REQUEST FOR PROPOSAL (RFP)

RFP NUMBER: 12-2021-07-E

Landfill Operation Services Contract for the Aspen Waste Management Facility

TERMS OF REFERENCE

August 17, 2021
TABLE OF CONTENTS

REQUEST FOR PROPOSAL (RFP) ........................................................................................................ 1
DEFINITIONS .................................................................................................................................... 4

1.0 SECTION 1.0 – REQUEST ........................................................................................................ 5

2.0 SECTION 2.0 – INTRODUCTION ............................................................................................ 6
  2.1 PURPOSE .................................................................................................................................. 6
  2.2 LOCATION ............................................................................................................................... 6
  2.3 HOURS OF OPERATION .......................................................................................................... 6
  2.4 AVAILABLE INFORMATION .................................................................................................... 6

3.0 SECTION 3.0 – SCOPE OF WORK ............................................................................................ 7
  3.1 BACKGROUND ....................................................................................................................... 7
  3.2 SUMMARY ............................................................................................................................. 8
  3.3 OVERVIEW OF SERVICES ..................................................................................................... 9
  3.4 CONTRACTOR’S GENERAL RESPONSIBILITIES ................................................................. 10
  3.5 TOWN OF DRAYTON VALLEY’S RESPONSIBILITIES ......................................................... 11
  3.6 PRIME CONTRACTOR ........................................................................................................ 11
  3.7 CONTRACTOR’S WORK FORCE .......................................................................................... 12
  3.8 FORCE ACCOUNT WORK .................................................................................................... 14
  3.9 ENVIRONMENTAL PROTECTION ....................................................................................... 14
  3.10 COMPACTION AND COVER SERVICES .............................................................................. 14
      3.10.1 WORKING FACE OPERATION AND MAINTENANCE .............................................. 15
      3.10.2 TRAFFIC CONTROL DEVICES ............................................................................... 16
      3.10.3 CONTROLLED WASTE .......................................................................................... 16
      3.10.4 LITTER CONTROL ..................................................................................................... 17
      3.10.5 COMPACTION .......................................................................................................... 17
      3.10.6 COMPACTION TESTING BY TOWN OF DRAYTON VALLEY .................................. 17
      3.10.7 DAILY COVER ........................................................................................................... 18
  3.11 SNOW CLEARING ................................................................................................................ 18
  3.12 USE OF AWMF BUILDINGS, THE AWMF SITE, AND AWMF PROPERTY ..................... 19
  3.13 PUBLIC DROP-OFF AREA ................................................................................................... 20
  3.14 MATERIALS RECOVERY FACILITY AND RECYCLING CENTRE OPERATIONS ........... 21
  3.15 CLEAN FILL STOCKPILE AREA ......................................................................................... 21
  3.16 YARD WASTE ..................................................................................................................... 21
  3.17 NUISANCE MANAGEMENT ............................................................................................... 21
  3.18 WEATHER AND AWMF ACCESS .................................................................................... 21
  3.19 FIRE CONTROL .................................................................................................................. 22
  3.20 MAINTENANCE OF ROADS ............................................................................................... 23
  3.21 SCAVENGING AND THEFT ............................................................................................... 23
  3.22 SECURITY, ACCESS, AND TRAFFIC CONTROL ................................................................. 23
  3.23 DUST SUPPRESSION ........................................................................................................... 24
  3.24 WORK PLAN ........................................................................................................................ 24
  3.25 SITE DRAINAGE .................................................................................................................. 24
  3.26 REPORTING .......................................................................................................................... 25
3.27 EQUIPMENT .......................................................................................................................... 26
  3.27.1 EQUIPMENT SPECIFICATIONS .............................................................................. 26
  3.27.2 EQUIPMENT BREAKDOWN .................................................................................... 27
  3.27.3 ADDITIONAL DETAILS ............................................................................................. 28

4.0 SECTION 4.0 – GENERAL INFORMATION ......................................................................... 29
  4.1 AGREEMENT REQUIREMENTS .......................................................................................... 29
  4.2 PAYMENT ADJUSTMENTS .................................................................................................. 29
  4.3 PERFORMANCE MEASURES ............................................................................................. 30
  4.4 SPECIFIC TERMS AND CONDITIONS ........................................................................... 31
    4.4.1 INSURANCE ............................................................................................................. 31
    4.4.2 CERTIFICATES ........................................................................................................ 32
    4.4.3 SAFETY .................................................................................................................... 32
  4.5 SUBMISSION OF PROPOSAL .......................................................................................... 32
  4.6 CONFLICT OF INTEREST ................................................................................................. 33
  4.7 ACCEPTANCE AND REJECTION OF PROPOSALS ......................................................... 33
  4.8 EVALUATION OF PROPOSALS ..................................................................................... 33
    4.8.1 PASS/FAIL EVALUATION ........................................................................................ 34
    4.8.2 TECHNICAL EVALUATION ...................................................................................... 35
  4.9 PROPOSAL PRICE EVALUATION ..................................................................................... 37
  4.10 PROPOSAL TIMELINE ...................................................................................................... 37

5.0 SECTION 5.0 – PROPOSAL FORMS ............................................................................... 38
  5.1 REQUIRED PROPOSAL DOCUMENTS ............................................................................. 39

APPENDICES

Appendix A Figures
Appendix B Approval
Appendix C Operations Plan, Issued For Review (August 2021)
Appendix D Historical Tonnages
## DEFINITIONS

<table>
<thead>
<tr>
<th>Item</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptable Waste</td>
<td>Waste accepted at the AWMF per Approval Section 4.3.</td>
</tr>
<tr>
<td>All Weather Roads</td>
<td>Roads on site capable of supporting traffic in all weather conditions.</td>
</tr>
<tr>
<td>Alternative Daily Cover</td>
<td>Alternative daily cover material to clean fill soils.</td>
</tr>
<tr>
<td>Apparent Density</td>
<td>Calculated as weight of landfilled waste divided by the airspace consumed.</td>
</tr>
<tr>
<td>Approval</td>
<td>Approval for the AWMF, Approval No. 47415-02-00, effective May 1, 2013, expiring April 30, 2023, held by the Aspen Waste Management Authority.</td>
</tr>
<tr>
<td>AWMF</td>
<td>The Aspen Waste Management Facility. Located at 49226 56th Street, Drayton Valley, Alberta, as per Figure 1.</td>
</tr>
<tr>
<td>Clean Fill Stockpile Area</td>
<td>The area set aside for stockpiling clean fill as per Figure 2.</td>
</tr>
<tr>
<td>Contractor</td>
<td>The successful proponent for this RFP.</td>
</tr>
<tr>
<td>Contractor's Representative</td>
<td>The Contractor’s site manager or primary operator for the AWMF.</td>
</tr>
<tr>
<td>Controlled Waste</td>
<td>Waste to be disposed of in a specified manner.</td>
</tr>
<tr>
<td>Customers</td>
<td>Patrons to the AWMF.</td>
</tr>
<tr>
<td>Daily Cover</td>
<td>Soil materials, or approved alternative, to be used to cover waste in accordance with the AWMF’s Operations Plan.</td>
</tr>
<tr>
<td>Fire Department</td>
<td>Drayton Valley/Brazeau County Fire Services.</td>
</tr>
<tr>
<td>Force Account</td>
<td>Payment method used for extra work when no unit price has been established.</td>
</tr>
<tr>
<td>MRF</td>
<td>Materials Recovery Facility</td>
</tr>
<tr>
<td>Operational Certificate</td>
<td>Certified in accordance with the Waste Control Regulation and the Municipal Waste Management Operator Certification Guidelines.</td>
</tr>
<tr>
<td>PDO</td>
<td>Public Drop-Off. Area containing roll-off bins for waste placement by small vehicle traffic.</td>
</tr>
<tr>
<td>Services</td>
<td>Work to be undertaken by the Contractor.</td>
</tr>
<tr>
<td>Starter Berms</td>
<td>Fill material piled into small windrows adjacent to waste placement.</td>
</tr>
<tr>
<td>TODV</td>
<td>Town of Drayton Valley</td>
</tr>
<tr>
<td>Waste</td>
<td>Refuse material to be disposed of at the AWMF.</td>
</tr>
<tr>
<td>Work</td>
<td>Services to be undertaken by the Contractor.</td>
</tr>
<tr>
<td>Working Face</td>
<td>The area of the landfill that is receiving waste.</td>
</tr>
</tbody>
</table>
SECTION 1.0 – REQUEST

1.1 The Town of Drayton Valley (as may be referred to hereinafter as the “TODV”) is requesting a detailed and comprehensive proposal from qualified individuals, individuals and/or businesses for the delivery of Landfill Operation Services for the municipality.

1.2 The TODV is seeking proposals to meet the minimum requirements for service delivery as outlined in this Request for Proposals.

1.3 General information is available from the Landfill Manager, Sonny Caguinguin, Town of Drayton Valley, 5102-52nd Street, Drayton Valley, AB. Phone 780 514 2561.

1.4 Submissions will be accepted at the TODV until 2:00PM local time, September 17, 2021.

1.5 Responses can be mailed to the Town of Drayton Valley, Box 6837, Drayton Valley, AB, T7A 1A1 or hand delivered to the Town of Drayton Valley Civic Centre, 5102-52nd Street, Drayton Valley, AB. The submission must be in a sealed envelope and clearly marked as:

Request for Proposal
Operations Contract for the Aspen Waste Management Facility
Town of Drayton Valley Selection Committee

Responses can also be submitted via email. The email submission must adhere to the following requirements:

Subject Line: Proposal – Operations Contract for the Aspen Waste Management Facility
Responses sent to: scaguinguin@draytonvalley.ca
Maximum attachment size: 20 MB

1.6 Submission inquiries are to be directed to:

Sonny Caguinguin, B. Eng.
Landfill Manager
Town of Drayton Valley
Phone: 780 514 2561
Email Address: scaguinguin@draytonvalley.ca
SECTION 2.0 – INTRODUCTION

2.1 PURPOSE

The purpose of this Request for Proposal (RFP) is to solicit non-binding Proposals from qualified Proponents with the intent to enter into a Contract with the Town of Drayton Valley (TODV) to provide landfill operation services at the Aspen Waste Management Facility (AWMF) located at 49226 56th Street, Drayton Valley, Alberta for a period of five (5) years. Subject to mutual approval by the TODV and the selected Proponent, the Agreement may be extended for an additional one (1) year term. The selected Proponent will be requested to enter into negotiations for an agreement with the TODV for the provision of the Deliverables.

All proposals received in response to this RFP will be evaluated and the Proponent judged to have the best overall Proposal will be selected to enter into negotiations leading to a Contract with the TODV for landfill operation services.

2.2 LOCATION

The Aspen Waste Management Facility, 49226 56th Street, Drayton Valley, Alberta.

2.3 HOURS OF OPERATION

The Aspen Waste Management Facility hours of operation are as follows:

A. Monday to Saturday: 9:00 a.m. to 5:00 p.m.
B. Sunday: 1:00 p.m. to 5:00 p.m. (from April 1 to October 31, No Winter operation on Sunday)

2.4 AVAILABLE INFORMATION:

The TODV can supply the following information and materials:

The following information is appended to this RFP:

A. Figure 1 – Site Location Map
   Figure 2 – Site Plan
B. Approval
D. Historical Tonnages
SECTION 3.0 – SCOPE OF WORK

3.1 BACKGROUND

The Town of Drayton Valley (TODV) is seeking a qualified Proponent to provide landfill operation services at the Aspen Waste Management Facility (AWMF), located in Drayton Valley, Alberta.

The AWMF is located approximately 2 km north of the TODV and is in the SE ¼ 20-49-07-W5M. The AWMF is surrounded by agricultural land, coulees, Highway 22, Range Road 75, and Township Road 494. The location of the AWMF, relative to the TODV, is illustrated on Figure 1 in Appendix "A".

The AWMF is currently owned by the TODV and operated under Approval No. 47415-02-00. The most recent Approval was renewed on May 1, 2013 and expires on April 30, 2023. A copy of the current Approval is provided in Appendix "B".

The AWMF currently services surrounding communities, including:

- The Town of Drayton Valley;
- Brazeau County;
- Parkland County; and
- Yellowhead County.

The AWMF is a Class II landfill, located at the north limits of the Town of Drayton Valley, Alberta (Figure 1). Developed and closed landfill cells on site include Phases 1A, 1B, 2A, 2B, 3A, 3B, 3C, and 3D. Currently, all commercial and municipal solid waste (MSW) (including construction and demolition waste) is being landfilled in Cell 4D within the Phase 4 development. Remaining cells which are to be developed in the future include Cell 4E. All known cells are presented on Figure 2. A copy of the AWMF Operations Plan, issued for review to the TODV, is attached as Appendix “C”.

On-site infrastructures include a scale facility and attached building (which is used as a ‘Take it or Leave it’ facility), public drop-off area, recycling building (which includes a storage area for household hazardous waste), Recycling Centre (located at the Site entrance) and a Materials Recovery Facility (MRF)/Quonset.

The historical tonnages of material processed at the AWMF for the past three (3) years is available below with detailed material reports found in Appendix "D":

<table>
<thead>
<tr>
<th>Material</th>
<th>2018 Tonnages</th>
<th>2019 Tonnages</th>
<th>2020 Tonnages</th>
<th>3-Year Average (tonnes/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Material Landfilled</td>
<td>16,319.85</td>
<td>16,121.30</td>
<td>15,658.96</td>
<td>16,033.37</td>
</tr>
<tr>
<td>Total Asbestos Disposed</td>
<td>1.83</td>
<td>-</td>
<td>3.39</td>
<td>2.61</td>
</tr>
<tr>
<td>Total Material Diverted</td>
<td>4,615.91</td>
<td>4,106.62</td>
<td>10,446.01</td>
<td>6,389.51</td>
</tr>
<tr>
<td>Total Clean Fill Received</td>
<td>178.55</td>
<td>467.65</td>
<td>10,432.48</td>
<td>3,692.89</td>
</tr>
<tr>
<td>Total Contaminated Soil Received</td>
<td>17,441.22</td>
<td>5,860.00</td>
<td>854.49</td>
<td>8,051.90</td>
</tr>
</tbody>
</table>
Table 3.1-2: Historical Tonnages of Material Processed

<table>
<thead>
<tr>
<th>Material</th>
<th>3-Year Average (tonnes/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Waste</td>
<td>7,686.29</td>
</tr>
<tr>
<td>Recycling</td>
<td>612.20</td>
</tr>
<tr>
<td>Used Oil</td>
<td>5.65</td>
</tr>
<tr>
<td>Scrap Metal</td>
<td>773.49</td>
</tr>
<tr>
<td>Cardboard</td>
<td>338.45</td>
</tr>
<tr>
<td>CFCs</td>
<td>61.33</td>
</tr>
<tr>
<td>Construction &amp; Demolition</td>
<td>4,771.04</td>
</tr>
<tr>
<td>Clean Fill</td>
<td>3,692.89</td>
</tr>
<tr>
<td>E-Waste</td>
<td>55.95</td>
</tr>
<tr>
<td>HHW</td>
<td>44.04</td>
</tr>
<tr>
<td>Asbestos</td>
<td>2.61</td>
</tr>
<tr>
<td>Concrete</td>
<td>763.68</td>
</tr>
<tr>
<td>MSW</td>
<td>3,576.04</td>
</tr>
<tr>
<td>Residential Recycling</td>
<td>301.43</td>
</tr>
<tr>
<td>Contaminated Soil</td>
<td>8,051.90</td>
</tr>
<tr>
<td>Special Waste</td>
<td>98.17</td>
</tr>
<tr>
<td>Tires</td>
<td>1,079.90</td>
</tr>
<tr>
<td>Compost</td>
<td>763.30</td>
</tr>
<tr>
<td>Sand</td>
<td>1,180.51</td>
</tr>
<tr>
<td>Yard waste</td>
<td>69.41</td>
</tr>
</tbody>
</table>

3.2 SUMMARY

The key Contract objectives are to:

- Operate the AWMF in accordance with federal, provincial, regional and local permits, regulations and guidelines, and following best management practices to assure performance of high quality;
- Operate the AWMF in a manner that maximizes public and Contractor safety;
- Operate the AWMF in the most efficient and cost-effective manner, minimizing the consumption of airspace;
- Operate the AWMF in a manner as to maximize customer convenience and satisfaction;
- Operate the AWMF in a manner that protects the environment from air and water pollution; and
- Operate the AWMF with minimal disruption to neighbouring residents.

Accordingly, the Work shall include, but not be limited to, the following:

- Conforming to federal, provincial, regional and local permits, regulations and/or guidelines;
• Meeting Workers’ Compensation Board requirements for all aspects of operations;
• Ensuring the proper handling of waste, compostable waste, asbestos waste, and recyclables to minimize the occurrence of fugitive litter, odour, dust, and leachate;
• Directing residential and commercial traffic using the AWMF;
• Moving and compacting Waste;
• Transporting and applying TODV-supplied daily cover (soil) and/or Contractor-supplied alternate daily cover (e.g., tarps), and TODV-supplied intermediate cover (soil) from the stockpiles at the AWMF;
• Meeting the working face sizing specified in the Operations Plan for AWMF;
• Managing, transporting and burying asbestos waste in accordance with all provincial and federal regulations;
• Operating the Public Drop-Off (PDO). The Contractor will be responsible for day-to-day supervision, waste screening, customer service, including providing for the safety of the public, and emptying of bins at the PDO;
• Supplying and transporting roll-off containers for residential waste (minimum four (4) open top containers, 40 cubic yards each);
• Assist with daily management of materials delivered to the site which are not landfilled;
• Maintaining and grading non-paved roads within AWMF;
• Controlling stormwater run-on and run-off within the limit of waste of the Cell 4 (A/B/C/D) area;
• Controlling and collecting litter at the AWMF as well as along adjacent neighbouring roads/area to the AWMF. The Contractor will be expected to supply, install, and maintain litter fencing at least two (2) metre high at the working face at the active landfill cell. Additional fencing around the working face may also be required to achieve adequate litter control;
• Ensuring contract conditions are met in wet and windy winter months with respect to such factors as litter control, drainage control and road maintenance; and
• Monthly and annual reporting (e.g. Soil Usage, equipment usage for force rate account work, etc.).

3.3 OVERVIEW OF SERVICES

The Contractor will be responsible for providing landfill operation services associated with the daily operation of the AWMF.

The service deliverables can be summarized into the following general categories:

• Landfill Operations – The Contractor shall be responsible for all aspects of landfilling waste delivered to the AWMF, compaction, grading, cover placement, and maintaining the landfill areas to facilitate safe access for customers;
• PDO Operations – The Contractor will be responsible for day-to-day supervision, waste screening, customer service, including providing for the safety of the public, and emptying of bins. The Contractor shall also provide information to the public accessing the PDO about the disposal options and diversion programs available at the AWMF; and
• On-Site Material Processing – The Contractor will be responsible for assisting with daily management of materials delivered to the site which are not landfilled. This will include, but not be limited to: sorting HHW materials and recyclables located in the MRF, directing customers to and maintaining tidiness of the drop-off areas at the diversion pad and relocating materials that have been dropped off in the
incorrect locations, and cleaning and organizing the MRF, Recycling Centre, Quonset, and Pesticide Building. The Contractor will advise the TODV when recycling bins/collection areas are reaching capacity.

The TODV’s objectives for the successful operation of the AWMF include:

- Customer Satisfaction – The Contractor shall be committed to providing excellent customer service.
- Regulatory Compliance – Full compliance with all applicable laws and regulations is expected, including but not limited to the Environmental Protection and Enhancement Act, its regulations and the AWMF’s Approval.
- Safety – The AWMF shall be operated in a manner that is safe for customers, staff and the public.
- Access and Capacity – Customers will have reasonable access to all AWMF facilities and facilities will be operated efficiently, ensuring that capacity to meet Customer needs is maintained.
- Litter Control and Collection – The AWMF will be operated in accordance with industry best practices and to ensure that neighbouring properties are not negatively impacted by the AWMF’s operations.
- Airspace Utilization – Landfill airspace is a significant asset to the TODV, and must be utilized efficiently and in a manner which optimizes this asset.
- Diversion – The diversion programs offered at the AWMF will be managed so as to produce high quality recyclable commodities with little contamination.

3.4 CONTRACTOR’S GENERAL RESPONSIBILITIES

The TODV shall maintain overall authority for the AWMF. The Contractor will assist and cooperate with the TODV to ensure Services are provided in a manner that ensures efficient operation and daily management of the AWMF is maintained at all times.

The Contractor is responsible for providing all tools, materials, trained labour, equipment, vehicles, personal protective equipment, and any other incidentals necessary to carry out the Services in accordance with the provisions of the Contract at its own sole cost and expense.

The Contractor’s on-site staff shall monitor received Waste for suspected hazardous or prohibited waste or any other items not accepted at the AWMF. The Contractor shall immediately report any suspicious materials to the TODV.

The Contractor shall have a training and orientation program for all of the Contractor’s staff employed at the AWMF. All staff trained and oriented shall sign a document indicating that they have been properly trained prior to commencing any independent work at the AWMF.

The Contractor shall provide the Services with the utmost regard for the safety and welfare of its staff, the AWMF Customers, and TODV staff. The Contractor shall take all necessary safety precautions, as required by law and by the TODV, and shall be responsible for the safety of all Contractor staff, Customers, and TODV staff at the AWMF.

The Contractor shall submit monthly and annual reports to the TODV as outlined in this document.
The Contractor shall perform the work in accordance with all Requirements of applicable codes, regulations, and the AWMF Approval, as may be amended by the Province.

3.5 TOWN OF DRAYTON VALLEY’S RESPONSIBILITIES

The TODV shall retain responsibility for the following:

- The AWMF’s Operating Approval;
- Communications with Alberta Environment and Parks;
- Environmental monitoring;
- Leachate monitoring and extraction;
- The determination of rate structures and implementation of Customer fees;
- The determination of acceptable Wastes;
- The determination of the AWMF’s operational hours;
- Operations and maintenance associated with:
  - The scales and scale house;
  - The used oil shed and used oil program; and
  - The Take it or Leave it building and service.
- Management of (with operational support provided by the Contractor) of:
  - The Household Hazardous Waste program;
  - The MRF, Quonset, and associated programs;
  - The collection of white goods and removal of CFCs; and
  - The pesticide building.
- Ownership of all Waste delivered to the AWMF;
- Supply of Daily Cover material stockpiled at the AWMF;
- The supply of a site-specific fill plan for the Contractor to follow;
- The design and construction of landfill cells;
- The design, construction, and maintenance of the leachate collection system;
- The design, construction, and maintenance of the final cover;
- Surveying to determine the finished height of Waste;
- Annual survey to calculate annual airspace utilization and calculation of apparent density;
- Maintaining permanent site perimeter fencing;
- Landscaping, including weed control and grass mowing;
- The design and implementation of the diversion programs;
- The removal of diversion materials off-site;
- Permanent signage;
- The cost of utilities for the AWMF; and
- Janitorial services for the maintenance building.

3.6 PRIME CONTRACTOR

The Contractor agrees that, upon acceptance of the Contractor’s Proposal, the Contractor will be the Prime Contractor as defined in the Glossary for the Work.

The Contractor will be Prime within the active landfill Cells, the PDO, and the MRF. The TODV will retain Prime responsibility at the scales.
3.7 **CONTRACTOR’S WORK FORCE**

The Contractor will, at all times, provide a sufficient quantity of suitably trained and equipped staff to safely and efficiently perform the Services in accordance with all requirements of this RFP. It is understood that staffing levels may fluctuate due to changes in incoming tonnages and any change in the staffing levels must be agreed by the TODV.

The Contractor’s Site Manager must be on-site a minimum of one (1) day per week. The Contractor must provide to the TODV the name of the designated alternate Contractor’s Site Manager, in the event that the primary representative is unable to be at the AWMF. While not on-site, the Contractor’s Site Manager must be accessible by telephone at all times during operating hours. Except through voluntary resignation, the designated Contractor’s Site Manager shall not be changed without the prior consent of the TODV. The Contractor’s Site Manager shall be authorized to represent the Contractor at the AWMF and shall have the full authority to act for the Contractor in all matters relating to the Work. Instructions given to the Contractor’s Site Manager by the TODV, or the TODV’s Representative, shall be held as instructions given to the Contractor. The Contractor shall also employ sufficient additional staff as required to perform the Work.

The Contractor shall not employ at the AWMF any person unfit for duty or anyone unskilled in the work assigned to that person. The TODV, by written notice to the Contractor, will maintain the right to require the immediate removal from the AWMF of any employee or Sub-contractor of the Contractor who, in the opinion of the TODV, is incompetent, disorderly, unfit, or otherwise unsatisfactory, in which case the employee or Sub-contractor will be permanently removed and shall not again be employed for the Work without the prior written approval of the TODV. The Contractor shall be solely liable for any costs, expenses, and/or damages resulting from such removal. The Contractor shall maintain good order and discipline amongst employees and Sub-contractors engaged by or through the Contractor on the Work.

The Contractor shall exercise amicable public relations while working at the AWMF. The Contractor’s employees and any Sub-contractors hired by the Contractor shall also be made conscious of their responsibilities in this regard. The TODV may require the suspension, discharge, or other disciplinary action of any employee or Sub-contractor directly involved in the AWMF operation for one or more of the following offences during working hours, and the Contractor shall comply with such requirements immediately:

- Intoxication;
- The use of foul, profane, vulgar, or obscene language;
- Solicitation of gratuities or tips from the public for services performed hereunder;
- The refusal to handle Waste, Recyclable Materials, Asbestos Waste or Compostable Waste;
- Any willful or reckless action in disregard of safety of persons or sanitary requirements;
- Any action which may constitute a nuisance, violation of law, or disorderly conduct;
- Theft; and
- Unauthorized scavenging or removal of material from the AWMF.

The Contractor and its Sub-contractors shall conform to and comply with all applicable laws, ordinances and regulations relating to employees, including but not limited to wages, employment standards, Workers’ Compensation, nondiscrimination, and all other matters...
with respect to the hiring, discharging, treatment, and safety of all workers employed on or with respect to the Work.

The Contractor shall maintain proper records showing the names of all workers employed by or through the Contractor and the time worked by each worker. This information shall be made available to the TODV upon request. The Contractor shall employ only competent and skilled workers, in sufficient numbers to complete the Work. Failure of the Contractor to provide adequate quantity of workers with proper qualifications shall constitute a material default by the Contractor of its obligations under the Contract, for which the TODV may terminate the Contract for cause.

At the direction of the TODV, the Contractor may be required to:

- Assist with the investigation of illegal activities;
- Photograph various locations of the AWMF to determine conditions; and
- Report animal/wildlife issues (including stray dogs) to Animal Control.

The Contractor shall take all precautions necessary to ensure that harmonious working relations exist at all times during performance of the Work and shall avoid any conflict or interference with other labour forces on or near the AWMF or in any way connected with the Work.

The Contractor represents and warrants to the TODV that there are no existing or pending labour agreements affecting the Contractor in any way which may impair the capacity or ability of the Contractor to complete the Work and that the Contractor shall at its own cost handle its own labour disputes.

