1			3.0
220-200	5	1			3.0
221-010	5	1			3.0
221-200	5	1			3.0
222-010	5	1			3.0
222-200	5	1			3.0
223-010	4	1			2.5
223-200	4	1			2.5
224-010	5	1			3.0
224-200	5	1			3.0
225-010	4	1			2.5
225-200	4	1			2.5
226-010	4	1			2.5
226-200	4	1			2.5
227-010	4	1			2.5

227-200	4	1			2.5
228-010	3	1			2.0
228-200	3	1			2.0
Average	5.0	1.2			3.1
East Stations					
Station ID	31-Mar	29-Jun	27-Sep	27-Nov	Average
300-010	4	1			2.5
300-200	4	1			2.5
301-010	4	1			2.5
301-200	4	1			2.5
302-010	3	1			2.0
302-200	3	1			2.0
303-010	4	1			2.5
303-200	4	1			2.5
304-010	3	1			2.0
304-200	3	1			2.0
305-010	3	1			2.0
305-200	3	1			2.0
306-010	3	1			2.0
306-200	3	1			2.0
307-010	3	1			2.0
307-200	3	1			2.0
308-010	4	1			2.5
308-200	4	1			2.5
Average	3.4	1.0			2.2
South Stations					
Station ID	31-Mar	29-Jun	27-Sep	27-Nov	Average
400-010	4	1			2.5
400-200	4	1			2.5
401-010	3	1			2.0
401-200	3	1			2.0
402-010	3	1			2.0
402-200	3	1			2.0
403-010	3	1			2.0
403-200	3	1			2.0
404-010	3	1			2.0
404-200	3	1			2.0
405-010	3	1			2.0
405-200	3	1			2.0
406-010	3	1			2.0

406-200	3	1			2.0
407-010	3	1			2.0
407-200	3	1			2.0
408-010	3	1			2.0
408-200	3	1			2.0
409-010	3	1			2.0
409-200	3	1			2.0
410-010	3	1			2.0
410-200	3	1			2.0
411-010	3	1			2.0
411-200	3	1			2.0
Average	3.1	1.0			2.0

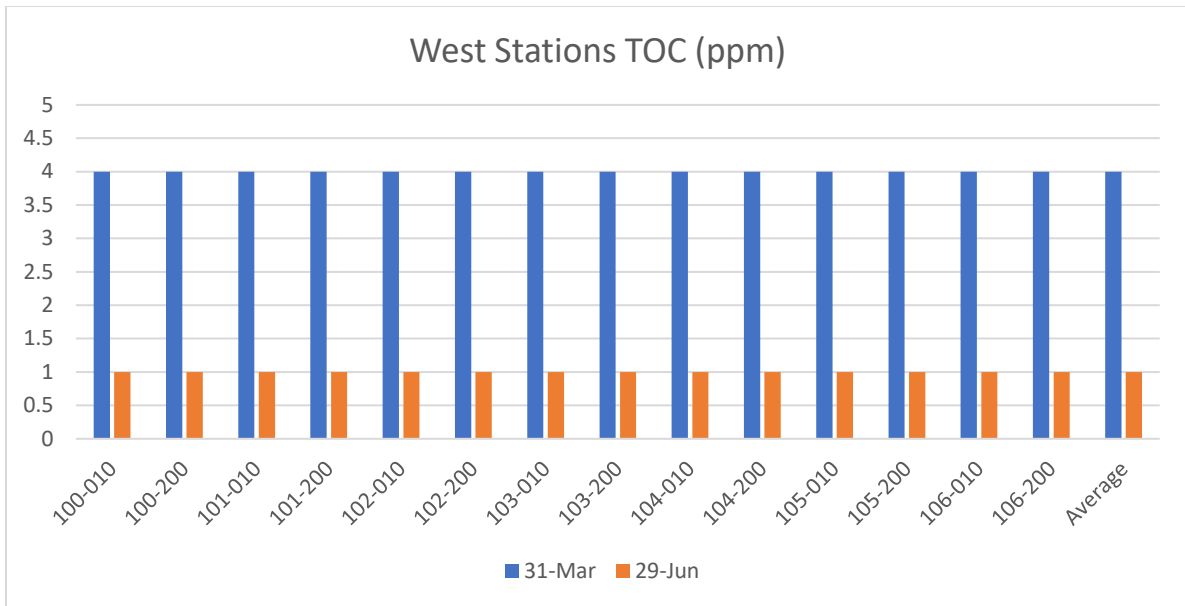


Figure 3 Buffer Perimeter TOC ppm West Stations

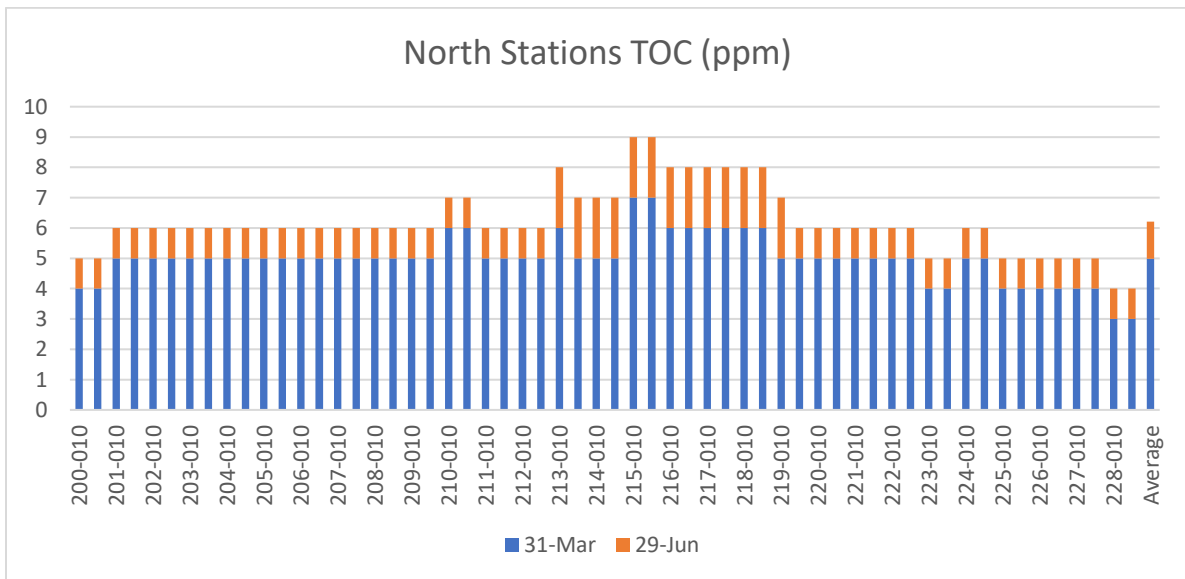


Figure 4 Buffer Perimeter TOC ppm North Stations

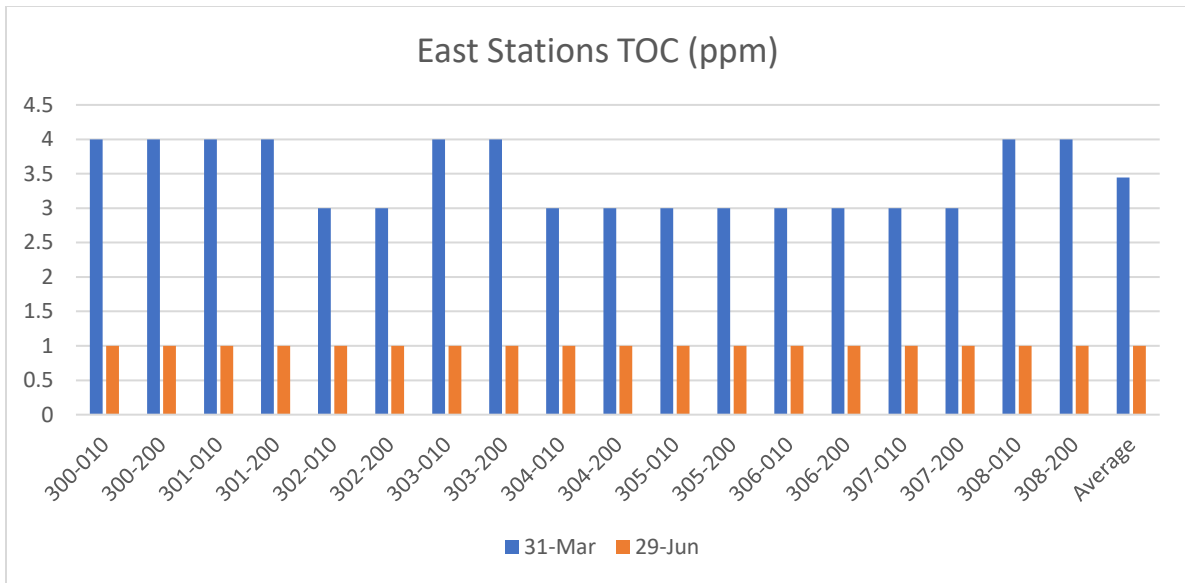


Figure 5 Buffer Perimeter TOC ppm East Stations

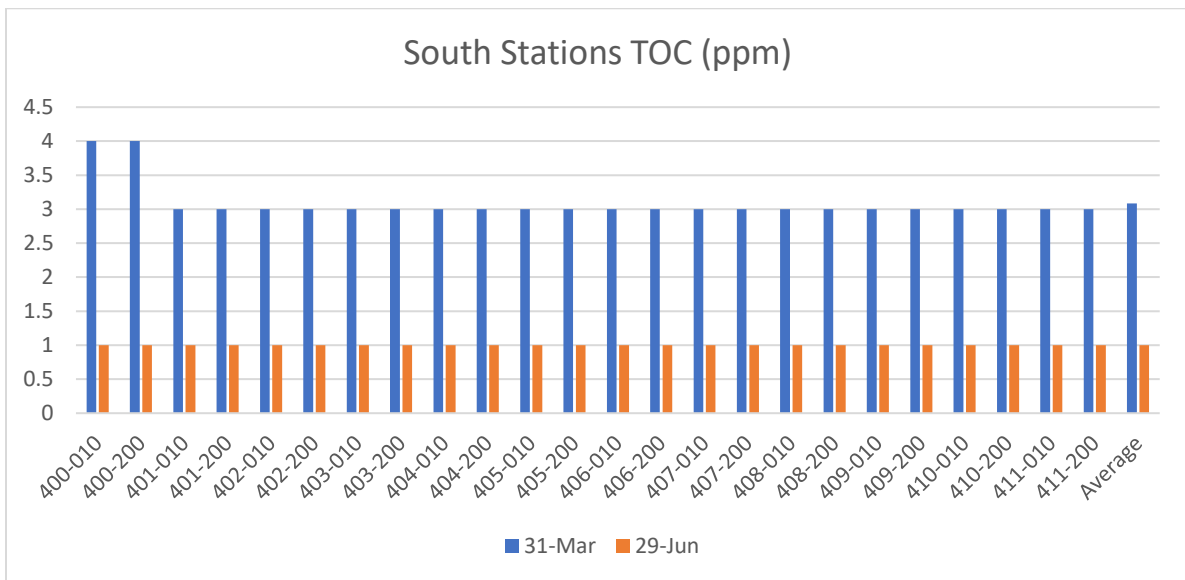


Figure 6 Buffer Perimeter TOC ppm South Stations

Table 3 Boundary Perimeter H₂S (ppb)

H₂S Response Setting: >1ppb

West Stations					
Station ID	31-Mar	29-Jun	27-Sep	27-Nov	Average
100-010	0	0			0.0
100-200	0	0			0.0
101-010	0	0			0.0
101-200	0	0			0.0
102-010	0	0			0.0
102-200	0	0			0.0
103-010	0	0			0.0
103-200	0	0			0.0
104-010	0	0			0.0
104-200	0	0			0.0
105-010	0	0			0.0
105-200	0	0			0.0
106-010	0	0			0.0
106-200	0	0			0.0
Average	0.0	0.0			0.0
North Stations					
Station ID	31-Mar	29-Jun	27-Sep	27-Nov	Average
200-010	0	0			0.0
200-200	0	0			0.0
201-010	0	0			0.0
201-200	0	0			0.0
202-010	0	0			0.0
202-200	0	0			0.0
203-010	0	0			0.0
203-200	0	0			0.0
204-010	0	0			0.0
204-200	0	0			0.0
205-010	0	0			0.0
205-200	0	0			0.0
206-010	0	0			0.0
206-200	0	0			0.0
207-010	0	0			0.0
207-200	0	0			0.0
208-010	0	0			0.0
208-200	0	0			0.0
209-010	0	0			0.0

209-200	0	0			0.0
210-010	0	0			0.0
210-200	0	0			0.0
211-010	0	0			0.0
211-200	0	0			0.0
212-010	0	0			0.0
212-200	0	0			0.0
213-010	0	0			0.0
213-200	0	0			0.0
214-010	0	0			0.0
214-200	0	0			0.0
215-010	0	0			0.0
215-200	0	0			0.0
216-010	0	0			0.0
216-200	0	0			0.0
217-010	0	0			0.0
217-200	0	0			0.0
218-010	0	0			0.0
218-200	0	0			0.0
219-010	0	0			0.0
219-200	0	0			0.0
220-010	0	0			0.0
220-200	0	0			0.0
221-010	0	0			0.0
221-200	0	0			0.0
222-010	0	0			0.0
222-200	0	0			0.0
223-010	0	0			0.0
223-200	0	0			0.0
224-010	0	0			0.0
224-200	0	0			0.0
225-010	0	0			0.0
225-200	0	0			0.0
226-010	0	0			0.0
226-200	0	0			0.0
227-010	0	0			0.0
227-200	0	0			0.0
228-010	0	0			0.0
228-200	0	0			0.0
Average	0.0	0.0			0.00
East Stations					
Station ID	31-Mar	29-Jun	27-Sep	27-Nov	Average

300-010	0	0			0.0
300-200	0	0			0.0
301-010	0	0			0.0
301-200	0	0			0.0
302-010	0	0			0.0
302-200	0	0			0.0
303-010	0	0			0.0
303-200	0	0			0.0
304-010	0	0			0.0
304-200	0	0			0.0
305-010	0	0			0.0
305-200	0	0			0.0
306-010	0	0			0.0
306-200	0	0			0.0
307-010	0	0			0.0
307-200	0	0			0.0
308-010	0	0			0.0
308-200	0	0			0.0
Average	0.0	0.0			0.00
South Stations					
Station ID	31-Mar	29-Jun	27-Sep	27-Nov	Average
400-010	0	0			0.0
400-200	0	0			0.0
401-010	0	0			0.0
401-200	0	0			0.0
402-010	0	0			0.0
402-200	0	0			0.0
403-010	0	0			0.0
403-200	0	0			0.0
404-010	0	0			0.0
404-200	0	0			0.0
405-010	0	0			0.0
405-200	0	0			0.0
406-010	0	0			0.0
406-200	0	0			0.0
407-010	0	0			0.0
407-200	0	0			0.0
408-010	0	0			0.0
408-200	0	0			0.0
409-010	0	0			0.0
409-200	0	0			0.0
410-010	0	0			0.0

410-200	0	0			0.0
411-010	0	0			0.0
411-200	0	0			0.0
Average	0	0.0			0.0

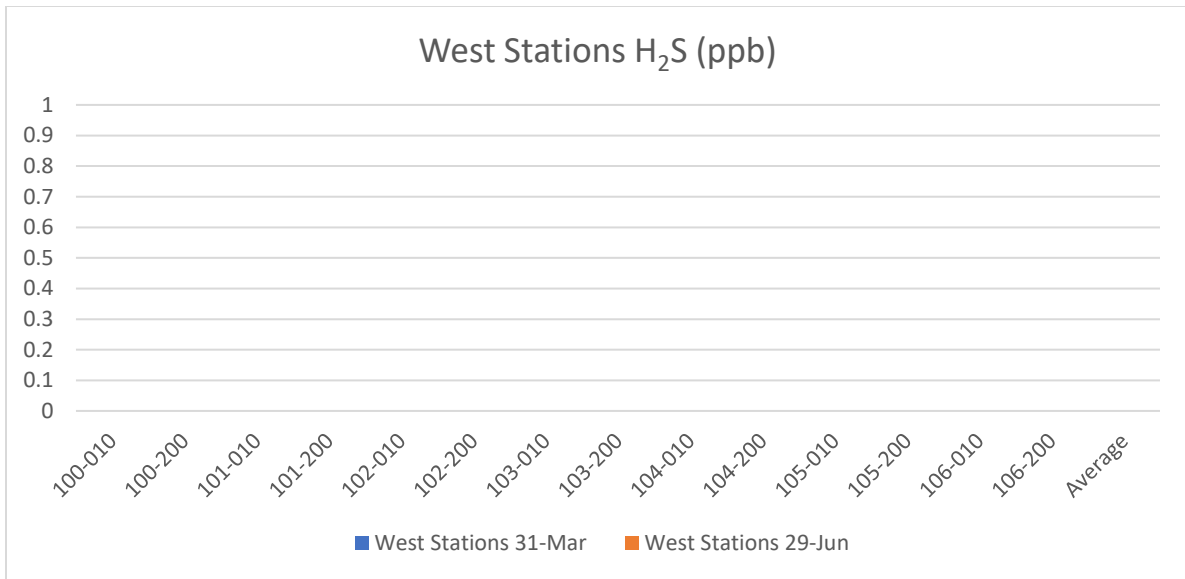


Figure 7 Buffer Perimeter H₂S ppb - West Stations

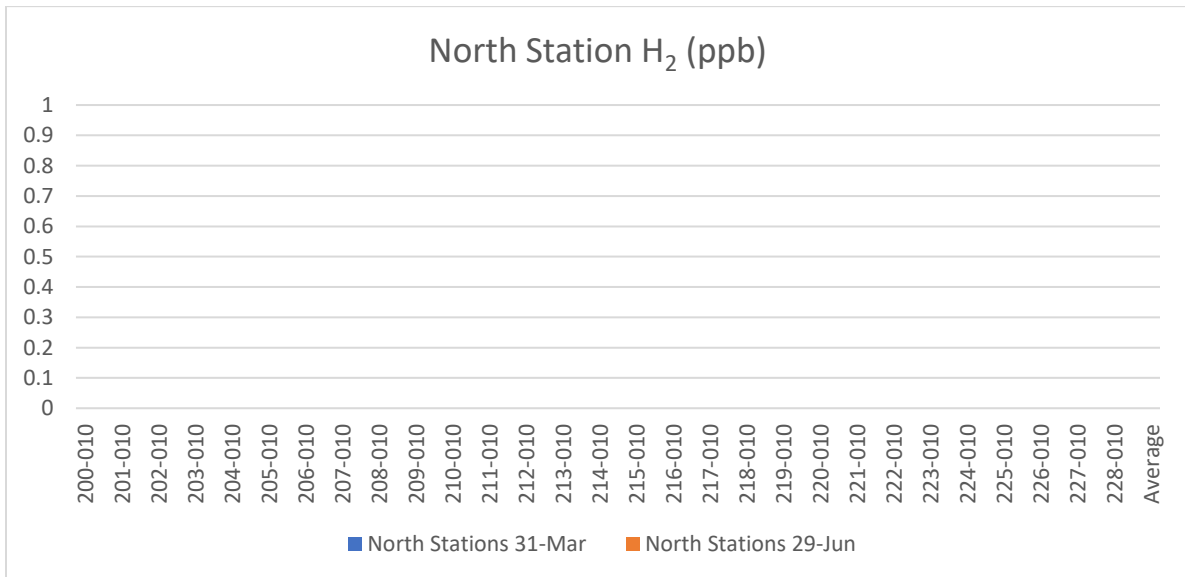


Figure 8 Buffer Perimeter H₂S ppb - North Stations

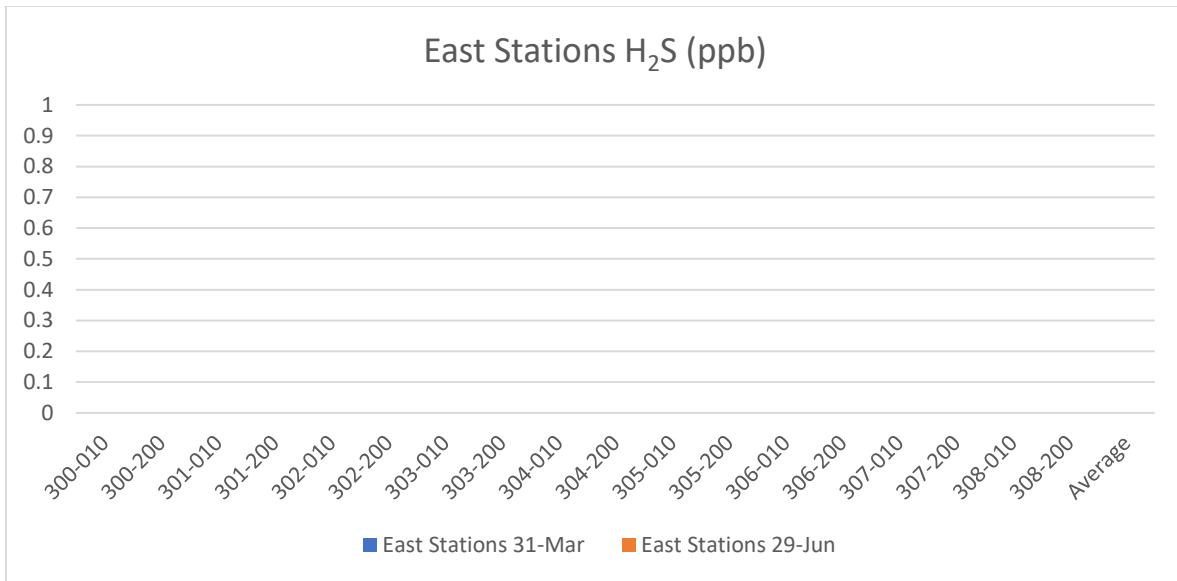


Figure 9 Buffer Perimeter H₂S ppb - East Stations

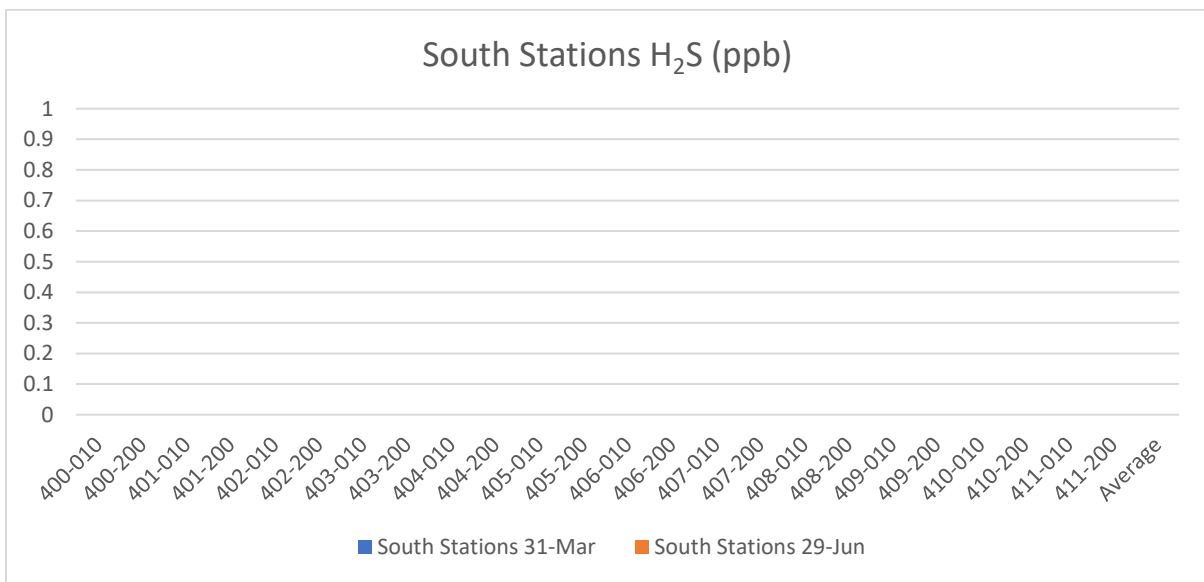


Figure 10 Buffer Perimeter H₂S ppb - South Station

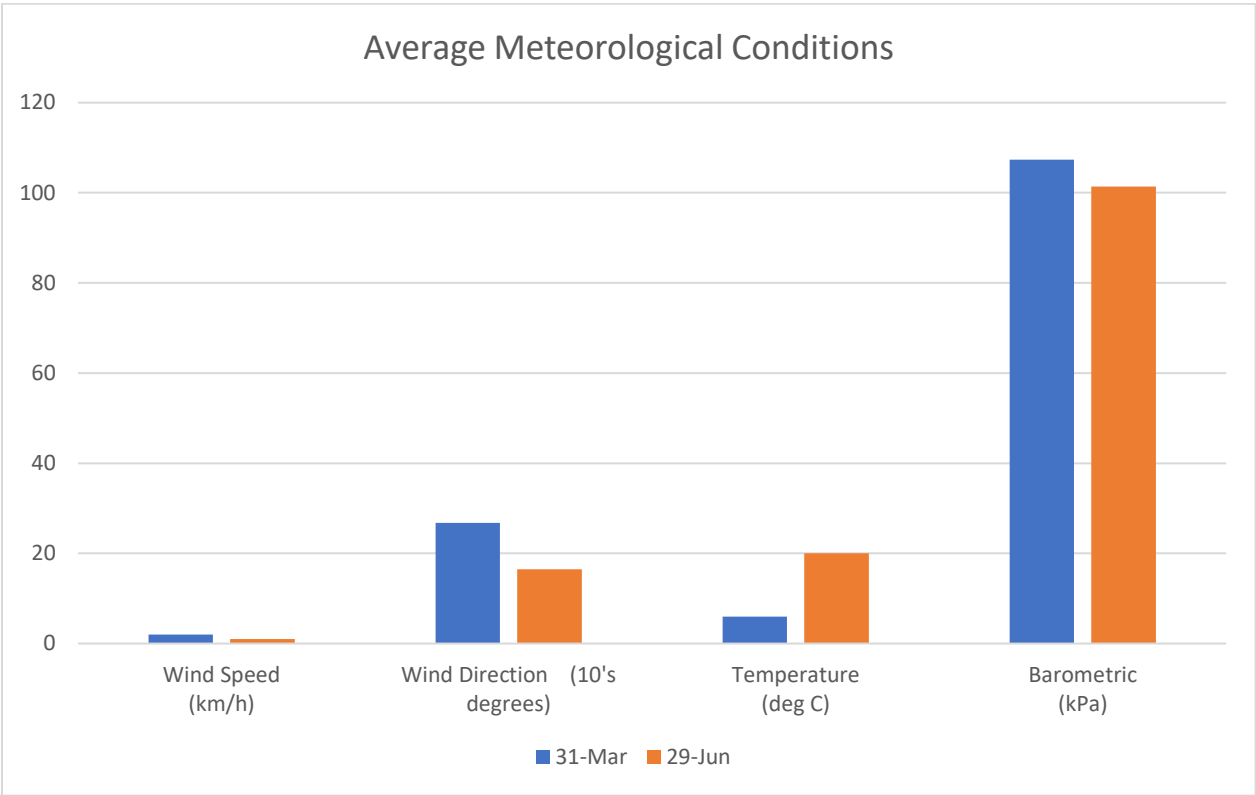


Figure 11 Average Meteorological Conditions

Parameters	31-Mar	29-Jun	27-Sep	27-Nov
Wind Speed (km/h)	2	1		
Wind Direction (10's degrees)	27	17		
Temperature (deg C)	6.0	20.0		
Barometric (kPa)	107.33	101.39		

Table 4 Average Meteorological Data

Table 5 Station Identification Codes

Station Codes	Boundary Perimeter
STATION ID	STATION NAME
100-010	West boundary, station 100, 10 cm ht
100-200	West boundary, station 100, 200 cm ht
101-010	West boundary, station 101, 10 cm ht
101-200	West boundary, station 101, 200 cm ht
102-010	West boundary, station 102, 10 cm ht
102-200	West boundary, station 102, 200 cm ht
103-010	West boundary, station 103, 10 cm ht
103-200	West boundary, station 103, 200 cm ht
104-010	West boundary, station 104, 10 cm ht
104-200	West boundary, station 104, 200 cm ht
105-010	West boundary, station 105, 10 cm ht
105-200	West boundary, station 105, 200 cm ht
106-010	West boundary, station 106, 10 cm ht
106-200	West boundary, station 106, 200 cm ht
200-010	North boundary, station 200, 10 cm ht
200-200	North boundary, station 200, 200 cm ht
201-010	North boundary, station 201, 10 cm ht
201-200	North boundary, station 201, 200 cm ht
202-010	North boundary, station 202, 10 cm ht
202-200	North boundary, station 202, 200 cm ht
203-010	North boundary, station 203, 10 cm ht
203-200	North boundary, station 203, 200 cm ht
204-010	North boundary, station 204, 10 cm ht
204-200	North boundary, station 204, 200 cm ht
205-010	North boundary, station 205, 10 cm ht
205-200	North boundary, station 205, 200 cm ht
206-010	North boundary, station 206, 10 cm ht
206-200	North boundary, station 206, 200 cm ht
207-010	North boundary, station 207, 10 cm ht
207-200	North boundary, station 207, 200 cm ht
208-010	North boundary, station 208, 10 cm ht
208-200	North boundary, station 208, 200 cm ht
209-010	North boundary, station 209, 10 cm ht
209-200	North boundary, station 209, 200 cm ht
210-010	North boundary, station 210, 10 cm ht
210-200	North boundary, station 210, 200 cm ht

211-010	North boundary, station 211, 10 cm ht
211-200	North boundary, station 211, 200 cm ht
212-010	North boundary, station 212, 10 cm ht
212-200	North boundary, station 212, 200 cm ht
213-010	North boundary, station 213, 10 cm ht
213-200	North boundary, station 213, 200 cm ht
214-010	North boundary, station 214, 10 cm ht
214-200	North boundary, station 214, 200 cm ht
215-010	North boundary, station 215, 10 cm ht
215-200	North boundary, station 215, 200 cm ht
216-010	North boundary, station 216, 10 cm ht
216-200	North boundary, station 216, 200 cm ht
217-010	North boundary, station 217, 10 cm ht
217-200	North boundary, station 217, 200 cm ht
218-010	North boundary, station 218, 10 cm ht
218-200	North boundary, station 218, 200 cm ht
219-010	North boundary, station 219, 10 cm ht
219-200	North boundary, station 219, 200 cm ht
220-010	North boundary, station 220, 10 cm ht
220-200	North boundary, station 220, 200 cm ht
221-010	North boundary, station 221, 10 cm ht
221-200	North boundary, station 221, 200 cm ht
222-010	North boundary, station 222, 10 cm ht
222-200	North boundary, station 222, 200 cm ht
223-010	North boundary, station 223, 10 cm ht
223-200	North boundary, station 223, 200 cm ht
224-010	North boundary, station 224, 10 cm ht
224-200	North boundary, station 224, 200 cm ht
225-010	North boundary, station 225, 10 cm ht
225-200	North boundary, station 225, 200 cm ht
226-010	North boundary, station 226, 10 cm ht
226-200	North boundary, station 226, 200 cm ht
227-010	North boundary, station 227, 10 cm ht
227-200	North boundary, station 227, 200 cm ht
228-010	North boundary, station 228, 10 cm ht
228-200	North boundary, station 228, 200 cm ht
300-010	East boundary, station 300, 10 cm ht
300-200	East boundary, station 300, 200 cm ht
301-010	East boundary, station 301, 10 cm ht
301-200	East boundary, station 301, 200 cm ht

302-010	East boundary, station 302, 10 cm ht
302-200	East boundary, station 302, 200 cm ht
303-010	East boundary, station 303, 10 cm ht
303-200	East boundary, station 303, 200 cm ht
304-010	East boundary, station 304, 10 cm ht
304-200	East boundary, station 304, 200 cm ht
305-010	East boundary, station 305, 10 cm ht
305-200	East boundary, station 305, 200 cm ht
306-010	East boundary, station 306, 10 cm ht
306-200	East boundary, station 306, 200 cm ht
307-010	East boundary, station 307, 10 cm ht
307-200	East boundary, station 307, 200 cm ht
308-010	East boundary, station 308, 10 cm ht
308-200	East boundary, station 308, 200 cm ht
400-010	South boundary, station 400, 10 cm ht
400-200	South boundary, station 400, 200 cm ht
401-010	South boundary, station 401, 10 cm ht
401-200	South boundary, station 401, 200 cm ht
402-010	South boundary, station 402, 10 cm ht
402-200	South boundary, station 402, 200 cm ht
403-010	South boundary, station 403, 10 cm ht
403-200	South boundary, station 403, 200 cm ht
404-010	South boundary, station 404, 10 cm ht
404-200	South boundary, station 404, 200 cm ht
405-010	South boundary, station 405, 10 cm ht
405-200	South boundary, station 405, 200 cm ht
406-010	South boundary, station 406, 10 cm ht
406-200	South boundary, station 406, 200 cm ht
407-010	South boundary, station 407, 10 cm ht
407-200	South boundary, station 407, 200 cm ht
408-010	South boundary, station 408, 10 cm ht
408-200	South boundary, station 408, 200 cm ht
409-010	South boundary, station 409, 10 cm ht
409-200	South boundary, station 409, 200 cm ht
410-010	South boundary, station 410, 10 cm ht
410-200	South boundary, station 410, 200 cm ht
411-010	South boundary, station 411, 10 cm ht
411-200	South boundary, station 411, 200 cm ht

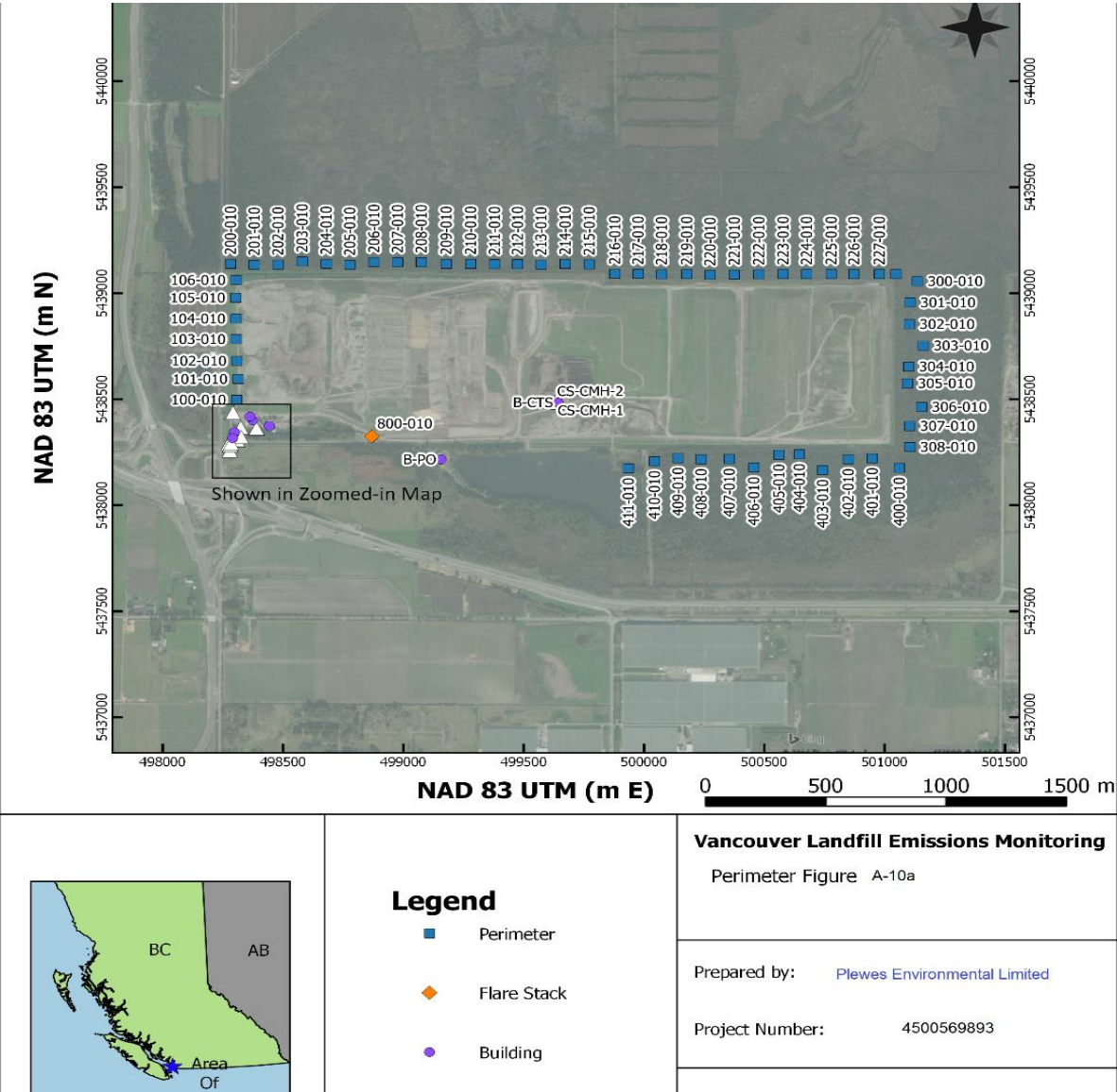


Figure 12 Satellite Photo - Perimeter Stations

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A. Forbidden Actions:

- Walking under suspended loads.
- Working or driving while under the influence of alcohol or drugs.
- Entering a confined space without first using a gas monitor to test the atmosphere.
- Entering a trench/hole over 4 feet (1.3 metres) without shoring or other engineered systems/procedures.
- Driving and talking/texting on a mobile phone/device, unless using hands free.
- Smoking in non-designated areas or within 20 feet (6 metres) of co-workers or in City vehicles/equipment.

B. Mandatory Actions:

1. Wearing a safety belt when provided in vehicle.
2. Vancouver Landfill Speed Limit:
 - Drive within the 15 km/h speed limit in the area of the scalehouse and administration/shop buildings and 5 km/h speed limit within the Residential Drop Off parking lots.
 - Driver within the 30 km/h speed limit within all other areas of the landfill.
3. Vancouver South Transfer Station Speed Limit:
 - Drive within the 5 km/h speed limit in all areas of the Vancouver South Transfer Station.
4. Wearing the following personal protective equipment is a mandatory requirement for all areas of the Vancouver Landfill and Vancouver South Transfer Station with the only exception of the public parking areas. The mandatory PPE requirements are:
 - a) Eye safety protection “**at all times**”.
 - b) Reflective safety vests (minimum dual contrast).
 - c) CSA approved safety footwear (over the ankle preferred).
 - d) Flame Resistant Clothing when performing work on or directly adjacent to the gas collection system or within the confines of the Flare Station.
 - e) When working on the tipping floor for greater than a total of 30 minutes in an 8 hour shift at the Vancouver South Transfer Station a minimum requirement of a half face respirator with organic vapour P100 cartridges.

Additional PPE requirements:

 - f) Hearing protection must be worn where required to protect against noise.
 - g) Hard hats or bump caps when required by the task being completed. (Note: Mandatory hard hat use may be directed by a contractor’s Health and Safety Program)

CONTRACTOR SAFETY ABSOLUTES

5. Locking out hazardous energy sources before starting work on equipment/machinery.
6. Using fall protection when working at heights over 10 feet (3 metres).
7. Any ground disturbance must not be undertaken without approval from TLO management. All ground disturbances must be planned, including the use of locates, AutoCAD record drawings and painted on the ground. The plan will include the use of a spotter and all underground facilities/utilities will be exposed at suitable intervals by hand or hydrovac and identified for size and alignment prior to mechanical excavation.
8. When ground disturbance unearths an unknown material or material which may potentially contain asbestos, all work must be stopped and IMMEDIATELY reported to TLO management so that containment and abatement can be planned.

C. Procedure for Inadvertent Utility Strike (Overhead/underground power lines, gas lines other than Landfill Gas Extraction)

WorkSafeBC considers utility strikes as potential “major release of hazardous substance”. Below is the current City of Vancouver practice related to utility strikes:

- The contractor striking utility “live or not” must immediately stop work and report to their Transfer & Landfill Operations (TLO) contact.
- TLO in consultation with the contractor and the City of Vancouver Operations Support and Safety Branch (OSSB) will determine if the strike falls under the WorkSafeBC definition of “major release of a hazardous substance”. TLO and OSSB will determine if a report will be submitted to WorkSafeBC by the contractor or by TLO.

D. Procedure for Inadvertent Strike of Landfill Gas Extraction System (Piping, wellheads and connections, valves)

The LFG extraction plant should not be operated if there is an excessive air leak into the gas collection system, as it significantly increases the risk of underground fire and also shut down the flare station and utilization systems abruptly, risking damage to these downstream systems.

- The LFG burner tip is a source of controlled combustion, which requires fuel such as landfill gas and oxygen to sustain combustion. The source of oxygen at the burner tip is from ambient conditions controlled by the automated draft air louvers mounted on the flare shell.
- **Air Intrusion** - If there are significant amounts of oxygen in the gas pipe, the flame may propagate down the pipe causing injury to staff and/or damage equipment. In addition, air intrusion causes safety features within the gas plant to shut down production which has a significant impact on TLO’s ability to meet both customer requirements.
- Landfill staff are keen to know when a gas system part is contacted because the gas infrastructure within the Landfill is vital to the landfill gas extraction system, which the Landfill is accountable for under its Ministry of Environment and Climate Change Strategy authorization. Even a bend in a pipe can impact on our extraction controls.

CONTRACTOR SAFETY ABSOLUTES**Locating Landfill Gas System Parts**

TLO recognizes that locating Landfill gas extraction system pipes, wellhead connections, and valves within the waste/soil materials at the Landfill is challenging. The following steps will help in successfully locating the Landfill gas system parts:

1. Obtain applicable record drawings from TLO and/or associated consultants and discuss known points of potential conflicts.
2. Use best industry excavation/trenching practices and follow your company's operating procedures to locate, delineate location and expose sub-surface parts. This includes hand exposing or using hydrovac as necessary.
3. Pre-surface disturbance planning (i.e. trenching):
 - a. Communicate with the Landfill Gas Technician to verify as best as possible the location of pipes and proposed work.
 - b. The technician will determine actions to mitigate potential interference with gas system operation (i.e. close valves).
 - c. Workers should hand expose pipe connections at the nearest well heads so that the direction of pipes leading to and from wellheads can be determined.

"STOP WORK" With Any Contact

Contact with any gas system part is considered an operational impact requiring operational responses. The following steps will help the Landfill staff respond quickly so that any effect on the gas extraction system is minimized.

1. If an unplanned contact with or damage to pipe occurs (i.e. dropping a boulder on, rubbed, hit, etc.), **"STOP WORK!"**
2. Immediately contact the Landfill Gas Technician via phone call with a request that they attend to view and assess the damage.
3. The contractor and Landfill Gas Technician, in consultation with the TLO Civil Engineer II, will create a work plan to address the contact (i.e. close valves, repair pipe, etc.).
4. Before repair, take pictures of the contact/damage.
5. Flash report the contact to the Flash Report Distribution list with a description of the contact cause and recommended next steps to mitigate the contact.
6. Discuss the pipe contact as an operational item at the weekly construction meeting.

Documented Report of Contact

An email investigation report must follow.

Understandably, the requirement for a documented report may be seen by some workers as an investigation to find fault. Our intent is to ensure we act quickly to confirm the integrity of the landfill gas systems, not to create employee concern about reporting. We certainly don't want to discourage employees from reporting contacts or even near misses of any kind.

If circumstances surrounding the incident indicate failure to follow standard working practices/procedures or other safety-related evidence, then a formal safety investigation needs to be completed within 30 days of the incident and submitted to TLO.