The Contractor acknowledges that some or all Other Contractors or Sub-contractors working at the AWMF may be union or non-union and labour peace shall be maintained at all times by the Contractor at the AWMF. The Contractor shall ensure that the Work is carried out in a manner which ensures there are no labour issues, work stoppages, or other labour disputes which might affect the Work. The Contractor confirms that no agreement with its employees or between its Sub-contractors and their employees will affect the Contractor's performance under this Contract and the expiry or termination of any such agreement will also not affect the Contractor's performance under this Contract. Delays in performance of the Work by a refusal of the Contractor's employees, its Sub-contractors, suppliers, agents or their employees to perform the Work pursuant to a lawful strike or lock-out, a contractual right to refuse to work, an unlawful strike or lock-out, or any other labour dispute shall be considered and construed as a delay by a cause within the Contractor's control.

Whenever the Contractor has knowledge that any actual or potential labour dispute is delaying, threatens to delay, or may threaten to delay the timely performance of the Work, the Contractor shall immediately give notice thereof in writing to the TODV, including all relevant information with respect to such dispute or potential dispute.

In the event of labour difficulties, the Contractor at its sole cost and expense shall take all legal steps available to it to continue performing the Work without interruption. The Contractor shall immediately inform the TODV in writing of any labour problems, or potential problems, and also inform the TODV of all solutions proposed.
The Contractor and all Sub-contractors shall ensure compliance, at all times, with all applicable labour legislation. Any non-compliance with applicable legislation with regard to work performed under this Contract will constitute a material default by the Contractor of the performance obligations under this Contract.

3.8 FORCE ACCOUNT WORK

The TODV, at its own discretion, may request that the Contractor undertake work in addition to that specified in the Contract. The Contractor will make their labour personnel equipment available to the TODV at the hourly rates provided in the Contract. Such work will not interfere with the Contractor’s ability to complete the Work as required in the Contract. The TODV reserves the right to perform extra work itself or to contract others at its sole discretion.

3.9 ENVIRONMENTAL PROTECTION

The Contractor shall be solely responsible for the protection of the environment at the AWMF through compliance with the rules, regulations, and practices required by all applicable legislation and requirements of all authorities having jurisdiction. The Contractor indemnifies and holds the TODV harmless from any and all liability which the TODV may incur or may relate to the Contractor's failure to comply with all such rules, regulations, practices, and requirements.

The Contractor must maintain compliance with all relevant statutes, regulations, and directions of all applicable authorities and jurisdictions in connection with the environment and the transport or use of hazardous or dangerous materials and substances. In addition to any environmental specifications expressly included elsewhere in the Contract, the Contractor must also comply strictly with all environmental specifications, regulations, publications, and policies of the TODV with regard to protection of the environment, whether or not they are bound with or referred to elsewhere in the Contract, except to the extent where they are in conflict with this Contract or any permits and approvals provided by the regulatory authorities, in which case the most stringent and safest requirements and standards will be adhered to.

Compliance by the Contractor with any rules, directions, or requirements of the Contract or the TODV in connection with health, safety, and the environment will not relieve the Contractor from its sole responsibility and liability to perform the Work and complete the Contract without causing injury or damage to health and to perform the Work in a safe manner.

Litter control practices shall be undertaken by the Contractor as specified in Section 3.10.4. If the Contractor receives an unsatisfactory review for any of the litter collection categories during a Performance Evaluation, additional litter collection shall be undertaken to ensure the litter is removed within twenty-four (24) hours.

3.10 COMPACTION AND COVER SERVICES

The per tonne unit price for compaction and cover services will include all of the Work in this section.
3.10.1 WORKING FACE OPERATION AND MAINTENANCE

The TODV will provide direction to the Contractor as to the areas of the AWMF that will be used for disposal and determine the number and location of Working Faces and the types of Acceptable Waste to be compacted and covered at a Working Face. The TODV will establish grades and elevations that the Contractor will achieve through compaction and cover. The Contractor will undertake the staging of landflling as directed.

The Contractor will maintain the Working Face size as per the Operations Plan.

When establishing a new Working Face, the Contractor will excavate and stockpile excess daily cover (when depth greater than 150 mm), or intermediate cover (to a remaining depth less than 150 mm), and excavate and stockpile all soil from roads, berms and pads, for reuse.

The height of Lifts shall be developed as per the AWMF’s Operations Plan to be provided by the TODV. Inclined slopes of the Working Face will typically be no steeper than that stipulated in the Approval.

The Contractor will level, grade and maintain secondary roads, pads, turn-around areas or other vehicle access associated with the Working Face using the bulldozer. Such work will be conducted in a manner to prevent water ponding and promote surface water run-off in a direction suitable to the TODV.

The Contractor will not permit any waste to be removed from the AWMF, unless otherwise directed by the TODV.

In certain instances, the TODV may direct the Contractor to construct Starter Berms. The Contractor will shape, grade, and compact all Starter Berms required on the outer edge of new Lifts. The Starter Berms will be constructed of waste and/or soil as directed by the TODV. Starter Berms will be the same height as the Lift and will have an outside slope not greater than 3.3:1 (horizontal:vertical). The TODV will direct where and how the Starter Berm will be developed.

The potential for collision between heavy equipment and other vehicles exists. The Contractor will be responsible for ensuring collision avoidance. The Contractor will have only one (1) light-duty company vehicle at the Working Face area at any time and safely parked away from any equipment activity.

The Contractor will ensure that heavy equipment does not operate within ten (10) metres of vehicle(s) or person(s). If a vehicle enters the Working Face, the operator will move their machine at least ten (10) metres away from the vehicle and park until the area is clear.

The heavy equipment operator must operate their machine in a manner that ensures they have a clear and unobstructed view. The operator will always have a clear and unobstructed view of the Pad.

If it is not possible for the equipment operator to maintain a clear and unobstructed view then the Contractor will provide a spotter to direct traffic. When a spotter is employed, the spotter will be responsible for directing vehicles to appropriate areas to avoid interference.
with the Contractor’s equipment and operations. The spotter must have verbal contact with the equipment operators.

The Contractor will be responsible for any damage caused by the Contractor to AWMF survey reference points as set or established. These survey reference points will be repaired and/or replaced at the expense of the Contractor.

The Contractor will be responsible for any damage caused by the Contractor to AWMF environmental monitoring and control stations as set or established. These environmental monitoring stations will be repaired and/or replaced at the expense of the Contractor.

The Contractor will be responsible for ensuring that any water that comes in contact with the waste is routed into the waste. Stormwater control and drainage swales shall be maintained by the Contractor to prevent run-off of impacted surface water.

3.10.2 TRAFFIC CONTROL DEVICES

The TODV will erect and maintain information signs at the entrance to the AWMF. The TODV will initially provide all signs, directional devices, barricades and fencing for directing traffic to the Working Face.

The Contractor will be responsible for the preservation of all signs, directional devices, barricades, and fencing used at the Working Face to direct and control traffic. The Contractor will also move these signs, directional devices, barricades, and fencing as required. Where the Contractor fails to preserve these traffic control devices, the Contractor will, at their expense, replace these with equivalent products approved by the TODV.

The Contractor will notify the TODV of any changes, repairs or clarifications required to signage to continue or improve save operation of the site.

3.10.3 CONTROLLED WASTE

Controlled Waste will be disposed of in one of the following manners as per applicable laws, regulations, guidance documents, and best management practices. The Contractor’s proposed methodology of landfilling controlled waste will be reviewed and approved by the TODV:

- Landfilled in the active Working Face where permissible by applicable laws, regulations and best management practices;
- Landfilled below the existing landfill surface in an excavation. The Contractor will excavate a pit in the existing landfilled waste as per best management practices. The Contractor will place, grade and compact the Controlled Waste in the pit, place and compact the excavated waste over the top of the Controlled Waste, and place, grade and compact cover soil over the disturbed area. Excavation may be completed near the Working Face or at another location within the landfill; or
- Landfilled above the existing landfill surface in a Bermed Area. The Contractor will place, grade and compact soil to construct a Bermed Area, as directed by the TODV staff. The TODV will provide and stockpile soil for the construction of the Bermed Area near the area of construction. The TODV or alternate will determine the location of the Bermed Area and the manner in which the Cell will be constructed. The Contractor will completely cover and compact the Controlled
Waste as directed by the TODV after the Controlled Waste has been deposited in the Bermed Area.

3.10.4 LITTER CONTROL

The Contractor will be responsible for all litter cleanup that results from the Works including litter due to insufficient compaction, insufficient cover, and non-maintained litter fencing. The Contractor shall conduct litter cleanups quarterly, after major storm events, during an annual spring event, and at the request of the TODV. The Contractor will be required to keep records of staff hours spent on litter cleanup, and a yearly minimum of 360 hours will be required.

The Contractor shall collect litter from the trees and neighbouring properties. The adjacent properties and the AWMF shall be maintained in a clean, tidy condition, and litter shall not be allowed to accumulate on the AWMF, including in any trees on the AWMF.

The Contractor shall be responsible for litter collection along access roads to the AWMF as required.

The Contractor will supply, install, relocate, and maintain a minimum of four (4) portable litter control devices that are effective in minimizing windblown litter from the Working Face. Litter fences at least two (2) metres high shall be placed daily in close proximity downwind of the Working Face. Failure to install and maintain subscribed fencing may result in a fine as decided upon by the TODV. The Contractor shall submit, monthly, to the TODV, a site plan showing proposed litter fencing locations for approval, prior to installing litter fencing.

Litter fencing installed by the Contractor shall be installed in such a way as to ensure that it does not penetrate the landfill liner. If the Contractor penetrates the landfill liner, under any circumstance, the Contractor shall immediately notify the TODV, and through a professional installer, make all necessary repairs within 48 hours of the occurrence of the damages. The Contractor shall take all necessary measures to prevent any waste or leachate from draining through the penetration of the landfill liner. In the event the Contractor does not comply with the repair requirements, the TODV may undertake the repair itself and deduct all cost from any payments owing under the Contract.

The Contractor shall collect litter on a regular basis and litter collection that occurs shall be completed by the end of each day. The AWMF shall be maintained in a clean, tidy condition, and litter shall not be allowed to accumulate on the AWMF, including in any surface water present at the AWMF.

3.10.5 COMPACtion

The Contractor will perform placement and compaction of Waste as described in the Operations Plan attached as Appendix “C”.

3.10.6 COMPACtion Testing by Town of Drayton Valley

The TODV will complete an annual topographical surveying of all active landfill areas. The TODV will use the topographical survey results to calculate the annual average apparent density (i.e., mass of waste landfilled divided by the calculated airspace consumed). The target minimum apparent density shall be 0.65 tonnes per cubic metre.
3.10.7 DAILY COVER

The Contractor will be responsible for placement of Daily Cover at the end of each day of landfilling. The material to be used for Daily Cover will be prioritized as follows (high to low priority) unless otherwise directed by TODV:

- Alternative Daily Cover (ADC) system as agreed upon by the Contractor; or
- Soil from the Clean Fill Stockpile Area.

The Contractor will be required to apply soil cover as per the Approval and as outlined in the landfill Operations Plan.

The Contractor will use any agreed upon ADC system to the satisfaction of the TODV.

3.11 SNOW CLEARING

The Contractor will keep all on-site Roads, Pads, and Stockpile Areas clear of snow. The Contractor will not allow snow to accumulate to depths of more than ten (10) centimetres on these roads and areas.

The Contractor will clear snow from the Working Face(s) prior to landfilling activities. The snow will be moved so as not to allow ponded water or interfere with on-site drainage courses such as swales, ditches and culverts.

Snow clearing operations for other areas of the AWMF, which include the scale and PDO areas, roads to the Working Face, and all roads to ancillary buildings.

Priority of snow clearing will be the scale and PDO areas, followed by roads to the Working face, and all roads to ancillary buildings, unless otherwise directed by TODV staff.

The Contractor will commence snow clearing activities under the following conditions:

- During AWMF operating hours when snow accumulations are greater than ten (10) centimetres at the AWMF; or when directed by TODV staff; and
- Outside of AWMF operating hours the Contractor will be responsible for monitoring snowfall accumulations and coordinating the snow removal service response when accumulations at the AWMF are:
  - 10 cm or more by 5:00 a.m.; or
  - 7.5 cm or more by 5:00 a.m. and it is still snowing.

The priority of the snow clearing activities is the site access, Scales area, PDO area, and haul road to active cell. These areas must be cleared of snow by the following opening times:

- 7:00 a.m. Monday to Saturday; and
- 10:00 a.m. Sunday.

The Contractor will then clear all other on-site roads, unless otherwise directed by TODV staff.
All cleared snow shall be stored on site at the Contractor’s discretion. Snow placed in these storage areas will be pushed up by the Contractor to maximize snow storage capabilities.

Snow must not be cleared onto walkways, against buildings, equipment, fences, gates, hydrants, monitoring wells or block access to these areas.

All culverts will be marked with re-bar and flagging tape by the Contractor. The culverts are to be kept clear from accumulated snow by the Contractor.

The Contractor is responsible for keeping the roads free of snow. If the roads get to the point where there is no room to push the snow off of the road, then the Contractor is responsible for removing the snow so that the roads can be plowed.

The Contractor is responsible for moving the directional sign and pylons at scale entrance, Recycling Centre, and Public Drop-off area before and after plowing.

The Contractor will be issued a gate key to allow for after-hours access to the landfill facility. The key will be used by the Contractor only for the purpose of providing snow clearing services.

The Contractor will ensure that the main gate remains closed and locked while providing snow clearing services during times outside the landfill’s regular operating hours.

The key will not be copied and will be returned to the TODV at the completion of the Contract period or when requested to do so by the TODV.

The Contractor will provide a phone number, which TODV staff can contact or leave a message for request of snow clearing services during operating hours.

The Contractor will respond to TODV snow removal request within four (4) hours of call out.

If responding to a message left by TODV staff, the Contractor will contact the landfill to confirm receipt of the message and provide an estimated time of arrival at the AWMF.

The ditches will have to be pushed back when heavy snow accumulation happens. Where it is not possible, the snow will have to be cleared out and hauled to on-site snow dump at the Contractor’s expense.

3.12 USE OF AWMF BUILDINGS, THE AWMF SITE, AND AWMF PROPERTY

The Contractor shall have use of portions of the maintenance building, including the kitchen, locker area, washroom, meeting area shared with the TODV.

The Contractor shall maintain the portions of the buildings they utilize in a neat and tidy condition to present a professional appearance to the satisfaction of the TODV.

The Contractor shall repair any damage to the TODV’s infrastructure, including, but not limited to buildings, equipment and land, caused by the Contractor or its staff, at the Contractor’s sole cost. The TODV may decide to complete repairs themselves, in which case the cost of the repairs shall be deducted from payments owed to the Contractor.
The TODV shall not be responsible for any loss or damage to the Contractor's property.

The TODV shall have access, at all times, to all buildings on site, regardless of origin.

The Contractor shall provide the Services with the least possible interference or disturbance to occupants, members of the public, and normal use of the AWMF.

The Contractor shall ensure that the AWMF site, including the AWMF buildings, is kept clean while providing the Services and, upon completion, will remove its materials, waste products and debris.

3.13 PUBLIC DROP-OFF AREA

The Contractor shall provide a minimum of one (1) attendant at the public drop-off area from the time that the AWMF opens until all Customers have left the AWMF at the end of each Working Day.

The Contractor’s public drop-off attendant shall direct traffic backing up to the public drop-off bins as well as direct the unloading of Waste and recyclables to ensure both occur in a safe and efficient manner.

The Contractor shall ensure that the public drop-off area is kept neat and tidy at all times, including sweeping up any debris and picking up litter, as necessary throughout each day.

The Contractor’s public drop-off attendant expected to be outside directing traffic, monitoring operations, and interacting with Customers in all types of weather.

The Contractor shall visually screen waste loads being dumped at the public drop-off for hazardous or unacceptable Waste on a regular basis.

The Contractor’s staff shall identify potentially recyclable items being dropped off, shall educated customers on recycling opportunities, and direct customer to appropriate on site facilities.

The Contractor shall remove and haul full public drop-off bins safely from the public drop-off area and empty them at the Working Face, prior to returning the emptied bins to the public drop-off.

The Contractor shall ensure material does not blow or fall out of the bins during transit and shall ensure debris does not accumulate between or below the bins and side walls or in any adjacent areas.

The Contractor shall be responsible for any damage caused to the public drop-off infrastructure as a result of compacting, loading, transporting, and placing the roll-off bins. If the TODV determines that damage other than normal wear and tear occurs to the public drop-off infrastructure, the TODV will repair the damage and the Contractor shall be billed for the cost of the repair.

The Contractor shall empty the roll-off bins at the end of each Working Day to ensure full capacity is available for the following Working Day. Once emptied at the end of the day, the Contractor shall close the lids on all roll-off bins, ensuring that the lids are closed whenever the public drop-off is unattended.
The Contractor shall not re-direct small vehicles to the Working Face without the prior approval of the TODV.

3.14 MATERIALS RECOVERY FACILITY AND RECYCLING CENTRE OPERATIONS

The Contractor shall assist with duties at the Recycling Centre, inside the MRF, and the recycling Quonset including but not limited to cleaning, organizing, and assisting with the diversion programs.

For the purposes of this tender, it is assumed that the level of effort required to undertake these duties and facilitate ongoing operations of the Recycling Centre and MRF will require 40 hours per month and could be coordinated with PDO operations staff. If additional level of effort is required to meet the needs of the TODV, Force Rate Account rates shall be applied.

3.15 CLEAN FILL STOCKPILE AREA

The Contractor shall ensure that the Clean Fill Stockpile Area is kept neat and orderly. The Contractor shall push, move, tidy, and relocate the various soil stockpiles, as necessary.

3.16 YARD WASTE

The Contractor shall manage yard waste based upon the Standards for Composting Facilities in Alberta.

3.17 NUISANCE MANAGEMENT

The Contractor shall develop, maintain, and implement a nuisance management plan that shall include, but is not limited to, addressing fires, litter, odour, dust, and disease vectors.

The Contractor shall operate the AWMF in a manner that minimizes the amount of litter that is created.

The Contractor shall ensure that the AWMF is neat and tidy at all times, collecting litter on a daily basis, as required. The Contractor shall be responsible for litter collection throughout the entire AWMF property.

The Contractor shall complete a daily log of litter control activities undertaken and shall submit that log to the TODV on a weekly basis.

The Contractor shall immediately collect fugitive litter which has spread onto adjacent lands.

3.18 WEATHER AND AWMF ACCESS

The Contractor shall operate the AWMF and shall process Customers under all weather conditions present. The Contractor shall provide any recommended contingency measures to enable the Contractor to continue to provide a reasonable level of service during extreme weather events to the TODV for approval, prior to the implementation of those potential contingency measures.
The Contractor shall be responsible for any towing charges or damages caused by poor condition of the access roads within the AWMF’s landfill cells as determined by the TODV in its sole discretion.

The Contractor shall be responsible for snow clearing and sanding/de-icing of trafficked areas throughout the AWMF. The Contractor shall ensure that all areas of the AWMF are accessible to Customers during operating hours.

The Contractor shall be responsible for the snow removal and sanding/de-icing in areas of the AWMF where foot traffic occurs, including but not limited to the public drop-off area.

3.19 FIRE CONTROL

The Contractor shall take all necessary steps and follow all best practices, ensuring that the Waste disposed of at the AWMF is handled in such a manner as to prevent fire from occurring at the landfill.

The Contractor’s staff shall be trained in handling landfill fires and shall be responsible to extinguish landfill fires, where it is safe and possible to do so.

The Contractor shall enforce that the AWMF is a non-smoking site, Customers will not be permitted to smoke at the AWMF and the Contractor’s staff will only smoke in the properly designated smoking area.

The Contractor shall be responsible for the protection from fire of the AWMF as well as the immediately adjacent properties in as much as they may be affected by a fire or otherwise as a result of performing the Work. To reduce the chance of fires, ignition sources shall be controlled through the following:

- No smoking by customers or staff is allowed anywhere on-site;
- No burning or potential burning waste shall be accepted;
- No mechanical work shall be performed on the Working Face;
- Equipment fueling shall occur away from the Working Face;
- All roll-off Containers of Waste at the residential waste receiving area shall be empty at the end of the day;
- All equipment shall be moved off the Working Face at end of day; and
- Other fire prevention measures as outlined in the Operations Plan and Operational Certificate.

Any materials required to smother or extinguish fires or to restore the surface of the AWMF to grade where a drop was due to fires shall be transported, placed and compacted by the Contractor at its own expense.

The Contractor shall, in the event of fire on the AWMF immediately notify the TODV and take necessary actions to control and extinguish the fire. If a fire occurs, the Contractor shall follow the fire control measures outlined in the Operations Plan.

If the fire cannot be controlled by the Contractor, the Contractor shall notify the Fire Department and operate the Contractor’s equipment as directed by the Fire Department to control and extinguish the fire. In all cases where there is a fire on the AWMF, the Contractor shall make their equipment available for fire-fighting purposes. All equipment
shall be equipped with CO₂ fire extinguishers. The Contractor will keep and maintain a water tank or truck on site with a pump ready to combat any potential fires.

If it is necessary at any time for a fire protection vehicle or fire truck to attend at the AWMF for the purpose of extinguishing a fire, any costs of, and incidental to, attendance of the equipment at the AWMF shall be paid by the Contractor.

3.20 MAINTENANCE OF ROADS

The Contractor shall maintain as directed or approved by the TODV all non-paved roads, pads and turnarounds as required for the AWMF operations.

The Contractor shall be responsible for grading all non-paved roads within the AWMF, as required.

Non-paved roads are to be inspected weekly for erosion and wear by the Contractor’s Site Manager. If signs of problems are present, immediate action shall be taken to repair the road, ensuring the safety of the public and staff. Additional repair and reconstruction shall be conducted on an as-needed basis.

The Contractor shall keep all paved surfaces within the AWMF in a clean and tidy condition and cleaning may be completed by sweeping, washing, or other mechanical means as necessary to achieve this condition.

Needed repairs to paved roads within the AWMF or paved and non-paved roads providing access to the AWMF, shall be reported to the TODV on a monthly basis at a minimum.

All non-paved roads shall maintain proper drainage, including ditches and culverts, as needed. The Contractor shall supply any culverts required to construct or maintain non-paved roads and ensure the proper internal drainage.

3.21 SCAVENGING AND THEFT

The scavenging of any Waste, Recyclable Materials, or Asbestos Waste is strictly prohibited. The Contractor shall not permit any Waste, Recyclable Materials, or Asbestos Waste of any kind to be removed from the AWMF, except by Other Contractors as authorized by the TODV. Scavenging or the permitting of scavenging may be cause for termination of any employee involved with doing so.

All theft will be reported to the Royal Canadian Mounted Police (RCMP) and copied to the TODV. The TODV will work with the Contractor to minimize the potential impacts of theft.

Theft shall be caused for Contractor staff termination or Contract termination.

3.22 SECURITY, ACCESS, AND TRAFFIC CONTROL

The Contractor shall provide barricades of a quality and quantity to be approved by the TODV, to be moved and maintained as necessary by the Contractor in order to direct the traffic at the AWMF.

The Contractor is responsible for traffic control at the AWMF. This includes ensuring the safe direction of traffic in the occurrence that access to the scales is disrupted for any reason.
The Contractor shall ensure the AWMF is secured during closed hours. The Contractor must ensure the scale house and AWMF gates are locked and the scale house alarm is activated.

The Contractor is solely responsible for the security and protection of all of their materials, supplies, tools, equipment and facilities. If the Contractor deems it necessary to provide additional security than what is present at the AWMF, it shall be provided at its sole cost and discretion.

3.23 DUST SUPPRESSION

The Contractor shall provide, operate, and maintain dust suppression systems for all regularly trafficked non-paved roads within the landfill property boundary.

The Contractor shall operate a water truck to mitigate dust, as required.

3.24 WORK PLAN

The TODV will provide the Contractor with the landfill’s Operation Plan which will form the basis of operations at the AWMF.

The Contractor shall prepare and submit a Work Plan to the TODV at least fourteen (14) days prior to commencement of the Work. A digital Copy of the Work Plan shall be provided to the TODV for approval. The Work Plan shall be reviewed and updated as required, at a minimum on an annual basis.

The Work Plan shall include, as a minimum:

- Emergency contact numbers;
- Communications Plan;
- Safety Plan;
- Quality Management Plan;
- Incident/Accident/Complaint forms;
- Inspection report forms;
- Daily Cover Material management;
- Contact numbers for any Sub-Contractors hired by the Contractor; and
- Other items as may be requested by the TODV.

3.25 SITE DRAINAGE

The Contractor shall be responsible for maintaining internal surface water drainage on the landfill footprint, including constructing ditches and installing culverts, as required, to ensure proper site drainage. The Contractor shall maintain the drainage such that the drainage characteristics of the AWMF are in accordance with the Operations Plan, applicable regulations, and as directed by the TODV. No water shall be allowed to pond on the landfill footprint. No Waste shall be placed in ponded water. All contaminated surface run-off and leachate shall be directed to the leachate collection system.

The TODV shall maintain ditches and watercourses and the Contractor shall be responsible for ensuring all ditches and watercourses are kept free of litter.
The placement of Waste, Recyclable Materials, or Asbestos Waste into any watercourses is prohibited. The Contractor shall be responsible for ensuring surface run-off that has contacted Waste, or Asbestos Waste is directed to the leachate collection system and not allowed to reach to a clean watercourse. The Contractor shall control and minimize the amount of clean water that contacts Waste to minimize leachate generation.

The Contractor shall be responsible for ensuring that the leachate collection system at the AWMF does not get damaged. The on-site leachate system shall be monitored during heavy precipitation events to ensure control of leachate flow and to minimize flow from any leachate outbreaks. TODV supplied concrete barriers shall be used to protect manholes and cleanouts and the Contractor is responsible for placement of the barriers. Damage to leachate liner systems shall be repaired within fourteen (14) Work Days at the expense of the Contractor unless such damage was caused by the TODV.

The TODV is responsible for maintaining the leachate collection system at the AWMF. The Contractor is responsible for ensuring that leachate is properly directed to the leachate collection system.

The duties of the Contractor may be modified from time to time in order to ensure leachate is collected and controlled as per the Operations Plan and the Approval.

3.26 REPORTING

The Contractor shall maintain, at all times, a comprehensive and accurate record keeping program. Reports are to be submitted to the TODV, as required by the Contract and as may be requested, concerning the delivery of services, and to the satisfaction of the TODV.

The Contractor shall document and maintain records pertaining to any incidents involving injury that occurred while performing the Services. In addition to reporting such incidents to the TODV, the Contractor shall also report any such incidents immediately to the appropriate authorities. For additionally clarity, any and all work-related accidents resulting in medical aid, disabling injury or fatality and serious occurrences (as defined in Alberta Occupational Health and Safety Act) as a result of any Services provided under the Contract, the Contractor must document and maintain the appropriate records. In addition to reporting such incidents to the TODV, the Contractor shall also report such incidents, where required by statute or regulations, to the Workers Compensation Board and as well to Alberta Occupational Health and Safety.

The Contractor shall report fires and safety incidents involving Customers immediately to the TODV.

The Contractor shall submit completed daily litter control forms to the TODV on a weekly basis.

The Contractor shall submit a monthly report, both electronically and in hard copy, including, but not limited to, the following information:

- A summary of the AWMF activities completed during the month;
- The documentation of the daily location of Waste disposal;
- Daily record of the Working Face width;
• Daily record of Daily Cover material use, including any daily and intermediate cover applied;
• Daily record of the number of public drop-off bins transferred to the Working Face;
• Monthly safety report, as identified in the safety plan;
• Summary of contractors who have received AWMF safety orientation;
• Equipment run-time and maintenance records;
• Summary of safety incidents involving Customers; and
• Any and all other information the TODV may reasonably request be included in such monthly reports.

The Contractor shall from time to time, at the request of the TODV, produce such statistical material or documentation and other records or reports as may be requested.

3.27 EQUIPMENT

The Contractor shall, at a minimum, provide and supply the following equipment:

• All equipment required to provide the Services including, but not limited to, landfill compactor, bulldozer, loader, and roll-off truck;
• Four (4) forty (40) cubic yard roll-off bins with lids that are able to fit the existing space at the public drop-off area; and
• Four (4) portable litter fences for litter control.

3.27.1 EQUIPMENT SPECIFICATIONS

3.27.1.1 LANDFILL COMPACTOR

One four-wheeled, steel-wheeled compactor designed and built for the express purpose of compacting solid waste at landfills and not converted from some other use, meeting the following specifications:

• Less than 8,000 total hours or newer, equipment with over 4,000 hours require certified maintenance records submitted with the Contractor’s RFP submission;
• A minimum manufacturer’s specified operating mass of 23,000 kilograms;
• Ability to climb solid waste slopes of 3:1 (horizontal:vertical);
• An enclosed, pressurized cab with working ventilation and all-season climate control systems;
• A design that allows the operator to maintain a clear and unobstructed view whenever they are operating the compactor in a forward or reverse direction; and
• A working two-way communications system.

The landfill compactor will operate continually at the Working Face throughout the day.

Typical Work includes, but is not limited to:

• Spreading, grading, and compacting Acceptable Waste; and
• Spreading, grading, and compacting Daily Cover material.

3.27.1.2 BULLDOZER

One track-type tractor bulldozer meeting the following specifications:
• Less than 2,000 hours or newer;
• A minimum manufacturer's specified mass of 21,000 kg;
• A flywheel horsepower of 165 or greater;
• An enclosed pressurized cab with working ventilation and all-season climate control systems;
• A design that allows the operator to have a clear and unobstructed view whenever operating the compactor in a forward or reverse direction; and
• A working two-way communication system.

Typical Work includes but is not limited to:

• Pushing, spreading, grading and compacting Acceptable Waste;
• Pushing, spreading, grading and compacting Daily Cover material or Alternative Daily Cover;
• Pushing, spreading, grading and compacting intermediate cover soil;
• Pushing, spreading, grading and compacting soil to construct and maintain pads, berms and roads as directed by the TODV;
• Pushing, spreading, grading and compacting soil or Acceptable Waste to construct Starter Berms; and
• Pushing and stockpiling snow for snow removal on landfill roads, and pads, unless other equipment is provided.

3.27.1.3 LOADER

Loader capable of loading Daily Cover material from the stockpiles and transporting to the active face, and for use in other general landfill operation applications, at a rate that will allow uninterrupted operation of the AWMF.

Rubber tired articulated loader with approximately one hundred and seventy (170) horsepower, a maximum lift height of approximately three (3) metres.

3.27.1.4 ROLL-OFF TRUCK

Roll-off truck capable of transporting 40 cubic yard roll-off bins around the site and to the active landfill area.

3.27.2 EQUIPMENT BREAKDOWN

The Contractor shall prepare a contingency plan for equipment failure, to be approved by the TODV. Should a piece of equipment break down, the Contractor shall provide equivalent replacement equipment to ensure there is no disruption to landfill operations. Inoperable equipment shall be repaired or replaced within the timeframes outlined below:

• For the compactor, within forty-eight (48) hours (the dozer can be used for waste placement and compaction during the 48-hour period);
• For the roll-off truck, within twenty-four (24) hours; and
• For other pieces of equipment, the Contractor shall be required to provide a suitable replacement piece of backup equipment within a timeframe that allows the Contractor to meet the TODV’s requirement for continuous operation of the AWMF.
3.27.3 ADDITIONAL DETAILS

The Contractor shall provide any and all other equipment that may be required to perform the Services.

The Contractor shall be solely responsible for maintenance, repairs and all other operating costs or requirements of the equipment the Contractor has supplied including, but not limited to, fuel, licensing, insurance, regular washing, storage, and paint. The Contractor is responsible for maintaining all equipment and vehicles in good operating condition and keep the same painted and washed so as to provide an appearance satisfactory to the TODV.

The Contractor shall clean-up all spills related to the Contractor’s equipment, including properly disposing of clean-up materials. In the event the Contractor has an on-site fuel tank, the Contractor shall remove the fuel tank and any contaminated soil around the tank at the end of the Contract.

The Contractor shall display all signs and identification on the vehicles used to provide the Services as may be required by the TODV.

The Contractor shall be prohibited from displaying any advertising matter whatsoever on any of the vehicles used to provide the Services.

The Contractor shall ensure that all of its equipment and vehicle operators are properly trained and certified and hold a valid license for the equipment and vehicles which they are operating.
SECTION 4.0 – GENERAL INFORMATION

4.1 AGREEMENT REQUIREMENTS

a. The successful Proponent will enter into a contractual agreement (in the form of a Services Agreement) with the TODV within fifteen (15) days after delivery of the Agreement to the successful Proponent by the TODV.

b. If the successful Proponent fails to execute and return the Agreement to the TODV within fifteen (15) days, the TODV may cease all discussions and have no obligation to the Proponent, and may, if it chooses to do so, award the Agreement to another Proponent, all without affecting any claim which the TODV may have against the Proponent as a result thereof.

c. The Request for Proposals and the completed Proposal Form(s) including the Price Quotation and proposed Service Schedule of the successful Proponent will become Schedules of the Services Agreement.

d. The Services Agreement will be for a negotiated term with the TODV, and, at the TODV's discretion, for an additional term.

e. The Services Agreement will include, but may not be limited to, the following:

   i. the start-up date identified by the Proponent in the proposal, and accepted by the TODV;

   ii. the Proponent will be expected to perform landfill operation services (excluding time required for morning start-up and evening shut-down) for an average of 52 hours per week from April 1st to October 31st and 48 hours per week from November 1st to March 31st, subject to the provision that the TODV will have the ability to amend the operation of the service for the following purposes:
      o to revise schedules; and
      o to operate evening or weekend service.

      which shall be in place of, or in addition to, the hours indicated within the successful Proponent’s proposed schedule.

f. The TODV will provide the successful Proponent with registration forms, brochures and other TODV-generated documents.

g. The successful Proponent must provide the TODV with a certificate from Workers Compensation acknowledging Workers Compensation coverage for himself/herself and his/her employees and a copy of his/her liability insurance with respect to his/her vehicle(s), <including but not limited to recreational vehicles on site and maintenance equipment used for landfill operation services>.

h. The successful Proponent is required to have a valid Town of Drayton Valley Business License, as well as any necessary Development and/or Building Permits, prior to Agreement execution

4.2 PAYMENT ADJUSTMENTS

The TODV may adjust the Monthly Payment or any other payment which is required to be made to the Contractor under the Contract by deducting the following sums based upon the following reasons. Nothing in this section limits or affects any of the TODV’s other rights or remedies under the Contract or at law or at equity or otherwise, and it is
acknowledged by the Contractor that the TODV’s remedies under the Contract are to be cumulative.

### Table 4.2. Payment Adjustments Summary

<table>
<thead>
<tr>
<th>Issue</th>
<th>Payment Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to maintain required hours or days of operation.</td>
<td>$1,000.00 per occurrence.</td>
</tr>
<tr>
<td>Failure to maintain equipment As Specified.</td>
<td>$500.00 per day.</td>
</tr>
<tr>
<td>Failure to accurately report equipment down-time and maintenance As Specified.</td>
<td>$100.00 per occurrence.</td>
</tr>
<tr>
<td>Failure to cover Waste at end of day.</td>
<td>$1000.00 per occurrence.</td>
</tr>
<tr>
<td>Failure to maintain size of Working Face As Specified.</td>
<td>$100.00 per day.</td>
</tr>
<tr>
<td>Failure to maintain roads As Specified.</td>
<td>$100.00 per day.</td>
</tr>
<tr>
<td>Failure to empty residential Waste Containers at end of day As Specified.</td>
<td>$100.00 per occurrence.</td>
</tr>
<tr>
<td>Failure to manage Asbestos Waste as per provincial guidelines.</td>
<td>$500.00 per occurrence.</td>
</tr>
<tr>
<td>Failure to control site drainage As Specified.</td>
<td>$100.00 per occurrence.</td>
</tr>
<tr>
<td>Smoking on-site.</td>
<td>$100.00 per occurrence.</td>
</tr>
<tr>
<td>Failure to clean up litter As Specified.</td>
<td>$100.00 per day.</td>
</tr>
<tr>
<td>Failure to report As Specified.</td>
<td>$100.00 per occurrence.</td>
</tr>
<tr>
<td>Failure to submit annual report by January 31 for the previous year.</td>
<td>$100.00 per day.</td>
</tr>
<tr>
<td>Failure to notify TODV of theft and/or vandalism.</td>
<td>$100.00 per occurrence.</td>
</tr>
<tr>
<td>Customer service complaints.</td>
<td>$100.00 per occurrence.</td>
</tr>
<tr>
<td>Failure to maintain adequate qualified staff on-site as agreed with the TODV.</td>
<td>$100.00 per day.</td>
</tr>
<tr>
<td>Failure to meet any other condition of the Contract.</td>
<td>At the discretion of the TODV, $100.00 per occurrence or the actual cost for the TODV to remedy the failure.</td>
</tr>
</tbody>
</table>

### 4.3 PERFORMANCE MEASURES

The Contractor shall achieve a minimum apparent density of 0.65 metric tonnes per cubic metre (650 kg/m³).

The TODV may conduct random tests, at its own expense, in order to ensure compaction requirements are being met.

The TODV’s testing procedure will be as follows:

- The TODV will conduct a survey of the area where the next lift of Waste is to be placed. The TODV will then record the weight of all the Waste going into the area over a specified period of time and then re-survey the area to determine the volume used;
- The density will be determined by dividing the weight (in kilograms) of Waste placed in the area by the volume (in cubic metres) utilized; and
- There will be no special allowance for any Daily Cover material applied in the density calculation. The weight of Daily Cover material placed will not be added to the weight of Waste placed, nor will the volume of Daily Cover material placed be estimated and subtracted from the total volume used.
Should the measured density fall below 0.65 T/m³, the Contractor shall amend operational procedures (e.g., compactive effort, lift thickness, etc.), provide necessary equipment, and/or amend daily cover usage to achieve the prescribed density.

The Contractor and the TODV shall complete a performance review on a quarterly basis to review operations and airspace consumption performance.

4.4 SPECIFIC TERMS AND CONDITIONS

Tenderers shall recognize the following:

a. The successful Tenderer is to provide Landfill Operation Services at AWMF in a manner that protects the environment and is consistent with the conditions of the Approval for the AWMF issued under the provisions of Alberta Environment and Parks (included in Appendix "B"), as well as all pertinent Federal, Provincial and local applicable acts, regulations, by-laws, guidelines, and policies.

b. The TODV owns and operates a leachate collection and control system at the AWMF. The successful Tenderer shall ensure that access is maintained to the leachate collection system manholes, holding tanks and other access cleanouts at all times. The successful Tenderer shall take all measures necessary to ensure that the leachate system is not damaged during the course of the Tenderer's operation.

c. The TODV owns and operates leachate, and groundwater monitoring wells at the AWMF. The successful Tenderer shall ensure that access is maintained to the monitoring wells at all times. The successful Tenderer shall take all measures necessary to ensure that the monitoring wells are not damaged during the course of the Tenderer's operations.

d. During the term of any Contract Agreement the TODV shall retain title, as personal property, to all equipment and or facilities at the located at the AWMF at the commencement of the Contract Agreement.

e. During the term of Contract Agreement, the successful Tenderer will retain title, as personal property, to all equipment and or facilities provided by the Tenderer. Upon termination of the Contract Agreement, all equipment and or facilities that are the property of the Tenderer shall be removed from the AWMF. The Tenderers' Tender cost shall include fees associated with the Compaction and Cover Services and removal at the termination of the Contract Agreement of the equipment and or facilities provided by the Tenderer.

f. A pre-contract site condition visual inspection will be completed jointly by the successful Tenderer and the TODV to establish the baseline conditions.

4.4.1 INSURANCE

Tenderers shall submit the following:

a. Commercial general liability insurance on an occurrence basis for third party bodily injury, personal injury and property damage, to an inclusive limit of not less than 5 million dollars per occurrence and in aggregate and including products and completed operations liability. The policy is to include the following:
i. The TODV, its officers, directors, agents, and volunteers as an additional insured with respect to liability arising in the course of performance of the Contractor's obligations under, or otherwise in connection with, the Contract;  
ii. Blanket contractual liability coverage;  
iii. Cross-liability and severability of interest clause;  
iv. Employers liability coverage;  
v. Thirty (30) day written notice of cancellation, termination, or material change;  
vi. Owner's and Contractor's protective liability;  
vii. Broad form property damage;  
viii. Waiver of subrogation; and  
ix. Accidental pollution liability (IBC2313 or equivalent).  

b. Automobile liability with:  
   x. Limit of liability not less than 5 million dollars; and  
   xi. Coverage for all vehicles owned, leased, or rented.  
c. Errors and Omissions liability insurance, insuring liability for errors and omissions in the performance or failure to perform the Work contemplated in the Contract, in an amount of not less than 5 million dollars per claim and in the annual aggregate.  
d. Contractors Pollution Liability Insurance with the TODV, its officers, directors, employees, consultants, and agents added as additional insureds insuring against bodily injury, property damage, and environmental cleanup costs for pollution conditions arising from the Contractor's operations in performing the Work in an amount not less than 2 million dollars annual aggregate for non-hazardous on-site services and 5 million dollars annual aggregate for hazardous waste. The insurance shall include cross-liability and severability of interests' provisions.  
e. Professional Liability Insurance with a limit of no less than 2 million dollars for each claim and in the aggregate, for claims resulting from the rendering or failure to render professional services, such insurance to remain in effect for a period not less than one year following completion or termination of the Contract.  

4.4.2 CERTIFICATES  
Tenderers shall submit the following:  
a. Proof of current Alberta Workers' Compensation Board (WCB) Certification;  
b. Performance Bond and Labour, and Material Payment Bond, each for the amount of 10% of the yearly contract value including GST.  
c. Landfill Operations Basics (LOB) certification for at least one staff on site.  

4.4.3 SAFETY  
Tenderers shall submit the following:  
a. A current copy of an issued Certificate of Recognition (COR) or Small Employer Certificate of Recognition (SECOR) under Alberta Occupational Health and Safety;  

4.5 SUBMISSION OF PROPOSAL  
a. The Proponent shall submit four (4) copies of its Proposal with all accompanying schedules, appendices or addenda in a sealed envelope or package marked with
the Proponent’s name and the RFP title up to the Closing Time set out on the date and at the location shown on the title page of this RFP.

b. Proposals received after the Closing Time or in locations other than the address indicated, will not be accepted and will be returned. The TODV may elect to extend the Closing Time.

c. Amendments to a Proposal may be submitted if delivered in writing prior to the Closing Time in a sealed envelope or package, marked with the Proponent’s name and the RFP title.

d. Proposals may be withdrawn by written notice only, provided such notice is received at the administration office of the TODV prior to Closing Time.

e. All costs associated with the preparation and submission of the Proposal, including any costs incurred by the Proponent after the Closing Time, will be borne solely by the Proponent.

4.6 CONFLICT OF INTEREST

By submitting a Proposal, the Proponent warrants that neither it nor any of its officers or directors, or any employee with authority to bind the Proponent, has any financial or personal relationship or affiliation with any elected official or employee of the TODV or their immediate families which might in any way be seen by the municipalities to create a conflict.

4.7 ACCEPTANCE AND REJECTION OF PROPOSALS

a. Notwithstanding any other provision in the Proposal documents, the TODV has in its sole discretion, the unfettered right to:

   i. accept any Proposal;
   ii. reject any Proposal;
   iii. reject all Proposals;
   iv. accept a Proposal which is not the lowest priced Proposal; and
   v. reject a Proposal even if it is the only Proposal received by the TODV.

b. All Proposals shall be irrevocable and remain open for acceptance for at least one hundred and twenty (120) days after the Closing Time, whether or not another Proposal has been accepted.

c. The TODV is not under any obligation to award a Contract and may elect to terminate this RFP at any time.

4.8 EVALUATION OF PROPOSALS

a. Proposals will be evaluated on the basis of the overall best value to the TODV based on quality, service, price, and any other criteria set out herein including, but not limited to:

   i. the Proponent’s ability to meet the requirements, qualifications, and competencies set out herein;
   ii. the Proponent’s ability to deliver the services when and where required;
   iii. financial offer;
iv. the Proponent’s business and technical reputation and capabilities, experience and where applicable, the experience of its personnel, financial stability, track record, and references of current and former customers;

v. quality of Proposal; and

vi. any other criteria set out in the RFP or otherwise reasonably considered relevant.

b. The TODV may elect to short list some of the Proponents and may require short listed Proponents to provide additional information or details, including making a presentation, supplying samples, demonstrations, and/or additional technical literature.

c. The TODV may elect to enter into negotiations with the Proponent or with any other Proponents concurrently. In no event will the TODV be required to offer any modified terms to any Proponent prior to entering into an Agreement, and the TODV will not be liable to any Proponent as a result of such negotiations.

d. All sub-contractors of the Proponent will be subject to the same evaluation process. It is the responsibility of the Proponent to guarantee that all its sub-contractors will comply with all the requirements and terms and conditions set out herein.

e. The evaluation process will occur in the following two stages:

i. Stage I will consist of a review to determine which proposals comply with all of the mandatory requirements. Proposals that do not comply with all of the mandatory requirements as of the submission deadline will, subject to the express and implied rights of the TODV, be disqualified and not evaluated further.

ii. Stage II will consist of a review of all compliant proposals to determine the highest ranking Proponent based on the rated criteria and pricing evaluation set out below.

<table>
<thead>
<tr>
<th>Rated Criteria</th>
<th>Weighted Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Submission</td>
<td>50</td>
</tr>
<tr>
<td>References</td>
<td>10</td>
</tr>
<tr>
<td>Price</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

4.8.1 PASS/FAIL EVALUATION

Proposals will be evaluated on a pass/fail basis for their compliance with the following elements:

- Proposal Form;
- References;
- Site Manager's Experience/Qualifications;
- List Certified Landfill Operators;
- List of Other Key Personnel;
- List of Sub-Contractors;
- List of Equipment;
- Schedule of Prices – Tendered Price;
- Schedule of Prices – Force Rate Account Work;
- Confirmation of Insurance;
• Confirmation of Performance Security;
• Worker’s Compensation Board Clearance Letter;
• Proof of Landfill Operator Certification; and
• Proof of COR or SECOR Certification.

For greater certainty, if the Proponent does not satisfy requirements for each aforementioned element, their Proposal may be rejected.

4.8.2 TECHNICAL EVALUATION

The Technical elements of the submission is to be in a form that clearly addresses all of the information and documentation requirements set out in this RFP. All information and documentation in the Technical Proposal should be in the same order as specified in this section.

4.8.2.1 EXPERIENCE AND CAPABILITY

This section should provide an overview of the Proponent’s organization and details of what the Proponent can offer the TODV with regard to the Work required for the Operation of the AWMF. Describe the Proponent’s experience with contracts of similar scope. Include a brief description of each contract, the client, and key personnel involved.

4.8.2.2 MANAGEMENT PLAN

This section will address all work required to be performed to satisfy the Proponent’s obligations, duties, and responsibilities for the Contract.

Specific information to be provided includes the following:

• Organizational Structure;
• Site Manager;
• Certified Landfill Operators; and
• Other Key Personnel.

4.8.2.3 ORGANIZATIONAL STRUCTURE

Describe the Proponent’s organizational structure for the Work and the relationships between all functions in the organization including reporting requirements and proposed communication with TODV.

The organizational structure must address the following basic functions and responsibilities:

• Contract management;
• Landfill operations, including all key personnel and backups for key personnel, including the Site Manager and Certified Landfill Operator;
• Communications; and
• Safety Plan.
4.8.2.4 SITE MANAGER

A Site Manager is required to be on site at minimum one (1) day per week. Identify the Site Manager responsible for ensuring that the AWMF is operated as per the Contract. Describe the Site Manager’s authority to represent the Proponent and the Site Manager’s responsibility in discharging the obligations of the Contract. Provide suitable information in support of the appointment of the Site Manager to properly manage this Contract.

4.8.2.5 CERTIFIED LANDFILL OPERATORS

Identify the primary certified landfill operators for the AWMF. Provide evidence of certification for the province of Alberta.

4.8.2.6 OTHER KEY PERSONNEL

Provide the other personnel that will be performing the AWMF, PDO staff, litter collector(s), other equipment operators. If specific personnel cannot be named, indicate the number of staff committed for various positions.

4.8.2.7 COMMUNICATIONS

Identify communications structure with TODV. Contractor shall attend monthly landfill operations meetings. Monthly meetings shall be attended by, at a minimum, the Site Manager. The Contractor shall be in attendance at other meetings with TODV as requested.

4.8.2.8 SAFETY PLAN

Provide a copy of Certificate of Recognition (COR) or Small Employer Certificate of Recognition (SECOR).

Provide a description of the Proponent’s plan to apply its Safety Plan related to daily landfill operations and provide a safe working environment for both its employees and landfill customers.

The successful Proponent shall prepare and submit the detailed Safety Plan at least twenty-one (21) days prior to commencement of the Work, which the Contractor shall implement, maintain, and supervise. The Safety Plan shall incorporate all safety precautions required by all applicable laws and regulations, including the Workers’ Compensation Act, the Occupational Health and Safety Regulations or any other occupational health and safety legislation or regulations that may be applicable.

4.8.2.9 LIST OF EQUIPMENT

Description of each piece of heavy equipment proposed for use and available for backup.

4.8.2.10 LIST OF SUB-CONTRACTORS

Description of the Tenderer’s proposed sub-contractors including contact information, project reference information and Work to be performed.
4.8.2.11 VALUE ADD ELEMENTS

Provide details of any value-added elements (e.g. additional services, use of alternative daily cover or sustainability practices) for consideration.

4.9 PROPOSAL PRICE EVALUATION

The financial evaluation will be based on a combination of fees provided by the Proponents in Schedule of Prices – Tendered Price and Force Rate Account and estimated waste tonnages for the Contract Term.

The TODV reserves the right to conduct a sensitivity analysis given the fluctuations in waste tonnages.

4.10 PROPOSAL TIMELINE

The Timeline for the RFP process is as follows:

a. RFP issued to vendors – August 20, 2021;
b. RFP closes – September 17, 2021;
c. Presentations (if applicable) – To Be Determined;
d. Completion of evaluation process and award – September 24, 2021; and
e. Signing of Services Agreement– October 8, 2021.
SECTION 5.0 – PROPOSAL FORMS

REQUEST FOR PROPOSAL SUBMISSION
LANDFILL OPERATION SERVICES
PAGE 1 OF 2

Proponent’s Name: ____________________________________________________________

Address ________________________________________________________________

________________________________________________________________________

Mailing Address (if different from above) ______________________________________

________________________________________________________________________

Telephone: _______________________________ Fax: _________________________

Key Contact Person: _______________________________________________________

Telephone (if different from above) __________________________________________

Email: ___________________________________________________________________

The undersigned Proponent, having carefully read and examined the RFP, including all sections, and having full knowledge of the requirements described herein, does offer to provide the goods and/or services in accordance with the requirements, terms and conditions set out in the RFP and in accordance with the pricing as described within.

______________________________ ____________________________
Signature of Authorized Signatory Date

______________________________
Print Name and Title
5.1 REQUIRED PROPOSAL DOCUMENTS

By initialing each item, the Proponent confirms it has completed and enclosed the following documentation in its Proposal, and has identified any deviations or items of non-compliance providing an explanation of where it does not comply.

Initial

1. The Proponent’s Alberta WCB registration number is ______________. The Proponent warrants that it is in good standing as to all WCB assessments and requirements.

2. The Proponent confirms that it will comply with all occupational health and safety requirements, policies and procedures of the TODV and all statutory occupational health and safety requirements under, or in connection with the Worker’s Compensation Act.

3. Brief description of Proponent’s company, purpose, and history of successes.

4. Information on size of organization, number of service providers, and staff employed.

5. Information on relevant experience performed during the last five (5) years.

6. Indication of the number and size of other municipalities where like services have or are currently being provided.

7. Identification of key personnel to be assigned to this Agreement, setting out their names, responsibilities, qualifications, and relevant experience.

8. Technical Requirements outlined in Section 4.8.2.

9. List of Equipment.

10. Security deposit.

11. Tender Form and Schedule of Prices.

12. Schedule of Prices – Force Rate Account Work. The Contractor will provide a list and rates for on-site force account Work as needed. Actual hourly rates must be provided. References to other publications, documents or provincial rate sheets will not be accepted. Any references to other publications for rates or equipment will be considered incomplete Tender documentation.
13. Submission of a detailed list of any deviations and/or variations from the terms and conditions set out in this RFP and, if applicable, detail proposed amendments.
# REFERENCES

**Reference 1:**

<table>
<thead>
<tr>
<th>Site Name:</th>
<th>_________________________________________________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Location:</td>
<td>_________________________________________________________________</td>
</tr>
<tr>
<td>Contract Duration</td>
<td>_________________________________________________________________</td>
</tr>
<tr>
<td>Waste Tonnage / Day:</td>
<td>_________________________________________________________________</td>
</tr>
<tr>
<td>Site Owner:</td>
<td>_________________________________________________________________</td>
</tr>
<tr>
<td>Contact Name:</td>
<td>_________________________________________________________________</td>
</tr>
<tr>
<td>Contact Telephone:</td>
<td>_________________________________________________________________</td>
</tr>
<tr>
<td>Description of Work:</td>
<td>_________________________________________________________________</td>
</tr>
</tbody>
</table>
**REFERENCES (CONTINUED)**

Reference 2:

<table>
<thead>
<tr>
<th>Site Name:</th>
<th>____________________________________________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Location:</td>
<td>____________________________________________________________</td>
</tr>
<tr>
<td>Contract Duration:</td>
<td>____________________________________________________________</td>
</tr>
<tr>
<td>Waste Tonnage / Day:</td>
<td>____________________________________________________________</td>
</tr>
<tr>
<td>Site Owner:</td>
<td>____________________________________________________________</td>
</tr>
<tr>
<td>Contact Name:</td>
<td>____________________________________________________________</td>
</tr>
<tr>
<td>Contact Telephone:</td>
<td>____________________________________________________________</td>
</tr>
<tr>
<td>Description of Work:</td>
<td>____________________________________________________________</td>
</tr>
<tr>
<td></td>
<td>____________________________________________________________</td>
</tr>
<tr>
<td></td>
<td>____________________________________________________________</td>
</tr>
<tr>
<td></td>
<td>____________________________________________________________</td>
</tr>
<tr>
<td></td>
<td>____________________________________________________________</td>
</tr>
<tr>
<td></td>
<td>____________________________________________________________</td>
</tr>
<tr>
<td></td>
<td>____________________________________________________________</td>
</tr>
</tbody>
</table>
### REFERENCES (CONTINUED)

#### Reference 3:

<table>
<thead>
<tr>
<th>Site Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contract Duration:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Waste Tonnage / Day:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site Owner:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact Telephone:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description of Work:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
**SITE MANAGER’S EXPERIENCE / QUALIFICATIONS**

The Tenderer agrees that the personnel employed by them will be as listed below and further agrees that any changes or additions made to this list will be made in writing to the TODV. As the job is service oriented, the TODV is looking for the Contractor’s employees to have customer service experience.