CONTRACTOR SAFETY ABSOLUTES**E. Asbestos Control**

The Vancouver Landfill accepts asbestos containing material from various sources such as construction demolition sites. Over the life of the landfill, the material has been buried at various locations within the landfill.

- Landfill surface/lower layers - Contractors who will be disturbing the landfill surface or lower layers with drilling, excavation or trenches should anticipate contact with asbestos containing material.
- Buildings/structures - Contractors disturbing buildings and structures shall determine the potential presence of asbestos containing material.

Contractors will establish an Asbestos Exposure Control Plan for the handling and disposal of asbestos containing material and the plan must include the following:

- Monitoring procedures.
- Worker & public protection procedures.
- Handling procedures.
- Disposal procedures

Worker and Public Notification

The Contractor shall inform all workers and the public visiting the work area of the potential for exposure to asbestos contaminated material from construction disturbance and the importance of safety precautions to ensure the safety of all workers and the public.

Handling Procedures

The following asbestos-containing waste handling procedures shall be implemented:

1. Temporary barriers will be erected 10 metres upwind and 25 metres downwind of all work sites and dumping areas to prevent unauthorized access to these hazard areas by unprotected workers.
2. All persons within 25-feet (8 metres) of the operations shall wear an asbestos HEPA approved respirator. Personnel shall wear disposable (Tyvek) coveralls, gloves, and foot coverings. Personnel shall be properly trained on the health effects of asbestos, proper work practices, and the use of respirators.
3. All disposable (Tyvek) coveralls will be considered to be contaminated with asbestos and shall be disposed of accordingly.
4. A water truck equipped with the appropriate spraying equipment to produce a fine mist will be required at all times to keep the suspected asbestos containing material wet at all times.
5. All drill cuttings or excavation material that is not already damp upon removal from the workings will be immediately wetted and placed into the container.
6. Disposal of suspected asbestos containing material:
 - If material is being placed in a large container or truck box, the material shall be deposited into a poly lined container or truck box for subsequent loading and hauling to the final onsite disposal area.
 - The liner of the container shall be of sufficient strength and thickness to prevent tearing and puncture of the liner when handling the material and transporting the container to the

CONTRACTOR SAFETY ABSOLUTES

- final disposal location. The liner shall stay intact without seam separation or damage throughout the handling and disposal process.
- The container or box shall be sealed once it is full and during transfer to the final waste disposal area.
7. If the material is being hand bagged, the contractor's Asbestos Exposure Control Plan shall include abatement procedures that include double bagging in 6 ml yellow disposal bags.
 8. Material shall be disposed of at an onsite location specifically designated by the Owner or Engineer for disposal of asbestos contaminated material.
 9. The Landfill Site Manager shall be notified of the status of the asbestos containing waste materials on a daily basis while handling and disposing of asbestos containing waste.

Drilling/Excavation Safety

1. The Exposure Control Plan for drilling operations and ground disturbance shall include ambient air monitoring and/or personal monitoring to confirm a safe distance from activities at which a respirator is not required to be worn with respect to landfill gases and airborne asbestos. The use of brush burning fans should be considered to vent the ambient air away from the work area. Care must be taken not to vent toward adjacent work areas.
2. If air monitoring and/or personal monitoring determines that air purifying respirator (APR) is necessary, the Contractor shall provide an appropriate APR (half-face or full-face) with approved P-100 cartridges for each crew member. All personnel using APR shall be properly trained and fit-tested prior to use.

F. Use of Crane, Drill, Tall Obstruction – Notification to the Boundary Bay Airport

The entire landfill property is within the limits of the Boundary Bay Airport as recorded on Plan No. 61884, 11 May 1981 - Transport Canada Plan Showing Lands Affected by Zoning Regulations for Boundary Bay Airport. This area includes a 45.5m Elevation Outer Limit Zone.

Notification Required**1. Crane Use or Other Obstruction**

Any and all plans to use cranes or erecting of any obstruction (including drills) higher than 25 feet (8 meters) above ground level (AGL) the Contractor shall contact the Vancouver Landfill Manager and the Boundary Bay Airport.

2. When is notification due?

To the Vancouver Landfill Manager - Two weeks prior to the erecting the crane or obstruction.

To the Boundary Bay Airport - An email notification to the airport MUST be submitted 48 hours prior so that the required NOTAM notification can be published for the knowledge of aircraft in the airport fly zone.

3. What is required to be in the notification?

The notification must include:

1. Contact person/ number,
2. Elevation above ground level, height above sea level, position of the crane latitude and longitude,
3. Duration of work, lighting and radius of work, as well as a description of the work.

CONTRACTOR SAFETY ABSOLUTES**4. Who gets the Boundary Bay notification?**

Notification is sent via email to:

- info@alpha-aviation.ca
- [Landfill Manager \(lynn.belanger@vancouver.ca\)](mailto:Lynn.belanger@vancouver.ca)

5. Late Notification

- Although 48 hours notification is required, the Boundary Airport management acknowledges that the Landfill may use cranes for emergency events.
- Send the email as soon as it is determined a crane must be used for an emergency event with an explanation for the late submission.

G. Flash Reporting:

1. The Flash Report is to be used as a tool to communicate via email that an incident or event is occurring and what immediate preventative measures being taken at the scene. IT IS NOT AN INCIDENT INVESTIGATION, ONLY A NOTIFICATION OF INCIDENT. The email must be sent out as quickly as possible, even if the full incident information is not known.
2. The intent of Flash Reporting is to provide members of a dedicated email distribution list a brief notification of a significant, serious or extreme event. The standardized format of communicating and gathering information gives all readers the information they require in a timely manner for potential escalation of details and/or interaction with external stakeholders.

Flash Report Levels & Definitions**Significant**

- any near miss that we wouldn't attempt to apply "serious" to (may include property damage)
- any injury that requires a trip to hospital
- any utility strike **WITHOUT** hazardous substance release (electrical power of any sort is considered a hazardous substance)
- any event where a member of the public is involved (without injuries)

Serious

- call to 9-1-1 to help control or respond to the scene of an incident
- person(s) transported by ambulance
- any incidents or events where member of the public was injured or experienced property damage
- assault or serious threats of violence to employee
- any utility strike **WITH** hazardous substance release (electrical power of any sort is considered a substance)
- work refusals
- vehicle event resulting in serious injury to employee
- contact with or wires down low voltage or underground utilities
- environmental release requiring moderate/major clean-up
- damage to equipment resulting in spill requiring moderate/major clean-up
- any event causing an evacuation
- any incident that is immediately reportable to a regulating body

CONTRACTOR SAFETY ABSOLUTES

- any visit from a WorkSafeBC Inspector
- Extreme**
- injury to employee or member of the public that results in significant/permanent disability or death
 - any employee seriously injured or killed including employee that requires immediate surgical intervention
 - major structural failure or collapse including crane, hoist, scaffolding
 - any major release of hazardous substance
 - injury to employee that requires immediate surgical intervention
 - contact with high voltage wires
 - any event with irreparable/significant damage to environment, including equipment failures
 - collapse of excavation
 - any event involving fire or explosion

Flash Report Email Format

The email message format shall contain the following information:

To: lynn.belanger@vancouver.ca, chris.dodd@vancouver.ca, calvin.lum@vancouver.ca, ken.fraser@vancouver.ca, anthony.thomas@vancouver.ca, hanna.musslick@vancouver.ca, kezi.nwaoha@vancouver.ca, jerry.sobejko@vancouver.ca, john.carabatsakis@vancouver.ca, kulwinderjit.jhajj@vancouver.ca, rob.weiss@vancouver.ca (TLO Project Managers – to be determined) (plus any contract company person you wish to include)

Subject Line of Email: Flash report Level (Choose Significant, Serious or Extreme) – Title of Event

The body of the email shall include:

- Event description (very brief - rule of thumb 25 words or less) stating:
 - incident time
 - site location
 - no injury or injury with brief description
 - no damage or damage with brief description.
- Immediate Preventative Measures implemented and who is accountable
- Stakeholders called to scene (Emergency Services, Risk Management, Utility Owner)
- Public impacted Y/N and how
- Date of next update
- Contact name and number for person who can provide further information if needed

The following is an example of a Flash Report email.

To: lynn.belanger@vancouver.ca, chris.dodd@vancouver.ca, calvin.lum@vancouver.ca, amrti.pangli@vancouver.ca, ken.fraser@vancouver.ca, rob.weiss@vancouver.ca, jerry.sobejko@vancouver.ca, (TLO Project Managers – to be determined) (plus any contract company person you wish to include)

Subject: Flash Report - Significant - Existing Fibrous Conduit Exposed

Location: Transfer Station Rebuild Project
Date/ Time: Friday, 24 Mar 2017/5:00 pm
Type: Existing Fibrous Conduit Exposed at the new Recycling Area Project
Injury Type: None

Description: Super Big Construction Company exposed fibrous conduit during the process of excavation at the Transfer Station Recycling/Green Waste area. Super Big employees cordoned off the area with fencing to restrict access. CoV Environmental Services were contacted and instructed Super Big to ensure conduit was not disturbed. Environmental Services will attend on Monday, 27 March 2017 to sample the conduit for testing. Environmental Services is satisfied that no risk of exposure will occur for the public or workers.

Immediate Preventative Measures: Stopped work and removed workers from area. Cordoned off the area with fencing.

Stakeholders Involved: Super Big Construction Company, CoV employees

Public Impact: None

Next Planned Update: Monday, 27 Mar 2017

John Super Big, Owner
Super Big Construction Company
604-020-0202

If you have any questions about the use of the Flash Report, please contact:
 Anthony Thomas, TLO OHS Superintendent, 604-318-9039

H. Health & Safety Reporting

A contractor may use this template or their own reporting format which will include the following information on a minimum bi-weekly basis to TLO management or as agreed to.

Contractor				
Number of Sub Contractors				
Project				
Project Number				
Reporting Dates				
Year				
INJURY LAG INDICATORS				
Report Item	Contractor	Sub-Contractor	Total for Reporting Dates	Ongoing Project Total
Work hours	0	0	0	0
Number of Fatalities	0	0	0	0
Number of Lost Time Injury	0	0	0	0
Number of Medical Treatment	0	0	0	0
Number of First Aid Only	0	0	0	0
Number of Modified Duty	0	0	0	0
OTHER LAG INDICATORS				
Near Miss - potential for injury	0	0	0	0
WSBC Reportable Occurrence	0	0	0	0
Non-Occupational Incident	0	0	0	0

CONTRACTOR SAFETY ABSOLUTES

Environmental Incidents	0	0	0	0
Property Damage	0	0	0	0
Motor Vehicle Damage	0	0	0	0
Equipment Damage	0	0	0	0
Fire	0	0	0	0
Theft	0	0	0	0
Utility strike	0	0	0	0
LEAD INDICATORS				
Formal Inspections Completed	0	0	0	0
Crew Safety Talks Completed	0	0	0	0
Employee Orientations Completed	0	0	0	0
Incident Investigations Signed off by JHSC & Contractor Mgt	0	0	0	0
Ground Disturbance Permits Issued	0	0	0	0
Hot Work Permits Issued	0	0	0	0
Confined Space Permits Issued	0	0	0	0

CONTRACT TITLE: _____BUNDLE 2A_____

PROJECT MANAGER (CITY EMPLOYEE): __KEZI NWAHA_____

CONTRACT NAME & # (IF KNOWN) _____TBD_____

Purpose

This document shall be completed by the project manager, who shall list all the **known** worksite hazards and all the **existing** work process hazards that will be associated with the upcoming contract. The completed document shall then be provided to all potential contractors, as part of the tender package, so the project can be bid appropriately based on the known worksite hazards.

Definitions

Project Manager - the City employee designated to be the liaison with the contractor for the purpose of managing, overseeing, coordinating or in any other way administering the contract.

Instructions for Completion

The document must be completed in full. Choices for each entry are:

Y - Yes - the known worksite hazard or existing work process hazard does exist

N - No - the known worksite hazard or existing work process hazard does not exist*

NA - Not Applicable - worksite hazard or existing work process is not applicable for this contract type

TBD - a third party (environmental consultant) will address the issue (primarily for a hazardous materials assessment)

*based on reasonable estimation from all input by persons with expertise or relevant knowledge and understanding

Information from Hazardous Materials Assessments Provided by a Third Party

A hazardous materials assessment may be completed prior to the Project Manager completing the Owners List of Known Workplace Hazards. Any such assessment should be referenced by the Project Manager in this document and provided with the tender package. Hazardous materials may include asbestos, lead, crystalline silica, ammonia, PCB's, CFC's, moulds, mercury, ozone depleting substances (ODS), radioactive substances.

Work Description:

The consultant hired for this contract shall conduct quarterly monitoring of the existing property boundary stations. These stations are located outside the storm water ditch at the City of Vancouver Landfill. The station are accessed by driving the perimeter road on site to a bridge location. The Consultant will then have to park and continue on foot. To access the outside berm, the Consultant will cross an aluminum bridge over the leachate ditch, walking on the berm and then crossing another bridge over the stormwater ditch. The consultant will then have to walk along, to the left and right of any bridge for up to 400 meters on either side. The perimeter monitoring stations are placed 100m apart all along the perimeter of the landfill. Multiple bridge access points will have to be used to provide access to all the stations.

Work Changes

If there are any changes to the work description, please review this document to ensure any additional hazards posed by the new scope of work are identified.

1. ASBESTOS-CONTAINING MATERIALS - asbestos is accepted for disposal at the landfill in accordance with the asbestos policy, asbestos trench/work area at the active face, residential drop off area asbestos bin, buried throughout the Landfill site with some locations identified, and any area of the site due to accidental receipt.	Yes (Y) No (N) Not Applicable (NA) To Be Determined (TBD)
a) Asbestos containing materials (ACM) may be encountered	Y
b) A hazardous materials assessment for asbestos is provided in the tender package	N
c) A hazardous materials assessment for asbestos is the responsibility of the contractor	Y

If yes to a), Vancouver Landfill Asbestos Exposure Control Plan available upon request.

2. LEAD-CONTAINING MATERIALS - disturbance of lead-based paint, buried wood, electrical circuitry or metal alloys.	Yes (Y) No (N) Not Applicable (NA) To Be Determined (TBD)
a) Inorganic lead-containing materials may be encountered	Y
b) A hazardous materials assessment for lead is provided in the tender package	N
c) A hazardous materials assessment for lead is the responsibility of the contractor	Y

3. OTHER HAZARDOUS MATERIALS - moulds and spores (at the Landfill active face and composting facility), wastewater treatment plant residuals, i.e. grit and sludge/scum screenings (at the Landfill active face), water treatment plant residuals (at the Landfill active face), bottom ash (on roads 40/50, at the Landfill active face), leachate/condensate (throughout the site), ammonia (ammonia-containing fridges accepted at RDO)	Yes (Y) No (N) Not Applicable (NA) To Be Determined (TBD)
a) A resource document for (list the specific hazardous material) is provided in the tender package Document title:	N
b) A resource document for (list the specific hazardous material) will be provided in the tender package Document title:	N
c) A hazard assessment for (list the specific hazardous materials) will be the contractors responsibility	Y

If yes to any, provide the applicable document upon request:

Vancouver Landfill Owner's List of Known Workplace Hazards

Moulds and spores - Landfill Control Measures Against Exposure to Microbiological Agents - Safe Operating Procedure

Wastewater treatment plant residuals - *Wastewater Treatment Residuals OH&S Info* - 2014-03

Water treatment plant residuals - *Drinking Water Treatment Residuals OH&S Info* - 2014-03

Bottom ash: Safe Operating Procedure: Bottom Ash Management at Vancouver Landfill and Executive Summary of *Vancouver Landfill Bottom Ash Management: Occupational Exposure Assessment and Human Health Risk Assessment*

Ammonia - Management of Ammonia-Containing Refrigerators - Safe Operating Procedure

Leachate - The work site will be adjacent to a leachate collection ditch. Leachate is a by-product of solid waste decomposition and is actively and passively controlled at the landfill site. Leachate can produce a wide range of materials including methane, carbon dioxide and a complex mixture of organic acids, aldehydes, alcohols and simple sugars. Leachate is unlikely to pose a significant risk to adverse effects on health. However, the contractor should implement controls to limit worker access to the leachate collection ditch and first aid procedures to include access to fresh air for respiratory irritation and water flushing for skin contact.

4. CONFINED SPACES - as marked on site at flare station, pump station, compost, scales, admin parking lot. Examples include flares, sewer manholes, sewer wet wells, water/oil separator, drainage sump, utility chambers.	Yes (Y) No (N) or Not Applicable (NA)
a) A hazard assessment (for entry and inspection only) from the City of Vancouver is provided in the tender package	N
b) The City of Vancouver shall provide procedures to isolate adjacent piping, or to lock out equipment (complicated systems only)	N
c) The contractor shall be responsible for identifying work site confined space locations and implementing isolation and lockout procedures in the confined space including the use of a Confined Space Permit process	Y

5. LOCK OUT - lockout procedures required for specific equipment and electrical systems (i.e. electrical repair, pump maintenance/repair).	Yes (Y) No (N) or Not Applicable (NA)
a) Lockout will be required to isolate or prevent the unexpected release of energy (electrical, mechanical, hydraulic, chemical, thermal, kinetic, gravitational, pneumatic, explosive/toxic gasses)	NA
b) Work will be performed on or near energized equipment, lines, or circuits	NA

If yes to a) or b) describe:

The contractor will implement a documented lock out procedure which will include a Lock Out Permit process.

6. FALL PROTECTION - any time a person will be exposed to a fall of 10' or greater, or a	
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Vancouver Landfill Owner's List of Known Workplace Hazards

fall of less than 10' where serious injury may occur: tree pruning, working on a roof, window and ledge cleaning, window replacement, roll-up door replacement/maintenance, tent installation, awning/canopy installation, overhead air exchange installation/maintenance, construction inspection and testing services.	Y
a) Workers will be exposed to a potential fall in excess of 3 m (10 feet), or to a fall of less than 3 m which would likely result in a serious injury (ex. impalement on rebar)	Y
b) Scaffolding or ladders will be required to be secured to a building or structure where applicable	NA

7. OVERHEAD AND UNDERGROUND UTILITIES - overhead high voltage power lines, underground utilities i.e. gas, water, sewer, etc.	NA
a) There will be electrical hazards associated with overhead power lines such as limits of approach and contact	NA
b) Necessary assurances (in writing) have (or will be) obtained by the City, through the utility company, for any work where minimum limits of approach cannot be maintained (provide documentation and review at pre job meeting with the successful contractor candidate). Form 30M33 is the assurance in writing acceptable to WorkSafe BC.	NA
c) Necessary assurances must be obtained (in writing) by the successful contractor, through the utility company, for any work where minimum limits of approach will not be able to be maintained. Form 30M33 is the assurance in writing acceptable to WorkSafe BC.	NA
d) Underground or hidden utilities are located on the job site. Any excavation or drilling work in proximity to an underground utility service must be undertaken in conformity with the requirements of the owner of that utility service. The work will require the owner's utility plans and/or BC1 Call package as appropriate.	NA

If yes to c), and the specific physical locations where minimum limits of approach will not be able to be maintained are known, how will this information be provided to the contractor?

Power lines and buried utilities at or near the site will be reviewed with the contractor to determine if minimum limits of approach cannot be maintained.

8. CONSTRUCTION, EXCAVATION, SHORING AND DEMOLITION	NA
a) As Prime Contractor, the Prime Contractor project manager will submit the Notice of Project when required	NA
b) The Prime Contractor will determine if workers will be required to enter an excavation over 1.2m (4 ft.) in depth	YNA

9. CHEMICALS, SOLVENTS, FUMES, VAPORS, AND/OR DUSTS - various nuisance dust	Y
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Vancouver Landfill Owner's List of Known Workplace Hazards

a) The worksite has chemicals solvents, fumes, vapors or dusts that may affect the contractor	Y
b) Material Safety Data Sheets for controlled products at the worksite will be made available by the contractor	N

If yes to a), list the work processes and/or chemicals in use:

Daily operation within the landfill may cause dust conditions or the construction activity may stir up dust in which case dust suppression is required.

10. NOISE - Landfill active face, Residential Drop Off Area, flare station, compost facility, demolition area, construction site	Y
a) Employees will be exposed to noise levels above 85dbA due to equipment operation or public vehicle traffic passing the construction site	Y

If yes to a), the Vancouver Landfill Noise Exposure Control plan is available on request.

OTHER HAZARDS (NOT IDENTIFIED ABOVE)	Y
a) compressed cylinder gas release (residential drop off area, flare station, active face, construction site)	Y
b) eye hazards (throughout the site)	Y
c) fires/explosion (Landfill active face, composting facility, flare station, equipment, throughout the site)	Y
d) mobile equipment/vehicle traffic (throughout the site)	Y
e) needle stick/blood borne pathogens (in garbage/on wheels/tracks of equipment)	Y
f) spills (known/unknown materials)	Y
g) silica dust (background levels at active face, demolition area, and scales)	Y
h) trip/slip hazards (throughout the site, wet landfill waste becomes very slippery)	Y
i) violence (scale house, RDO, active face, compost)	N
j) Landfill gas created during the decomposition of municipal solid waste (flare station, active face, landfill gas piping system, demolition area, pump station, low lying areas such as trenches or ditches)	Y
k) Equipment tipping/rollover (RDO, active face, compost, demolition area, unconsolidated material)	Y
l) Hot surfaces (equipment, flare station)	Y
m) Traffic - a major landfill roadway runs adjacent to the construction site	Y
n) Crane lifts a. Potential risks - wind fluctuations, proximity of power lines, proximity of	Y

Vancouver Landfill Owner's List of Known Workplace Hazards

other flares & flare station buildings, proximity of vehicle traffic roads b. A crane lift risk assessment and plan is the responsibility of the contractor	
o) Use of Cranes, Drills, Tall Obstructions a. Notification is required to be sent to the Boundary Bay Airport when cranes, drills or other tall obstructions exceeding 25 feet (8 meters) in height. Notification procedures will be provided to the contractor.	Y

Additional Concerns	Yes (Y) No (N) or Not Applicable (NA)
We foresee additional health and safety concerns associated with the work	Y

If yes, describe:

- a) Crossing bridges over storm and leachate ditches
- b) Walking up and down steep outdoor stairs to access bridges
- c) Walking on/in boggy area outside landfill perimeter
- d) Slips trips and falls due to growing brush, trees, blackberries near monitoring stations
- e) Working alone

Describe the control measures each of the concerns listed above:

- a) Bridges have railings and no slip walkways
- b) Stairs have no slip steps and some have railings
- c) Contractor should wear appropriate footwear, steel toed gumboots and consider using a walking stick to aid in stability
- d) Brush, trees, and blackberries can be cut back by the City's onsite contractor in advance of quarterly sampling. This can be requested by the contractor in advance of a visit
- e) A working alone procedure must be included in the SSSP to be developed by the contractor before the first site visit.