<table>
<thead>
<tr>
<th>Name of Site Manager</th>
<th>Site Manager’s Experience / Qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Landfill Operation Management Experience (Specific Projects and Number of Years)</td>
</tr>
<tr>
<td></td>
<td>Landfill Operation Formal Training</td>
</tr>
</tbody>
</table>
### LIST OF CERTIFIED LANDFILL OPERATORS

The Tenderer agrees that the personnel employed by them will be as listed below and further agrees that any changes or additions made to this list will be made in writing to the TODV. As the job is service oriented, the TODV is looking for the Contractor’s employees to have customer service experience.

<table>
<thead>
<tr>
<th>Name of Employee</th>
<th>Employee's Experience / Qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Landfill Operation Experience</td>
</tr>
<tr>
<td></td>
<td>(Specific Projects and Number of Years)</td>
</tr>
<tr>
<td></td>
<td>Heavy Equipment Operation Experience</td>
</tr>
<tr>
<td></td>
<td>(Number of Years)</td>
</tr>
<tr>
<td></td>
<td>Landfill Operation Formal Training</td>
</tr>
<tr>
<td></td>
<td>Heavy Equipment Formal Training</td>
</tr>
<tr>
<td></td>
<td>Other Training</td>
</tr>
</tbody>
</table>
LIST OF OTHER KEY PERSONNEL

The Tenderer agrees that the personnel employed by them will be as listed below and further agrees that any changes or additions made to this list will be made in writing to the TODV. As the job is service oriented, the TODV is looking for the Contractor’s employees to have customer service experience.

<table>
<thead>
<tr>
<th>Name of Employee</th>
<th>Employee's Experience / Qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Landfill Operation Experience</td>
</tr>
<tr>
<td></td>
<td>(Specific Projects and Number of Years)</td>
</tr>
<tr>
<td></td>
<td>Heavy Equipment Operation Experience</td>
</tr>
<tr>
<td></td>
<td>(Number of Years)</td>
</tr>
<tr>
<td></td>
<td>Landfill Operation Formal Training</td>
</tr>
<tr>
<td></td>
<td>Heavy Equipment Formal Training</td>
</tr>
<tr>
<td></td>
<td>Other Training</td>
</tr>
</tbody>
</table>
LIST OF SUB-CONTRACTORS

The Tenderer agrees that the Sub-Contractors employed by them will be as listed below and further agrees that no changes or additions will be made to their list without the written approval of the TODV.

<table>
<thead>
<tr>
<th>Name and Address of Sub-Contractor</th>
<th>Reference Project and Reference Contact Information for Similar Work to be Performed by Sub-Contractor</th>
<th>Work to be Performed by Sub-Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
LIST OF EQUIPMENT

The Tenderer will provide a description of each piece of heavy equipment to be used at the AWMF. The age and condition of the equipment will be a significant consideration in the quotation evaluation process. No changes to the equipment used at the Facility will be allowed without the written consent of the TODV.

<table>
<thead>
<tr>
<th>LANDFILL COMPACTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make:</td>
</tr>
<tr>
<td>Year:</td>
</tr>
<tr>
<td>Horsepower:</td>
</tr>
<tr>
<td>Owned or Leased:</td>
</tr>
<tr>
<td>Anticipated Hours of Operation per Year:</td>
</tr>
<tr>
<td>Accessories or Attachments to be Provided:</td>
</tr>
<tr>
<td>Maintenance Performed to Date (attach records/logs as required):</td>
</tr>
<tr>
<td>Proposed Maintenance Program (attach separate sheets as required):</td>
</tr>
<tr>
<td>Equipment Maintenance / Replacement Guarantees:</td>
</tr>
<tr>
<td>Equipment Type</td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td>BULLDOZER</td>
</tr>
</tbody>
</table>

Proposed Maintenance Program (attach separate sheets as required):

Equipment Maintenance / Replacement Guarantees:
LIST OF EQUIPMENT (CONTINUED)

<table>
<thead>
<tr>
<th>LOADER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make:</td>
</tr>
<tr>
<td>Year:</td>
</tr>
<tr>
<td>Horsepower:</td>
</tr>
</tbody>
</table>

Owned or Leased:

Anticipated Hours of Operation per Year:

Accessories or Attachments to be Provided:

Maintenance Performed to Date (attach records/logs as required):

Proposed Maintenance Program (attach separate sheets as required):

Equipment Maintenance / Replacement Guarantees:
**SCHEDULE OF PRICES – TENDERED PRICE**

To Supply all necessary equipment, labour, materials, supervision, and all things necessary to provide compaction and cover services at the Aspen Waste Management Facility in accordance with the attached Invitation to Tender, Forms, and General Conditions.

**Tender Price**

A. Compaction and Cover Services Unit Price (see Section 3.10 for work included in this price)

$_______________________ / tonne (excluding GST)

B. Snow Clearing Unit Price (see Section 3.11 for work included in this price)

$_______________________/event (excluding GST)

C. Landfill Operations (all other work described in this RFP)

$______________________/month (excluding GST)

**Tendered Sum**

The quantities listed under Tender Sum are estimates only, and are in no way guaranteed quantities. The purpose of these quantities is only for comparison of tender submissions. Tendered sum shall be calculated as follows:

D. Estimated Total Annual cost of Compaction and Cover Services

Compaction and Cover Services Unit Price A x 16,000 tonnes:  $________________

E. Estimated Total Annual cost of Snow Clearing

Snow Clearing Unit Price B x 5 events:       $________________

F. Landfill Operations

Landfill Operations Unit Price A x 12 months:    $________________

G. Estimated Force Account Work (Sum of the Following)

Rates taken from Schedule of Prices – Force Rate Account Work

- Landfill Compactor Hourly Rate x 40 hours:       $________________
- Bulldozer Hourly Rate x 60 hours:               $________________
- Excavator Hourly Rate x 80 hours:               $________________
- Articulated Rock Truck Hourly Rate x 40 hours:  $________________
- Motor Grader Hourly Rate x 50 hours:            $________________
Loader Hourly Rate x 100 hours: $______________
Loader with Snow Blade Hourly Rate x 40 hours: $______________
Labourer Hourly Rate x 100 hours: $______________

E. TOTAL TENDERED SUM (Sum D + E+ F+ G) $______________

**Yearly Escalation Factor**

For each year of the contract, the rates will increase by an escalation factor of two percent (2 %) on the first day of September in each successive year that the contract is in force.
**SCHEDULE OF PRICES – FORCE RATE ACCOUNT WORK**

Force Account hourly rates will be supplied for work that may be required in addition to the Work specified herein.

The Contractor must supply Force Account hourly rates for equipment that the Contractor may make available for additional work required at the Facility. List type, make, model, year and serial number and hourly rate of equipment to be utilized. Provide actual hourly rates. Reference to other rates sheet or documents will be considered non-compliant and incomplete.

<table>
<thead>
<tr>
<th>Type, Make, Model of Equipment</th>
<th>Rate per Hour (excluding GST)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landfill Compactor</td>
<td></td>
</tr>
<tr>
<td>Bulldozer</td>
<td></td>
</tr>
<tr>
<td>Excavator</td>
<td></td>
</tr>
<tr>
<td>Articulated Rock Truck</td>
<td></td>
</tr>
<tr>
<td>Motor Grader</td>
<td></td>
</tr>
<tr>
<td>Loader</td>
<td></td>
</tr>
<tr>
<td>Loader with Snow Blade</td>
<td></td>
</tr>
<tr>
<td>Labourer</td>
<td></td>
</tr>
</tbody>
</table>

**Yearly Escalation Factor**

For each year of the contract, the rates will increase by an escalation factor of two percent (2 %) on the first day of September in each successive year that the contract is in force.

If additional space is required, please attach additional sheet(s).
APPENDIX A

FIGURES

Figure 1 – Site Location Map
Figure 2 – Site Plan
APPENDIX B

APPROVAL
APPROVAL

PROVINCE OF ALBERTA

ENVIRONMENTAL PROTECTION AND ENHANCEMENT ACT
R.S.A. 2000, c.E-12, as amended.

47415-02-00

APPROVAL NO.: .................................................................................................

014-47415

APPLICATION NO.: ..........................................................................................

May 1, 2013

EFFECTIVE DATE: ..............................................................................................

April 30, 2023

EXPIRY DATE: ..................................................................................................

APPROVAL HOLDER: ...........................................................................................

ASPEN WASTE MANAGEMENT AUTHORITY

ACTIVITY: CONSTRUCTION, OPERATION AND RECLAMATION OF THE...

Class II Landfill in the Town of Drayton Valley where more than 10,000 tonnes per year
of waste, not including hazardous waste, is disposed of.

IS SUBJECT TO THE ATTACHED TERMS AND CONDITIONS:

Designated Director under the Act .................................................................

Neil Holands, P.Eng.

Date Signed ............ May 1, 2013 .................................................................
TERMS AND CONDITIONS ATTACHED TO APPROVAL

PART 1: DEFINITIONS

SECTION 1.1: DEFINITIONS

1.1.1 All definitions from the Act and the regulations under the Environmental Protection and Enhancement Act apply except where expressly defined.

1.1.2 In all PARTS of this approval:

(a) "Act" means the Environmental Protection and Enhancement Act, R.S.A. 2000, c.E-12, as amended;

(b) "active landfill area" means the area of the landfill that has received or is receiving waste and has not been closed and that is being used for disposal, storage, processing, transport or handling of waste;

(c) "APEGA" means the Association of Professional Engineers, Geologists and Geophysicists of Alberta;

(d) "application" means the written submissions to the Director in respect of application number 014-47415 and any subsequent applications for the amendments of approval number 47415-02-00;

(e) "as-built plans" means survey plans, signed and stamped by a professional registered with APEGA, that document variances from design or construction plans that were either approved or authorized according to the terms and condition of this approval;

(f) "bulk liquid" means a liquid transported in a vehicle tank or body that is not contained in barrels or other such containers;

(g) "cell" means a designed or designated area of the landfill comprised of an excavation or earthen structure in which waste is enclosed by a cover;

(h) "cell closure" means the capping of a cell with a barrier layer and subsoil and topsoil;

(i) "certified operator" means a person who holds a valid Certificate of Qualification of the appropriate class under Part 3, Section 25 of the Waste Control Regulation (A.R. 192.96), or as amended;

(j) "class II" means what it means in the Waste Control Regulation (AR 192/96) as amended;
TERMS AND CONDITIONS ATTACHED TO APPROVAL

(k) "class III" means what it means in the Waste Control Regulation (AR 192/96) as amended;

(l) "clay liner" means a liner that:

(i) is comprised of clay material compacted to achieve an in-place hydraulic conductivity of $1 \times 10^{-9}$ metres/second or less; and

(ii) has a minimum thickness of 1.0 metres at all points measured perpendicular to the slope;

(m) "compliance boundary" means the location or locations where measurements of groundwater quality for regulatory purposes are taken to assess the landfill's performance;

(n) "construction quality assurance" means an integrated system of management activities involving planning, implementation, documentation, assessment, reporting and quality improvement to identify the level to which construction is in compliance with the specifications;

(o) "construction quality control" means the overall system of technical activities that measures the attributes and performance of construction to verify that construction meets the specifications;

(p) "cover" means soil or other material that is used to cover compacted waste in a cell;

(q) "clay" means any sampling period of 24 consecutive hours unless otherwise specified;

(r) "Director" means an employee of the Government of Alberta designated as a Director under the Act;

(s) "effective distance downwind" means at a distance and orientation downwind from the working face where the most amount of fugitive waste is captured by the litter catch fence;

(t) "effective distance upwind" means at a distance and orientation upwind of the working face where the wind screen provides the most amount of wind protection for the working face;

(u) "final closure" means the period of time when waste will no longer be placed in the defined portion of the landfill and activities are undertaken to complete the final cover system and decommission components and facilities that are no longer required, and this period of time includes the construction of any
TERMS AND CONDITIONS ATTACHED TO APPROVAL

additional components or monitoring systems that are necessary for post-closure care;

(v) "final cover" means soils and other material used on the surface of a landfill that is completed to its maximum designated waste elevation;

(w) "fugitive waste" means substances originating from the landfill that are moved by natural forces, including but not limited to the following:

(i) styrofoam;

(ii) paper;

(iii) cardboard; or

(iv) plastic;

(x) "grab sample" means an individual sample collected in less than 30 minutes and which is representative of the substance sampled;

(y) "groundwater" means groundwater as defined in the Water Act;

(z) "hydraulic conductivity" means the ease with which a fluid can be transported through a material;

(aa) "ISO 17025" means the international standard, developed and published by International Organization for Standardization (ISO), specifying management and technical requirements for laboratories;

(bb) "incompatible wastes" means substances which when mixed can produce effects which are harmful to human health or the environment such as heat, pressure, fire, explosion, violent reaction, toxic dusts, mists, fumes or gases, or flammable fumes or gases;

(cc) "landfill" means all buildings, structures, cells, storage facilities, material handling facilities, process and pollution abatement equipment, vessels, trenches, roadways, berms, monitoring wells, pipelines and other installations, and includes the land, located on the South 1/2 of Section 20, Township 49, Range 07, West of the 5th Meridian, that is being or has been used or held for or in connection with the Aspen waste Management Authority Class II landfill;

(dd) "landfill gas" means a mixture of gases generated by the microbial decomposition of and the chemical reactions between wastes in the landfill;
TERMS AND CONDITIONS ATTACHED TO APPROVAL

(ee) "leachate" means a liquid that has undergone chemical or physical changes and has been in contact with:

(i) waste in a biodegradation pad or landfill cell; or

(ii) residuals on a compost pad;

(ff) "leachate collection system" means a system that gathers leachate so that it may be removed from the landfill and which could include a permeable drainage layer, a network of perforated pipes, and sumps or manholes from where leachate can be removed;

(gg) "LEL" means a lower explosive limit that is the lowest percentage by volume of an explosive vapour or gas in air that will propagate a flame at 25° Celsius at atmospheric pressure;

(hh) "liner" means a continuous layer placed beneath and at the sides of a landfill cell to restrict the migration of leachate, or landfill gas or both;

(ii) "local environmental authority" means Environment and Sustainable Resource Development, in the Province of Alberta, or the agency that has the equivalent responsibilities for any jurisdiction outside the Province;

(jj) "maximum acceptable leachate head" means the maximum depth of leachate above the primary liner, not including the sumps or leachate pipe trenches;

(kk) "maximum designated waste elevation" means the maximum elevation of waste in metres above sea level as described in the application;

(ll) "monitoring system" means all equipment used for sampling, conditioning, analyzing or recording data in respect of any parameter listed or referred to in this approval including equipment used for continuous monitoring;

(mm) "monitoring well" means a well drilled at a site to measure groundwater levels and collect groundwater samples for the purpose of physical, chemical, or biological analysis to determine the concentration of groundwater constituents;

(nn) "month" means calendar month;

(oo) "cell" means a designed designated area comprised of an excavation or earth structure in which compacted wastes are enclosed by a cover;

(pp) "post-closure period" means:

(i) a minimum period of 25 years from the final closure of the landfill;
TERMS AND CONDITIONS ATTACHED TO APPROVAL

(ii) the groundwater quality performance standards specified in TABLE 4.11-A are met at all points of compliance; and

(iii) the quality and quantity of leachate and landfill gas generated at the landfill meet objectives that, in the opinion of the Director, show the landfill has stabilized;

(qq) "QA/QC" means quality assurance and quality control;

(rr) "run-off" means any rainwater or meltwater that drains as surface flow from the landfill excluding leachate;

(ss) "run-off control system" means any parts of the landfill that collect, store or treat run-off;

(tt) "run-on" means any rainwater or meltwater that drains as surface flow into the active landfill area;

(uu) "run-on control system" means parts of the landfill that divert run-on away from the active landfill area;

(vv) "soil" means unconsolidated mineral or organic surficial materials that can be, have been, or are being altered by weathering, biological processes, or human activity;

(ww) "subsoil" means the layer of soil directly below the topsoil layer that consists of the B and C horizons as defined in The Canadian System of Soil Classification, Third Edition, 1998, as amended;

(xx) "surface water management system" means a system that manages run-off and run-on;

(yy) "tank" means a stationary device, designed to contain an accumulation of a substance, which is constructed primarily of non-earthen materials that provide structural support;


(aaa) "uppermost formation" means a continuous water-saturated geological stratum or strata, including, but not limited to sand lenses and aquifers, that is projected to be the most probable pathway or pathways for lateral transport of leachate;
TERMS AND CONDITIONS ATTACHED TO APPROVAL

(bbb) "waste storage area(s)" means the area(s) designated for waste container storage and/or waste tank storage as described in the application;

(ccc) "week" means any consecutive 7-day period unless otherwise specified;

(ddd) "working face" means that portion of the active landfill area where waste is currently being deposited, spread and compacted; and

(eee) "year" means a calendar year, unless otherwise specified.

PART 2: GENERAL

SECTION 2.1: GENERAL

2.1.1 The approval holder shall immediately report to the Director by telephone any contravention of the terms and conditions of this approval at 1-780-422-4505.

2.1.2 The approval holder shall submit a written report to the Director within 7 days of the reporting pursuant to 2.1.1.

2.1.3 The terms and conditions of this approval are severable. If any term or condition of this approval or the application of any term or condition is held invalid, the application of such term or condition to other circumstances and the remainder of this approval shall not be affected thereby.

2.1.4 If the approval holder monitors for any substances or parameters which are the subject of operational limits as described in this approval more frequently than is required and using procedures authorized in this approval, then the approval holder shall provide the results of such monitoring as an addendum to the reports required by this approval.

2.1.5 All abbreviations used in this approval follow those given in Standard Methods for the Examination of Water and Wastewater published jointly by the American Public Health Association, the American Water Works Association, and the Water Environment Federation, 2012, as amended, unless otherwise specified in this approval.

2.1.6 The approval holder shall submit all annual reports required by this approval to be compiled or submitted to the Director on or before March 31 of the year following the year in which the information was collected, unless otherwise specified in this approval.

2.1.7 Environmental Protection and Enhancement Act Approval No. 47415-01-00 is cancelled.
TERMS AND CONDITIONS ATTACHED TO APPROVAL

SECTION 2.2: RECORD KEEPING

2.2.1 The approval holder shall record and retain all the following information in respect of any sampling conducted or analyses performed in accordance with this approval for a minimum of ten years, unless otherwise authorized in writing by the Director:

(a) the place, date and time of sampling;
(b) the dates the analyses were performed;
(c) the analytical techniques, methods or procedures used in the analyses;
(d) the names of the persons who collected and analyzed each sample; and
(e) the results of the analyses.

SECTION 2.3: ANALYTICAL REQUIREMENTS

2.3.1 With respect to any sample required to be taken pursuant to this approval, the approval holder shall ensure that:

(a) collection;
(b) preservation;
(c) storage;
(d) handling; and
(e) analysis;

shall be conducted in accordance with the following unless otherwise authorized in writing by the Director:

(i) for run-on, run-off, leachate and groundwater parameters:
   (A) the Standard Methods for the Examination of Water and Wastewater, published jointly by the American Public Health Association, American Water Works Association, and the Water Environment Federation, 2012, as amended;

(ii) for soil samples:
   (A) Soil Sampling and Methods of Analysis, Lewis Publishers, 1993, as amended.

(iii) for waste analysis:
TERMS AND CONDITIONS ATTACHED TO APPROVAL

(A) the Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA, SW-846, September 1986, as amended.

2.3.2 The approval holder shall analyze all samples that are required to be obtained by this approval in a laboratory accredited pursuant to ISO 17025, as amended, for the specific parameter(s) to be analyzed, unless otherwise authorized in writing by the Director.

2.3.3 The approval holder shall comply with the terms and conditions of any written authorization issued by the Director under 2.3.2.

PART 3: LANDFILL CONSTRUCTION

SECTION 3.1: GENERAL

3.1.1 The approval holder shall construct the landfill as a Class II landfill and as described in the application, unless otherwise specified in this approval.

3.1.2 At least 14 days prior to construction of any:

(a) landfill cell;
(b) surface water management system for the landfill;
(c) composting pad;
(d) sump waste dewatering lagoon; or
(e) cell closure system

the approval holder shall submit to the Director, the following plans for the proposed construction, signed and stamped by a professional registered with APEGA:

(i) a Design Plan and Specifications for the proposed construction;
(ii) a Construction Quality Assurance Plan; and
(iii) a Construction Quality Control Plan.

3.1.3 The Design Plan and Specifications in 3.1.2 for any new cell shall include at a minimum all of the following:

(a) a clay liner;
TERMS AND CONDITIONS ATTACHED TO APPROVAL

(b) a leachate collection system capable of maintaining the maximum acceptable leachate head;

(c) a groundwater monitoring system;

(d) a underdrain groundwater collection system as required;

(e) a gas monitoring network upon cell closure; and

(f) a run-on control system to prevent flow onto the active landfill area for events up to at least the peak discharge from a 1 in 25 year – 24 hour duration rainfall event.

(g) a landfill run-off control system to collect and store landfill run-off for events up to at least the peak discharge from a 1 in 25 year – 24 hour duration rainfall event.

3.1.4 The Design Plan and Specifications in 3.1.2 for any cell closure shall include, at a minimum, all of the following unless otherwise authorized in writing by the Director:

(a) a final clay barrier;

(i) consisting of at least 0.6 metres of clay; and

(ii) having a maximum hydraulic conductivity of $1 \times 10^{-7}$ metres/second or less;

(b) a subsoil layer overlying the clay barrier with a minimum thickness of 0.35 metres;

(c) a topsoil layer overlying the subsoil layer with a minimum thickness of 0.20 metres;

(d) a contoured profile having no slope exceeding 30%;

(e) a contoured profile such that no water pools over the cells; and

(f) a vegetative cover.

3.1.5 The approval holder shall not deviate from the Design Plan and Specifications, as submitted under 3.1.2, unless the following conditions are met:

(a) the deviation results in a minor adjustment to the Design Plan and Specifications in 3.1.2 to suit field conditions encountered; and
TERMS AND CONDITIONS ATTACHED TO APPROVAL

(b) the deviation will result in an equivalent design performance of the landfill.

3.1.6 Prior to commencing the operation of any cell following construction, excluding the placement of waste as a protective layer, the approval holder shall submit to the Director a summary report of the Construction Quality Assurance and Construction Quality Control results signed and stamped by a professional registered with APEGA.

3.1.7 The summary report in 3.1.6 shall contain the following information, as a minimum:

(a) confirmation that the landfill has been constructed according to:

(i) the Construction Quality Assurance Plan;

(ii) the Construction Quality Control Plan; and

(iii) the Design Plan and Specifications subject to the deviations as per 3.1.5;

(b) documentation of any minor deviations as per 3.1.5; and

(c) confirmation by the professional registered with APEGA, that deviations as per 3.1.5 will result in an equivalent design performance of the landfill.

3.1.8 The approval holder shall maintain:

(a) the integrity of the landfill liners; and

(b) the integrity of the leachate collection system.

SECTION 3.2: SURFACE WATER MANAGEMENT

3.2.1 The approval holder shall construct surface water management systems at the landfill as described in the application except as otherwise provided in this approval.

3.2.2 The approval holder shall construct the following surface water management systems at the landfill before any waste is placed in a new cell:

(a) a run-on control system to prevent flow onto the active landfill area for events up to at least the peak discharge from a 1 in 25 year – 24 hour duration rainfall event; and

(b) a run-off control system for the active landfill area to collect and control at least the run-off water volume resulting from a 1 in 25 year – 24 hour duration rainfall event.
TERMS AND CONDITIONS ATTACHED TO APPROVAL

SECTION 3.3: SOIL CONSERVATION

3.3.1 The approval holder shall conserve all topsoil from disturbed land at the landfill.

3.3.2 The topsoil in 3.3.1 shall be used for reclamation of the landfill.

3.3.3 The approval holder shall not use topsoil for cover of the working face.

3.3.4 The approval holder shall salvage, from disturbed land, sufficient subsoil to meet the subsoil replacement requirements for cell closure.

3.3.5 The approval holder shall locate all topsoil stockpiles at the landfill.

3.3.6 When topsoil and subsoil are stockpiled, the stockpiles shall be constructed as follows:

(a) topsoil and subsoil shall be stockpiled on stable foundations;
(b) topsoil shall be stockpiled in a manner that prevents admixing with subsoil;
(c) subsoil shall be stockpiled in a manner that prevents admixing with topsoil;
(d) topsoil and subsoil shall be stockpiled separately from each other;
(e) stockpiles shall be stabilized to control wind and water erosion;
(f) stockpiles shall be accessible and retrievable; and
(g) stockpiles shall be revegetated.

3.3.7 The approval holder shall immediately suspend topsoil and subsoil salvage when:

(a) wet or frozen field conditions will result in the admixing, degradation, or compaction of topsoil or subsoil; or
(b) high wind velocities, any other field conditions or landfill operations will result in the admixing, degradation, or loss of topsoil or subsoil.

3.3.8 The approval holder shall only recommence topsoil and subsoil salvage when suspended under 3.3.7, if field conditions referred to in 3.3.7 no longer exist.
TERMS AND CONDITIONS ATTACHED TO APPROVAL

PART 4: LANDFILL OPERATIONS, LIMITS, MONITORING AND REPORTING

SECTION 4.1: GENERAL

4.1.1 The approval holder shall maintain the geographical boundaries of the landfill to South ½ of Section 20, Township 49, Range 07, West of the 5th Meridian.

4.1.2 The approval holder shall:

(a) Operate, and

(b) maintain the following waste management facilities at the landfill:

(i) Class II waste disposal areas;

(ii) Class III waste disposal areas; and

(iii) waste storage areas.

4.1.3 In addition to 4.1.2 the approval holder shall operate the following infrastructure components at the landfill, at a minimum:

(a) leachate collection and removal systems (for all new cells);

(b) run-on control systems;

(c) run-off control systems;

(d) groundwater monitoring wells;

(e) a weigh scale; and

(f) site access control

4.1.4 The approval holder shall maintain the infrastructure components listed in 4.1.3.

4.1.5 The approval holder shall operate all above ground tanks to conform to the Guideline for Secondary Containment for Above Ground Storage Tanks, Environment and Sustainable Resources Development, 1997, as amended, unless otherwise authorized in writing by the Director.

LANDFILL OPERATOR CERTIFICATION

4.1.6 The operation of the landfill shall be supervised by a Certified Operator in accordance with:
TERMS AND CONDITIONS ATTACHED TO APPROVAL

(a) the Waste Control Regulation, as amended; and

(b) the latest edition of the Municipal Waste Management Operator Certification Guidelines.

SECTION 4.2: OPERATIONS PLAN

4.2.1 The approval holder shall:

(a) maintain; and

(b) implement

an Operations Plan that does not contravene the requirements of this approval.

4.2.2 The Operations Plan shall include, at a minimum, all of the following:

(a) waste acceptance policies and procedures;

(b) policies and procedures for wastes requiring special handling, if accepted;

(c) operating procedures for nuisance management; and

(d) an emergency response plan.

4.2.3 The approval holder shall:

(a) review the Operations Plan annually at a minimum; and

(b) update the Operations Plan as required.

4.2.4 The approval holder shall retain a copy of the Operations Plan at the landfill.

4.2.5 The approval holder shall submit to the Director an up-to-date Operations Plan when requested in writing by the Director.

SECTION 4.3: WASTE ACCEPTANCE

4.3.1 The approval holder shall not dispose of the following at the landfill:

(a) hazardous waste;

(b) bulk liquid waste;

(c) domestic wastewater;
TERMS AND CONDITIONS ATTACHED TO APPROVAL

(d) explosives;

(e) radioactive waste;

(f) biomedical waste; and

(g) ozone depleting substances.

4.3.2 Except as provided for in 4.3.3, if any waste listed in 4.3.1 is received at the landfill, the approval holder shall remove it within seven days of receipt or such time as directed in writing by the Director.

4.3.3 The approval holder shall remove the following waste listed in 4.3.1 from designated storage areas within 365 days of acceptance:

(a) household hazardous waste; and

(b) ozone depleting substances.

4.3.4 The approval holder shall dispose of waste that the landfill is not authorized to dispose of to a facility holding a current Approval, Registration, or as otherwise authorized under the Act, or to facilities approved by a local environmental authority outside of Alberta.

4.3.5 The approval holder shall prevent incompatible wastes from mixing.

SPECIAL WASTES

4.3.6 The approval holder shall dispose of asbestos wastes in accordance with Guidelines for the Disposal of Asbestos Waste, Environment and Sustainable Resources Development, as amended.

4.3.7 The approval holder shall dispose of contaminated sulphur and sulphur containing wastes in accordance with Guidelines for the Disposal of Sulphur Containing Solid Wastes, Environment and Sustainable Resources Development, as amended.

4.3.8 The approval holder shall cover the following immediately after disposal at the landfill:

(a) dead animals;

(b) animal parts; and

(c) meat and bone meal.
TERMS AND CONDITIONS ATTACHED TO APPROVAL

4.3.9 The approval holder shall dispose of hydrocarbon-contaminated soil only in the hydrocarbon-contaminated soil disposal cell unless it is used as cover in accordance with 4.3.10.

4.3.10 Cover material consisting of hydrocarbon-contaminated soil in any cell shall meet the limits specified in Table 4.3-A.

TABLE 4.3-A: HYDROCARBON CONTAMINATED SOIL LIMITS WHEN USED AS COVER

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Petroleum Hydrocarbons</td>
<td>Less than 20,000 mg/kg</td>
</tr>
<tr>
<td>Chloride</td>
<td>Less than 3,000 mg/kg</td>
</tr>
<tr>
<td>Flashpoint</td>
<td>Greater than 61°C</td>
</tr>
</tbody>
</table>

SECTION 4.4: NUISANCE MANAGEMENT

4.4.1 The approval holder shall not release any fugitive waste to lands outside of the landfill boundary.

4.4.2 The approval holder shall not operate the landfill unless and until the following fugitive waste control processes and measures are adhered to:

(a) the working face width shall not exceed 25 metres;

(b) the working face length shall not exceed 25 metres;

(c) waste shall be placed and compacted immediately after it is deposited on the working face;

(d) soil or other alternative cover material shall be:
   (i) located at the working face at all times;
   (ii) used to cover the working face immediately after closing at the end of each day at a minimum; and
   (iii) of sufficient quantity to control fugitive waste;

(e) movable wind screens shall be in place at an effective distance up-wind of the working face; and
TERMS AND CONDITIONS ATTACHED TO APPROVAL

(f) movable litter catch fences shall be in place at an effective distance downwind of the working face.

4.4.3 The approval holder shall not dispose of waste that may become fugitive waste at the landfill:

(a) by unloading transfer station trailers with moving floors when wind gusts exceed 60 kilometres per hour; or

(b) by any method when wind gusts exceed 70 kilometres per hour.

4.4.4 Notwithstanding 4.4.3, the approval holder shall not dispose of waste that may become fugitive waste when fugitive waste cannot be controlled within the landfill boundary.

SECTION 4.5: LEACHATE MANAGEMENT

4.5.1 The approval holder shall dispose of leachate removed from the landfill leachate collection system only by one or more of the following methods:

(a) disposal to a wastewater treatment facility that is authorized to accept such waste;

(b) recirculation through the cell from which it was taken;

(c) disposal to a deep well approved by the Alberta Energy Resources Conservation Board; or

(d) to an onsite leachate treatment facility authorized in writing by the Director.

4.5.2 Subject only to 4.5.1, during landfill operations, closure and post-closure, the maximum acceptable leachate head shall not exceed the limits specified in Table 4.5-A.

4.5.3 Notwithstanding the 4.5.2, the maximum acceptable leachate head may be exceeded during times of higher than expected precipitation events for a period of not more than 14 days.
TERMS AND CONDITIONS ATTACHED TO APPROVAL

TABLE 4.5-A: MAXIMUM ACCEPTABLE LEACHATE HEAD LIMITS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Maximum Acceptable Leachate Head Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leachate within a new cell and cells equipped with a leachate collection system</td>
<td>300 mm</td>
</tr>
<tr>
<td>Leachate within an existing cell</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4.6: SURFACE WATER MANAGEMENT

4.6.1 The approval holder shall not release any substances from the run-off control system to the surrounding watershed except as authorized by this approval.

4.6.2 The approval holder shall not allow run-on to enter the active landfill area.

4.6.3 The approval holder shall direct all run-off from the landfill area to the run-off control system as specified in the application.

4.6.4 Releases from the run-off control system shall comply with the limits for the parameters specified in TABLE 4.6-A

4.6.5 Any accumulated water in the run-off control system that exceeds the limits in TABLE 4.6-A shall only be used as follows:

(a) for dust suppression at the landfill; or
(b) for on-site irrigation;
(c) disposed to a wastewater treatment facility holding an Approval under the Act; or
(d) disposed to an Alberta Energy and Utilities Board approved disposal well; or
(e) as authorized in writing by the director
TERMS AND CONDITIONS ATTACHED TO APPROVAL

TABLE 4.6-A: RUN-OFF LIMITS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Maximum Concentration or Range (in mg/L unless otherwise specified)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>6.0-9.5 pH units</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>2500</td>
</tr>
<tr>
<td>Total Suspended Solids</td>
<td>25</td>
</tr>
<tr>
<td>Ammonia (total)</td>
<td>5</td>
</tr>
<tr>
<td>Chloride</td>
<td>250</td>
</tr>
<tr>
<td>Sodium</td>
<td>200</td>
</tr>
<tr>
<td>Sulphate</td>
<td>500</td>
</tr>
<tr>
<td>Chemical Oxygen Demand</td>
<td>500</td>
</tr>
<tr>
<td>Oil and Grease</td>
<td>No visible sheen</td>
</tr>
</tbody>
</table>

SECTION 4.7: SUBSURFACE LANDFILL GAS MANAGEMENT LIMITS

4.7.1 Subsurface landfill gas shall not exceed the explosive gas limits specified in TABLE 4.7-A.

TABLE 4.7-A: SUBSURFACE LANDFILL EXPLOSIVE GAS LIMITS

<table>
<thead>
<tr>
<th>Sampling Location</th>
<th>Explosive Gas Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the subsurface at the landfill property</td>
<td>50% LEL</td>
</tr>
<tr>
<td>In an on-site building or enclosed structure or in the area immediately outside the foundation of the building structure</td>
<td>20% LEL</td>
</tr>
<tr>
<td>In an off-site building or enclosed structure or in the area immediately outside the foundation of the building or structure</td>
<td>1% LEL</td>
</tr>
</tbody>
</table>

SECTION 4.8: DOMESTIC WASTEWATER

4.8.1 The approval holder shall release domestic wastewater only to a septic tank (holding tank) with subsequent disposal to a wastewater treatment facility holding a current Approval or Registration under the Act.
TERMS AND CONDITIONS ATTACHED TO APPROVAL

4.8.2 Sludge produced by the domestic wastewater collection system shall be disposed of only at a facility holding a current Approval or Registration under the Act.

SECTION 4.9: WATER WORKS

Not used at this time.

SECTION 4.10: MONITORING AND REPORTING

LANDFILL OPERATIONS

4.10.1 The approval holder shall monitor operations at the landfill as required in TABLE 4.10-A.

4.10.2 The approval holder shall report to the Director the results of the landfill operations monitoring as required in TABLE 4.10-A.

TABLE 4.10-A: OPERATIONS - MONITORING AND REPORTING REQUIREMENTS

<table>
<thead>
<tr>
<th>Monitoring/Measuring Activity</th>
<th>Frequency</th>
<th>Method</th>
<th>Sampling Location</th>
<th>Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighing and observing type of waste received</td>
<td>Continuously (when operating)</td>
<td>Measurement</td>
<td>At entrance to landfill</td>
<td>Annually, as per 4.10.7, on or before March 31st of the year following the year in which the information was collected</td>
</tr>
<tr>
<td>Weighing and observing type of material removed</td>
<td>Continuously (when operating)</td>
<td>Measurement</td>
<td>At entrance to landfill</td>
<td></td>
</tr>
<tr>
<td>Detecting hazardous waste</td>
<td>Continuously (when operating)</td>
<td>Observation, analytical results, or load inspections</td>
<td>At entrance to landfill and at all disposal or storage locations</td>
<td></td>
</tr>
<tr>
<td>Tracking general location of waste deposited</td>
<td>Daily (when operating)</td>
<td>As per survey, or by estimation</td>
<td>At active landfill area or survey co-ordinates</td>
<td></td>
</tr>
<tr>
<td>Observing cover material for nuisance management</td>
<td>Continuously (when operating)</td>
<td>Observation</td>
<td>At active landfill area</td>
<td></td>
</tr>
<tr>
<td>Tracking public complaints regarding nuisances and responses</td>
<td>Daily</td>
<td>Recording in daily log</td>
<td>Landfill</td>
<td></td>
</tr>
<tr>
<td>Tracking fugitive waste retrieval</td>
<td>When fugitive waste is retrieved</td>
<td>Recording in daily log</td>
<td>Landfill or off-site</td>
<td></td>
</tr>
</tbody>
</table>
**TERMS AND CONDITIONS ATTACHED TO APPROVAL**

<table>
<thead>
<tr>
<th>Monitoring/Measuring/Observing Activity</th>
<th>Frequency</th>
<th>Method</th>
<th>Sampling Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checking final and intermediate cover</td>
<td>When cover is applied</td>
<td>Intermediate cover by observation; final cover by survey or test cores</td>
<td>On each completed cell</td>
</tr>
<tr>
<td>Observing working face width</td>
<td>Daily</td>
<td>Observation</td>
<td>At active landfill area</td>
</tr>
</tbody>
</table>

**LEACHATE**

4.10.3 The approval holder shall monitor leachate at the landfill as required in TABLE 4.10-B.

4.10.4 The approval holder shall report to the Director the results of the leachate monitoring as required in TABLE 4.10-B.

**TABLE 4.10-B: LEACHATE MONITORING AND REPORTING REQUIREMENTS**

<table>
<thead>
<tr>
<th>Monitoring Activity</th>
<th>Frequency</th>
<th>Method</th>
<th>Sampling Location</th>
<th>Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leachate level monitoring</td>
<td>Weekly</td>
<td>Measurement</td>
<td>At each leachate manhole and sump</td>
<td></td>
</tr>
<tr>
<td>Leachate parameters:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Suspended Solids</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammonia (total)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Kjeldahl Nitrogen</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulphate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Petroleum Hydrocarbons</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume of leachate removed</td>
<td>As removed</td>
<td>Measurement</td>
<td>At each leachate manhole and sump</td>
<td></td>
</tr>
</tbody>
</table>

Annually, as per 4.10.7, on or before March 31st of the year following the year in which the information was collected.
TERMS AND CONDITIONS ATTACHED TO APPROVAL

SURFACE WATER

4.10.5 The approval holder shall monitor the run-off control system as required in TABLE 4.10-C.

4.10.6 The approval holder shall report to the Director the results of the run-off control system monitoring as required in TABLE 4.10-C.

TABLE 4.10-C: RUN-OFF WATER MONITORING AND REPORTING REQUIREMENTS

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Frequency</th>
<th>Sample Type</th>
<th>Sample Location</th>
<th>Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>a) prior to each</td>
<td>Representative grab</td>
<td>Each runoff Control System Pond from</td>
<td>Annually, as per 4.10.7, on or before March 31st of the</td>
</tr>
<tr>
<td>Total Suspended Solids</td>
<td>release, and</td>
<td>sample</td>
<td>which a release (a) is to occur,</td>
<td>year following the year in which the information was</td>
</tr>
<tr>
<td>Ammonia (Total)</td>
<td>b) during any</td>
<td></td>
<td>or (b) is occurring</td>
<td>collected</td>
</tr>
<tr>
<td>Chloride</td>
<td>unanticipated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium</td>
<td>release from the</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulphate</td>
<td>runoff control</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Oxygen Demand</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil and Grease</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume</td>
<td>When released</td>
<td>Measured</td>
<td>Discharge Point</td>
<td></td>
</tr>
</tbody>
</table>

ANNUAL REPORT

4.10.7 The approval holder shall submit to the Director, an Annual Landfill Operation Report which shall include, at a minimum, all of the following information:

(a) a summary of the information monitored as required in TABLE 4.10-A, TABLE 4.10-B, and TABLE 4.10-C;

(b) a summary of the waste types stored pursuant to 4.3.2, including their origin;

(c) all records of landfill inspections conducted by the Approval Holder;

(d) a summary of the performance of the landfill run-on and run-off control systems; and

(e) any other information requested in writing by the Director.
TERMS AND CONDITIONS ATTACHED TO APPROVAL

SECTION 4.11: GROUNDWATER

4.11.1 The approval holder shall implement the Groundwater Monitoring Program as described in the application.

PERFORMANCE STANDARDS

4.11.2 The approval holder shall immediately provide written notification to the Director if the groundwater quality fails to meet any of the groundwater performance standards in TABLE 4.11-A in the uppermost formation at the Compliance Boundary.

4.11.3 The approval holder shall immediately implement the remediation or risk management program within two years of groundwater quality failing to meet:

(a) any of the alternative groundwater performance standards specified in the Groundwater Monitoring Program; or

(b) any of the groundwater performance standards specified in TABLE 4.11-A.

TABLE 4.11-A: GROUNDWATER PERFORMANCE STANDARDS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Performance Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride (Cl)</td>
<td>0 to 250 mg/L</td>
</tr>
<tr>
<td>Sodium (Na)</td>
<td>0 to 200 mg/L</td>
</tr>
<tr>
<td>Sulphate (SO₄)</td>
<td>0 to 500 mg/L</td>
</tr>
<tr>
<td>pH</td>
<td>6.5 to 8.5</td>
</tr>
</tbody>
</table>

MONITORING AND REPORTING

4.11.4 The approval holder shall monitor all groundwater monitoring wells within the compliance boundary at the landfill for the parameters specified and according to the schedule specified in TABLE 4.11-B.

4.11.5 The approval holder shall report to the Director the results of the groundwater monitoring as required in TABLE 4.11-B.
## TERMS AND CONDITIONS ATTACHED TO APPROVAL

### TABLE 4.11-B: GROUNDWATER MONITORING AND REPORTING REQUIREMENTS

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Frequency</th>
<th>Sample Type</th>
<th>Sample Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride (Cl)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium (Na)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulphate (SO₄)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parameters (as identified in the application)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Static elevations of the groundwater prior to</td>
<td>Twice per year</td>
<td>Grab or Measurement</td>
<td>Groundwater Monitoring Wells</td>
</tr>
<tr>
<td>purging</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conductance (at time of sampling)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature (at time of sampling)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH (at time of sampling)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.11.6 The approval holder shall compile an Annual Groundwater Monitoring Program Report which shall include, at a minimum, all of the following information:

(a) a legal description of the landfill and a map illustrating the landfill boundaries;

(b) a topographic map of the landfill;

(c) a description of the landfill activities and processes;

(d) a map showing the location of all surface and groundwater users, and, a listing describing surface water and water well use details, within at least a three kilometre radius of the landfill;

(e) a general hydrogeological characterization of the region within a five kilometre radius of the landfill;

(f) a detailed hydrogeological characterization of the landfill;

(g) a geological cross-section(s) of the landfill;

(h) a map of surface drainage patterns located within the landfill;
TERMS AND CONDITIONS ATTACHED TO APPROVAL

(i) a map of groundwater monitoring well locations and a description of the existing groundwater monitoring program for the landfill;

(j) a summary of any changes to the groundwater monitoring program made since the last groundwater monitoring report;

(k) a description of purging and sampling procedures;

(l) monitoring data recorded as required in Table 4.11-B;

(m) an interpretation of changes in fluid elevations;

(n) an interpretation of groundwater flow patterns;

(o) an interpretation of the analytical results including the following:

(i) diagrams indicating the location of any contamination identified;

(ii) probable sources of contamination; and

(iii) the extent of contamination identified;

(p) a summary and interpretation of the data collected since the groundwater monitoring program began including:

(i) control charts which indicate trends in contaminant concentrations; and

(ii) the migration of contaminants;

(q) a description of the following:

(i) contaminated groundwater remediation techniques employed;

(ii) source elimination measures employed;

(iii) risk assessment studies undertaken; and

(iv) risk management studies undertaken;

(r) a sampling schedule for the following year;

(s) recommendations, as follows;

(i) for changes to the groundwater monitoring program to make it more effective; and
TERMS AND CONDITIONS ATTACHED TO APPROVAL

(ii) for remediation, risk assessment or risk management of contamination identified.

4.11.7 The Annual Groundwater Monitoring Program Report shall be signed and stamped by a professional registered with APEGA, or other professional authorized in writing by the Director.

4.11.8 The approval holder shall submit two copies of the Annual Groundwater Monitoring Report to the Director on or before March 31st of the year following the year in which the information on which the report is based was collected, unless otherwise authorized in writing by the Director.

SECTION 4.12: FINANCIAL SECURITY REQUIREMENTS

Not used at this time.

PART 5: FINAL CLOSURE, RECLAMATION AND POST-CLOSURE

SECTION 5.1: FINAL CLOSURE AND RECLAMATION

5.1.1 The approval holder shall undertake final closure and reclamation of the landfill in accordance with the Closure and Post Closure Plan, unless otherwise authorized in writing by the Director.

5.1.2 The approval holder shall implement the Final Closure Plan as authorized in writing by the Director.

5.1.3 The approval holder shall notify the Director of the proposed date of the completion of final closure of the landfill at least one year prior to the proposed date.

5.1.4 The approval holder shall commence final closure of the landfill:

(a) no later than 180 days after the landfill reaches the maximum designated waste elevation; or

(b) if no waste is received at the landfill for disposal for a period of 180 days.

5.1.5 The approval holder shall notify the Director of the date of commencement of final closure of the landfill no later that 30 days following commencement of final closure.

5.1.6 The approval holder shall complete final closure of the landfill no later than 180 days following the date of commencement of final closure or another time authorized in writing by the Director.
TERMS AND CONDITIONS ATTACHED TO APPROVAL

5.1.7 The approval holder shall submit a Final Closure Report signed and stamped by a professional registered with APEGA within 60 days following completion of the final closure of the landfill.

5.1.8 The Final Closure Report shall include, at a minimum, all of the following:

(a) the date of completion of the final closure;

(b) a statement including supporting evidence that the final closure has been completed in accordance with the final closure plan;

(c) a description of any deviations to the final closure plan and the reasons for the deviations;

(d) a description of the final cover system and the installation methods and procedures used;

(e) an estimate of the maximum quantity of waste placed in the landfill for disposal over the life of the landfill;

(f) a description of how the following elements have been, or will be dealt with:

   (i) the final use of the closed areas;

   (ii) drainage restorations;

   (iii) soil replacement;

   (iv) final cover slopes;

   (v) erosion control;

   (vi) re-vegetation and condition of the site; and

   (vii) subsidence and differential settlement remediation; and

(g) as-built plans, signed and stamped by a professional registered with APEGA, for the landfill showing the location of fill areas, final grades and structural components.

5.1.9 Final cover of phases 1a, 1b, 2a, 2b, 3a, 3b, 3c and 3d shall consist of a minimum of 0.6 metres of compacted native soil and a minimum of 0.1 metres of topsoil.
TERMS AND CONDITIONS ATTACHED TO APPROVAL

5.1.10 Final cover for phase 4 and new cells shall consist of a minimum of 0.6 metres of compacted clay, a minimum of 0.35 metres of subsoil, and minimum of 0.2 metres of topsoil, unless otherwise authorized in writing by the Director.

5.1.11 The slope of the final grade shall be a maximum of 30% and a minimum of 5%.

SECTION 5.2: POST-CLOSURE

5.2.1 The approval holder shall submit to the Director, an up-to-date Post-Closure Care Plan, no less than 180 days prior to the proposed date of the completion of final closure of the landfill.

5.2.2 The approval holder shall include the following in the Post-Closure Care Plan at a minimum:

(a) a plan for maintaining the integrity of the final cover systems;

(b) a plan for maintaining the surface water run-on and run-off systems;

(c) a plan for maintaining the groundwater monitoring system;

(d) the groundwater monitoring program including performance standards and points of compliance;

(e) a plan for maintaining the landfill gas monitoring system;

(f) the landfill gas monitoring program and performance standards at points of compliance;

(g) a plan for maintaining the leachate collection and monitoring system;

(h) quality and quality objectives of leachate and landfill gas that show the landfill has stabilized;

(i) a plan for remediating areas affected by subsidence and differential settlement;

(j) a plan for erosion control;

(k) a plan for maintaining vegetative cover; and

(l) any other information requested in writing by the Director.
TERMS AND CONDITIONS ATTACHED TO APPROVAL

5.2.3 If the Post-Closure Care Plan is found deficient by the Director, the approval holder shall correct all deficiencies as outlined in writing by the Director within 60 days of the deficiency letter.

5.2.4 The approval holder shall implement the Post-Closure Care Plan as authorized in writing by the Director.

POST CLOSURE MONITORING AND REPORTING

5.2.5 The approval holder shall monitor in accordance with the Post-Closure Care Plan for the duration of the post-closure period.

5.2.6 The approval holder shall compile an Annual Post-Closure Care Report.

5.2.7 The Annual Post-Closure Care Report shall include the following at a minimum:

(a) the annual groundwater monitoring report;

(b) details on any repairs and maintenance of the final cover system and vegetation;

(c) a report of any remedial or corrective actions taken; and

(d) any other information requested in writing by the Director.

5.2.8 The approval holder shall submit one copy of the Annual Post-Closure Care Report to the Director on or before March 31st of the year following the year in which the information on which the report is based was collected, unless otherwise authorized in writing by the Director.