KNOWN WORKPLACE HAZARDS LIST COMPLETED BY: Hanna Musslick	
Project Manager Name (print): Kezi Nwaoha	
Project Manager Signature:	Date:
Title:	Phone:

NOTICE ON COVID-19

Due to the circumstances surrounding COVID-19, several changes have been made to the Transfer & Landfill Operations Site Safety Orientations and Agreements, which will be covered by your site contact in the attached procedure.

In addition to information outlined in the Site Safety Orientation, the following COVID-19 protocols have been implemented for all work taking place on site. Please follow all listed protocols to help in preventing the spread of COVID-19.

- (1) Maintain physical distancing of 2 meters (6 feet) from all workers and members of public.
- (2) Limit vehicle travel to a maximum of two workers at a time to maintain the physical distancing and keep windows open when there are two workers.
- (3) Wash your hands often with soap and water for at least 20 seconds (the duration of singing the happy birthday song twice). If soap and water is not available, alcohol-based hand rub can be used to disinfect your hands as long as they are not visibly soiled. If they are visibly soiled, remove as much of the visible dirt as possible first and then use hand rub.
- (4) Do not touch your face, eyes, nose or mouth OR anything that will touch your face (eyewear, respirators, cigarettes, drinking cups, etc.) with unwashed hands.
- (5) Cover your mouth and nose with the crease of your elbow or a disposable tissue when you sneeze or cough.
- (6) Keep common surfaces clean and disinfected around your work area and in vehicles etc. If disinfectant supplies are required, please ask your supervisor.
- (7) When work requires two or more workers to be working in close proximity (<2 m), the involved workers should hold a short tail gate meeting to discuss how the work task will be completed prior to starting the task to limit the amount of time in close proximity as much as possible.
- (8) Workers required to work in close proximity (<2 m) must take extra care to not touch their face and wash their hands well. Gloves can be worn but should be accompanied by hand washing once the gloves have been removed.
- (9) Face shields should be considered as additional PPE when working in close proximity to other workers. Wearing face shields may decrease

Standard Operating Procedure

potential for of spread of liquid droplets from a worker who inadvertently sneezes or coughs during the work activity.

- (10) Do not dispose of disposable PPE (face masks, gloves, etc.) paper towel, tissues, etc. on the Landfill site. Please bag the waste items and place the bag into the waste containers located around the site.



Engineering Services - VL

Standard Operating Procedure

Title:	#3 Site Safety Orientation and Agreement
Branch:	Transfer & Landfill Operations
Site:	Vancouver Landfill
VanDoc:	ENG – TLO - VL Active SOP's - #3 Site Safety Orientation and Agreement

REVISION HISTORY				
Rev. No.	DCR#	Description	Date Created/Revised	Created/Revised by
1		Complete revision	Revised Nov 2017	R. Weiss (OHS Supt), Tech Team
2		Added CoV Alcohol, Controlled Drugs & Medication Policy information	Revised 26 July 18	R. Weiss (OHS Supt.)
3		Addition of steamer information	Revised 8 Aug 18	R. Weiss (OHS Supt.)
4		Addition of vehicle backing and LFG pressurization info	Revised 24 Aug 18	R. Weiss (OHS Supt.)
5		Addition of PPE Map and FR clothing requirements	Revised 24 Jan 20	A. Thomas (OHS Supt)
6		Addition of COVID-19 protocols	Revised 1 Apr 20	A. Thomas (OHS Supt)

The City of Vancouver, Transfer & Landfill Operations Branch requires that all persons working on the Vancouver Landfill (VL) site receive the following orientation before any work begins, and at regular intervals in future. The orientation identifies the hazards that may be encountered, and requirements which are in place for your safety. All individuals shall understand and agree to comply with this document to have access to work on this site.

This orientation shall be delivered by Transfer and Landfill Operations or Equipment Services staff. Please note that you will receive this orientation at least every six (6) months or if it has been more than six (6) weeks since your last visit to the Vancouver Landfill site.

CONTRACTORS / VENDORS / CITY OF VANCOUVER BRANCHES

Contractors, vendors or employees from other City of Vancouver branches must receive the following orientation before commencing business on the Landfill site. Each contractor, vendor or City of Vancouver employee (or team of employees) will be assigned a Landfill Site Contact as a point of contact for any questions or reporting of hazards, concerns or incidents. It is the responsibility of the contractor, vendor or City of Vancouver employee to communicate with their Site Contact in advance of their visit or at a minimum as soon as they arrive on site.

The name of your Landfill Site Contact person is: _____
Cell number: _____

SITE CONTACT – CHECK WHICH SECTIONS THE READER MUST COMPLETE

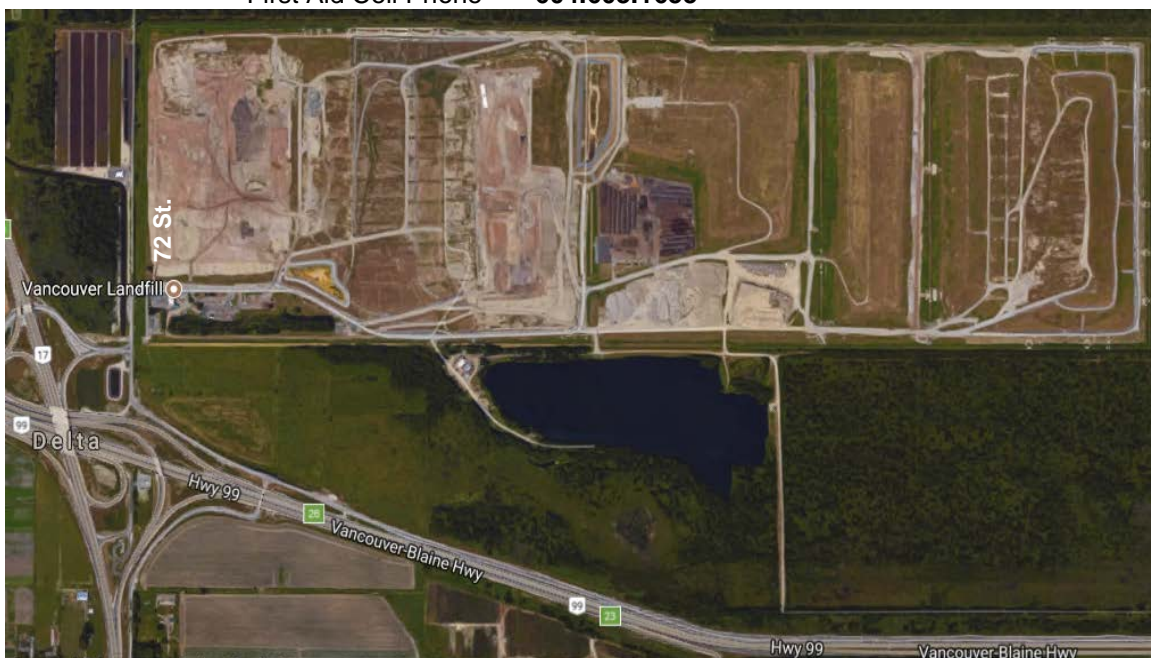
- ☐ Part One - General Safety – Pages 2 to 10, sign page 13
- ☐ Part Two - Equipment Services (EQS) Landfill Garage – Pages 11 to 12, sign page 13 (required only by those who will be entering the EQS Landfill Garage).

PART ONE - GENERAL SAFETY

I. SITE PLAN

Site Address 5400 72nd Street, Delta, BC

Contact Numbers Landfill Office 604.606.2700
First Aid Cell Phone 604.603.1655



SEE APPENDIX "A" FOR ROAD NUMBERING MAP

Standard Operating Procedure

II. LANDFILL SITE HAZARDS

The hazards that may be encountered at the Landfill are listed in alphabetical order by area below.

√ General Site Hazards – Apply to all workers.			
<ul style="list-style-type: none"> • Animal or insect stings • Confined spaces (as marked) • Electrical hazards • Eye hazards (ie. Dust) • Fall protection (working at height of ≥10 ft.) • Fires/explosions • Landfill gas 		<ul style="list-style-type: none"> • Mobile equipment and vehicle traffic • Poor housekeeping • Power outage • Slips, trips, and falls • Spills • Weather (affects equip/vehicle operation, walking surfaces, etc.) 	
☐ Zero Waste Centre (ZWC)		☐ Disposal Area Active Face	
<ul style="list-style-type: none"> • Asbestos • Bed Bugs • Compressed gas cylinders • Cuts (blades, sharp objects, puncture) • Dust, including silica • Equipment tipping/rollover • Flying objects 		<ul style="list-style-type: none"> • Heat/cold stress for worker • Lifting hazards • Mobile equipment and vehicle traffic • Needle sticks • Noise • Toxic gases • Violence 	
<ul style="list-style-type: none"> • Asbestos • Bioaerosols (mould, bacteria, wastewater) • Bio-hazardous materials • Compressed gas cylinders • Cuts (blades, sharp objects, puncture) • Dust, including silica • Equipment tipping/rollover 		<ul style="list-style-type: none"> • Flying objects • Heat/cold stress for worker • Landfill gas • Mobile equipment and vehicle traffic • Needle sticks • Noise • Toxic gases • Uneven terrain 	
☐ Compost Facility		☐ Scalehouse/Kiosks	☐ Leachate Pump Station
<ul style="list-style-type: none"> • Bioaerosols (mould, bacteria) • Dust, including silica • Equipment tipping/rollover • Flying Objects 		<ul style="list-style-type: none"> • Blood borne pathogens (money handling) • Congestion & obstructions • Dust, including silica • Long stationary posture • Vehicle traffic • Noise • Violence 	<ul style="list-style-type: none"> • Confined spaces • Electrical (lockout) • Landfill gas • Leachate
☐ Flare Station		☐ Other Areas	
<ul style="list-style-type: none"> • Above-ground pressurized pipelines • Compressed gas cylinders • Confined spaces (marked) • Congestion & obstructions • Electrical (lockout) • Flame flashback during flare start-up 		<ul style="list-style-type: none"> • Heat/cold stress for worker • Hot surfaces • Landfill gas • Lifting hazards • Vehicle traffic • Noise • Overhead hazard • Toxic gases • Working alone or in isolation 	
		Site Contact To List & Discuss (i.e. Gas Field, C&D Recovery Project, Closed Areas, Landfill Services Maintenance Yard, Soil Stockpile, Burns Bog) <ul style="list-style-type: none"> • _____ • _____ • _____ • _____ • _____ • _____ • _____ 	

Various controls have been implemented to minimize the risk of all the listed hazards. If you have any questions or concerns about hazards or require further information, please discuss with your Site Contact.

NOTE: If you notice a hazard or unsafe condition, **please correct it immediately**. If you are unable to correct the hazard or unsafe condition yourself, report it immediately to your Site Contact.

III. SAFETY RULES

SIGN IN AND OUT

- All contractors/vendors/City of Vancouver employees must sign in and out upon arriving or leaving the Landfill.
- During the COVID-19 health crisis, all sign in and out will be done verbally with Landfill staff on the 2nd floor of the Landfill Administration Building or by phone call to 604.606.2700 during regular office hours. If there is no one there to check you in or out, please call your Site Contact.
- If your Site Contact has an office in the Technical Trailer, please first sign in at the Administration Building, then inform your Site Contact of your arrival and they will direct you from there.
- Please note sign in/sign out location on the map below in red.

Landfill Administration Building Office

Location: 2nd Floor with entrance on East Side of Administration Building.

Tel: **604.606.2700**

Hours: Mon to Fri, 7:00am – 3:30pm.



Standard Operating Procedure

- **After hours sign in/out:** The Administration Office closes by 3:30 pm. The main gate closes at 6:00 pm.
- If you will be on site after the offices or the gate closes, inform your Site Contact and indicate to them what your expected time out will be.
- Sign out in person or by phone according to your Sign out Time as listed in the table:

Sign In Location	Sign Out In Person	Sign Out By Phone
Did you sign in at the Administration Building?	Then sign out in person at the Administration Building before 3:30 pm	Or sign out by phoning 604.606.27040
Still at the Vancouver Landfill between 4:00 pm and 6:00 pm?	Sign out at the Weighscales	Or sign out by phoning 604.506.3159 (Sub Foreman)
On site after 6:00 pm?		Phone 604.506.3159 (Sub Foreman)

VEHICLE ACCESS TO & OPERATION WITHIN THE LANDFILL



- Rules for vehicles entering the Vancouver Landfill
 - Vehicles authorized to by-pass the scales
 - Some vendors and City of Vancouver vehicles have been authorized to by-pass the scales and therefore are permitted to by-pass the vehicle line up on 72nd street. **ONLY VEHICLES WITH AUTHORIZATION MAY BY-PASS.**
 - Vehicles not authorized to by-pass
 - When entering the site from along Burns Drive and 72nd street, vehicles may not pass the inbound line-up during operating hours, **unless traffic control persons are actively managing traffic and the traffic control person gives you a clear direction to by-pass.** If no traffic control persons are present, then unauthorized vehicles must wait in line.

Standard Operating Procedure

- If a traffic control person is present, vehicles may signal to traffic control persons that they would like to bypass by putting on their 4-way flashers. Do not proceed until the traffic control person notes your flashers and gives you clear instruction to bypass.
- All drivers/operators must observe traffic control measures (i.e., stop signs, no stopping road markings, speed signs, warning signs and cones).
- The speed limit on the Landfill premises is **30 km/h, 15 km/h adjacent to the scales, and 10km/h in the Zero Waste Centre.**
- Seatbelts must be worn at all times while vehicles are in motion, no exception.
- **MANDATORY VEHICLE BACKUP RULE** – Before backing any type vehicle, the vehicle operator must check the rear of the vehicle to ensure no persons or obstructions will be hit by the backing vehicle. Vehicle operators will **HONK THE HORN TWICE** before backing the vehicle.
- To prevent exhaust fumes from entering the scalehouse, all vehicles must turn off their engines when sitting at the weighmaster window on the scales.

DISTRACTED DRIVING

- The use of cellular phones while operating vehicles or equipment is prohibited by City policy and the BC Motor Vehicle Act unless in a Province-approved hands-free mode. Always move to a safe place out of the way of any equipment or vehicles prior to using a cellular phone or engaging in any other non-mobile activity.
- The use of listening devices with headphones (such as music players) is prohibited while on site by City policy.
- The Vancouver Landfill has many persons on the ground and vehicles moving in close proximity to each other. A distracted driver is considered a **HIGH RISK** to both vehicles and persons on the ground. **Distracted drivers will be asked to leave the site and will not be permitted access without written permission from the Landfill Manager or designate.**

SMOKING

- Smoking is only permitted in the designated smoking location on the south west corner of the Administration building parking lot. Smokers will find a covered area at this location.
- Smoking is **not permitted** at any other location within the Landfill.



CITY OF VANCOUVER ALCOHOL, CONTROLLED DRUGS & MEDICATIONS POLICY

- The City of Vancouver Alcohol, Controlled Drug and Medications Policy applies to all City employees, volunteers and contractors performing work on behalf of the City.
- The City of Vancouver (the “City”), and those who perform services on its behalf, have a shared responsibility to maintain a safe and healthy work environment. The use of Alcohol, Controlled Drugs and Medications can have a serious adverse effect on the health, safety and productivity of City employees, on contract employees, on the work environment and the public.
- Policy Rules:
 - To not cultivate, manufacture, distribute, offer or sell Controlled Drugs while at work or on break, or while operating a vehicle.
 - To not possess a Controlled Drug while at work or on a break, while attending at City premises, or while operating a vehicle, unless the Controlled Drug is legally in the possession of the employee, volunteer, or contractor; and the Controlled Drug is contained in its original, sealed and unopened packaging.
 - To not possess open Alcohol while at work or on break, while attending at City premises, or while operating a vehicle.
 - To not distribute, offer or sell Medication for which a prescription is required while at work or on break, while attending at City premises, or while operating a vehicle.
 - To abstain from use of Alcohol, Medication or Controlled Drugs prior to commencing work in a manner that could render them unfit to perform their duties safely and efficiently.
 - To abstain from use of Alcohol and Controlled Drugs while at work or on break, while attending at City premises, or while operating a vehicle.
 - To act responsibly with regard to the use of Medication, whether over the-counter or prescribed by a physician, to prevent adverse effects on work performance.

SCAVENGING

- Scavenging is prohibited anywhere in the Landfill. Scavenging is the search for and collection of anything from discarded waste.

CONED OFF, SIGNED AREAS, ASBESTOS DEPOSITS

- Be aware of and stay clear of coned-off areas; these are closed to protect you from hazards.
- Be aware that asbestos is routinely managed at the Landfill. Asbestos is required to be double bagged and poses no harm if the bags are not disturbed. Asbestos is disposed of within areas posted with asbestos signs or wording.

WORKSAFEBC COMPLIANCE

- Comply with WorkSafeBC regulations when entering any confined space, depression, or potentially poorly ventilated areas.

IV. FIRST AID ATTENDANT – CALL 604.603.1655 (PLEASE WRITE THIS NUMBER DOWN)

- All injuries, even minor injuries, are to be reported to the first aid attendant and your Site Contact. The first aid room is located at the southeast corner of the Landfill Administration building. (Location noted on the following page picture)
- Notify the designated First Aid Attendant at **604.603.1655** (VL First Aid Cell Phone). If no answer, contact the Landfill Office at **604.606.2700** to alert the First Aid Attendant.

EMERGENCY REQUIRING AN AMBULANCE

- For injuries requiring an ambulance call 911 immediately, then inform the Landfill First Aid Attendant and your Site Contact (dial “9” first from land lines). Your Site Contact will arrange to have the ambulance met at the gate and directed to the injury location.

V. IN THE EVENT OF AN EMERGENCY

- Report any fires, spills, accidents or other emergencies to the Landfill Office immediately. In the event of an emergency that requires outside response, call 911 immediately and then inform the Landfill Office at **604.606.2700** and your Site Contact.
- The Landfill Manager or designate is responsible for contacting additional authorities as required.
- For detailed information, refer to the Vancouver Landfill Emergency Response Plan.

SAFETY DURING AN EMERGENCY

- In an emergency, your first priority is to warn others and evacuate the immediate area. Do not put yourself in danger.
- If not directly and helpfully involved, report to the **Emergency Muster Station** in the north end of the employee parking lot near the entrance to the Administration Building.



- Do not return to the site until instructed that it is safe.
- During an emergency muster, you must be present for a head count. Do not leave the Vancouver Landfill until you are directed to do so.
- If the emergency involves chemical products or materials, Material Safety Data Sheets for materials used on site are located in Superintendent's office and are available online at the Vancouver Citywire website. Ask your Site Contact to assist with accessing MSDS information.
- Materials brought onto site by contractors/other City branch workers require MSDS sheets.

VI. HEALTH AND SAFETY CONCERNS

- If you have any health or safety concerns, please discuss them with your Site Contact.

VII. INCIDENT REPORTING

- **Incident Definition:** An accident or other occurrence, which resulted in, or had the potential for causing an injury or occupational disease. Incidents may include near misses, minor injuries, medical aid treatments, doctor visits, and/or injuries resulting in lost time accidents (*e.g. structural and equipment failures*).
- **Near-Miss Definition:** Incident without injuries but with potential to cause a serious injury; an event which had strong potential to be an injury that required medical aid, time loss or fatality, however did not result in an injury to an employee. A near miss can be loosely defined as a "close call" or a "near hit". Near misses may include property/equipment damage.
- ❖ The above incidents must be reported to your Site Contact immediately without delay. All injuries shall be managed in accordance with VL Injury/Illness and First Aid procedures. If you are unable to get in touch with your Site Contact, report the incident to the Landfill Office at **604.606.2700**.

VIII. PERSONAL PROTECTIVE EQUIPMENT (PPE)

All PPE must meet WorkSafeBC requirements for workers accessing the Landfill. PPE is required in all locations outside the Main Parking Lot or the Technical Trailer Office parking lot (as outlined in yellow below).



1) The following are necessary on the site:

- Yellow Hi-visibility reflective vest or coveralls as per City of Vancouver requirements. The requirement for hi-visibility vests is inclusive of the walkways from the Administration building to the Scalehouse.
- Safety protective footwear (heavy-duty, above the ankle, construction-type safety boots with an external triangular green CSA patch). Boots should also be approved as shock-resistant when working on electrical systems (display an external white Ω CSA patch).
- Approved safety eyewear.

2) Also necessary where appropriate:

- Hard hat.
- Fall protection in situations where a fall of 3 metres (10 feet) or more could occur, or from a lesser height but which represents a higher risk of injury.
- Flame Resistant Clothing and a personal gas monitor when performing work on or directly adjacent to the gas collection system or within the confines of the Flare Station.
- Hearing protection at the Landfill Active Face, Residential Drop-Off Area, Demolition Area, Compost Facility, Flare Station or any area requiring hearing protection.
- Respirator with appropriate filtering cartridges or paper particulate mask as directed by the Site Contact or where mandatory signs are located.

- Other specific equipment where determined necessary or by regulation for the particular situation or as directed by the Site Contact.