May 1, 2013
Date Signed

DESIGNATED DIRECTOR UNDER THE ACT
Town of Drayton Valley
Aspen Waste Management Facility
Operations Plan

PRESENTED TO
Town of Drayton Valley

AUGUST 17, 2021
ISSUED FOR REVIEW
FILE: 704-SWM.SWOP04431-01

This proposal is the property of Tetra Tech Canada Inc. and it is protected by copyright for intellectual property. The content of this proposal is not intended for the use of, nor is it intended to be relied upon, by any person, firm, or corporation other than the Town of Drayton Valley. This document contains confidential commercial and technical information and must not be released in whole, or in part, to any third party without express written consent. Tetra Tech Canada Inc. denies any liability whatsoever to other parties who may obtain access to this proposal for damages or injury suffered by such third parties arising from the use of this document or the information contained herein. If the recipient of the Proposal chooses not to accept it, it shall be returned to Tetra Tech Canada Inc. without delay. If the recipient of the proposal is subject to an Access to Information Act, either
This page intentionally left blank.
The Operations Plan must be reviewed at a minimum of once (1) per year as per Approval No. 47415-02-00 Section 4.2.3.
# REVISION HISTORY

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision No.</th>
<th>Summary of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# TABLE OF CONTENTS

## OPERATIONS PLAN REVIEW

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>1.1</td>
<td>Basis for Operation Plan</td>
<td>1</td>
</tr>
<tr>
<td>1.2</td>
<td>Applicable Regulations</td>
<td>2</td>
</tr>
<tr>
<td>1.3</td>
<td>Hours of Operation</td>
<td>2</td>
</tr>
<tr>
<td>1.4</td>
<td>Tipping Rates</td>
<td>2</td>
</tr>
<tr>
<td>2.0</td>
<td>SITE INFRASTRUCTURE</td>
<td>3</td>
</tr>
<tr>
<td>2.1</td>
<td>Administration Office and Scale House</td>
<td>3</td>
</tr>
<tr>
<td>2.2</td>
<td>Landfill Cells</td>
<td>3</td>
</tr>
<tr>
<td>2.2.1</td>
<td>Phases 1 and 2</td>
<td>3</td>
</tr>
<tr>
<td>2.2.2</td>
<td>Phase 3</td>
<td>3</td>
</tr>
<tr>
<td>2.2.3</td>
<td>Phase 4</td>
<td>4</td>
</tr>
<tr>
<td>2.3</td>
<td>Household Hazardous Waste Facility</td>
<td>4</td>
</tr>
<tr>
<td>2.4</td>
<td>Material Recovery Facility</td>
<td>4</td>
</tr>
<tr>
<td>2.5</td>
<td>Public Drop Off</td>
<td>4</td>
</tr>
<tr>
<td>2.6</td>
<td>Used Oil, Filter, and Container Facility</td>
<td>4</td>
</tr>
<tr>
<td>2.7</td>
<td>Stormwater Ponds</td>
<td>4</td>
</tr>
<tr>
<td>2.8</td>
<td>Stockpile Areas</td>
<td>5</td>
</tr>
<tr>
<td>2.9</td>
<td>Pesticide Building</td>
<td>5</td>
</tr>
<tr>
<td>3.0</td>
<td>FACILITY OPERATIONS AND PERSONNEL</td>
<td>5</td>
</tr>
<tr>
<td>3.1</td>
<td>Contracted Services and Operating Personnel</td>
<td>5</td>
</tr>
<tr>
<td>3.2</td>
<td>Training</td>
<td>6</td>
</tr>
<tr>
<td>3.2.1</td>
<td>Facility Operations</td>
<td>6</td>
</tr>
<tr>
<td>3.2.2</td>
<td>Emergency Response Procedures</td>
<td>6</td>
</tr>
<tr>
<td>3.3</td>
<td>Equipment</td>
<td>7</td>
</tr>
<tr>
<td>3.4</td>
<td>Occupational Health and Safety</td>
<td>7</td>
</tr>
<tr>
<td>3.4.1</td>
<td>Prime Contractor</td>
<td>7</td>
</tr>
<tr>
<td>3.5</td>
<td>Site Rules</td>
<td>7</td>
</tr>
<tr>
<td>4.0</td>
<td>REGULATORY REQUIREMENTS AND RECORDS</td>
<td>8</td>
</tr>
<tr>
<td>4.1</td>
<td>Regulatory Requirements</td>
<td>8</td>
</tr>
<tr>
<td>4.2</td>
<td>Procedures for Maintaining Operation Records</td>
<td>8</td>
</tr>
<tr>
<td>4.2.1</td>
<td>General</td>
<td>8</td>
</tr>
<tr>
<td>4.2.2</td>
<td>Operations Plan</td>
<td>8</td>
</tr>
<tr>
<td>4.2.3</td>
<td>Operating Records</td>
<td>9</td>
</tr>
<tr>
<td>4.2.4</td>
<td>Waste Records</td>
<td>9</td>
</tr>
<tr>
<td>4.2.5</td>
<td>Employee Records</td>
<td>10</td>
</tr>
<tr>
<td>4.2.6</td>
<td>Site Monitoring</td>
<td>10</td>
</tr>
<tr>
<td>4.2.7</td>
<td>Sampling Records</td>
<td>10</td>
</tr>
</tbody>
</table>
5.0 WASTE ACCEPTANCE ........................................................................................................ 11
  5.1 Scale Operations ............................................................................................................. 11
  5.2 Accepted Waste .............................................................................................................. 12
  5.3 Prohibited Waste ......................................................................................................... 13
  5.4 Waste Receiving .......................................................................................................... 14
  5.5 Handling Methods ...................................................................................................... 14
  5.6 Waste Screening ......................................................................................................... 14
  5.6.1 Routine Inspection .................................................................................................... 15
  5.7 Waste Pre-Approval ..................................................................................................... 15
  5.8 Questionable Waste ..................................................................................................... 15

6.0 WASTE PLACEMENT AND COMPACTION ..................................................................... 16
  6.1 Waste Placement and Compaction Directions ............................................................... 16
    6.1.1 Initial Lift Placement .............................................................................................. 16
    6.1.2 Active Area Preparation (After Initial Lift Placement) .......................................... 16
    6.1.3 Placement and Compacting Methodology ............................................................... 17
    6.1.4 Spotting Traffic Control .......................................................................................... 17
    6.1.5 Vehicle Distance .................................................................................................... 17
    6.1.6 Asbestos Handling and Disposal .......................................................................... 17
    6.1.7 Inclement Weather Fill Area ................................................................................ 18
  6.2 Special Waste Handling ............................................................................................... 18
    6.2.1 Hydrocarbon Contaminated Soils ....................................................................... 18
    6.2.2 Solidified Waste and Sludge ................................................................................ 19
    6.2.3 Ozone-Depleting Substances .............................................................................. 19
    6.2.4 Animal Carcasses ................................................................................................. 19
    6.2.5 Specified Risk Materials ..................................................................................... 19
    6.2.6 Powdery Waste .................................................................................................... 19
    6.2.7 Bulky Waste ........................................................................................................ 19
    6.2.8 Hot Loads ............................................................................................................ 20

7.0 COVER AND SOIL MANAGEMENT ............................................................................... 20
  7.1 Daily Cover .................................................................................................................. 20
  7.2 Alternative Daily Cover .............................................................................................. 21
  7.3 Intermediate Cover .................................................................................................... 21
  7.4 Final Cover .................................................................................................................. 21
  7.5 Soil Conservation ........................................................................................................ 22

8.0 LEACHATE MANAGEMENT .......................................................................................... 22
  8.1 Leachate Management Plan ........................................................................................ 22
  8.2 Leachate Generation .................................................................................................... 22
  8.3 Leachate Measurement ................................................................................................ 22
    8.3.1 Phases 1 and 2 ..................................................................................................... 22
    8.3.2 Phase 3 ............................................................................................................... 22
    8.3.3 Phase 4 ............................................................................................................... 23
8.3.4 Measurement Activities .............................................................. 23
8.4 Leachate Sumps ................................................................................. 24
8.5 Analytical Requirements ................................................................. 24
8.6 Leachate Disposal .............................................................................. 24

9.0 LINER PROTECTION ........................................................................ 25

10.0 SURFACE WATER MANAGEMENT .................................................. 25
  10.1 Surface Water Management ......................................................... 25
  10.2 Surface Water Release Criteria ..................................................... 26
  10.3 Surface Water Treatment ............................................................... 27
  10.4 Groundwater .................................................................................. 27

11.0 LANDFILL GAS MANAGEMENT ...................................................... 27

12.0 SITE CONTROL ................................................................................ 27
  12.1 Site Security ................................................................................... 27
  12.2 Signs ............................................................................................ 28
  12.3 Roads ........................................................................................... 29
    12.3.1 Access Roads ............................................................................ 29
    12.3.2 On-Site Haul Roads ................................................................. 29
    12.3.3 Traffic Control ......................................................................... 29
    12.3.4 Snow Clearing ......................................................................... 29

13.0 NUISANCE MANAGEMENT .............................................................. 30
  13.1 Nuisance Control .......................................................................... 30
  13.2 Litter Control ................................................................................ 30
    13.2.1 On-site Litter ............................................................................ 31
    13.2.2 Off-site Litter ........................................................................... 31
  13.3 Dust Control .................................................................................. 31
  13.4 Noise Control ................................................................................ 32
  13.5 Odor Control ................................................................................ 32
  13.6 Wildlife Management .................................................................... 32
    13.6.1 Large Animals .......................................................................... 33
    13.6.2 Vectors and Vermin ................................................................. 33
    13.6.3 Bird Control ............................................................................ 33
  13.7 Complaints Procedure ................................................................... 34

14.0 PUBLIC DROP-OFF ......................................................................... 34

15.0 HOUSEHOLD HAZARDOUS WASTE .............................................. 34

16.0 CONSTRUCTION AND DEMOLITION WASTE .............................. 35

17.0 SITE INSPECTION ........................................................................... 35
  17.1 Surface Water Management Systems .......................................... 35
  17.2 Leachate Management ................................................................. 36
17.3 Buffer Zones ................................................................. 36
17.4 Fencing and Site Security ............................................. 36
17.5 Access Roads ................................................................. 36
17.6 Environmental Monitoring Infrastructure ................. 36

18.0 UNDERDRAIN WATER MANAGEMENT ..................... 37
  18.1 Underdrain Water Level Monitoring ......................... 37
  18.2 Underdrain Water Removal ....................................... 37

19.0 PIPELINES .................................................................. 38

20.0 BURNING .................................................................... 38

21.0 SPILL MANAGEMENT .................................................. 38

22.0 EMERGENCY RESPONSE PLAN ............................... 39

23.0 CONTRAVENTION PROCEDURE .............................. 39

24.0 REVISIONS TO OPERATIONS PLAN ....................... 39
  24.1 Revisions Procedure .................................................. 39

25.0 CLOSURE .................................................................. 40

LIST OF TABLES IN TEXT

Table 1-1: Tipping Rates .................................................. 2
Table 4-1: Regulatory Requirements ................................. 8
Table 4-2: Reporting Requirements ................................. 11
Table 7-1: Hydrocarbon Contaminated Soil Limits .............. 20
Table 8-1: Leachate Pumpout Depths ............................... 24
Table 10-1: Surface Water Parameters and Limits ............... 26
Table 10-2: Surface Water Monitoring and Reporting ......... 27
Table 18-1: Underdrain Collection Manhole Pumpout Depths .. 37

APPENDIX SECTIONS

FIGURES

Figure 1  Site Location Map
Figure 2  Site Plan
APPENDICES

| Appendix A | Tetra Tech’s Limitations on the Use of This Document |
| Appendix B | Approval                                              |
| Appendix C | Emergency Response Plan                                |
| Appendix D | Special Waste Procedure and Approval Policy            |
## ACRONYMS & ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronyms/Abbreviations</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACSA</td>
<td>Alberta Construction Safety Association</td>
</tr>
<tr>
<td>AENV</td>
<td>Alberta Environment</td>
</tr>
<tr>
<td>AEP</td>
<td>Alberta Environment and Parks</td>
</tr>
<tr>
<td>AMSL</td>
<td>above mean sea level</td>
</tr>
<tr>
<td>AWMF</td>
<td>Aspen Waste Management Facility</td>
</tr>
<tr>
<td>BTEX</td>
<td>benzene, toluene, ethylbenzene, and total xylene</td>
</tr>
<tr>
<td>CFC</td>
<td>chlorofluorocarbon</td>
</tr>
<tr>
<td>COD</td>
<td>chemical oxygen demand</td>
</tr>
<tr>
<td>COR</td>
<td>certificate of recognition</td>
</tr>
<tr>
<td>EPEA</td>
<td>Alberta Environmental Protection and Enhancement Act</td>
</tr>
<tr>
<td>HHW</td>
<td>household hazardous waste</td>
</tr>
<tr>
<td>MH</td>
<td>manhole</td>
</tr>
<tr>
<td>MRF</td>
<td>material recovery facility</td>
</tr>
<tr>
<td>MSW</td>
<td>municipal solid waste</td>
</tr>
<tr>
<td>MW</td>
<td>monitoring well</td>
</tr>
<tr>
<td>OH&amp;S</td>
<td>Occupational Health and Safety</td>
</tr>
<tr>
<td>OMG</td>
<td>Omni-McCaan Geoscience</td>
</tr>
<tr>
<td>PDO</td>
<td>public drop-off</td>
</tr>
<tr>
<td>PHCS</td>
<td>petroleum hydrocarbon contaminated soil</td>
</tr>
<tr>
<td>PPE</td>
<td>personal protective equipment</td>
</tr>
<tr>
<td>sonnevera</td>
<td>sonnevera international corp.</td>
</tr>
<tr>
<td>TDG</td>
<td>transportation of dangerous goods</td>
</tr>
<tr>
<td>TDS</td>
<td>total dissolved solids</td>
</tr>
<tr>
<td>TDV</td>
<td>Town of Drayton Valley</td>
</tr>
<tr>
<td>TEH</td>
<td>total extractable hydrocarbon</td>
</tr>
<tr>
<td>Tetra Tech</td>
<td>Tetra Tech Canada Inc.</td>
</tr>
<tr>
<td>TOC</td>
<td>total organic carbon</td>
</tr>
<tr>
<td>TVH</td>
<td>total volatile hydrocarbon</td>
</tr>
<tr>
<td>VOC</td>
<td>volatile organic compound</td>
</tr>
<tr>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
</tr>
<tr>
<td>WL</td>
<td>water level</td>
</tr>
</tbody>
</table>
LIMITATIONS OF REPORT
This report and its contents are intended for the sole use of the Town of Drayton Valley and their agents. Tetra Tech Canada Inc. (Tetra Tech) does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than the Town of Drayton Valley, or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this document is subject to the Limitations on the Use of this Document attached in the Appendix or Contractual Terms and Conditions executed by both parties.
1.0 INTRODUCTION

Tetra Tech Canada Inc. (Tetra Tech) was retained by the sonnevera international corp. (sonnevera) to complete an operations plan for the Aspen Waste Management Facility (AWMF), located in Drayton Valley, Alberta. It is understood that the Town of Drayton Valley (TDV) has requested to have an operations plan in place for the AWMF site as a framework to guide landfill operations.

This document provides operating procedures for the management of the AWMF. The intention of this landfill operating plan is to provide an outline for landfill operations. If there should be any discrepancies between the information presented herein and current Federal or Provincial regulations or current municipal policies and bylaws, the most current shall be adhered to.

The current site is located approximately 2 km north of the TDV and is in the SE ¼ 20-49-07-W5M. The AWMF is surrounded by agricultural land, coulees, Highway 22, Range Road 75, and Township Road 494. The location of the AWMF, relative to the TDV, is illustrated on Figure 1.

The AWMF is currently owned by the TDV and operated under Approval No. 47415-02-00. The most recent Approval was renewed on May 1, 2013 and expires on April 30, 2023. A copy of the current Approval is provided in Appendix B.

The AWMF currently services surrounding communities, including:
- The Town of Drayton Valley;
- Brazeau County;
- Parkland County; and
- Yellowhead County.

The AWMF is a Class II landfill, located at the north limits of the Town of Drayton Valley, Alberta (Figure 1). Developed landfill cells on site include Phases 1A, 2A, 2B, 2B, 3A, 3C, 3D, 4A, 4B, 4C, and 4D. Currently, all commercial and municipal solid waste (MSW) (including construction and demolition waste) is being landfilled in Cell 4D within the Phase 4 development. Remaining cells which are to be developed in the future include Cell 4E. All known cells are presented on Figure 2.

On-site infrastructures include a scale facility and attached building (which is used as a ‘Take it or Leave it’ facility), public drop off area, recycling building (which includes a storage area for household hazardous waste), and a materials recovery facility/quonset.

1.1 Basis for Operation Plan

The operations plan is based upon the following key documents:
- Standards for Landfills in Alberta, Alberta Environment and Parks, 2010;
- Landfill operations per Approval No. 47415-02-00, Section 4.1, dated May 1, 2013; and
1.2 Applicable Regulations

The AWMF operates in compliance with the Alberta Environmental Protection and Enhancement Act (EPEA) and associated regulations as amended. These regulations include the following:

- Waste Control Regulation, 1996;
- Ozone-Depleting Substances and Halocarbon Alternatives Regulations, 2016;
- Code of Practice for Land Treatment of Soil Containing Hydrocarbons, 2008;
- Standards for Landfills in Alberta, 2010;
- Guidelines for the Disposal of Asbestos Waste, 1989;
- Hazardous Waste Storage Guidelines, 1988;
- Guidelines for Secondary Containment for Above Ground Storage Tanks, 1997; and

1.3 Hours of Operation

The AWMF operates from Monday to Saturday 9:00 a.m. to 5:00 p.m. and 1:00 p.m. to 5:00 p.m. on Sundays. The AWMF is closed Easter Sunday, Christmas Day, Boxing Day, and New Year’s Day.

1.4 Tipping Rates

Disposal and tipping rates for the AWMF are recommended by administration during municipal budget deliberations and either accepted or modified by council before it is passed every year as part of our overall budget. Current rates as of July 1, 2021, as set by the TDV, are as follows:

Table 1-1: Tipping Rates

<table>
<thead>
<tr>
<th>Waste Type</th>
<th>Unit</th>
<th>Waste Origin Within Town Boundaries</th>
<th>Waste Origin Outside of Town Boundaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>Per Tonne</td>
<td>$78.00</td>
<td>$93.60</td>
</tr>
<tr>
<td>Construction, Demolition, and Debris</td>
<td>Per Tonne</td>
<td>$67.00</td>
<td>$80.40</td>
</tr>
<tr>
<td>Town Residential Collection or Public Works Department</td>
<td>Per Tonne</td>
<td>$78.00</td>
<td>$93.60</td>
</tr>
<tr>
<td>Residential Homeowners or Rental Property</td>
<td>Per Tonne</td>
<td>$5.00/load, $75.00 minimum</td>
<td>$6.00/load, $90.00 minimum</td>
</tr>
<tr>
<td>Compostable (Commercial Only)</td>
<td>Per Tonne</td>
<td>$32.00</td>
<td>$38.40</td>
</tr>
<tr>
<td>Recycling (Mixed Loads)</td>
<td>Per Tonne</td>
<td>$75.50</td>
<td>$90.60</td>
</tr>
<tr>
<td>Sump Waste</td>
<td>Per Tonne</td>
<td>$64.00</td>
<td>$76.80</td>
</tr>
<tr>
<td>Clean Concrete</td>
<td>Per Tonne</td>
<td>$17.25</td>
<td>$20.70</td>
</tr>
<tr>
<td>Asphalt</td>
<td>Per Tonne</td>
<td>$17.25</td>
<td>$20.70</td>
</tr>
<tr>
<td>Revenue Generated Cover</td>
<td></td>
<td></td>
<td>Negotiated</td>
</tr>
<tr>
<td>Clean Fill</td>
<td>Per Tonne</td>
<td>$5.00</td>
<td>$6.00</td>
</tr>
<tr>
<td>Scrap Metals</td>
<td>Per Tonne</td>
<td>$60.00</td>
<td>$72.00</td>
</tr>
<tr>
<td>White Goods and CFC Units</td>
<td>Per Unit</td>
<td>$60.00</td>
<td>$72.00</td>
</tr>
<tr>
<td>Waste Type</td>
<td>Unit</td>
<td>Waste Origin Within Town Boundaries</td>
<td>Waste Origin Outside of Town Boundaries</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----------</td>
<td>--------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Asbestos</td>
<td></td>
<td>Negotiated</td>
<td></td>
</tr>
<tr>
<td>Special or Event Waste</td>
<td></td>
<td>Negotiated</td>
<td></td>
</tr>
<tr>
<td>Other (Event or Contracted)</td>
<td></td>
<td>Negotiated</td>
<td></td>
</tr>
</tbody>
</table>

For clean fill, a one-time pre-approval fee of $150.00 is charged. Additionally, for residential recycling blue bags deposited at the material recovery facility (MRF), there is no charge. For waste streams that require additional handling, administration, or are deemed beneficial, a rate will be negotiated prior to acceptance.

### 2.0 SITE INFRASTRUCTURE

Landfill infrastructure and facilities located at the AWMF include the following elements described herein and illustrated on Figure 2.

#### 2.1 Administration Office and Scale House

The administrative office is located at the site entrance. Files and records are maintained in the administrative office for archiving, referencing, and annual reporting. The administrative office also includes the scale house, staff amenities, office space, lockers, washrooms, utilities room, and a room that is currently being used for a public ‘Take It or Leave It’ facility.

The scale house incorporates both inbound and outbound scales. Scale house attendants screen and monitor all traffic entering the site, direct vehicles to appropriate facilities, assess fees, inspect waste loads, and assess suspect and/or random loads for further inspection/screening.

#### 2.2 Landfill Cells

Class II waste cells are located at the AWMF and used for the disposal of solid non-hazardous solid waste. Waste is collected from residential and commercial services and disposed in the aforementioned cell.

##### 2.2.1 Phases 1 and 2

Historic cells are located in the Phase 1 and Phase 2 areas of the site. These cells were operational from XXX to XXX and are now closed with completed final cover placed. There is no liner system present within this area and thus the cells are unlined and leachate management is through natural attenuation.

##### 2.2.2 Phase 3

Cells in Phase 3A, 3B, and 3C are unlined natural attenuation cells.

Cells in the Phase 3D area were constructed with a leachate collection system, liner, and underdrain to control hydrostatic uplift on the liner below the water table.

Cells in Phase 3 were operational from XXX to XXX and have been closed with final cover in place and completed.
2.2.3 Phase 4

Cells 4A, 4B, 4C, and 4D were constructed with a clay liner and leachate collection system. Phase 4 began waste placement in 2011 and continues to maintain active landfilling operations. The Phase 4 cells are not closed at this time.

2.3 Household Hazardous Waste Facility

The household hazardous waste (HHW) facility is operated to collect, bulk, and ship HHW materials. The HHW facility is located just south of the scale and scale house building and is 480 m² in size. HHW materials collected at the HHW building include solvents, cleaning products, fluorescent tubes and batteries. Electronic waste is also collected and stored in this building until there is enough to be picked up by an e-waste contractor.

2.4 Material Recovery Facility

The MRF is used to divert recyclable materials from the landfill. It is located just south of the scale and scale house building. Materials are collected at the MRF, sorted, and bulked. The MRF is a Quonset structure, approximately 440 m² in size, and is used for the collection and storage of blue recycling bags, cardboard materials, and propane tanks prior to shipping to the appropriate recyclers.

Adjacent to the MRF are open compounds for the collection and storage of tires, white goods, and refrigeration units containing chlorofluorocarbons (CFCs).

Landfill customers are able to drop off white goods such as refrigerators, stoves, washers, dryers, and water tanks here. White goods are segregated, those containing CFCs (such as fridges and freezers) have them removed by a certified technician (if applicable), and stored for future recycling. CFC containing units must be drained by authorized firms or individuals prior to removal from the site.

2.5 Public Drop Off

The public drop-off (PDO) is intended to divert residential small vehicle customers from the active working face of the landfill and facilitate increased diversion and segregation of general waste materials. The public small vehicle drop-off is located on a raised, paved Z-wall structure which can accommodate five 40-cubic yard bins. The facility includes designated access roads for residents and heavy equipment to mitigate risk of vehicular interaction between heavy landfill equipment used to collect and transfer the bins and residential small vehicle traffic. PDO Operations are presented in Section 15.0.

2.6 Used Oil, Filter, and Container Facility

The used oil, filter, and container facility is located adjacent to the MRF building. The facility holds an oil containment tank for the purpose of collecting and storing used oil and space for filters and containers.

2.7 Stormwater Ponds

The stormwater pond is located north-east of the active cells and collects runoff from the site. The retention capacity of the pond is 2,500 cubic metres. Collected surface water is not considered leachate as it does not directly contact waste. The water from this pond is stored prior to testing and release. Section 4.6.5 of the Approval allows for collected stormwater to also be used for dust suppression at the landfill and on-site irrigation. Additionally, water
may be disposed of at a wastewater treatment facility or disposal well. All other purposes must be authorized in writing by the director. Further details on stormwater management are available in Section 10.0.

In addition to the stormwater pond, there is a sediment forebay of undetermined capacity located along the south alignment of the stormwater control ditching in the southwest area of the AWMF site.

### 2.8 Stockpile Areas

Material stockpiles are located west and north of the active cells. To the west of the active cells are stockpile areas for topsoil and clay material. Stockpiles to the north of the active cells contain tire shred material. Hydrocarbon contaminated soils, as specified in Approval Section 4.3.10, are stockpiled within the confines of the active cells and within the lined cell areas for use as daily cover material.

### 2.9 Pesticide Building

The pesticide building is located north-west of the scale house. Pesticides are regulated under the Environmental Protection and Enhancement Act and are classified as a fumigant, fungicide, herbicide, insecticide, vertebrate toxicant, or pesticide fertilizer with specific active ingredients under the Pest Control Products Act. Only pesticide containers generated within the Authority’s boundaries will be accepted at the landfill.

Pesticide containers are placed in the lockable pesticide container building. Containers that are accepted must be triple rinsed and be free of liquid. Accepted containers must have all paper booklets and cardboard material removed, may be plastic, metal, or drums that have a Pesticide Control Product (PCP) number attached. All glass pesticide containers that are triple rinsed are to be landfilled. Emergency procedures for pesticides shall be posted at the building and a record must be kept of the number and type of containers at the landfill.

### 3.0 FACILITY OPERATIONS AND PERSONNEL

#### 3.1 Contracted Services and Operating Personnel

The TDV retains a private contractor for landfill operations which includes the following services:

- Waste placement, compaction and daily cover;
- PDO bin operations;
- Stockpile management;
- Leachate management;
- Stormwater management;
- Site maintenance;
- Snow clearing;
- White goods and scrap metal management;
- Recycling drop off services of limited materials (currently tires, bagged recyclables, cardboard, batteries and propane tanks);
• HHW facility operations;
• MRF operations; and
• Take it or Leave It facility.

Typically, three employees are present at the AWMF at a given time and include the scale attendant, transfer station attendant, and landfill operator.

The TDV directly employs the scale attendant and manages the record keeping for the site.

### 3.2 Training

#### 3.2.1 Facility Operations

Operations staff and contractors working on site undertake site orientation outlining the facilities and roles at the AWMF. The orientation program includes safety training as required by Occupational Health and Safety (OH&S) guidelines, basic first aid, workplace hazardous materials information system (WHMIS), and transportation of dangerous goods (TDG). The training also includes risk assessment and provides sufficient operations skill to allow new employees to work safely within their functional area under supervision. An overview of this operations plan is required prior to commencing work.

Temporary personnel and contractors will complete a simplified orientation program and receive sufficient training to conduct work in a safe and responsible manner.

General operations, task-specific operations, and safety training will be documented with written records of meetings and instruction. Documentation of the employee’s operations and safety training will be stored in the employee’s personnel file at the administrative office. Future training opportunities that will contribute to the overall operation of the facility will be made available to the staff. Training documentation will be reviewed annually for any necessary updates.

There will be a minimum of one certified landfill operator supervising the AWMF. The operator will have a valid Certificate of Qualification of the appropriate class under Part 3, Section 25 of the Waste Control Regulation (A.R. 192.96). The certified operator may designate a person responsible when they are away from the facility, but will be available by phone if he or she is not on the site. The landfill must be supervised by a certified operator and the approval holder must submit the name of a certified operator to Alberta Environment and Parks (AEP). AEP must be notified in writing within 30 days of a change of certified operators.

#### 3.2.2 Emergency Response Procedures

All employees are required to be familiar with the emergency response plan attached in Appendix C.

Additionally, signage is present at the landfill site office that includes the following:

- Safety and emergency procedures governing site staff and users;
- Telephone locations and emergency telephone numbers;
- Fire extinguishing equipment locations and instructions on emergencies concerning fire; and
- Spill response procedures and emergency contacts.
3.3 Equipment

Heavy equipment used for landfill operations will generally consist of a landfill compactor and crawler loader/bulldozer. Additional support equipment, such as excavators, rock trucks, etc., will be deployed as required to construct, operate, and maintain the site.

Equipment used to operate the PDO will generally consist of a roll-off bin truck which will transport the waste bins from the PDO to the active face.

Additional equipment used for the operation of the HHW and MRF facilities will generally consist of a skid steer. Additional support equipment may be required periodically.

Equipment shall be replaced and upgraded as necessary and comply with Part 3 of the Occupational Health and Safety Code. All equipment used on site will be inspected and maintained as per manufacturer’s specifications or specifications certified by a qualified professional. Equipment maintenance requiring licensing or certification will be commissioned to appropriate organizations. Records of equipment, manuals, inspections, and maintenance will be maintained in the administrative office for record keeping and annual reporting.

3.4 Occupational Health and Safety

Workplace safety is held to a high standard at the AWMF.