IX. HEAVY EQUIPMENT

There are many varieties of heavy equipment used at the Landfill. Due to their size and operating speed, heavy equipment operators have restricted visibility for person standing or walking on the ground. **FOR YOUR SAFETY, ALWAYS GIVE HEAVY EQUIPMENT A WIDE SAFETY ZONE.**

- Do not walk in the active tipping area of the Landfill.
- Do not move into the vicinity of any vehicle or mobile equipment until you have made eye contact with the operator/driver and ensured that he/she is aware of your presence.
- Remember that people are more mobile than equipment – it is your responsibility to stay out of the way. Do not, at any time, walk behind any vehicle or piece of heavy equipment.
- Remain outside of the swing radius of excavators, approximately 15 metres (50 feet), unless absolutely necessary. If entry is required within that radius, make eye contact and communicate with the operator so they are aware of your location.
- In the demolition dumping area, maintain a safe distance between trucks (one truck and trailer length or 75 feet/23 metres). End dump style demolition trucks pose an extreme hazard of tipping over on their side when the box is lifted.
- All heavy equipment must be turned off before fuelling.

X. LANDFILL GAS HAZARDS

Landfill gas is produced by underground waste deposits and exists within the Landfill and in gas collection system piping and equipment. Gases can collect in confined spaces, depressions, and poorly ventilated areas.

- Never enter a signed/marked confined space without prior approval from your Site Contact. All manholes within the Landfill are classified as confined spaces due to potential presence of landfill gases.
- Do not access the fenced enclosure at the Flare Station or conduct any work around the landfill gas system without prior approval from your Site Contact.
- Do not alter any component of the landfill gas collection system without prior authority from the Landfill Manager or designate.
- Use extreme caution when operating vehicles or equipment or when walking near landfill gas collection systems. The system is under 100 PSI and can cause significant damage or injury if released.
- If possible, stand upwind of wells or any other landfill gas works. If an accidental or uncontrolled release of landfill gas is believed to have occurred near your work area, attempt to remove yourself from the area by taking a path that is crosswind from the source and attempt to get upwind if it is determined to be safe to do so. Immediately notify the Landfill Manager or your Site Contact.

- If a hydrogen sulphide (rotten eggs) odour is detected remove yourself from the area and notify the Landfill Manager or Site Contact.
- More information about Landfill Gas is available upon request from your Site Contact.

XI. LANDFILL FIRES

Decomposition of the wood waste will create chemical reactions which form gases and heat. If air is introduced into the mix, a spontaneous combustion fire can occur. Fires within landfills are not uncommon and are managed by landfill staff following the established procedures and practices of gas and heat monitoring and the fire response plan.

STEAMERS - A steamer is a plume of hot gas that seeps out of the surface where solid waste is landfilled. The following picture shows steamers rising from the landfill surface. If you observe this type of steam rising from the surface, immediately inform a Landfill employee or your Site Contact.

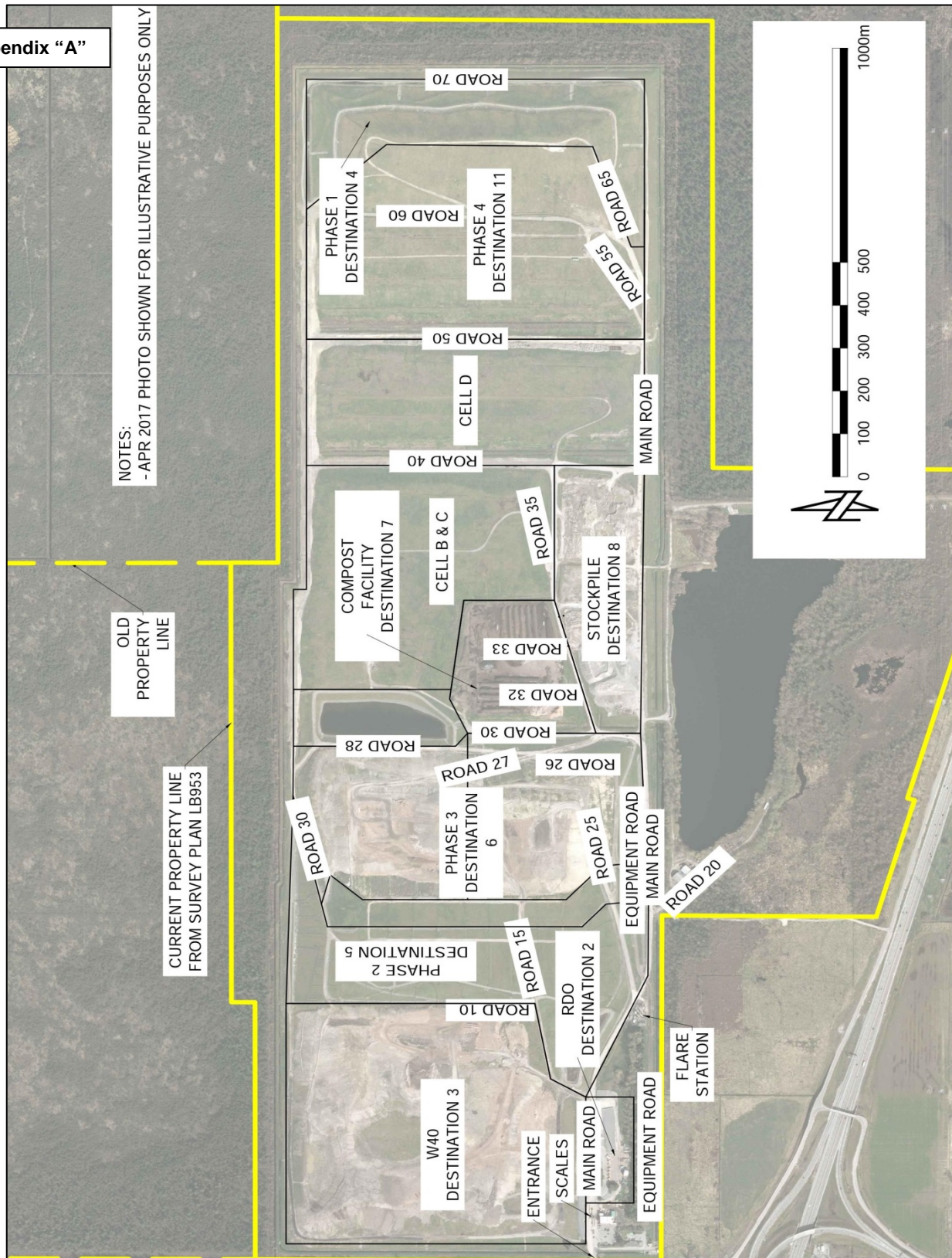
Do not approach the steam. The steam may be the result of a sub-surface fire which has the potential to produce toxic gases harmful to humans.



XII. WORKING ALONE

- Determine with your Site Contact whether your work is considered working alone. Each time you access the Vancouver Landfill and when you will be working alone, you must tell your Site Contact where you will be located while working alone.
- Persons working alone must receive adequate training from their employer or home branch before being permitted to work alone at the Vancouver Landfill. You must follow your employers working alone procedures, including any check in's required by that procedure.
- Persons working alone must sign in and out at the Landfill Administration office and advise reception staff they will be working alone.

Appendix "A"



PART TWO – EQUIPMENT SERVICES (EQS) LANDFILL GARAGE

SAFETY ORIENTATION

This section is to be used in conjunction with the Site Safety Orientation and Agreement that is in place at the Vancouver Landfill (VL). This applies to all persons working at the Landfill and includes contractors hired by Equipment Services (EQS) to perform work on site. Each person must receive the complete VL orientation prior to work commencing, paying special attention to the sections that are most pertinent to the work they will be performing. All applicable WSBC rules are in effect while working in or around the garage as well as all other areas operated by Transfer and Landfill Operations.

I. GENERAL SAFETY ISSUES:

The garage has hazards that are common to most vehicle / equipment repair facilities and they include, but are not limited to:

- Open vehicle repair pits
- Overhead hazards associated with the use of a bridge crane
- Hazards associated with the use of compressed air
- Hazards associated with the use of compressed gases (oxygen / acetylene)
- Various oils, solvents and other chemicals
- Slip and trip hazards
- Congested work areas
- Hazards associated with the movement of large industrial machines and their parts
- Exposure to contaminants that are found at the Landfill

II. PERSONAL PROTECTIVE EQUIPMENT (PPE)

All PPE must meet WSBC and City of Vancouver requirements and must be used in accordance with the manufacturer's instructions. The required PPE necessary for working in the Equipment Services Garage is as follows:

- High visibility coveralls or vest
- Safety footwear (above the ankle CSA green triangle and Ω symbol)
- Approved safety eyewear
- Hearing protection as required in the garage and outside as per the Vancouver Landfill requirements

Also necessary where appropriate:

- Respirator
- Hard hat
- Bump cap
- Dust mask
- Gloves (choose protection relative to the hazard)

III. WORKING ALONE AT THE EQS SHOP

EQS staff will be signing on to "SafetyLine Mobile Worker Monitoring System" through the Equipment Services procedure. Contractors will be required to stay with EQS / TLO staff OR log into the existing SafetyLine system in place with the Vancouver Landfill.

IV. IN THE EVENT OF AN EMERGENCY AT THE EQS SHOP

Respond as per the TLO orientation and be sure that any contractors on site are accounted for and kept under the care of EQS or TLO staff until authorized to be released.

V. FIRST AID AT THE EQS SHOP

The TLO procedures for receiving first aid are to be followed. All injuries are to be reported to the first aid attendant and the worker's immediate supervisor.



SAFETY ORIENTATION AGREEMENT for CONTRACTORS and VENDORS

LEGAL TERMS AND CONDITIONS

- You agree that entry to and use of the Site is at your own risk and that neither the City of Vancouver, nor its employees or agents will be liable for any loss or injury to person or property whether or not caused by negligence.
- You agree to comply at all times with the above requirements and to follow the instructions of the Landfill Manager, or designate, and/or the First Aid Attendant at all times.
- You agree to reimburse the City of Vancouver for any and all costs, losses and damage which may be caused by your failure to carry out safe working practices while on the site or to otherwise comply with this Site Safety Orientation/Agreement.
- The terms of this Site Safety Orientation/Agreement are additional to, and not in replacement of any other agreement between you and the City of Vancouver. However, in the event of any inconsistency between the two, this agreement prevails.

NOTE: Complete this sign off if you are not a City of Vancouver employee

STATEMENT OF RESPONSIBILITY

Name

Company &
Nature of Work

Cell Phone

I certify that I have read, understood and agree to comply with and be bound by this Site Safety Orientation/Agreement.

Signature

Date

CITY OF VANCOUVER EMPLOYEES

*** Enter name if you are a City of Vancouver employee (no signature is required)

The following City of Vancouver employee has been provided the Site Safety Orientation.

Name of CoV Employee (Please print)

Branch

Office use only - Orientation Provided By

Name & Title

Company/Branch/Date

DISTRIBUTION: Detach page 18 and give to the Office Support Clerk for data entry.
Pages 1 to 17 may be given to the person receiving the orientation for their use.

REQUEST FOR PROPOSALS NO. PS20200721
CONSULTANT FOR GAS FIELD MANAGEMENT - VANCOUVER LANDFILL
PART C - FORM OF PROPOSAL

PART C – FORM OF PROPOSAL

RFP No. PS20200721 CONSULTANT FOR GAS FIELD MANAGEMENT - VANCOUVER LANDFILL (the
“RFP”)

Proponent’s Full Legal Name: _____

“Proponent”

Address: _____

Jurisdiction of Legal Organization: _____

Key Contact Person: _____

Telephone: _____

E-mail: _____

The Proponent, having carefully examined and read the RFP, including all amendments and addenda thereto, if any, and all other related information published on the City’s website, hereby acknowledges that it has understood all of the foregoing, and in response thereto hereby submits the enclosed Proposal.

The Proponent further acknowledges that it has read and agrees to the Legal Terms & Conditions attached as Appendix 1 to this Form of Proposal.

IN WITNESS WHEREOF the Proponent has executed this Proposal Form:

Signature of Authorized Signatory for the Proponent

Date

Name and Title

Signature of Authorized Signatory for the Proponent

Date

Name and Title

**REQUEST FOR PROPOSALS NO. PS20200721
CONSULTANT FOR GAS FIELD MANAGEMENT - VANCOUVER LANDFILL
PART C - FORM OF PROPOSAL**

APPENDICES

The Form of Proposal includes the following attached Appendices:

- | | |
|-------------|--|
| APPENDIX 1 | Legal Terms and Conditions of RFP |
| APPENDIX 2 | Questionnaire |
| APPENDIX 3 | Commercial Proposal |
| APPENDIX 4 | Proponents References |
| APPENDIX 5 | Certificate of Insurance |
| APPENDIX 6 | Declaration of Supplier Code of Conduct Compliance |
| APPENDIX 7 | Personal Information Consent Form(s) |
| APPENDIX 8 | Subcontractors |
| APPENDIX 9 | Proposed Amendments to Form of Agreement |
| APPENDIX 10 | Conflicts; Collusion; Lobbying |
| APPENDIX 10 | Proof of WorkSafeBC Registration |

REQUEST FOR PROPOSALS NO. PS20200721
CONSULTANT FOR GAS FIELD MANAGEMENT - VANCOUVER LANDFILL
PART C - FORM OF PROPOSAL

APPENDIX 1
LEGAL TERMS AND CONDITIONS OF RFP

1 APPLICATION OF THESE LEGAL TERMS AND CONDITIONS

These legal terms and conditions set out the City's and the Proponent's legal rights and obligations only with respect to the RFP proposal process and any evaluation, selection, negotiation or other related process. In no event will the legal terms and conditions of this Appendix 1 apply to, or have the effect of supplementing, any Contract formed between the City and the Proponent, or otherwise apply as between the Proponent and the City following the signing of any such Contract.

2 DEFINITIONS

In this Appendix 1, the following terms have the following meanings:

- (a) "City" means the City of Vancouver, a municipal corporation continued pursuant to the Vancouver Charter.
- (b) "Contract" means a legal agreement, if any, entered into between the City and the Proponent following and as a result of the Proponent's selection by the City in the City's RFP process.
- (c) "Losses" means, in respect of any matter, all direct or indirect, as well as consequential: claims, demands, proceedings, losses, damages, liabilities, deficiencies, costs and expenses (including without limitation all legal and other professional fees and disbursements, interest, penalties and amounts paid in settlement whether from a third person or otherwise).
- (d) "Proponent" means the legal entity which has signed the Proposal Form, and "proponent" means any proponent responding to the RFP, excluding or including the Proponent, as the context requires.
- (e) "Proposal" means the package of documents consisting of the Proposal Form (including this Appendix 1), the Proponent's proposal submitted under cover of the Proposal Form, and all schedules, appendices and accompanying documents, and "proposal" means any proposal submitted by any proponent, excluding or including the Proponent, as the context requires.
- (f) "Proposal Form" means that certain Part C of the RFP, completed and executed by the Proponent, to which this Appendix 1 is appended.
- (g) "RFP" means the document issued by the City as Request for Proposals No. PS20200721 CONSULTANT FOR GAS FIELD MANAGEMENT - VANCOUVER LANDFILL, as amended from time to time and including all addenda.

3 NO LEGAL OBLIGATION ASSUMED BY THE CITY

Despite any other term of the RFP or the Proposal Form, including this Appendix 1 (except only Sections 7, 8.2 and 10 of this Appendix 1, in each case to the extent applicable), the City assumes no legal duty or obligation to the Proponent or to any proposed subcontractor in respect of the RFP, its subject matter or the Proposal unless and until the City enters into a Contract, which the City may decline to do in the City's sole discretion.

4 NO DUTY OF CARE OR FAIRNESS TO THE PROPONENT

The City is a public body required by law to act in the public interest. In no event, however, does the City owe *to the Proponent or to any of the Proponent's proposed subcontractors* (as opposed to the public) any contract or tort law duty of care, fairness, impartiality or procedural fairness in the RFP

REQUEST FOR PROPOSALS NO. PS20200721
CONSULTANT FOR GAS FIELD MANAGEMENT - VANCOUVER LANDFILL
PART C - FORM OF PROPOSAL

process, or any contract or tort law duty to preserve the integrity of the RFP process. The Proponent hereby waives and releases the City from any and all such duties and expressly assumes the risk of all Losses arising from participating in the RFP process on this basis.

5 EVALUATION OF PROPOSALS

5.1 Compliance / Non-Compliance

Any proposal which contains an error, omission or misstatement, which contains qualifying conditions, which does not fully address all of the requirements or expectations of the RFP, or which otherwise fails to conform to the RFP may or may not be rejected by the City at the City's sole discretion. The City may also invite a proponent to adjust its proposal to remedy any such problem, without providing the other proponents an opportunity to amend their proposals.

5.2 Reservation of Complete Control over Process

The City reserves the right to retain complete control over the RFP and proposal processes at all times. Accordingly, the City is not legally obligated to review, consider or evaluate the proposals, or any particular proposal, and need not necessarily review, consider or evaluate the proposals, or any particular proposal, in accordance with the procedures set out in the RFP, and the City reserves the right to continue, interrupt, cease or modify its review, evaluation and negotiation processes in respect of any or all proposals at any time without further explanation or notification to any proponents.

5.3 Discussions/Negotiations

The City may, at any time prior to signing a Contract, discuss or negotiate changes to the scope of the RFP, any proposal or any proposed agreement with any one or more of the proponents without having any duty or obligation to advise the Proponent or to allow the Proponent to vary its Proposal as a result of such discussions or negotiations with other proponents or changes to the RFP or such proposals or proposed agreements, and, without limiting the general scope of Section 6 of this Appendix 1, the City will have no liability to the Proponent as a result of such discussions, negotiations or changes.

5.4 Acceptance or Rejection of Proposals

The City has in its sole discretion, the unfettered right to: accept any proposal; reject any proposal; reject all proposals; accept a proposal which is not the lowest-price proposal; accept a proposal that deviates from the requirements of the RFP or the conditions specified in the RFP; reject a proposal even if it is the only proposal received by the City; accept all or any part of a proposal; enter into agreements respecting the subject matter of the RFP with one or more proponents; or enter into one or more agreements respecting the subject matter of the RFP with any other person at any time.

6 PROTECTION OF CITY AGAINST LAWSUITS

6.1 Release by the Proponent

Except only and to the extent that the City is in breach of Section 8.2 of this Appendix 1, the Proponent now releases the City, its officials, its agents and its employees from all liability for any Losses incurred in connection with the RFP or the Proposal, including any Losses in connection with:

- (a) any alleged (or judicially determined) breach by the City or its officials, agents or employees of the RFP (it being agreed that, to the best of the parties' knowledge, the City has no obligation or duty under the RFP which it could breach (other than wholly unanticipated obligations or duties merely alleged or actually imposed judicially));

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- (b) any unintentional tort of the City or its officials or employees occurring in the course of conducting the RFP process;
- (c) the Proponent preparing and submitting the Proposal;
- (d) the City accepting or rejecting the Proposal or any other submission; or
- (e) the manner in which the City: reviews, considers, evaluates or negotiates any proposal; addresses or fails to address any proposal or proposals; resolves to enter into a Contract or not enter into a Contract or any similar agreement; or the identity of the proponent(s) or other persons, if any, with whom the City enters any agreement respecting the subject matter of the RFP.

6.2 Indemnity by the Proponent

Except only and to the extent that the City breaches Section 8.2 of this Appendix 1, the Proponent indemnifies and will protect, save and hold harmless the City, its officials, its agents and its employees from and against all Losses, in respect of any claim or threatened claim by the Proponent or any of its proposed subcontractors or agents alleging or pleading:

- (a) any alleged (or judicially determined) breach by the City or its officials or employees of the RFP (it being agreed that, to the best of the parties' knowledge, the City has no obligation or duty under the RFP which it could breach (other than wholly unanticipated obligations or duties merely alleged or actually imposed judicially));
- (b) any unintentional tort of the City or its officials or employees occurring in the course of conducting the RFP process, or
- (c) liability on any other basis related to the RFP or the proposal process.

6.3 Limitation of City Liability

In the event that, with respect to anything relating to the RFP or this proposal process (except only and to the extent that the City breaches Section 8.2 of this Appendix 1), the City or its officials, agents or employees are found to have breached (including fundamentally breached) any duty or obligation of any kind to the Proponent or its subcontractors or agents whether at law or in equity or in contract or in tort, or are found liable to the Proponent or its subcontractors or agents on any basis or legal principle of any kind, the City's liability is limited to a maximum of \$100, despite any other term or agreement to the contrary.

7 DISPUTE RESOLUTION

Any dispute relating in any manner to the RFP or the proposal process (except to the extent that the City breaches this Section 7 or Section 8.2 of this Appendix 1, and also excepting any disputes arising between the City and the Proponent under a Contract (or a similar contract between the City and a proponent other than the Proponent)) will be resolved by arbitration in accordance with the *Commercial Arbitration Act* (British Columbia), amended as follows:

- (a) The arbitrator will be selected by the City's Director of Legal Services;
- (b) Section 6 of this Appendix 1 will: (i) bind the City, the Proponent and the arbitrator; and (ii) survive any and all awards made by the arbitrator; and
- (c) The Proponent will bear all costs of the arbitration.

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8 PROTECTION AND OWNERSHIP OF INFORMATION

8.1 RFP and Proposal Documents City's Property

- (a) All RFP-related documents provided to the Proponent by the City remain the property of the City and must be returned to the City, or destroyed, upon request by the City.
- (b) The documentation containing the Proposal, once submitted to the City, becomes the property of the City, and the City is under no obligation to return the Proposal to the Proponent.

8.2 Proponent's Submission Confidential

Subject to the applicable provisions of the *Freedom of Information and Protection of Privacy Act* (British Columbia), other applicable legal requirements, and the City's right to publicly disclose information about or from the Proposal, including without limitation names and prices, in the course of publicly reporting to the Vancouver City Council about the RFP, the City will treat the Proposal (and the City's evaluation of it), in confidence in substantially the same manner as it treats its own confidential material and information.

8.3 All City Information Confidential

- (a) The Proponent will not divulge or disclose to any third parties any non-public documents or information concerning the affairs of the City which have been or are in the future provided or communicated to the Proponent at any time (whether before, during or after the RFP process). Furthermore, the Proponent agrees that it has not and must not use or exploit any such non-public documents or information in any manner, including in submitting its Proposal.
- (b) The Proponent now irrevocably waives all rights it may have by statute, at law or in equity, to obtain any records produced or kept by the City in evaluating its Proposal (and any other submissions) and now agrees that under no circumstances will it make any application to the City or any court for disclosure of any records pertaining to the receipt, evaluation or selection of its Proposal (or any other submissions) including, without limitation, records relating only to the Proponent.

9 NO CONFLICT OF INTEREST / NO COLLUSION / NO LOBBYING

9.1 Declaration as to no Conflict of Interest in RFP Process

- (a) The Proponent confirms and warrants that there is no officer, director, shareholder, partner, employee or contractor of the Proponent or of any of its proposed subcontractors, or any other person related to the Proponent's or any proposed subcontractor's organization (a "person having an interest") or any spouse, business associate, friend or relative of a person having an interest who is: (i) an official or employee of the City; or (ii) related to or has any business or family relationship with an elected official or employee of the City, in each case, such that there could be any conflict of interest or any appearance of conflict of interest in the evaluation or consideration of the Proposal by the City, and, in each case, except as set out, in all material detail, in a separate section titled "Conflicts; Collusion; Lobbying" in the Proposal in accordance with the form set out in Part C - APPENDIX 10.
- (b) The Proponent confirms and warrants that there is no person having an interest (as defined above) who is a former official, former employee or former contractor of the City and who has non-public information relevant to the RFP obtained during his or her employment or engagement by the City, except as set out, in all material detail, in a separate section titled "Conflicts; Collusion; Lobbying" in the Proposal in accordance with the form set out in Part C - APPENDIX 10.

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9.2 Declaration as to No Conflict of Interest Respecting Proposed Supply

The Proponent confirms and warrants that neither the Proponent nor any of its proposed subcontractors is currently engaged in supplying (or is proposing to supply) goods or services to a third party such that entering into an agreement with the City in relation to the subject matter of the RFP would create a conflict of interest or the appearance of a conflict of interest between the Proponent's duties to the City and the Proponent's or its subcontractors' duties to such third party, except as set out, in all material detail, in a separate section titled "Conflicts; Collusion; Lobbying" in the Proposal in accordance with the form set out in Part C - APPENDIX 10.

9.3 Declaration as to No Collusion

The Proponent confirms and warrants that:

- (a) the Proponent is not competing within the RFP process with any entity with which it is legally or financially associated or affiliated, and
- (b) the Proponent is not cooperating in any manner in relation to the RFP with any other proponent responding to the RFP,

in each case, except as set out, in all material detail, in a separate section titled "Conflicts, Collusion, Lobbying" in the Proposal in accordance with the form set out in Part C - APPENDIX 10.

9.4 Declaration as to No Lobbying

The Proponent confirms and warrants that:

- (a) neither it nor any officer, director, shareholder, partner, employee or agent of the Proponent or any of its proposed subcontractors is registered as a lobbyist under any lobbyist legislation in any jurisdiction in Canada or in the United States of America; and
- (b) neither it nor any officer, director, shareholder, partner, employee or agent of the Proponent or any of its proposed subcontractors has engaged in any form of political or other lobbying whatsoever with respect to the RFP or sought, other than through the submission of the Proposal, to influence the outcome of the RFP process,

in each case, except as set out, in all material detail, in a separate section titled "Conflicts, Collusion, Lobbying" in the Proposal in accordance with the form set out in Part C - APPENDIX 10.

10 GENERAL

- (a) All of the terms of this Appendix 1 to this Proposal Form which by their nature require performance or fulfillment following the conclusion of the proposal process will survive the conclusion of such process and will remain legally enforceable by and against the Proponent and the City.
- (b) The legal invalidity or unenforceability of any provision of this Appendix 1 will not affect the validity or enforceability of any other provision of this Appendix 1, which will remain in full force and effect.
- (c) The Proponent now assumes and agrees to bear all costs and expenses incurred by the Proponent in preparing its Proposal and participating in the RFP process.

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**APPENDIX 2
QUESTIONNAIRE**

Complete this Appendix 2 - Questionnaire in the form set out below.

Executive Summary

In the space below and/or in an additional page(s) included with the Proposal and clearly titled "Executive Summary" provide a brief executive summary of your Proposal.

Proponent Overview and Experience

In the space below and/or in an additional page(s) included with the Proposal and clearly titled "Proponent Overview and Experience" provide a description of the Proponent and its purpose, company size, capabilities, areas of expertise, experience and history of successes, with emphasis on experience and accomplishments as a consultant for work similar to that contemplated by the RFP. The same information should be supplied for any proposed subcontractors including the subcontractor responsible for Greenhouse Gas Verification.

Select a maximum of 5 reference projects undertaken within the last 5 years. The same information should be supplied for any proposed subcontractors.

Information provided should include:

- Clear explanation as to how previous work is comparable/relevant to the work contemplated by the RFP;
- brief project description and intent. Narratives should include a discussion of design, philosophy and approach to meet the intent, design challenges, and resolutions;
- budget control and management - i.e. initial contract price & final contract cost - explain variation;
- project schedule control and management - i.e. initial schedule and revised schedule - explain variation;
- names of key personnel responsible for project delivery; and
- awards received.

Key Personnel

In the space below and/or in an additional page(s) included with the Proposal and clearly titled "Key Personnel" identify and provide professional biographical information for the key personnel for the work to be performed under the Proposal, outlining intended roles contemplated for each of them therein and highlighting their previous experience with:

- a. Municipal solid waste landfills;

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- b. Landfill gas collection, flaring and utilization systems;
- c. Landfill and gas system health and safety;
- d. Annual reporting and greenhouse gas reporting for large municipal landfills;
- e. Verification of greenhouse gas reporting at large municipal landfills;
- f. Applicable regulations, industry standards, and codes; and
- g. Landfill gas field work, well monitoring, and operations.

Please also attach to this Form of Proposal as an additional Appendix CVs and a complete organization chart, identifying all roles and areas of responsibility including proposed subcontractors.

Work Plan and Schedule

In the space below and/or in an additional page(s) to be included with the Proposal and clearly titled "Work Plan and Schedule" provide details of the sequential process by which the Proponent proposes to undertake the work. The Proponent should also demonstrate their capability to perform the services and meet project challenges and to provide a plan of action.

Information that should be supplied:

- The functional and technical requirements;
- Significant issues, opportunities, challenges and constraints;
- Work Plan - detailed breakdown of deliverables and approach to completing the work, laid out per Task specified in the General Requirements;
- Project schedule - proposed major milestone schedule, with the City's preferred dates taken into consideration; and
- Review project schedule and assess risk management elements that may affect the project;
- Risk management strategy.

Health and Safety

In the space below (or attached to their Proposal as an additional Appendix clearly titled "Health and Safety management", the Proponent should provide the following documents:

- Health and Safety Program manual or documents.

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- Two examples of completed incident report summaries and corrective action plans (redacted versions acceptable). (Example: injury incident reports with investigation details and what action was taken to prevent future injury incidents, or equipment damage reports with investigation details and what preventative action was taken, such as training, equipment modification, procedure change, etc.)
- A set of typical leading indicators that are tracked on similar projects. (Examples of leading indicators include new employee safety orientations, safety tailgate meetings, hazard analysis forms such as Job Hazard Assessments or Field Level Hazard Assessments, monthly safety meetings, worksite safety, etc.)

Innovation and Value Added Service

Notwithstanding any other provision hereof, the City welcomes Proposals with innovative or novel proposed approaches to the City's objectives and requirements and may consider Proposals that deviate from the Requirements if such would add value to the services sought. In the space below and/or in an additional page(s) included with the Proposal and "Innovation and Value Added Service" provide details of any proposed innovative approaches to meeting the City's requirements.

EMPLOYMENT EQUITY

1. In addition to being an equal opportunity employer, please describe any policies/programs or how you advance employee equity, diversity and inclusion for under-represented populations (such as Women, Indigenous People, People with Disabilities)
2. Do you regularly conduct an employee equity "survey" or similar information/data collection on workforce diversity? Y/N
 - a. Please describe how you track/monitor your workforce diversity including frequency
3. Do you source/hire from Workforce Development and/or Skill Training programs, including pre-employment support, apprenticeships or ongoing employment support, for people who are under-represented and/or face barriers to traditional employment (such as Indigenous persons, Women, youth, Minorities, People with Disabilities including mental health)? Y/N
 - a. Please describe and/or use the table below

Category of Partnership Organizations	Name of the Partnership Organization(s)
Indigenous Peoples	
Women	

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Ethno-Cultural Peoples	
People with Disabilities	
LGBTQ2+	
Youth/Seniors	
Other	

4. Do you support training for career advancement and/or skills development?
a. If yes, please describe
5. Do you compensate at or above a Living Wage (currently \$20.91/hr) Y/N
Do you provide non-mandatory benefits (i.e. extended health) to your employees? Y/N, if yes, please describe

WORKFORCE DIVERSITY

Vendors' are required to answer to the following question, which is for information gathering purposes only, and will be kept confidential in accordance with the Legal Terms and Conditions.

As best known, in the space below, indicate the vendor's company profile with regards to economic inclusion supporting employment equity, [diversity, inclusion](#) and reconciliation by an equity-seeking demographic (including but not limited to Women, Indigenous Peoples, Ethno-cultural People (minorities, newcomers, immigrants), persons with disabilities or LGBTQ2+ people). *Confidential & for information only*

<p><u>Overall Workforce Diversity:</u></p> <p>% Women</p> <p>% Indigenous Peoples</p> <p>% Ethno-cultural People</p> <p>% People with Disabilities</p> <p>% LGBTQ2+</p> <p>% Other: please indicate</p>	<p><u>Leadership/Management/Executive Diversity:</u></p> <p>% Women</p> <p>% Indigenous Peoples</p> <p>% Ethno-cultural People</p> <p>% People with Disabilities</p> <p>% LGBTQ2+</p> <p>% Other: please indicate</p>	<p>Workforce</p>
<p><u>If you choose not to respond please indicate why:</u></p> <p><input type="checkbox"/> <u>Do not track this information</u></p> <p><input type="checkbox"/> <u>Do not want to share this information</u></p>		

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APPENDIX 3
COMMERCIAL PROPOSAL

Complete this Appendix 3 - Commercial Proposal in the Excel sheet provided separately.

Proponent to provide proposed pricing and payment terms, which should be in accordance with Part A, Section 7.0 of the RFP (as well as any other sections of the RFP imposing requirements as to pricing).

When submitting its Proposal by email, please ensure Appendix 3 - Commercial Proposal is provided as a separate file to the entire Proposal.

☐

By colouring in this box, the Proponent hereby confirms that the above Commercial Proposal is based on the payment of wages to employees of the Proponent and Subcontractors that comply with the City's Living Wage Policy as described in Section 10.0 of Part A and in the Form of Agreement attached hereto as Part D.

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APPENDIX 4
PROPONENT'S REFERENCES

Complete this Appendix 4 - Proponents References in the form set out below with references that are relevant to the Scope of Work set out in this RFP.

Client Name # 1	
Address (City and Country)	
Contact Name	
Title of Contact	
Telephone No.	
E-mail Address	
Length of Relationship	
Type of Goods and/or Services provided to this Client	

Client Name # 2	
Address (City and Country)	
Contact Name	
Title of Contact	
Telephone No.	
E-mail Address	
Length of Relationship	
Type of Goods and/or Services provided to this Client	

Client Name # 3	
------------------------	--

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Address (City and Country)	
Contact Name	
Title of Contact	
Telephone No.	
E-mail Address	
Length of Relationship	
Type of Goods and/or Services provided to this Client	

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APPENDIX 5
CERTIFICATE OF INSURANCE

Appendix 5 is to be duly completed and signed by the Proponent's insurance agent or broker as evidence of its existing insurance, along with a letter from its insurance broker or agent indicating whether or not (and, if not, then to what extent) it will be able to comply with the insurance requirements set out in the Form of Agreement, should the Proponent be selected as a successful Proponent. (Any successful Proponent will also be required to provide proof of the satisfaction of all insurance requirements prior to or concurrently with the City entering into any Agreement.)



**CERTIFICATE OF EXISTING INSURANCE
TO BE COMPLETED AND APPENDED TO THE PROPOSAL/TENDER**

1. **THIS CERTIFICATE IS ISSUED TO:** City of Vancouver, 453 W 12th Avenue, Vancouver, BC, V5Y 1V4
and certifies that the insurance policy (policies) as listed herein has/have been issued to the Named Insured and is/are in full force and effect.

2. **NAMED INSURED** (must be the same name as the proponent/bidder and is either an individual or a legally incorporated company)

BUSINESS TRADE NAME or DOING BUSINESS AS

BUSINESS ADDRESS

DESCRIPTION OF OPERATION

RFP PS20200721 - Consultant for Gas Field Management - Vancouver Landfill

3. **PROPERTY INSURANCE (All Risks Coverage including Earthquake and Flood)**

INSURER _____	Insured Values (Replacement Cost) -
TYPE OF COVERAGE _____	Building and Tenants' Improvements \$ _____
POLICY NUMBER _____	Contents and Equipment \$ _____
POLICY PERIOD From _____ to _____	Deductible Per Loss \$ _____

4. **COMMERCIAL GENERAL LIABILITY INSURANCE (Occurrence Form)**

Including the following extensions:	INSURER _____
✓ Personal Injury	POLICY NUMBER _____
✓ Property Damage including Loss of Use	POLICY PERIOD From _____ to _____
✓ Products and Completed Operations	Limits of Liability (Bodily Injury and Property Damage Inclusive) -
✓ Cross Liability or Severability of Interest	Per Occurrence \$ _____
✓ Employees as Additional Insureds	Aggregate \$ _____
✓ Blanket Contractual Liability	All Risk Tenants' Legal Liability \$ _____
✓ Non-Owned Auto Liability	Deductible Per Occurrence \$ _____

5. **AUTOMOBILE LIABILITY INSURANCE** for operation of owned and/or leased vehicles

INSURER _____	Limits of Liability -
POLICY NUMBER _____	Combined Single Limit \$ _____
POLICY PERIOD From _____ to _____	<i>If vehicles are insured by ICBC, complete and provide Form APV-47.</i>

6. ☐ **UMBRELLA OR** ☐ **EXCESS LIABILITY INSURANCE** **Limits of Liability (Bodily Injury and Property Damage Inclusive) -**

INSURER _____	Per Occurrence \$ _____
POLICY NUMBER _____	Aggregate \$ _____
POLICY PERIOD From _____ to _____	Self-Insured Retention \$ _____

7. **PROFESSIONAL LIABILITY INSURANCE**

INSURER _____	Limits of Liability
POLICY NUMBER _____	Per Occurrence/Claim \$ _____
POLICY PERIOD From _____ to _____	Aggregate \$ _____
	Deductible Per Occurrence/Claim \$ _____

If the policy is in a "CLAIMS MADE" form, please specify the applicable Retroactive Date: _____

8. **OTHER INSURANCE**

TYPE OF INSURANCE _____	Limits of Liability
INSURER _____	Per Occurrence \$ _____
POLICY NUMBER _____	Aggregate \$ _____
POLICY PERIOD From _____ to _____	Deductible Per Loss \$ _____
TYPE OF INSURANCE _____	Limits of Liability
INSURER _____	Per Occurrence \$ _____
POLICY NUMBER _____	Aggregate \$ _____
POLICY PERIOD From _____ to _____	Deductible Per Loss \$ _____

SIGNED BY THE INSURER OR ITS AUTHORIZED REPRESENTATIVE

PRINT NAME OF INSURER OR ITS AUTHORIZED REPRESENTATIVE, ADDRESS AND PHONE NUMBER

Dated _____

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APPENDIX 6

DECLARATION OF SUPPLIER CODE OF CONDUCT COMPLIANCE

Complete this Appendix 6 - Declaration of Supplier Code of Conduct Compliance in the form set out below.

All proposed suppliers are to complete and submit this form to certify compliance with the supplier performance standards set out in the Supplier Code of Conduct.

The City of Vancouver expects each supplier of goods and services to the City to comply with the supplier performance standards set out in the City's Supplier Code of Conduct (SCC) <<https://policy.vancouver.ca/AF01401P1.pdf>>. The SCC defines minimum labour and environmental standards for City suppliers and their subcontractors.

Suppliers are expected to comply with the aforementioned standards upon submitting a tender, proposal, application, expression of interest or quotation to the City, or have a plan in place to comply within a specific period of time. The City reserves the right to determine an appropriate timeframe in which suppliers must come into compliance with these standards. To give effect to these requirements, an authorized signatory of each proposed vendor must complete the following declaration and include this declaration with its submission:

As an authorized signatory of _____(vendor name), I declare that I have reviewed the SCC and to the best of my knowledge, _____(vendor name) and its proposed subcontractors have not been and are not currently in violation of the SCC or convicted of an offence under national and other applicable laws referred to in the SCC, other than as noted in the table below (include all violations/convictions that have occurred in the past three years as well as plans for corrective action).

Section of SCC / title of law	Date of violation /conviction	Description of violation / conviction	Regulatory / adjudication body and document file number	Corrective action plan

I understand that a false declaration and/or lack of a corrective action plan may result in no further consideration being given to the submission of _____(vendor name).

Signature: _____

Name and Title: _____

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APPENDIX 7
PERSONAL INFORMATION CONSENT FORM(S)

Complete one copy of this Appendix 7 - Personal Information Consent Form(s), in the form set out below, for each key personnel for whom a CV or other information regarding employment history and qualifications has been included in the Proposal.

PERSONAL INFORMATION CONSENT FORM

Reference PS20200721

Title: RFP No. PS20200721 CONSULTANT FOR GAS FIELD MANAGEMENT - VANCOUVER LANDFILL

With the provision of my signature at the foot of this statement I, _____

_____ (Print Name)

consent to the indirect collection from _____

_____ (Print Name of Proponent) of

my personal information in the form of a work history, resume or summary of qualifications.

In consenting to this indirect collection, I understand that my personal information, so collected, will be used by the City for the sole purpose of evaluating the submitted response to the above-noted procurement process. I understand further that my personal information, once collected by the City, will be handled by the City in accordance with the provisions of the (BC) *Freedom of Information and Protection of Privacy Act*.

Signature

Date

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APPENDIX 8
SUBCONTRACTORS

Complete this Appendix 8 - Subcontractors in the form set out below by listing all of the subcontractors that the Proponent proposes to use in carrying out its work under an Agreement, or state that the Proponent does not propose to use any subcontractors.

If selected to enter into an Agreement with the City, the Proponent may be limited to using subcontractors listed in its Proposal. If the City objects to a subcontractor listed in a Proposal, the City may permit a Proponent to propose a substitute Subcontractor acceptable to the City.

Subcontracted Scope		
Subcontractor		
Contact (name, title, email, telephone no.)		
Approximate Percent of the Work to be Subcontracted		
Social Value Business - shall mean a business that has a recognized environmental or social certification and/or is majority owned/controlled by an equity-seeking demographic (including but not limited to non-profit, cooperative, Women, Indigenous Peoples, Ethno-cultural People (minorities, newcomers, immigrants), persons with disabilities or LGBTQ+ people).	In the space below, detail the Proponent's proposed use of Social Value Businesses as sub-contractors/consultants (if any) and provide brief company profiles of those Social Value Businesses and descriptions of how they qualify as Social Value Businesses.	
The Subcontractor's Relevant Experience (identify at least three similar projects within the last five years, including the client)	1. Project Name:	
	Client:	
	Nature of Work:	
	Value:	
	Client Contact:	

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	2. Project Name:	
	Client:	
	Nature of Work:	
	Value:	
	Client Contact:	
	3. Project Name:	
	Client:	
	Nature of Work:	
	Value:	
	Client Contact:	

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APPENDIX 9
PROPOSED AMENDMENTS TO FORM OF AGREEMENT

Complete this Appendix 9 - Proposed Amendments to Form of Agreement in the form set out below by detailing any proposed amendments to the Form of Agreement attached as Part D. If no amendments to the Form of Agreement are proposed, state "none". It is at the City's sole discretion whether or not these proposed amendments will be considered for the Form of Agreement.

Section / General Condition	Proposed Amendment	Rationale and Benefit

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APPENDIX 10
CONFLICTS; COLLUSION; LOBBYING

Complete this APPENDIX 10 - Conflicts; Collusion; Lobbying in the form set out below by setting out any exceptions to the declarations in Section 9 of the Legal Terms and Conditions attached as Appendix 1 to this Part C - Form of Proposal or indicate that there are no exceptions, as applicable.

Exceptions to Declaration as to no Conflict of Interest in RFP Process (Section 9.1 of Legal Terms and Conditions)	
Exceptions to Declaration as to No Conflict of Interest Respecting Proposed Supply (Section 9.2 of Legal Terms and Conditions)	
Exceptions to Declaration as to No Collusion (Section 9.3 of Legal Terms and Conditions)	
Exceptions to Declarations as to No Lobbying (Section 9.4 of Legal Terms and Conditions)	

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APPENDIX 11
PROOF OF WORKSAFEBC REGISTRATION

Attached as APPENDIX 11 to this Form of Proposal proof of valid WorkSafeBC registration.

PART D
FORM OF AGREEMENT

See attached.