All workers (both landfill staff and contractors) shall adhere to the provincial Occupational Health and Safety Act, Regulation and Code.

3.4.1 Prime Contractor

Unless otherwise documented, the landfill operator is the prime contractor at the AWMF a per Section 3(1) of the Alberta Occupational Health and Safety Act.

3.5 Site Rules

To minimize risk of injury, staff and clients will adhere to the following rules:

- Obey all traffic lights;
- Proceed slowly onto the scale platform;
- Provide the scale house the origin of waste;
- Declare all waste products;
- Proceed as directed by the scale house;
- Smoking is prohibited on site;
- Children and pets must remain in the vehicle at all times;
- Scavenging is prohibited;
- Follow the direction of the site staff, written or verbal;
• Site equipment has the right of way;
• Please act in a safe and responsible manner;
• Wear appropriate footwear and clothing;
• Operators are not responsible for the custody of vehicles or property nor for the damage thereto while upon the premises whether caused by negligence or otherwise;
• All persons using or otherwise present upon these premises assume all risk of loss or injury to person or property, whether caused by negligence of the operator or otherwise;
• 30 kilometres per hour speed limit on paved entrance road; and
• 10 kilometres per hour speed limit on internal roads.

4.0 REGULATORY REQUIREMENTS AND RECORDS

4.1 Regulatory Requirements

The AWMF, as per Approval Section 4.1, must operate and maintain the following summarized in Table 4-1.

Table 4-1: Regulatory Requirements

<table>
<thead>
<tr>
<th>Approval No. 47415-02-00 Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Class II waste disposal areas.</td>
</tr>
<tr>
<td>• Class III waste disposal areas.</td>
</tr>
<tr>
<td>• Waste storage areas.</td>
</tr>
<tr>
<td>• Leachate collection and removal systems.</td>
</tr>
<tr>
<td>• Run-on control systems.</td>
</tr>
<tr>
<td>• Run-off control systems.</td>
</tr>
<tr>
<td>• Groundwater monitoring wells.</td>
</tr>
<tr>
<td>• A weigh scale.</td>
</tr>
<tr>
<td>• Site access control.</td>
</tr>
</tbody>
</table>

4.2 Procedures for Maintaining Operation Records

4.2.1 General

The operating records will be used for historical assessment of performance, planning future operations, and developing the AWMF facilities. All reports and records of AWMF operations will be sent to the AWMF manager for review and acceptance. Once accepted, records will be filed and maintained by the AWMF manager or designated representative.

4.2.2 Operations Plan

The current operations plan, complete with amendments and supporting documentation, will be available in the site administrative office, and accessible to all employees. Prior to commencing employment, all employees will be made aware of the operations plan and sign an agreement of understanding of the operations plan. The operations
4.2.3 Operating Records

The operating records approved by the AWMF manager or designated representative are the official records for development and operations for the landfill and ancillary services and operations from the initial planning phase to post-closure. The operating records will be maintained on site and contain the following documents:

- Approval, operations plan and amendments;
- Design, construction, and development records for landfill structures, management systems, and ancillary facilities and services, including drawings, quality control, and quality assurance reports;
- Names, qualifications, and certification of all staff and contractors;
- Dates, quantity, material type, source, and location of all approved waste received and disposed;
- Dates, quantity, material type, source, and location of all prohibited waste received and transferred;
- Monitoring reports, analytical results, and professional interpretation reports for all groundwater, surface water, leachate, and landfill gas monitoring and treatment;
- Results from routine and random waste inspections;
- All site inspections, environmental audits, and compliance audits;
- Site development and improvements;
- Health and safety reports, including but not limited to accidents, near-misses, resolution, and preventative measures taken;
- Emergency events and responses, including but not limited to fires, natural disasters, severe air contamination, serious accidents, and spills;
- Complaints received and means of resolution;
- Non-compliance with regulatory bodies and/or Approval and corrective action taken;
- Cell closure and post-closure activities and monitoring, including all drawings and reports; and
- Any post-closure remedial action taken.

Furthermore, any non-routine activities and/or conditions will be documented and recorded. The original documents may not be removed with the exception of litigation and evidentiary purposes. In the aforementioned exceptions, the original documents will be replaced with a certified copy of the original. Photocopies and electronic copies may be provided in all other events requiring access to operating records. The operating records will be made available upon request to representatives of Alberta Environment and Parks (AEP).

A daily activity summary sheet is attached in Appendix X.

4.2.4 Waste Records

The AWMF will summarize the following information for the purpose of annual reporting:
• Quantity, material type, and location of waste received and disposed;
• Quantity, material type, location, and manifest of waste requiring special handling received;
• Quantity, material type, and location of prohibited waste received and transferred;
• Detection of hazardous and/or prohibited waste; and
• Results from routine and random waste inspections.

4.2.5 Employee Records
Employee records are classified documents and used only for management purposes. Relevant qualifications may be available to operating staff. Relevant qualifications include, but not limited to certifications, proficiencies, and licenses.

4.2.6 Site Monitoring
As per requirement of the Approval, the AWMF will monitor the following:
• Incoming waste;
• Leachate volumes extracted from each cell and/or manhole;
• Groundwater; and
• Surface water.

The procedures for each monitoring program are summarized within their respective sections in the operations plan. The monitoring records and reports will be filed in the site office and stored electronically.

4.2.7 Sampling Records
The AWMF must record and retain information with respect to sample collection and analyses for a minimum of 10 years as per the Approval, Section 2.2.1. The sampling information includes the following:
• Place, date, and time of sampling and analyses;
• Analytical techniques, methods, and procedures;
• Name of persons who collected and analyzed sample; and
• Result of the analyses.

4.2.8 Annual Reporting
An annual report must be submitted to the designated representative (Director) from the Government of Alberta on or before March 31 of the year following the year in which the information was collected as per Approval Section 2.1.6. The contents of the annual report at minimum shall include the requirements listed in Table 4-2.
Table 4-2: Reporting Requirements

<table>
<thead>
<tr>
<th>Operational Reporting</th>
<th>Environmental Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Monitoring results outlined in Table 4.10-A of the Approval.</td>
<td>▪ Monitoring results outlined in Table 4.10-B of the Approval.</td>
</tr>
<tr>
<td>▪ Dates of wind speeds exceeding 70 km per hour.</td>
<td>▪ Groundwater monitoring report outlined in Tables 4.11-A and 4.11-B and Section 4.11 to Section 4.10.11 of the Approval.</td>
</tr>
<tr>
<td>▪ Dates of landfill closure or restricted access to working face due to weather conditions.</td>
<td>▪ Leachate monitoring outlined in Sections 4.10.3 to 4.10.4 and Table 4.10-B of the Approval.</td>
</tr>
<tr>
<td>▪ Source, type, and date of prohibited materials delivered or detected to/on site requiring transfer to another facility within seven days outlined in Section 5.7.</td>
<td>▪ Run-off water monitoring outlined in Sections 4.10.5 to 4.10.6 and Tables 4.6-A and 4.10-C of the Approval.</td>
</tr>
<tr>
<td>▪ Record of landfill inspections.</td>
<td>▪ Subsurface landfill gas migration monitoring report as outlined in Table 4.7-A of the Approval.</td>
</tr>
<tr>
<td>▪ Landfill survey results.</td>
<td>▪ Summary of surface water management systems.</td>
</tr>
<tr>
<td>▪ Remedial actions for any differential settlements of closed landfill cells.</td>
<td></td>
</tr>
<tr>
<td>▪ Activities relating to staging and new cell construction.</td>
<td></td>
</tr>
<tr>
<td>▪ Maintenance and repairs for closed landfill cells.</td>
<td></td>
</tr>
<tr>
<td>▪ Summary of any closure and reclamation activity.</td>
<td></td>
</tr>
<tr>
<td>▪ Environmental or compliance audits.</td>
<td></td>
</tr>
<tr>
<td>▪ Complaints and response.</td>
<td></td>
</tr>
<tr>
<td>▪ Contraventions.</td>
<td></td>
</tr>
<tr>
<td>▪ Emergency events.</td>
<td></td>
</tr>
<tr>
<td>▪ Amendments to operations plan.</td>
<td></td>
</tr>
</tbody>
</table>

Furthermore, annual tonnages of the year following the year in which the information was collected must be submitted to the AEP online Waste Management System by March 31.

In 2018, Alberta Environment and Parks (AEP) made significant regulatory changes related to climate change with the intent of further reducing GHG emissions and to increase the level of reporting GHG emissions. Some of the changes included: the Specified Gas Emitters Regulation (SGER) developed in 2003 was replaced by the Carbon Competitiveness Incentive Regulation (CCIR); and the Specified Gas Reporting Regulation (SGRR) was also updated. The CCIR was replaced by the Technology Innovation and Emissions Reduction (TIER) System on January 1, 2020, by the Government of Alberta. The TIER system is intended to reduce emissions and invest in clean technology. The TIER regulation applies to facilities that emit 100,000 tonnes or more of GHG emissions per year in 2016, or subsequent years.

5.0 WASTE ACCEPTANCE

The following section presents a summary of waste acceptance policies and procedures.

5.1 Scale Operations

Upon arrival at the site, clients and patrons will be advised of the facility operations through signage located at the site entrance. Information provided will include the following:

- Facility name;
- Name of site owner and operator;
- Hours of operation;
• Admission restrictions;
• Acceptable wastes;
• Prohibited wastes; and
• Emergency contact information.

Additional information will be provided, as required, by the scale house attendant.

5.2 Accepted Waste

Wastes accepted by the AWMF include those disposed of at the landfill, diverted to material recovery and alternative disposal, and stockpiled.

Wastes which can be disposed of at the landfill include the following:
• Residential sanitary refuse;
• Construction and demolition debris;
• Asbestos;
• Animal carcasses (excluding specified risk materials); and

Wastes directed to waste segregation, material recovery, or alternative disposal include the following:
• Vehicle tires;
• White goods;
• General metals;
• Vehicle batteries;
• Agricultural chemical containers including pesticide, herbicide, and fungicide containers;
• Vehicle bodies;
• Petroleum hydrocarbon contaminated soil (that meet applicable criteria);
• Empty propane tanks (40 pound maximum);
• Used lube oil and filters;
• Household recycling including paper, glass, and plastics;
• Cardboard;
• Propane tanks;
• Household hazardous waste including solvents, drain cleaners, pesticides, and herbicides; and
• Paint and aerosols.

Clean fill and topsoil will be directed to stockpile areas designated by the landfill operator.
5.3 Prohibited Waste

Wastes that are not accepted at the AWMF include the following:

- Hazardous waste;
- Waste containing free liquids;
- Biomedical waste; and
- Hydrocarbon contaminated sludges.

Hazardous wastes are defined under the Alberta Environmental protection and Enhancement Act (EPEA) Activities Designation Regulation and Waste Control Regulation. In addition, the Alberta User Guide for Waste Managers includes a comprehensive list of hazardous wastes and a detailed description for determining whether a waste is hazardous.

The following materials are prohibited on site in accordance to the Waste Control Regulation (192/1996), Alberta User Guide for Waste Managers, and the Approval:

- All substances defined in Schedule 1 of the Waste Control Regulation (192/1996):
  - Compressed gas;
  - Flammable and combustible materials;
  - Oxidizing materials;
  - Toxic and biohazardous infectious materials;
  - Corrosive materials; and
  - Dangerously reactive materials.
- Radioactive materials.
- Explosives.
- Untreated biomedical waste.
- Improperly packaged special waste (e.g., un-bagged asbestos).
- Polychlorinated biphenyl and polychlorinated biphenyl contaminated materials.
- Outdated drugs and cytotoxic waste.
- Bulk liquid waste.
- Container(s) containing liquid waste greater than 5 L.
- Dangerous oilfield waste.
- Domestic wastewater.
- Specified risk material (see Section 6.2.5).
5.4 Waste Receiving

All vehicles bringing waste materials to the site will be weighed at the scales upon entering the site. Weight (before and after disposal), license plate, time of arrival, time of departure, and waste type for all vehicles will be recorded at the scale house. Waste types include categories such as residential, construction and demolition debris, white goods, tires, recyclable metals, clean fill and topsoil, waste oil, and agricultural waste. The vehicle will then be directed to the appropriate facilities. Prior to departing the site, the empty weight (tare) of the vehicle will be recorded and the customer will be charged based on net weight and waste material type deposited.

The scale operator is responsible for initial screening of incoming waste and inspection of vehicles to assure that loads are secure. The scale is the first on-site opportunity to screen for prohibited wastes. The scale operator will question the driver to ensure the waste being delivered has been approved and, if necessary, inspect incoming loads, provide directions as to where on site the waste is to be taken for unloading, and any other instructions to assure safe and efficient operating procedures are followed at all times. Under normal circumstances, the scale operator does not leave the scale house. The quantity, material type, and source of the waste disposed at the AWMF is recorded for annual reporting.

Unfamiliar or suspicious vehicles will be carefully inspected for prohibited materials and queried as to the type and source of the waste. Only waste that is acceptable within the terms of the Approval will be accepted, and then only at the discretion of the scale house. Waste screening protocols are presented in Section 5.6.

In the event that waste is rejected at the scale house, the driver’s name, licence plate, contact information, time of arrival, time of departure, waste type, result of waste inspection (if performed), and reason for rejecting the waste will be recorded and provided to the AWMF manager or designated representative (via the scale operator) before the vehicle leaves.

Clients disposing of waste requiring special handling (see Section 5.7) are required to provide the pre-approval form and advanced notice. In the event that advance notice is not provided, the waste may be refused. A copy of the pre-approval form is attached in Appendix D.

The scales will be inspected and/or calibrated as per manufacturers recommendations in compliance with the Canadian Weights and Measures Act. Records of scale inspection and calibration will be maintained in scale house. Alterations and adjustments are made according with Measurement Canada. Records of inspection and scale calibration shall be maintained on site.

5.5 Handling Methods

All materials received and accepted at the AWMF will be stored and handled in appropriate areas and/or loaded directly into designated containers as directed by scale house staff if not deposited in the landfill active working face. Litter control procedures are detailed in Section 13.2.

5.6 Waste Screening

The following section presents an overview of waste screening procedures and protocols to be implemented at the AWMF.
5.6.1 Routine Inspection

Vehicles are required to report to the scale house upon entering the site. While on the scale, the license plate will be recorded and the driver will be questioned about the type and source of waste entering the site. The scale operator will also visibly assess the vehicle’s load when possible. The driver will then be directed to appropriate facilities.

During routine operations, all staff and operators will be on the lookout for prohibited and hazardous wastes during unloading and prior to processing waste. This includes a dedicated waste screener and equipment operators.

5.7 Waste Pre-Approval

Waste pre-approval is mandatory for all waste requiring special handling. Special waste must be pre-approved, registered with the landfill operator, and include the pre-approval application form as attached in Appendix D.

Landfill personnel must be notified at least 24 hours in advance prior to arrival for contaminated soil and asbestos. Each truck containing contaminated soil must have its own unique job code prior to access.

Delivery of ash waste shall be by appointment only. Ash will not be accepted during windy conditions and/or during periods when the designated area is not readily accessible.

5.8 Questionable Waste

All employees will be on the lookout for potentially hazardous and prohibited waste. The following response is for questionable waste, waste of unknown origin, suspicious driver and/or personnel, and waste with unusual paperwork arriving on site.

Possible clues to identifying unacceptable wastes include the following:

- Warning labels on packaging, cans, or drums;
- Liquid leaking from a load;
- Wastes that have hydrocarbon odour or oily appearance;
- Wastes consisting of sludge or semi-solids;
- Wastes consisting of metallic or non-metallic powders;
- Wastes transported in vacuum or tank trucks;
- Wastes having an unusual or unfamiliar odour; and
- Opaque containers and drums that are sealed at both ends.

In the event that unacceptable waste is observed during unloading, the landfill operator will:

- Instruct the driver to discontinue unloading the material;
- Record the vehicle license number;
- Record, if possible, the driver’s name and address;
- Record, if possible, the company’s name, telephone number, address, and contact person;
- Record, if possible, the origin of the waste;
- Instruct the driver to park their vehicle;
- Contact the driver’s company;
- If the driver leaves the site, contact Alberta Environment at 1.800.222.6514; and
- Isolate and secure the areas that the unacceptable waste has been disposed.

### 6.0 WASTE PLACEMENT AND COMPACTION

The following section describes waste placement policies and procedures by clients and operators.

The landfill shall be operated in the most efficient and cost-effective manner while insuring that public and employee safety is observed and that the impact to the environment is minimized. The landfill operators must be aware of the regulatory requirements that the landfill must comply with and if non-compliance issues are observed, inform the Authority as soon as possible.

#### 6.1 Waste Placement and Compaction Direction

Waste collected through residential and commercial services will be disposed at the working face of the active landfill cell. Small vehicles will be directed to the PDO or working face at discretion of the scale house.

Landfilling will generally be completed using the area method of landfilling. Completed stages will have a minimum height of 3 m to 4 m, with a minimum 1% grade to facilitate drainage towards perimeter ditches for above-grade landfill areas.

The AWMF employs the Above Grade Area Fill Method to landfill waste. This methodology involves waste placement, compaction, and placement of cover material.

##### 6.1.1 Initial Lift Placement

The first lift of waste will be placed in each cell carefully as to protect the liner from damage. The waste will be screened for bulky or long items that can harm the liner system. Preference will be given towards waste with low damage potential. Waste placement will begin at the edge of the liner system by carefully pushing waste over the liner. No disposal vehicles or heavy equipment will be operated until a minimum of 2 metres of waste has been placed over the liner. Compactors will not be used for initial waste placement activities.

##### 6.1.2 Active Area Preparation (After Initial Lift Placement)

Prior to the placement of waste in a new active area, the following steps will be completed:

- Haul roads to the active landfill area, including turning and staging areas, will be constructed of a sufficient size and quality to permit safe and all-weather access;
- The active landfill area and haul roads will be graded to promote drainage away from the active area, and to prevent or minimize the ponding of stormwater;
Prior to the placement of waste, existing cover material (as much as is feasible) will be removed and stockpiled for future use, or scarified, to ensure precipitation and/or snowmelt can percolate down to lower layers of waste and not cause leachate breakouts; and

Ensure that all portable litter fencing and signage is in place.

6.1.3 Placement and Compacting Methodology

The following filling methodology will be followed for active landfill areas:

- Waste haulers will remove tarps (if applicable) prior to approaching the active landfill area. Waste haulers will follow direction from on-site staff with regards to approaching the active area in designated locations once space is available. Waste haulers shall dump waste as close of the active landfill area as possible, so as not to interfere with heavy equipment and on-going operations.

- After unloading, waste haulers will leave the active area to re-tarp (if applicable) in a designated location away from the active landfill area.

- Once the waste haulers have left the active landfill area, the crawler loader/dozer will spread waste over the active landfill area. The spread waste will be graded smooth without irregularities or depressions. Waste will be spread in lifts of approximately 0.3 m to 0.6 m in thickness (dependent on equipment size and weight) and compacted with the landfill compactor a minimum of three to five passes (or until the onboard compaction monitoring equipment indicates that compaction has been achieved) prior to placement of the next lift. The top of the completed active areas/cells shall be graded to a minimum slope of 1% to promote drainage, prevent the ponding of water; and direct stormwater to perimeter ditching/stormwater channels.

- The active landfill area will be minimized to limit the amount of exposed waste. As indicated above, the maximum active landfill area dimensions will be 15 m in width.

- The location and extent of the special waste will be surveyed, mapped and kept on file for future reference.

6.1.4 Spotting Traffic Control

Spotting will be conducted by equipment operators or by additional staff as deemed necessary by operators.

6.1.5 Vehicle Distance

All vehicles tipping at the active landfill face must maintain a minimum distance of 3 m from other haul vehicles and 7 m from site heavy equipment as to prevent waste over flow, vehicular collisions and reduce hazards associated with personnel walking from the front-to-back of vehicles.

6.1.6 Asbestos Handling and Disposal

Asbestos waste will only be accepted as per AEP’s Disposal of Asbestos Waste: Acceptable Industry Practices, February 2012. Clients disposing of asbestos waste must complete a non-hazardous waste manifest and scheduled prior to arrival.

The waste generator shall give 24-hour notice to the AWMF prior to shipping asbestos containing materials (ACM) to the landfill. All ACM must be properly contained (i.e., double bagged in bags designed for and clearly marked as “Asbestos”) in order to be accepted at the site.
The scale attendant will notify operations staff and/or the equipment operator at the active landfill area of the arrival of asbestos waste. Asbestos shall be disposed of in the landfill either in an excavated pit, or dedicated cell located away from and downwind of the active landfill area. Upon depositing asbestos waste in the pit or dedicated cell, the material shall be covered immediately with a minimum of 25 cm of non-garbage cover material. Precautions should be taken to ensure that asbestos is not placed with 30 m of an outside slope, beneath future haul road alignments, future vertical gas extraction wells if applicable.

Asbestos materials must be handled carefully as to prevent the rupture or tearing of containment bags and the spread and contamination of asbestos materials to the working environment. The asbestos materials will be segregated in a designated area. All vehicles and reusable containers that have been in contact with friable asbestos waste will be thoroughly cleaned. Any waste residual from the cleaning process should be covered immediately.

6.1.7 Inclement Weather Fill Area

For each above-ground development stage, an inclement weather area may be identified and maintained to facilitate ongoing operations during wet weather periods (e.g., spring and/or storm season). This inclement weather area must be of an adequate size to permit ongoing landfill operations for several weeks and be located as close as practically possible to an all-weather haul road.

In the event of periods of inclement weather or at the commencement of spring thaw, the active landfill area will be graded and covered with 150 mm of daily cover. Measures will be taken to ensure stormwater is shed away from the covered active area. Landfill operations will then be relocated to the inclement weather area until such as time as weather merits access to the regular active area.

6.2 Special Waste Handling

The AWMF accepts waste requiring special handling prior to recycling and disposal. These materials include, but are not limited to asbestos, animal parts, and hydrocarbon contaminated soils. Waste requiring special handling may be scheduled prior to delivery dependant on waste category, registered with landfill operators, and include the pre-approval application form.

6.2.1 Hydrocarbon Contaminated Soils

The disposal of contaminated soils is based on the Alberta User Guide for Waste Managers and the Interim Guideline for Handling and Disposal of Petroleum Hydrocarbon Contaminated Soil. Petroleum Hydrocarbon Contaminated Soil (PHCS) is classified as a waste flammable solid under the Environmental Protection and Enhancement Act – Waste Control Regulation (AR 129/93), based solely on its flammability. If the flash point analysis of representative samples of soil is below 61°C, the soil is considered hazardous waste and is not permitted in the AWMF. A secondary classification of the contaminated soil is based upon Benzene, Toluene, Ethylbenzene, Total Xylene (BTEX), total petroleum hydrocarbons, metals, lead, and phenols.

The procedures for handling contaminated soils by landfill personnel are as follows:

- Landfill personnel must be notified at least 24 hours prior to contaminated soil arrival for site preparation;
- Each truck must have their own job code;
- The scale operator will record the job location, general contractor, hauler, licence number, and weight of the load, under the access code number’s shipping document; and
The material shall be piled, bermed, or spread out on a completed or dormant cell or can be used as an intermediate cover for the landfill and may be used as daily cover for the active cell.

If the soils are going to be exported off-site, testing of the soil for the Alberta Tier 1 Soil Remediation Guidelines criteria for the anticipated land use must be carried out before the soil can be reused.

The AWMF accepts hydrocarbon contaminated soils for use as daily cover materials. The contaminated soils must not exceed the limits outlined in Table 7-1.

At no time shall hydrocarbon or chloride impacted soils be used for covering above grade sideslopes of Class II cells.

6.2.2 Solidified Waste and Sludge

Only dewatered residual material, passing the paint filter test (US EPA Method 9095B) will be disposed of directly on the working face of the landfill.

6.2.3 Ozone-Depleting Substances

White goods such as refrigerators, stoves, washers, dryers, water tanks are collected at the AWMF and stored in the segregated waste storage area for future recycling. Refrigerators and other cooling devices may still have freon, a chlorofluorocarbon (CFC), within the unit. CFC’s are regulated substances under federal and provincial environmental legislation and must be handled accordingly.

Undrained CFC units must be drained by authorized firms or individuals prior to removal from site. Once CFC units are confirmed drained, they may be placed with other white goods for removal by a designated recycler.

6.2.4 Animal Carcasses

Animal carcasses are accepted at the AWMF, pending notification to the site. Animal carcasses must be buried within the waste, to a depth of 1 m.

6.2.5 Specified Risk Materials

Specified Risk Materials (SRMs) are not accepted at the AWMF.

6.2.6 Powdery Waste

Powdery wastes (e.g., grain dust and saw dust) will only be accepted if pre-approved and the material type and source are known as some powdery waste may constitute hazardous waste (e.g., residual powder coating). These wastes, if acceptable, require special handling. Personal protective equipment (PPE), including respiratory devices, will be used as necessary. Water may be used to reduce dust generation. Powdery wastes will be covered with soil immediately upon placement.

6.2.7 Bulky Waste

Bulky and large waste items received on site will be primarily directed to the PDO or alternatively to the active working face where it will be crushed and compacted for disposal where practical or feasible. Any depressions caused by crushing bulky waste on the active working face will be refilled with waste or soil.
Large bulky items which cannot be crushed will be buried at the toe of the active landfill face.

6.2.8 Hot Loads

Hot loads (loads that are smoking or visibly burning) may arrive to site. Staff will monitor all vehicles entering the site for indications of hot loads. Any hot loads will not be allowed to dump and shall be rejected and returned to the owner.

7.0 COVER AND SOIL MANAGEMENT

The following section is a summary of cover materials and requirements.

7.1 Daily Cover

Daily cover will be applied at the end of each operating day to affect the following:

- Prevent propagation of insects;
- Reduce odours;
- Minimize windblown debris;
- Prevent access to rodents and birds;
- Prevent infiltration of rainfall;
- Prevent the spread of fires; and
- Provide an aesthetically pleasing environment.

During normal operating conditions, daily cover will consist of either 0.15 m of soil applied at the end of each working day or approved alternative cover (see Section 7.2). Optimally, soil used for daily cover should be granular and free draining to ensure percolation throughout the waste mass and not result in leachate breakouts on sideslopes. Cover material will be obtained from stockpiles created during cell construction or borrow material and will be placed by a loaded and compacted.

Fine grained soil material can be utilized as daily cover with the provision that it is removed or scarified prior to placement of additional lifts of waste.

Cover material will be clean fill (free of any debris) or approved alternatives. Inclement weather conditions may prevent or delay application of daily cover.

Hydrocarbon or Chloride contaminated soils meeting the requirements listed in Table 7-1 may be used for daily cover.

Table 7-1: Hydrocarbon Contaminated Soil Limits

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Petroleum Hydrocarbons</td>
<td>Less than 20,000 mg/kg</td>
</tr>
<tr>
<td>Chloride</td>
<td>Less than 3,000 mg/kg</td>
</tr>
<tr>
<td>Flashpoint</td>
<td>Greater than 61°C</td>
</tr>
</tbody>
</table>

As per Table 4.3-A of the Approval.
At no time shall hydrocarbon or chloride impacted soils be used for covering above grade sideslopes of Class II cells.