PROFESSIONAL SERVICES AGREEMENT
PS20200721 CONSULTANT FOR GAS FIELD MANAGEMENT - VANCOUVER
LANDFILL

THIS AGREEMENT is made as of the [day] day of [month/year] (the “Effective Date”)

BETWEEN:

CITY OF VANCOUVER
453 West 12th Avenue
Vancouver, British Columbia
V5Y 1V4

(the “City”)

OF THE FIRST PART

AND:

[CONSULTANT NAME]
[address]

(the “Consultant”)

OF THE SECOND PART

(the City and the Consultant are hereinafter sometimes referred to individually as “Party” and collectively as “Parties”)

BACKGROUND:

- A. The City requires the professional services described herein, and desires to engage the Consultant to perform said services.
- B. The Consultant has agreed to perform the said services in accordance with the terms and conditions of this Agreement.

NOW THEREFORE, in consideration of the mutual covenants and promises made by the Parties and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

1.0 INTERPRETATION

1.1 In this Agreement, including the recitals, schedules and appendices to this Agreement, the following words and terms, unless the context otherwise requires, shall have the meanings set out below:

- (a) **“Agreement”** means this Professional Services Agreement inclusive of all schedules, appendices, exhibits or other documents attached hereto or incorporated herein by reference, as amended from time to time;
- (b) **“Applicable Laws”** means all statutes, regulations, by-laws, codes, rules, notices, orders, directives, standards and requirements of every competent federal, provincial, regional, municipal and other statutory authority applicable to the Consultant, any Sub-contractor and the Services, including the Vancouver Building By-law, the British Columbia Building Code, and the British Columbia Fire Code, all as may be in force from time to time;
- (c) **“City’s Site”** means any land and/or premises owned by the City on which or in respect of which the Services are performed by the Consultant;
- (d) **“City’s Project Manager”** means the City’s employee, or his/her delegate, who is authorized in writing to deal with the Consultant on behalf of the City in connection with the Services, or to make decisions in connection with this Agreement;
- (e) **“Confidential Information”** has the meaning set out in Section 15.1
- (f) **“Contract Document”** refers to each of the individual documents composing the Agreement, including this Professional Services Agreement (exclusive of the documents attached hereto or incorporated herein by reference) and each schedule, appendix, exhibit or other document attached to this Professional Services Agreement or incorporated into the Agreement by reference;
- (g) **“Deliverables”** has the meaning set out in Section 17.1;
- (h) **“GST”** means the tax payable and imposed pursuant to Part IX of the Excise Tax Act (Canada), as amended or replaced from time to time;
- (i) **“Living Wage”** means the hourly wage established by the Living Wage Certifier from time to time during the Term, which includes: (i) direct wages; and (ii) the value of any non-mandatory benefits such as paid sick leave, employer-paid Medical Services Plan premiums and extended health benefits;
- (j) **“Living Wage Certifier”** means the Living Wage for Families Campaign, any successor entity, or, in the event the Living Wage for Families Campaign ceases to carry on operations, such other living wage certification entity designated by the City to the Consultant in writing; **“Living Wage Employee”** means any and all employees of the Consultant and all Sub-contractors of the Consultant that perform any part of the Services on a property owned by or leased to the City, including all streets, sidewalks and other public rights of way, for at least one consecutive hour, but excluding Students, volunteers and employees of Social Enterprises;
- (k) **“Project Team”** has the meaning set out in subsection 2.2(c);

- (l) “**Proposal**” means the proposal submitted by the Consultant in response to the RFP, a copy of which is attached hereto, or incorporated by reference herein by operation of, Appendix B;
 - (a) “**PST**” means the provincial sales tax payable and imposed pursuant to the *Provincial Sales Tax Act* (British Columbia), as amended or replaced from time to time;
 - (m) “**RFP**” means Request for Proposal **PS20200721- Consultant for Gas Field Management - Vancouver Landfill**, together with all addenda and questions and answers attached hereto, or incorporated by reference herein by operation of, Appendix C;
 - (n) “**Services**” has the meaning set out in Section 2.1;
 - (o) “**Social Enterprise**” means a business that: (i) is owned by a non-profit organization or community services co-operative; (ii) is directly involved in the production and/or selling of goods and services for the combined purpose of generating income and achieving social, cultural, and/or environmental aims; and (iii) has a defined social and/or environmental mandate;
 - (p) “**Student**” means an individual who is enrolled in a school, college, university or other educational institution and is employed by the Consultant or a Sub-contractor, as the case may be, to obtain practical workplace experience as a requirement of or credit for their education;
 - (q) “**Sub-contractor**” has the meaning set out in Section 4.1; and
 - (r) “**Term**” means the term of this Agreement as specified in Section 12.1.
- 1.2 The Contract Documents are complementary and what is called for by any one will be as binding as if called for by all. In the event of any conflict or inconsistency between or among any of the Contract Documents, the Contract Documents will be interpreted in the following order of priority, from highest to lowest:
- (a) this Agreement, excluding Appendices B and C;
 - (b) the RFP; and
 - (c) the Proposal.
- 1.3 In this Agreement, including the recitals, schedules and appendices to this Agreement, except as expressly stated to the contrary or the context otherwise requires:
- (a) the recitals and headings to sections, schedules and appendices are for convenience and reference only and will not affect the interpretation of this Agreement;
 - (b) the terms “this Agreement”, “hereof”, “herein”, “hereunder” and similar expressions refer, unless otherwise specified or the context otherwise requires, to this Agreement taken as a whole (including any and all attached schedules and appendices) and not to any particular section, subsection or other subdivision;
 - (c) each reference to a statute is deemed to be a reference to that statute and any successor statute, and to any regulations, rules, policies and criteria made under that statute and any successor statute, each as amended or re-enacted from time to time;

- (d) each reference to a rule, guideline, policy, regulation or directive is deemed to be a reference to any successor or replacement of such rule, guideline, policy, regulation or directive;
- (e) words importing the singular include the plural and vice versa and words importing gender include all genders;
- (f) references to time of day or date mean the local date or time in Vancouver, British Columbia;
- (g) all references to money mean lawful currency of Canada;
- (h) the word “written” includes printed, typewritten, faxed, e-mailed or otherwise capable of being visibly reproduced at the point of reception and “in writing” has a corresponding meaning; and
- (i) the words “include” and “including” are to be construed as meaning “including, without limitation”.

2.0 CONSULTANT'S SERVICES TO THE CITY

2.1 The Consultant will provide and be fully responsible for the following services (the “**Services**”):

- (a) the services described in the RFP;
- (b) the services which the Consultant proposed to provide in the Proposal; and
- (c) all services not specifically included in subsections 2.1(a) and 2.1(b), but which are necessary or incidental to the completion of such other Services.

2.2 The Consultant will be fully responsible for:

- (a) coordinating the Services with the City’s Project Manager, or his/her delegate, and ensuring that the performance of the Services does not adversely impact any design or construction schedule for any project or work and/or services provided by the City’s other consultants, in each case to which the Services relate;
- (b) taking all steps required in placing, effecting and maintaining insurance and providing evidence of insurance as set out in Appendix A - Insurance Requirements; and
- (c) maintaining and supervising its employees and Sub-contractors (the “**Project Team**”) described in Section 3.1.

2.3 The Consultant represents and warrants to the City that the Consultant possesses the necessary skills, knowledge, qualifications and experience to perform the Services to the reasonable satisfaction of the City.

2.4 The Consultant will perform the Services:

- (a) with that degree of care, skill and diligence normally applied in the performance of services of a similar nature and magnitude to those contemplated by this Agreement at the time and place the Services are rendered;

- (b) in accordance with sound current professional practices and design standards; and
 - (c) in conformity with any and all Applicable Laws.
- 2.5 The Consultant will commence the Services promptly and will use every reasonable effort to carry out the Services in accordance with:
 - (a) the requirements and appendices of this Agreement, or
 - (b) where no date is specified for the provision of any component of the Services by this Agreement, such completion dates as are reasonably specified from time to time by the City.
- 2.6 The Consultant will not permit, do or cause anything to be done at any time which could allow any lien, certificate of pending litigation, judgment or certificate of any court or any mortgage charge, conditional sale agreement, personal property security interest or encumbrance of any nature to be imposed or to remain on title to the City's Site or any other City property.

3.0 PROJECT TEAM

- 3.1 Subject to Section 3.2, the Consultant will utilize only the Project Team members noted in the Proposal.
- 3.2 Except for substitutions required by circumstances not within its reasonable control, the Consultant may not make substitutions of Project Team members without the prior written consent of the City, which consent will not be unreasonably withheld, delayed or conditioned.
- 3.3 For the purposes of this Section 3, "substitutions required by circumstances not within its reasonable control" means substitutions required by virtue of illness, death, injury, pregnancy, medical leave, or termination of employment or contract, but expressly excludes situations where the Project Team member is called upon to perform services for another client of the Consultant, its Sub-contractor or their affiliates.
- 3.4 The City may, with stated reasons and acting reasonably, request that the Consultant replace a Project Team member. The Consultant will, subject to scheduling and staffing considerations, make commercially reasonable efforts to replace the individual with someone of substantially similar competency and experience.
- 3.5 Regardless of whether or not the City consents to a substitution, or requests a substitution, the City will not be liable to pay additional compensation to the Consultant for any replacement Project Team member.

3A Living Wage

- 3A.1 Subject to Section 3A.2, it is a condition of this Agreement that, for the duration of the Term, the Consultant pays all Living Wage Employees not less than the Living Wage.
- 3A.2 Notwithstanding Section 3A.1, the Consultant has up to 6 months from the date on which any increase in the Living Wage is published by the Living Wage Certifier to increase wages for all Living Wage Employees such that all Living Wage Employees continue to be paid not less than the Living Wage.
- 3A.3 The Consultant shall ensure that the requirements of Section 3A.1 apply to all Sub-contractors.

- 3A.4 A breach by the Consultant of its obligations pursuant to Sections 3A.1 and 3A.3 shall constitute a material breach by the Consultant of this Agreement that shall entitle the City to terminate this Agreement with immediate effect if the Consultant has not remedied such breach within the time period specified by the City in writing to the Consultant.
- 3A.5 The Consultant shall maintain up-to-date records and accounts which clearly document its satisfaction of the requirements of this Article 3A and shall make the same available to the City upon request. The City may request copies of all such records and accounts which shall be provided to the City by the Consultant (subject to reimbursement of the Consultant's reasonable copying costs and any other direct costs and expenses, if any) at any time prior to the expiry of 365 days after completion of all of the Services or earlier termination of this Agreement. For avoidance of doubt, any records and accounts provided by the Consultant in accordance with this Section 3A.5 shall be deemed to be Confidential Information.
- 3A.6 The Consultant shall prepare and submit to the City in a format reasonably acceptable to the City before January 31 of each calendar year of the term or, for each partial calendar year of the term, within 30 days of the expiry of the term a living wage report setting out:
- (a) the number of Living Wage Employees of the Consultant and each Sub-contractor who were paid a Living Wage pursuant to this Section 3A during the previous calendar year or portion thereof that would not have received a Living Wage for substantially similar work but for the obligations of the Consultant pursuant to this Section 3A; and
 - (b) the total incremental costs incurred by the Consultant, including any amounts paid to Sub-contractors, in order to fulfill its obligations pursuant to this Section 3A to pay a Living Wage to the Living Wage Employees described in Section 3A.6(a).

4.0 SUB-CONTRACTORS

- 4.1 Unless expressly permitted pursuant to Section 3.0, the Consultant may not engage any contractor or consultant (in each case a "**Sub-contractor**") for the performance of any part of the Services, unless the Consultant has first obtained the written consent of the City, which consent may be arbitrarily withheld.
- 4.2 The Consultant will administer, coordinate, and manage all Services provided by any Sub-contractors, and will assume full responsibility to the City for all work performed by the Sub-contractors in relation to the Services and will pay all fees and disbursements of all Sub-contractors, subject to reimbursement by the City where the City has expressly agreed in this Agreement that such reimbursement is to be separate from and additional to the fees and disbursements payable to the Consultant.
- 4.3 Where a Sub-contractor is used by the Consultant under this Agreement, the Consultant will legally bind the Sub-contractor to comply with this Agreement.
- 4.4 Nothing in this Agreement will create any contractual relationship between a Sub-contractor and the City.

5.0 BASIS OF PAYMENT TO THE CONSULTANT

- 5.1 In consideration of the Services performed by the Consultant to the satisfaction of the City and in strict conformity with the terms hereof, the City will pay the Consultant the fees and reimbursable expenses prescribed herein, plus GST and PST as applicable to the sale made to the City hereunder.

- 5.2 The fees for the Services are described in this Section 5.0 and in **[Reference each relevant section of the Proposal or other schedule to this Agreement and ensure there are no inconsistencies.]**. Subject to Section 5.3, payment to the Consultant will be based on hours worked by employees of the Consultant or by the Sub-contractors multiplied by the applicable hourly charge-out rates stated in the Proposal.
- 5.3 If there are maximum, lump sum or other limiting amounts for fees or disbursements indicated herein for the Services or for portions thereof, then notwithstanding anything to the contrary in this Agreement the maximum fees or disbursements to be paid by the City to the Consultant for the Services or such portions of the Services will not exceed those stated amounts, except as mutually agreed in writing. Any limit on the fees or disbursements to be paid by the City to the Consultant will in no way diminish the duties and obligations of the Consultant to provide the Services covered by this Agreement.
- 5.4 Notwithstanding anything to the contrary contained in this Agreement, save as otherwise mutually agreed in writing subsequent to the date hereof (or pursuant to Section 6.0), the total professional fees payable to the Consultant for the Services (not including GST AND PST or disbursements) will not exceed **\$(insert amount)**.
- 5.5 Notwithstanding anything to the contrary contained in this Agreement, save as otherwise mutually agreed in writing subsequent to the date hereof (or pursuant to Section 6.0), the total disbursements for which the City will reimburse the Consultant in respect of the Services will not exceed **\$(insert amount)** (the “Fixed Disbursement Amount”).
- 5.6 [Notwithstanding anything to the contrary contained in this Agreement, save as otherwise mutually agreed in writing subsequent to the date hereof (or pursuant to Section 6.0), the maximum liability of the City hereunder (the “Maximum Fees and Disbursements”) will be **\$(insert amount)**, plus GST and PST as applicable to the sale made to the City hereunder] **[Delete this section if inapplicable.]**
- 5.7 Subject to any “Fixed Disbursement Amount” defined herein, or any other limit on disbursements stated herein, the City will reimburse the Consultant for disbursements reasonably incurred by the Consultant in the performance of the Services. Reimbursement of these expenses by the City will be at actual cost without any addition for overhead or profit. **[NTD: If there are specific monetary limits for specific categories of disbursements, then modify accordingly.]**
- 5.8 If the Consultant has engaged Sub-contractors, then the Consultant will make full payment to said Sub-contractors for work performed in relation to the Services. [Subject to any “Fixed Disbursement Amount” defined herein, or any other limit on disbursements stated herein, the City will reimburse the Consultant for payments made to Sub-contractors at amounts equal to such actual payments without any additions for overhead and profit to the Consultant.] **[Include only if applicable.]**
- 5.9 The Consultant will, by the 25th day of each month, provide to the City’s Project Manager a draft invoice with an attached detailed account of all charges to be claimed by the Consultant for the preceding month (if any). The City’s Project Manager shall review the draft, raise any concerns with the Consultant within ten working days and, after settlement of any issues (in the City’s Project Manager’s discretion), approve the draft invoice. The Consultant, if so requested, will meet with the City’s Project Manager to expedite and settle of the draft invoice. The Consultant will submit its final invoice, as per the approved draft invoice, to the City of Vancouver, Attention: Accounts Payable, by email to APInvoice@vancouver.ca. The invoice must contain:

- (a) the Consultant's name, address and telephone number;
 - (b) the City purchase order number;
 - (c) the name of the City's Project Manager;
 - (d) the invoice number and date;
 - (e) details of any applicable taxes (with each tax shown separately); and
 - (f) tax registration number(s).
- 5.10 If the City does not approve of or wishes to further review, audit or otherwise seek clarification concerning any of the Consultant's invoices, for whatever reason, the City will not be liable for interest charges in respect of that invoice for the period from the date the invoice is submitted until the date that the invoice is paid, provided however, the City will use reasonable efforts to have the review, audit or clarification resolved within a 60 day period. The City will, if it approves the amount of such invoice, cause the respective invoice to be paid within 30 days of approval by electronic funds transfer to the bank account indicated by the Consultant.
- 5.11 The Consultant will keep proper accounts and records of all costs and expenditures forming the basis of any billing to the City, including but not limited to hours worked, details of all disbursements and percentage amounts of work completed. The City will be entitled to verify the accuracy and validity of all billings and payments made by auditing and taking extracts from the books and records of the Consultant and by such other means as will be reasonably necessary or advisable.
- 5.12 The Consultant shall provide bank account information to the City to enable the City to make payments by electronic funds transfer, as contemplated hereby.
- 6.0 CHANGES TO SCOPE OF SERVICES**
- 6.1 The City's Project Manager may, from time to time and at any time on prior written notice to the Consultant, vary the scope of Services to be provided by the Consultant. In that case and where this Agreement contains delivery dates and/or limits as to fees or disbursements (or a defined "Maximum Fees and Disbursements") for all or any part of the Services, such delivery dates and/or limits will be adjusted as agreed to by both Parties in writing, and failing agreement, as reasonably determined by the City's Project Manager.
- 6.2 Should the Consultant consider that any request or instruction from the City's Project Manager constitutes a change in the scope of Services, the Consultant will provide the City's Project Manager with notice in writing within ten days of such request or instruction. If the Consultant does not deliver written notice to the City within the time period specified, the City will not be obligated to make any payments of additional fees, disbursements or out of pocket expenses to the Consultant.
- 6.3 The City's Project Manager will consider the Consultant's written notice (if any) within a further ten days of receipt of the Consultant's notice and determine and advise as to whether the request constitutes a change in the scope of the Services and, if necessary, the method by which the variation will be scoped and reimbursed. [If the City determines that the professional fees payable to the Consultant should be increased due to an increase in the scope of the Services then any such

increases will be based on the hourly rates set out in Section [insert] of the Proposal.][Delete if inapplicable.]

7.0 RELEASE AND INDEMNIFICATION

- 7.1 The Consultant now releases the City, its officials, officers, employees and agents from all costs, losses, damages and expenses, including those caused by personal injury, death, property damage, loss and economic loss arising out of, suffered or experienced by the Consultant, its Sub-contractors, and their respective officers, employees and agents in connection with their performance of the Services under this Agreement.
- 7.2 In undertaking the Services, the Consultant acknowledges that the Consultant has inspected the City's Site, agrees to accept the City's Site "as-is" and undertakes to take all precautions necessary to ensure the safety of all persons employed or contracted by the Consultant to perform the Services.
- 7.3 Despite any insurance coverage of the City, the Consultant hereby agrees to indemnify and save harmless the City of Vancouver and its successors, assigns, official, employees, agents and authorized representatives and each of them (in each case an "Indemnified Party") from and against all costs, losses, claims, damages, actions, and causes of actions (collectively referred to as "Claims") that an Indemnified Party may sustain, incur, suffer or be put to at any time either before or after the expiration or termination of this Agreement, that arise out of errors, omissions or negligent acts of the Consultant, its Sub-contractors, or their respective officers, employees or agents under this Agreement excepting always that this indemnity does not apply to the extent, if any, to which the Claims are caused by errors, omissions or negligent acts of an Indemnified Party.
- 7.4 This indemnity will not affect or prejudice the City from exercising any other rights that may be available to it at law or in equity.
- 7.5 The release and indemnity set out above will survive the expiry or sooner termination of this Agreement.

8.0 INSURANCE

- 8.1 The Consultant will comply with the insurance requirements set out in Appendix A - Insurance Requirements.

9.0 WORKSAFEBC

- 9.1 The Consultant agrees that it will procure and carry and pay for, full WorkSafeBC coverage for itself and all workers, employees, servants and others engaged in or upon any work or service which is the subject of this Agreement. The Consultant agrees that the City has the unfettered right to set off the amount of the unpaid premiums and assessments for such WorkSafeBC coverage against any monies owing by the City to the Consultant. The City will have the right to withhold payment under this Agreement until the WorkSafeBC premiums, assessments or penalties in respect of work done or service performed in fulfilling this Agreement have been paid in full.
- 9.2 The Consultant will provide the City with the Consultant's and each Sub-contractor's WorkSafeBC registration number and clearance letters from WorkSafeBC confirming that the Consultant and each Sub-contractor are registered in good standing with WorkSafeBC and that all assessments have been paid to the date thereof prior to the City having any obligation to pay monies under this Agreement. The Consultant will indemnify the City and hold harmless the City from all manner of

claims, demands, costs, losses, penalties and proceedings arising out of or in any way related to unpaid WorkSafeBC assessments owing from any person or corporation engaged by the Consultant in the performance of this Agreement or arising out of or in any way related to the failure to observe safety rules, regulations and practices of WorkSafeBC, including penalties levied by WorkSafeBC.

- 9.3 Whenever the Consultant is required or permitted to perform any Services on any City sites, the Consultant is now appointed and now accepts appointment as the “prime contractor” (as defined in the WorkSafeBC regulations) in connection with such Services.

10.0 CITY INFORMATION/APPROVALS

- 10.1 No reviews, approvals or inspections carried out or information supplied by the City will derogate from the duties and obligations of the Consultant (with respect to designs, reviews, inspections, approvals or otherwise), and all responsibility related to the Services will be and remain with the Consultant. For greater certainty, any information provided by the City to the Consultant, whether under the RFP or under this Agreement, including any studies, reports, plans, drawings, or specifications, is provided to the Consultant for information purposes only and may not be relied upon by the Consultant.

11.0 COMMUNICATION BETWEEN CONSULTANT AND CITY

- 11.1 The City appoints [insert name] [email address] as the City’s Project Manager for the purposes of this Agreement.

In the event of the revocation in writing of [insert name]’s appointment as the City’s Project Manager by the City, [insert name] will have no further authority under this Agreement, except as may be specifically designated in writing by the City and agreed to in writing by [insert name], and all references to the City’s Project Manager in this Agreement will thereafter be deemed to be a reference to the City or to such other person designated in writing by the City to the Consultant.

The City’s Project Manager may from time to time delegate to a representative the performance of or the authority to perform the duties, responsibilities, rights and obligations of the City in respect of which the City’s Project Manager has been designated and appointed its sole and exclusive agent.

- 11.2 The Consultant appoints [insert name] [email address] as its representative for the purposes of this Agreement (the “Consultant’s Project Manager”).
- 11.3 Unless otherwise agreed to in writing by the Parties, all material communication between the Consultant and the City regarding this Agreement, including performance of the Services, will be between the City’s Project Manager and the Consultant’s Project Manager.

12.0 TERM OF AGREEMENT

- 12.1 This Agreement will commence on the Effective Date and will expire on the completion of the Services, which Services must be completed by [insert date] (the “Term”).

[Insert schedule]

13.0 TERMINATION

- 13.1 The City at any time, in its sole judgment, may, whether or not cause exists, terminate the services of the Consultant in whole or in part by giving ten days’ prior written notice to the

Consultant. If termination is not for cause, the Consultant will be paid for all Services properly performed to the date of the delivery of the said notice (subject to the terms of this Agreement) plus all necessary and reasonable wind-up costs incurred, if any, in closing out the Services or the part terminated.

- 13.2 Despite Section 13.1, in no event and under no circumstances will the Consultant's "necessary and reasonable wind-up costs incurred" pursuant to Section 13.1 exceed \$[insert dollar amount calculated at ten business days' pay] (including all taxes).

14.0 ASSIGNMENT

- 14.1 The Consultant will not assign this Agreement in whole or in part except with the prior written consent of the City, which consent will not be unreasonably withheld, delayed or conditioned. Any attempt to assign this Agreement without such consent will be void and of no effect. However, the Consultant will be permitted to assign this Agreement to any entity into, by or with which the business or assets of the Consultant have been merged, acquired, consolidated or re-organized, or any entity which purchases all or substantially all of the business or assets of the Consultant, provided always that the Consultant first provides the City with:

- (a) reasonable particulars of the transaction (permitting the City to independently verify the nature of the transaction); and
- (b) a legally enforceable covenant from the new entity confirming that it is legally bound to the City to perform this Agreement.

15.0 CONFIDENTIALITY

- 15.1 In the course of or for the purpose of performing the Services, the Consultant will obtain or have access to information, including but not limited to technical information, financial information and business information, which is confidential to the City, and is the exclusive, world-wide property of the City and/or its suppliers and customers (collectively "Confidential Information"). Excluded from the definition of Confidential Information is:

- (a) information which is in, or becomes part of, the public domain, not due to the Consultant's breach of this Agreement or the Consultant's actions;
- (b) information which was previously in the Consultant's possession and did not originate from the City; and
- (c) information which lawfully becomes available to the Consultant from a third party not under an obligation of confidence to the City regarding such information.

- 15.2 The Consultant will not use or reproduce the Confidential Information other than as reasonably required for the performance of the Services under this Agreement. The Consultant will not, without the prior written consent of the City given on such terms and conditions as it prescribes in its sole discretion, disclose or allow access to the Confidential Information to any person, except to only those of its own employees who have a need to know the Confidential Information solely for the provision of the Services, and who have been advised of its confidential nature and have agreed to be bound by the confidentiality and use-restriction provisions in this Section 15.0. The Consultant will take all reasonable precautions against the Confidential Information being used by or disclosed to any unauthorized person.

- 15.3 If the Consultant is required by any law, legal proceeding, or court or government order, to disclose any Confidential Information, the Consultant shall limit its disclosure of such Confidential Information to the extent and purpose legally required, provided that prior to any disclosure the Consultant will promptly notify the City in writing of the existence and the terms, and conditions of the required disclosure and, at the City's request and expense, co-operate in obtaining a protective order or other assurance that confidential treatment and restrictions on use will be accorded such Confidential Information.
- 15.4 The City is subject to the *Freedom of Information and Protection of Privacy Act* (British Columbia), which imposes significant obligations on the City's contractors to protect all personal information acquired from the City in the course of providing services to the City. The Consultant confirms and acknowledges its obligations to comply with all obligations imposed on it pursuant to the *Freedom of Information and Protection of Privacy Act* (British Columbia) with respect to all personal information received from the City whether as part of the Confidential Information or otherwise.
- 15.5 The Consultant acknowledges that in the event of a breach by the Consultant or any of its employees of their respective confidentiality obligations pursuant to this Section 15.0, damages alone would not be an adequate remedy. The Consultant therefore agrees with the City that, in addition to and without limiting any other right or remedy it may have, the City will have the right to an immediate injunction or other available equitable relief in any court of competent jurisdiction enjoining any threatened or actual breach of such obligations.
- 15.6 The Consultant shall return all copies of the Confidential Information to the City, in all tangible forms and media, and delete all Confidential Information resident in any databases or systems, upon the earliest of the following dates:
- (a) completion of the Services;
 - (b) expiration or earlier termination of this Agreement; and
 - (c) written request of the City for return of the Confidential Information;
- provided that the Consultant shall have the right to retain one copy of the Confidential Information solely for archival purposes or as otherwise may be required by law, subject to its ongoing confidentiality and restricted use obligations.
- 15.7 This Section 15.0 shall survive the expiration or earlier termination of this Agreement.

16.0 NO PROMOTION OF RELATIONSHIP

- 16.1 The Consultant will not disclose or promote its relationship with the City, including by means of any verbal declarations, announcements, sales, marketing or other literature, letters, client lists, websites, internet domain names, press releases, brochures or other written materials (the "**Communications**") without the express prior written consent of the City (except as may be necessary for the Consultant to perform its obligations under this Agreement).
- 16.2 Furthermore, the Consultant undertakes and will cause all of its Sub-contractors to undertake not to disclose or promote its relationship with the City in any Communications in a manner which could suggest or create an association, express or implied, between the Consultant and the City. Without limiting the generality of the foregoing, the Consultant will not refer to or use any website, domain name, official emblem, logo or mascot of the City of Vancouver in any Communications, without the express prior written consent of the City.

17.0 DELIVERABLES

- 17.1 As a result of or as part of providing the Services, the Consultant may receive, create, produce, acquire or collect one or more of the following:
- (a) products, goods, equipment, supplies, models, prototypes and other materials;
 - (b) information and data;
 - (c) reports, drawings, plans, designs, depictions, specifications and other documentation; and
 - (d) any other items identified in this Agreement as deliverables;
- (collectively, the “**Deliverables**”).
- 17.2 Deliverables are deemed not to include:
- (a) any item not required to be produced by the Consultant or supplied to the City as part of or together with the Services, provided that if the City has paid or is liable to pay for any portion of such item’s creation, production, acquisition or collection then such item shall be deemed to be a Deliverable;
 - (b) any item produced as a result of the Services, which is specified in this Agreement as being excluded from the Deliverables category; and
 - (c) any item which pre-existed the effective date of this Agreement, that is owned by a third party or that is used by the Consultant as part of the services provided to any of its other customers (the “**Pre-Existing Materials**”).
- 17.3 All Deliverables will be owned solely by the City unless otherwise expressly provided herein. The City shall have the complete and unfettered right to use and deal with the Deliverables for its own benefit in any way it sees fit without limitation, and without accounting in any way to the Consultant.
- 17.4 The Consultant will keep accurate records and provide regular reports to the City about the Deliverables as they are created or acquired, and grant to the City access to the Deliverables at all times on reasonable notice. The Consultant will treat each Deliverable as subject to the confidentiality provisions set out in Section 15.0 unless advised otherwise by the City.
- 17.5 Each Deliverable, as to the whole or that portion of the Deliverable then existing, will be delivered by the Consultant to the City on the earliest of each of the following events:
- (a) the date specified in this Agreement for the delivery of such Deliverable;
 - (b) immediately on the date of expiration or sooner termination of this Agreement; or
 - (c) the date specified by written notice of the City requesting delivery of all or any part of the Deliverable.
- 17.6 The Consultant transfers to the City, free of all liens and encumbrances, ownership of each Deliverable, and assigns all of its world-wide present and future rights, title and interest in and to each Deliverable, including copyright, effective as of the date of creation or acquisition of such Deliverable by the Consultant. The Consultant irrevocably waives, in favour of the City, all moral

rights in the Deliverables. The Consultant will obtain from its employees and any independent contractors, all required assignments and releases of intellectual property, and waivers of moral rights, in the Deliverables. The Consultant will not assert any rights to or interests in, or apply for or register any copyright or other rights or interests in, the Deliverables, or assist any other person in doing so. The Consultant shall provide to the City, during and after the term of this Agreement, any reasonable assistance required for the City to obtain, perfect and enforce its ownership of and rights in the Deliverables, including without limitation execution of assignments and transfers of the Deliverables. This Section does not apply to Pre-Existing Materials.

- 17.7 The Consultant will not incorporate any Pre-Existing Materials in any Deliverable without first:
- (a) advising the City, in writing, of the nature of the Pre-Existing Materials and their proposed use and obtaining the City's written consent to do so;
 - (b) acquiring from each third-party owner of such Pre-Existing Materials, a fully paid-up, perpetual, non-exclusive license, in writing, for the City to use the Pre-Existing Materials as part of the Deliverable; and
 - (c) granting, in writing, to the City with respect to such Pre-Existing Materials that the Consultant owns, a fully paid-up, perpetual, non-exclusive license to use the Pre-Existing Materials as part of the Deliverable.

- 17.8 The Consultant represents and warrants that the Deliverables will not infringe, misappropriate or misuse any copyright, patent, trade-mark, trade secret, or confidential or proprietary information of a third party. The Consultant shall defend, indemnify and hold the City harmless from and against any and all damage, liability, cost and expense incurred by the City in connection with any claim by a third party that a Deliverable infringed, misappropriated or misused its copyright, patent, trade-mark, trade secret, or confidential or proprietary information.

18.0 NOTICES

- 18.1 Any notice required or permitted to be given to the Consultant will be sufficiently given if delivered in writing by the City's Project Manager to the Consultant's Project Manager personally or, if mailed, by registered mail to the last known address of the Consultant.
- 18.2 Any notice required or permitted to be given to the City will be sufficiently given if delivered in writing by the Consultant's Project Manager to the City's Project Manager personally or, if mailed, by registered mail to City of Vancouver at 453 West 12th Avenue, Vancouver, B.C., V5Y 1V4 (addressed to the attention of the City's Project Manager).

19.0 NO CONFLICT OF INTEREST

- 19.1 The Consultant agrees that during the Term the Consultant will not engage in any conduct which would or might put the interests of the City into conflict with the interests of any other person, whether or not a client of the Consultant's. Without limiting the general scope of this Section 19.1 and by way of example only, the Consultant is prohibited from and will not provide any services which assist or could be seen to be assisting any person in responding to a request for proposal or invitation to tender, or otherwise giving that person an unfair competitive advantage over other proponents or tenderers responding to a request for proposal or invitation to tender by the City. The Consultant now acknowledges that a breach of this Section 19.1 could constitute not only a breach of this Agreement but also a violation of the *Competition Act* (Canada) and *Criminal Code* of Canada, and accordingly, could be punishable as a crime (as well as a breach of contract).

19.2 The Consultant now confirms and warrants that there is no officer, director, shareholder, partner or employee or other person related to the Consultant's organization (a "**person having an interest**") or any spouse, business associate, friend or relative of a person having an interest who is:

- (a) an elected official or employee of the City; or
- (b) related to or has any business or family relationship with an elected official or employee of the City, such that there would be any conflict of interest or any appearance of a conflict of interest in the administration of this Agreement or the performance of the Services.

20.0 NON-RESIDENT WITHHOLDING TAX

20.1 If the Consultant is a non-resident of Canada as defined in Canadian income tax legislation, the City may withhold from all monies payable under this Agreement such amounts as set out in Canadian income tax legislation, unless a Canada Revenue Agency waiver has been provided to the City within the time limit required under the Canada Revenue Agency administrative guidelines as in effect from time to time and, in any event, prior to payment of an invoiced amount.

20.2 The City shall receive full credit under this Agreement for monies withheld as of and from the date of the withholding and no interest will be payable by the City on sums withheld and later paid directly to the Consultant.

20.3 The Consultant shall indemnify the City for any losses, damages or expenses incurred by the City as a result of the Consultant's failure to properly disclose to the City its non-resident status, as defined in Canadian income tax legislation.

21.0 COMPLIANCE WITH LAW

21.1 The Consultant will comply with the City of Vancouver License By-law and maintain a valid business license throughout the duration of this Agreement.

21.2 The Consultant agrees that it will during the Term comply with all Applicable Laws.

22.0 GOVERNING LAW AND RESOLUTION OF DISPUTES

22.1 This Agreement will be governed by the laws of the Province of British Columbia and the courts of British Columbia will have exclusive jurisdiction to determine all disputes arising under this Agreement and the Parties now irrevocably agree to submit all disputes to the courts of British Columbia for resolution.

23.0 INDEPENDENT CONSULTANT

23.1 This Agreement is a contract for services and the Consultant, its permitted Sub-contractors, and the officers, directors, shareholders, partners, personnel, affiliates and agents of the Consultant and its permitted Sub-contractors are not, nor are they to be deemed to be, partners, appointees, employees or agents of the City.

23.2 The Consultant will not represent to anyone that the Consultant has any authority to bind the City in any way or that the Consultant is an employee or agent of the City.

24.0 INDEPENDENT LEGAL ADVICE

- 24.1 The Consultant acknowledges that the Consultant has been given the opportunity to seek independent legal advice before executing this Agreement.

25.0 TIME FOR PERFORMANCE

- 25.1 **Time of the Essence.** Time shall be of the essence of this Agreement.
- 25.2 **Unavoidable Delay.** Notwithstanding Section 25.1, except for the performance of obligations to pay money, the time periods for the City and the Consultant to perform under this Agreement will be extended for periods of time during which their performance is delayed or prevented due to an Unavoidable Delay. For the purposes of this Section, an “**Unavoidable Delay**” means any circumstances beyond the reasonable control of the party trying to perform (such as, for example, acts of God, war or other strife or governmental action) but expressly excludes any and all delays caused by the Consultant’s lack of financial resources; the Consultant’s insolvency ; strikes, lockouts or other withdrawals of services arising out of any labour dispute involving the City, the Consultant or a Sub-contractor; or governmental action taken in the enforcement of any law specifically against the Consultant or its Sub- Consultants. If an Unavoidable Delay occurs, the non-performing party will, as soon as possible after the occurrence of the Unavoidable Delay, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume performance of its obligations under this Agreement.

26.0 GENERAL

- 26.1 **No Waiver.** No action or failure to act by the City shall constitute a waiver of any right or duty under this Agreement, or constitute an approval or acquiescence in any breach hereunder, except as may be specifically agreed in writing by the City.
- 26.2 **Severability.** The invalidity, illegality or unenforceability of any portion or provision of this Agreement or the occurrence of any event rendering any portion or provision of this Agreement void shall in no way affect the validity or enforceability of any other portion or provision of this Agreement. Any void portion or provision shall be deemed severed from this Agreement and the balance of this Agreement shall be construed and enforced as if this Agreement did not contain the particular portion or provision held to be void. The Parties further agree to amend this Agreement to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken position.
- 26.3 **Remedies Cumulative.** The remedies of the Parties provided for in this Agreement are cumulative and are in addition to any remedies available to the Parties at law or in equity. No remedy will be deemed to exclude or restrict the right of a Party to any other remedies against the other Party and a Party may from time to time have recourse to one or more of the remedies specified in this Agreement or at law notwithstanding the termination of this Agreement.
- 26.4 **Further Assurances.** Each Party shall execute such further and other documents and instruments and do such further and other acts as may be necessary to implement and carry out the provisions and intent of this Agreement.
- 26.5 **Entire Agreement.** The Contract Documents constitute the entire agreement between the Parties with respect to the subject matter hereof, and supersede all previous communications, representations and agreements, whether oral or written, with respect to the subject matter hereof.

- 26.6 **Amendment.** This Agreement shall not be amended except as specifically agreed in writing by both the City and the Consultant.
- 26.7 **Joint and Several Liability of Joint Venture Participants.** If the Consultant is a joint venture of two or more entities, it is understood and agreed that the grants, covenants, provisos, claims, rights, powers, privileges and liabilities of the entities who comprise the Consultant shall be joint and several.
- 26.8 **Schedules and Appendices.** The schedules and appendices attached hereto are incorporated by reference in and form an integral part of this Agreement.
- 26.9 **Set-Off.** The City may at its option, withhold and set-off against any amount owing to the Consultant (whether under this Agreement or otherwise) any amounts payable by the Consultant to the City (whether under this Agreement or otherwise) and the amount of any damages suffered or claims made or to be made by the City as a result of any other claim it may have against the Consultant, whether such claim is at law or in equity or tort or on any other basis.
- 26.10 **Enurement.** This Agreement shall enure to the benefit of and be binding upon the City and the Consultant and their respective successors and permitted assigns.
- 26.11 **Execution.** This Agreement may be executed in one or more counterparts each of which will constitute an original and together will constitute one and the same Agreement. This Agreement may be executed by the Parties electronically or by facsimile and if so executed and transmitted, this Agreement will be for all purposes as effective as if the Parties had delivered an executed original Agreement.

As evidence of their agreement to be bound by the above contract terms, the City and the Consultant each have executed this Agreement as of the day and year first above written.

CITY OF VANCOUVER

by its authorized signatories:

Signature: _____

Name: _____

Title: Category Manager

Signature: _____

Name: _____

Title: Chief Purchasing Officer

Signature: _____

Name: _____

Title: General Manager, Engineering Services Department

[INSERT NAME OF CONSULTANT]

by its authorized signatories:

Signature: _____

Name: _____

Title: _____

Signature: _____

Name: _____

Title: _____

Print Name and Title

APPENDIX A - INSURANCE REQUIREMENTS

A1.1 Required Types/Amounts Prior to commencing the Services, the Consultant will obtain at its own expense:

- (a) a professional (errors and omissions) liability insurance policy with limits of not less than \$2,000,000.00 per claim and not less than \$3,000,000.00 in aggregate and a deductible of not more than \$50,000, protecting the Consultant against all claims for loss or damage arising out of any error or omission of the Consultant or the Consultant's personnel in the performance of the Services; and
- (b) Commercial general liability insurance policy with a limit of not less than \$2,000,000 per occurrence \$2,000,000 in aggregate and a deductible of not more than \$5,000 or other such amounts as the City may approve from time to time, protecting the Consultant and the Consultant's personnel against all claims for bodily injury including death, personal injury, advertising liability, completed operations, and product liability, and property damage or loss, arising out of the operations of the Consultant or the actions of the Consultant or the Consultant's personnel. The policy must:
 - (i) include a cross-liability or severability of interest clause in favour of the City;
 - (ii) include blanket contractual liability coverage;
 - (iii) include contingent employer's liability coverage;
 - (iv) include non-owned auto liability coverage; and
 - (v) name the City and the City's officials, employees and agents as additional insureds.
- (c) Automobile liability insurance on all licensed vehicle owned or leased to the Consultant with a limit of not less than \$5,000,000 per occurrence or other such amount as the City may approve from time to time protecting against damages arising from bodily injury including death, and from claims for property damage arising from the operations of the Consultant, its agents or employees.
- (d) All-risk contractor's equipment or property insurance covering all property or equipment owned or rented by the Consultant and its agents or employees against all risks of loss or damage with coverage sufficient to allow for immediate replacement. This insurance must include a clause that waives the insurer's right of subrogation against the City and the City's officials, employees and agents.

A1.2 Required Policy Terms

All required insurance policies must remain in full force and effect at all times until completion of the Services or earlier cancellation of this Agreement, and for a period of not less than two years thereafter, and must:

- (a) be obtained from and issued by insurers authorized to carry on business within British Columbia, on terms satisfactory to the City's Director of Risk Management, acting reasonably;

- (b) be primary insurance in respect to the City, and any insurance or self-insurance maintained by the City will be in excess of this insurance and will not contribute with such policies; and
- (c) contain a provision that such insurance coverage will not be cancelled or endorsed to reduce the limits of liability without the insurer or their authorized representative giving the City at least 30 days' written notice. Should the policy be endorsed to restrict coverage midterm, written notice of such restriction will be sent by registered mail to the City no later than the effective date change; the exception is cancellation for non-payment of premium in which case the applicable statutory conditions will apply.

A1.3 Insurance Certificate

Prior to signing, and immediately following the signature of, this Agreement, the Consultant shall have provided, or shall provide, the City's Project Manager with evidence of all required insurance to be taken out in the form of one or more certificate(s) of insurance. The certificate(s) of insurance will identify the Agreement title, number, policyholder and scope of work and must not contain any qualifications or disclaimers. Proof of insurance, in the form of such certificate(s) of insurance (or copies of the policy(ies) themselves, if requested), will be made available to the City's Project Manager at any time during the performance of the Services immediately upon request.

A1.4 Sub-Contractors' Insurance

The Consultant will provide in its agreements with its Sub-contractors insurance clauses in the same form as in this Agreement. Upon request, the Consultant will deposit with the City's Project Manager detailed certificates of insurance for the policies of its Sub-contractors (or copies of the policy(ies) themselves, if requested) and a copy of the applicable insurance clauses from its Sub-contractor agreements.

A1.5 Insurance Requirements Additional to any other Requirements

The Consultant and each of its Sub-contractors will purchase and maintain, at its own cost, any additional insurance which it is required by law, or other lines of insurance coverages, endorsements, or increased limits of insurance as deemed necessary by the City and as a reasonable and prudent consultant, engineer, architect, or other professional would require to protect their performance of services similar to the Services outlined.

A1.6 Insurance Requirements Independent of Agreement Obligations

Neither the providing of insurance by the Consultant or the Sub-contractors in accordance with this Agreement, nor the insolvency, bankruptcy or the failure of any insurance company to pay any claim accruing, will be held to relieve the Consultant from any other provisions of this Agreement with respect to liability of the Consultant or otherwise.

APPENDIX B - PROPOSAL

APPENDIX C - RFP

APPENDIX D - INSURANCE FORMS

APPENDIX E - SCOPE OF WORK