7.2 Alternative Daily Cover

The use of alternate cover materials such as synthetic covers, spray on foams, and retractable tarps becomes cost effective where clay cover is not available on site. Alberta Environment will be consulted prior to the use of alternative covers.

7.3 Intermediate Cover

Intermediate cover is constructed by placing an additional 150 mm of soil on areas that have already received 150 mm of daily cover. The resulting 300 mm of total soil depth constitutes intermediate cover for areas of the landfill that will be inactive for extended periods of time to further reduce the percolation of precipitation through the cover system and thereby reduce leachate generation potential, as well as address concerns related to the exposure of waste due to cover erosion.

Intermediate cover is ideally a clay soil layer. A permeable layer of material should not be used to provide intermediate cover for the waste as it allows water to enter the cell, generating excess leachate.

The efficient operation of the landfill will include the recovery (excavation and reuse) of the top 150 mm of the intermediate cover soil. The recovered intermediate cover soil will be used for future daily cover.

7.4 Final Cover

Upon reaching maximum designated waste elevation, final cover is placed to manage surface water and landfill gas generation. Any and all depressions will be filled to promote drainage away from cell and controlled using water management systems.

The Standards Section 6.1(C) recommends the following final cover system:

- Minimum of 5% grade and maximum of 30% grade;
- 0.60 m barrier layer with maximum hydraulic conductivity of 1 x 10⁻⁷ m per second;
- Subsoil with depth of 0.35 m for pasture or recreational uses or 0.80 m for cultivated land use or forestry;
- 0.20 m of top soil; and
- Vegetation.

The barrier layer will contain clay liner or composite liner system. The previously stored topsoil/subsurface soil or equivalent will ensure establishment of vegetative cover. The vegetative cover, with preference to native grasses, will be applied and maintained to prevent erosion.

However, an approved alternative final cover system may be used (e.g., evapotranspiration cover).
7.5 Soil Conservation

Topsoil and upper subsoil must be salvaged from any site clearing, including cell construction and expansion, and properly stored for landfill reclamation. Proper storage includes stockpiling on stable foundations or undisturbed topsoil, and preventative measures against erosion (e.g., revegetating stockpile, and fencing). Topsoil and upper subsoil conservation may be suspended during inclement weather in which conditions will result in degradation of quality, compaction, or mixing of soil.

Topsoil and upper subsoil must not be used as daily cover.

8.0 LEACHATE MANAGEMENT

The following section provides an overview of leachate management, generation, measurement procedures, pond inspection, analytical requirements, and disposal.

8.1 Leachate Management Plan

The management of leachate on the site is an important operating requirement that requires commitment of staff and resources to ensure that the site remains compliant with its operating approval, while dealing with leachate in the most environmentally benign and cost-effective manner possible.

8.2 Leachate Generation

Leachate is generated from the percolation and chemical alteration of water (e.g., surface water and precipitation) through waste materials, and is generally produced once the waste mass becomes saturated (reaches field capacity). Leachate generation can be minimized by proper operating procedures and implementation of a run-on/runoff collection system at the active landfill face.

The facility will be operated such that the production of leachate is minimized and uncontrolled release of leachate from the site is prevented. The landfill will be developed and operated to minimize moisture infiltration.

8.3 Leachate Measurement

8.3.1 Phases 1 and 2

Leachate levels are monitored in three monitoring wells for the older part of the landfill. These wells are 98-11, 99-26, and 07-11.

8.3.2 Phase 3

Cells in Phase 3A, 3B, and 3C are unlined natural attenuation cells. Three leachate extraction pipes were installed to lower leachate levels in the Phase 3C area in 2011.

Cells in the Phase 3D area were constructed with a leachate collection system, liner, and underdrain to control hydrostatic uplift on the liner below the water table. Leachate levels are monitored in manholes in the 3D-A, 3D-B, 3D-C, and 3D expansion areas.
8.3.3 Phase 4

As discussed in Section 2.2, Cells 4A, 4B, 4C, and 4D were constructed with a clay liner and leachate collection system. Leachate levels are monitored at the sumps associated with each cell.

8.3.4 Measurement Activities

Leachate head is recorded weekly at a minimum:

The measurements are taken using a water level meter and recorded on the measurement sheet. These measurement sheets are reported to the AWMF manager for record keeping. The results from these records are tabulated for inclusion in the annual report.

Leachate levels are to be kept below 300 mm from the lowest point of the liner during landfill operations, closure, and post-closure as per Approval Section 4.5.3. Reduction of leachate levels must occur within fourteen days of exceedance. Leachate pond inspection procedures will continue through the active life of the landfill.

The procedure for using the water level meter are as follows:

- Prior to use:
  - Wear appropriate gloves (e.g., nitrile) and safety glasses;
  - Inspect the water level meter for kinks or damage;
  - Clean the water level meter if contaminated;
  - Calibrate the sensitivity to lowest detectable setting; and
  - Record all pertinent air monitoring results (sustained, dissipating, background, and odor).

- Begin reeling the electronic probe into manhole/riser at a slow pace until the meter sounds.

- Test the validity of measurement by withdrawing the tape and lowering it again until the sound is audible.

- Check the depth on the tape. Repeat the measurement for accuracy.

- Record the water level on the measurement sheet.

- Decontaminate all equipment used and store according to manufacturer’s specifications.

Leachate in manholes must be pumped out for disposal once the level in the manholes reaches a level 30 cm above the liner. The leachate level must be measured and recorded both prior to and following pumping. If pumping/disposal operations require more than one day to lower the leachate level to the required depth, measurements shall be taken immediately prior to the first load of the day and following the last load of the day. All pumping volumes and level measurement data shall be recorded and forwarded to the landfill manager and to the engineer.

Leachate will be removed from the manholes, when required, with a vacuum truck or other suitable equipment and hauled to the Drayton Valley Sewage Lagoon.

One leachate sample shall be collected from each phase on an annual basis for chemical analysis.
Table 8-1: Leachate Pumpout Depths

<table>
<thead>
<tr>
<th>Sump/Manhole</th>
<th>Location</th>
<th>Maximum Allowable or Target Leachate Elevation (m AMSL)</th>
<th>Maximum Level as Depth Below Manhole Rim</th>
</tr>
</thead>
<tbody>
<tr>
<td>98-11</td>
<td>Phase I and II</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>07-11</td>
<td>Phase I and II</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>99-26</td>
<td>Phase I and II</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>3C1</td>
<td>Phase 3C</td>
<td>Not Reported</td>
<td>854.5 (target)</td>
</tr>
<tr>
<td>3C2</td>
<td>Phase 3C</td>
<td>Not Reported</td>
<td>854.5 (target)</td>
</tr>
<tr>
<td>3C3</td>
<td>Phase 3C</td>
<td>Not Reported</td>
<td>854.5 (target)</td>
</tr>
<tr>
<td>Cell 3D-A (MH1)</td>
<td>Phase 3D</td>
<td>854.7 (maximum)</td>
<td>11.099</td>
</tr>
<tr>
<td>MH 3D-2 Underdrain (MH2)</td>
<td>Phase 3D</td>
<td>Water level to be maintained above leachate level.</td>
<td></td>
</tr>
<tr>
<td>Cell 3D-B (MH3)</td>
<td>Phase 3D</td>
<td>855.46 (maximum)</td>
<td>11.225</td>
</tr>
<tr>
<td>MH 3D-4 Underdrain (MH4)</td>
<td>Phase 3D</td>
<td>Water level to be maintained above leachate level.</td>
<td></td>
</tr>
<tr>
<td>Cell 3D-C (MH5)</td>
<td>Phase 3D</td>
<td>856.61 (maximum)</td>
<td>9.76</td>
</tr>
<tr>
<td>MH 3D-6 Underdrain (MH6)</td>
<td>Phase 3D</td>
<td>Water level to be maintained above leachate level.</td>
<td></td>
</tr>
<tr>
<td>Cell 3D Expansion Area (MH7)</td>
<td>Phase 3D</td>
<td>858.03</td>
<td>3.11</td>
</tr>
<tr>
<td>Interceptor Drain</td>
<td>Phase 4</td>
<td>844 (target)</td>
<td>4.5</td>
</tr>
<tr>
<td>Cell 4A</td>
<td>Phase 4</td>
<td>858.81 (maximum)</td>
<td>15.42</td>
</tr>
<tr>
<td>Cell 4B</td>
<td>Phase 4</td>
<td>857.77 (maximum)</td>
<td>14.50</td>
</tr>
<tr>
<td>Cell 4C</td>
<td>Phase 4</td>
<td>857.15 (maximum)</td>
<td>14.20</td>
</tr>
<tr>
<td>Cell 4D</td>
<td>Phase 4</td>
<td>857.02 (maximum)</td>
<td>14.55</td>
</tr>
</tbody>
</table>

8.4 Leachate Sumps

The leachate sumps in Cells 4A, 4B, 4C, and 4D shall be visually inspected concurrent with leachate measurements to ensure that the liner is intact, and the piping is undamaged. Open leachate sump inspections will occur at the following timeframe:

- Weekly from April to October;
- Monthly from November to March;
- Within 24 hours of a significant rainfall event; and
- As needed.

8.5 Analytical Requirements

Analysis of leachate is addressed in the approved environmental monitoring plan for the AWMF.

8.6 Leachate Disposal

Leachate is hauled off site to be disposed of at the Town of Drayton Valley wastewater treatment plant. When removed from site, the volume, date, and disposal facility will be recorded.
9.0 LINER PROTECTION

Care will be taken to protect the integrity of the liner so that it is not compromised by equipment impact, accidental puncture, freezing, or desiccation. Liner protection will include both the base and sideslopes of the cell.

To protect the liner from punctures, the following steps will be taken:

- Place the first lift of waste that is unlikely to cause damage to the liner system, such as residential MSW, that will act as a protective layer; and
- Avoid placement of materials such as broken concrete, steel bars, pipes and similar materials that could damage or puncture the liner system.

Damage to the liner system will be prevented by:

- Avoiding operating equipment directly on the liner system; and
- Placing the first lift of waste by pushing the waste across the liner system and only operating the equipment on the surface of this first lift of waste.

The liner system will be protected from frost damage by:

- Completing construction of a new liner prior to the onset of freezing temperatures;
- Placing a protective layer over the entire surface of the liner system as soon as possible after construction;
- Maintaining moisture in the liner system during drying weather conditions until a protective layer can be applied;
- Avoiding high plastic clays that are more prone to desiccation; or
- Applying a geomembrane above the clay liner.

10.0 SURFACE WATER MANAGEMENT

The following section summarizes surface water management procedures.

10.1 Surface Water Management

There is one surface water collection pond currently on site and is illustrated on Figure 2.

The depth of the surface water collection ponds will be monitored on a weekly basis or after significant rain events. The minimum freeboard for each pond is 0.4 m from the top of bank. In the event that the minimum freeboard level is exceeded, analysis of the water quality shall be undertaken within the pond according to the parameters listed in Table 10-1. Based on the results of the analysis, surface water in the affected collection pond will be pumped out and disposed of on site or off site as approved by AEP.
Table 10-1: Surface Water Parameters and Limits

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Maximum Concentration or Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>6.0 to 9.5 pH units</td>
</tr>
<tr>
<td>Oil and Grease</td>
<td>No visible sheen</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>2,500 mg/L</td>
</tr>
<tr>
<td>Total Suspended Solids</td>
<td>25 mg/L</td>
</tr>
<tr>
<td>Chemical Oxygen Demand</td>
<td>50 mg/L</td>
</tr>
<tr>
<td>Total Ammonia Nitrogen</td>
<td>5 mg/L</td>
</tr>
<tr>
<td>Chloride</td>
<td>250 mg/L</td>
</tr>
<tr>
<td>Sulphate</td>
<td>500 mg/L</td>
</tr>
<tr>
<td>Sodium</td>
<td>200 mg/L</td>
</tr>
</tbody>
</table>

As per Table 4.6-A of the Approval.

Any ponding around and inside the landfill cells must be noted and reported in writing to the TDV so that corrective measures can be taken as soon as possible.

Landfill personnel will inspect the run-on and run-off systems at the landfill, on a weekly basis and immediately after a storm event, to identify any needed repairs. Any irregularities must be reporting in writing to the TDV. The landfill operator must keep a record of the inspections and any corrective action to date.

10.2 Surface Water Release Criteria

The surface water must be sent for testing to meet the requirements in Table 10-1 prior to release. The analytical results, discharge/sampling location, and volume of surface water must be provided to the AWMF manager for record keeping and annual reporting. In the event of unplanned release of surface water, the surface water must be tested.

The stormwater detention pond has been designed to contain a 24-hour, 1 in 25-year storm event. Additionally, the pond should be emptied prior to meeting the minimum freeboard of 0.40 m. Water in the detention pond can be released off-site, provided it meets the specific parameters available in table 10-1. Testing requirements are available in Table 10-2. Water can only be released during periods without precipitation.

Should water quality not be suitable for release off-site, options for disposal include the Drayton Valley Sewage Lagoon, a licensed disposal well, dust suppression on site, or on-site irrigation.

The landfill operator shall monitor and report release of stormwater as outlined in Table 10-2.
Table 10-2: Surface Water Monitoring and Reporting

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Monitoring Frequency</th>
<th>Reporting Annually</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>Prior to any release.</td>
<td>Yes.</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>Prior to any release.</td>
<td>Yes.</td>
</tr>
<tr>
<td>Ammonia Total</td>
<td>Prior to any release.</td>
<td>Yes.</td>
</tr>
<tr>
<td>Chloride, Dissolved</td>
<td>Prior to any release.</td>
<td>Yes.</td>
</tr>
<tr>
<td>Chemical Oxygen Demand</td>
<td>Prior to any release.</td>
<td>Yes.</td>
</tr>
<tr>
<td>Oil &amp; Grease</td>
<td>Prior to any release.</td>
<td>Yes.</td>
</tr>
<tr>
<td>Sodium</td>
<td>Prior to any release.</td>
<td>Yes.</td>
</tr>
<tr>
<td>Sulphate, Total</td>
<td>Prior to any release.</td>
<td>Yes.</td>
</tr>
<tr>
<td>Total Kjeldahl Nitrogen</td>
<td>Prior to any release.</td>
<td>Yes.</td>
</tr>
<tr>
<td>Metals</td>
<td>Prior to any release.</td>
<td>Yes.</td>
</tr>
<tr>
<td>BTEX</td>
<td>Prior to any release.</td>
<td>Yes.</td>
</tr>
<tr>
<td>F1</td>
<td>Prior to any release.</td>
<td>Yes.</td>
</tr>
<tr>
<td>F2</td>
<td>Prior to any release.</td>
<td>Yes.</td>
</tr>
<tr>
<td>Phenols</td>
<td>Prior to any release.</td>
<td>Yes.</td>
</tr>
<tr>
<td>Volume</td>
<td>When released.</td>
<td>Yes.</td>
</tr>
</tbody>
</table>

As per Table 4.10-B of the Approval.

10.3 Surface Water Treatment

Surface water that does not meet the requirements may be used as a dust suppressant or sent to an approved disposal facility.

10.4 Groundwater

Groundwater sampling and compliance monitoring shall be undertaken as per the approved environmental monitoring plan for the AWMF.

11.0 LANDFILL GAS MANAGEMENT

Soil gas monitoring shall be undertaken as per the approved environmental monitoring plan for the AWMF.

12.0 SITE CONTROL

The following section provides an overview of site security, signage, scavenging policies, and road management.

12.1 Site Security

The Code of Practice for Landfills requires the use of artificial and/or natural barriers to control public access to the landfill and prevent unauthorized vehicular traffic and illegal dumping of wastes. The AWMF uses both natural barriers (trees) and fences/gates to control access. Figure 2 identifies the extent of gates, existing and proposed fences, and exiting natural barriers.
Where natural barriers do not exist, the perimeter fence discourages unauthorized entry to the landfill, minimizes intrusions by scavenging animals, delineates the property boundary, isolates and screens the operations from the community and traps windblown debris.

The perimeter fence will be inspected on a weekly basis for integrity. All required repairs should be reported immediately in writing to the landfill manager. Repairs will be made immediately if any deficiencies should be detected.

Gates must be locked and secured during all non-operating periods at the landfill. Only authorized personnel will have keys to the facilities.

All clients are required to report to the scale house upon entering the site. A visitor log will be maintained in the scale house and will include visitor names and date of site visit.

12.2 Signs

Signs at the landfill provide the public, waste haulers, and other users of the landfill site with information and direction regarding the disposal of waste, site operations and management, and other pertinent information such as disposal fees, exclusion of specific waste, and on-site safety procedures.

The entrance to the landfill has a large sign with the following information:

- Facility name;
- Name of the site owner and operator(s);
- Hours of operation throughout the week and year (seasonal variation);
- Admission restrictions;
- Acceptable wastes;
- Prohibited wastes; and
- Emergency contact and telephone number(s).

Signs along on-site roads display the following information:

- Location of segregated waste areas;
- Permitted routes to various disposal areas;
- Road safety including speed limits, intersections, and warnings; and
- Warning signs of illegal dumping.

Signs at the working faces display the following information:

- Type of waste accepted at any particular disposal location;
- Instructions on disposing of waste at a specific location;
- Warning of any hazards; and
• Accident prevention and safety procedures specific to a particular disposal location.

Information on signs that are provided at the landfill site office include the following information:

• Safety and emergency procedures governing site staff and site users;
• Telephone locations and emergency telephone numbers;
• Fire extinguishing equipment locations and instructions on emergencies concerning fire; and
• Spill response procedures and emergency contacts.

12.3 Roads

12.3.1 Access Roads

Access to the AWMF is provided on Highway 22. Upon entering the AWMF, all visitors are required to report to the scale house. The scale house will determine which facility and roads the vehicles may use dependent on site conditions, load size, vehicle type, and waste type.

12.3.2 On-Site Haul Roads

Haul roads will be constructed on site as necessary for landfill operations, including disposal of waste and application of daily cover. Application of water may be applied to haul roads to mitigate dust.

12.3.3 Traffic Control

Upon entering the AWMF, vehicles will follow two-way roads leading to the administrative office, scale house, and PDO, as directed by the scale house. Vehicles are to adhere to posted speed limits, directional signs, stop signs, and control signs.

Landfill staff or contractors will employ traffic control (flag-persons, traffic cones, and barricades) during periods of high traffic volume and construction projects as necessary.

12.3.4 Snow Clearing

The contractor will not allow snow to accumulate more than approximately 10 cm above ground on haul roads, access roads, stockpile area, transfer station, and parking lot. Snow removal may be suspended under extreme weather conditions and resume when practical.

The contractor will remove snow from the active working face prior to landfilling activities. The snow will be removed in such a way as to not allow interference with on-site drainage systems and mitigate surface water accumulation.
13.0 NUISANCE MANAGEMENT

The following section summarizes nuisance protocols and complaint procedures.

13.1 Nuisance Control

The AWMF will be operated at all times to minimize nuisances. As per section 4.4.1 of the Approval, the AWMF shall not release any fugitive waste to lands outside of the landfill boundary.

As per the Approval Section 4.4.2, nuisance control, at a minimum, must include:

- The working face width shall not exceed 25 metres;
- The working face length shall not exceed 25 metres;
- Waste shall be placed and compacted immediately after it is deposited on the working face;
- Soil or other alternative cover material shall be:
  - Located at the working face at all times;
  - Used to cover the working face immediately after closing at the end of each day at a minimum; and
  - Or sufficient quantity to control fugitive waste.
- Movable wind screens shall be in place at an effective distance up-wind of the working face; and
- Movable litter catch fences shall be in place at an effective distance downwind of the working face.

Additional measures in place, as per Section 4.4.3 of the Approval forbid disposal during the following conditions:

- By unloading transfer station trailers with moving floors when wind gusts exceed 60 kilometres per hour; or
- By any method when wind gusts exceed 70 kilometres per hour.

Notwithstanding Section 4.4.3, Section 4.4.4 of the Approval states the AWMF shall not dispose of waste that may become fugitive waste when fugitive waste cannot be controlled within the landfill boundary.

The AWMF will implement further measures as necessary to mitigate nuisances.

13.2 Litter Control

Preventative litter control measures are steps taken to minimize the blowing of litter from the active area of a landfill. The following measures will be used at the site to control and minimize windblown litter:

- All vehicular traffic transporting waste to and around the site will be secured to prevent litter from blowing out of the vehicle.
- Daily cover or approved alternative daily cover will be used to cover exposed waste and to confine light weight material.
The working face location will be selected based on the direction and intensity of the wind to provide maximum shelter for the active area. The area of the working face will be kept to a minimum on windy days. The active/working face must be limited to a maximum width of 15 metres wide.

- Portable litter fences will be placed downwind of the active face at all times.
- Placement of litter control fencing around the perimeter of the active landfill area.
- Potential problematic loads with respect to litter will be scheduled or rescheduled to minimize potential litter impacts.

The AWMF will maintain litter mitigation procedures, with practical steps being taken to prevent the escape of litter from site. Regular on-site and off-site litter pickup will be completed to remove wind-blown litter from the AWMF and surrounding areas. Litter clean-up will begin in the spring of each year and be conducted as required until the onset of winter.

### 13.2.1 On-site Litter

The site, roads, fences, and neighboring land will be inspected on a biweekly basis. Litter deposited in the aforementioned areas will not be allowed to accumulate and must be collected on a routine basis.

The following cleanup procedures shall be observed:

- **Litter cleanup from fences** – litter will be removed from and long litter fences daily, or as necessary during high wind speeds.
- **Cleanup along on-site roads** – litter occurring along on-site roads will be collected daily.
- **Cleanup at entrance area and entrance roads** – litter at the site entrance and road leading to the entrance will be collected daily.
- **Other areas** – litter will be collected as necessary.

Litter fencing on site consists of four fences, approximately 20 ft. by 20 ft. which are placed adjacent to waste placement.

### 13.2.2 Off-site Litter

Off-site litter may occur from wind-blown material on the working face or from vehicles transporting waste to the facility. Administrative and engineered control systems are put in place to mitigate off-site litter generation.

All vehicles transporting waste to the facility are required to secure all loads. Vehicles with non-secured loads arriving to the facility will be surcharged with their identification recorded as a check against future occurrence.

In the event that litter is blown from waste disposal vehicles within immediate vicinity of the landfill, it will be retrieved and disposed of in the active face by litter control personnel. Inspection and retrieval are carried out on property adjacent to the landfill as necessary.

### 13.3 Dust Control

Dust generation is common at landfill sites due to the handling of soils, dry waste, and the movement of vehicles on gravel.
Dust mitigation measures will be employed on an as-needed basis and may include the following:

- Use of water to control dust;
- Control speed limits on on-site gravel roads;
- Road maintenance;
- Limit the amount of road maintenance done during dry conditions;
- Seeding programs;
- The proper placement of stockpiles to minimize dispersion; and
- Soil stockpiles that will not be used for more than one year will be seeded.

### 13.4 Noise Control

Potential noise impacts from the site may result from the operation of the landfill equipment. The operation of this equipment will be conducted to ensure that noise emission standards are adhered to.

### 13.5 Odor Control

In general, landfills have the potential to emit three types of odors: (1) waste odor, (2) landfill gas odor, and (3) leachate odor. Waste odor is generated by recently disposed waste and is controllable by the application of daily cover. Landfill gas odor is generated during the anaerobic decomposition of organic waste material. Leachate odor is generally related to ammonia and organics.

Should landfill gas odors become a problem at site, then an investigation into the issue is required and a solution implemented. The investigation will address such items as gas generation rates, the location of odor problems around the site, and potential methods to reduce odors such as active gas collection or the placement of organic soil as a bio-filter media.

Waste odors will be controlled at the facility by the following procedures:

- Use of daily cover on the working face;
- Routine site inspections; and
- Daily emptying of bins at the PDO.

Should waste odors become a problem, the odor source will be evaluated with appropriate remedial action.

### 13.6 Wildlife Management

Should animals be attracted to the landfill to an extent that they become problematic, appropriate controls will be introduced. Corrective measures will be on a situation specific basis. If necessary, advice will be provided by the Director, a Wildlife Officer, or local bylaw officer. AWMF will ensure compliance with the Alberta *Wildlife Act*, Alberta *Pest Control Act*, *Species at Risk Act*, *Migratory Birds Convention Act*, and their associated regulations.
13.6.1 Large Animals

Large animals, which can pose a problem to the AWMF, typically include coyotes and deer. If large animals are sighted by landfill operators or staff, local animal control should also be notified to remove the animal from site if it poses a risk to staff or visitors. Once the large animal has been removed from site, the point of entry should be located and fixed to prevent future entries of large animals. The point of entry may consist of a break in the fencing system on site, or a dig area where the animal dug under the fence to access the site.

13.6.2 Vectors and Vermin

The terms vector and vermin refer to objectionable insects, rodents, and birds that sometimes establish habitat at a landfill. The impact of these species is examined from a health perspective and from a social or psychological perspective.

Measures to mitigate vector and vermin include the following:

- Increase cover application frequency as necessary to restrict insect infestation and reduce time of exposed waste;
- Avoid the formation of standing pools of stagnant water through positive drainage to stormwater detention ponds; and
- Maintain drainage ditches with a positive gradient to facilitate drainage and the removal of blockages as soon as they become apparent.

13.6.3 Bird Control

Gulls and ravens represent the most significant landfill nuisance with respect to bird vectors. Birds are typically opportunistic feeders, which develop a strong attachment to a region or site that provides a readily available food source.

Bird vectors are generally attracted to the following areas:

- Active cell area which provides a source of food;
- Soil and wood waste stockpiles from which birds can scan for predators and foraging opportunities;
- Short grass areas for loafing; and
- Open water areas for bathing and drinking.

For the purpose of effectively managing bird populations on site, the following strategies may be implemented:

- Minimize the active cell area;
- Apply daily or alternative cover diligently;
- Ensure proper site drainage;
- Minimize stockpiles adjacent to the active cell; and
- Maintain a litter management program to ensure that litter does not attract bird vectors.
In addition to operational controls, additional deterrents may be considered to manage bird populations. Noise based deterrents (e.g., pyrotechnics and distress call playback) may not be feasible as it introduces additional nuisances. Furthermore, it is noted that these deterrents would likely be ineffective in the long term in the absence of a real threat. As such, in the event that the operational strategies listed above are insufficient, the use of lethal reinforcement (e.g., raptors) may be considered.

### 13.7 Complaints Procedure

If a complaint concerning a nuisance (e.g., rodents, odour, litter, noise, drag-out, and dust) is received related to operations at the AWMF from any individual or entity, the AWMF manager or designated representative will complete a complaint form.

It will be the AWMF manager’s responsibility to ensure that the complaint is immediately investigated and the complainant contacted within 48 hours with an explanation as to what occurred, why, and what if any corrective action is to be, or has been taken. The AWMF manager or designate will ensure that appropriate corrective action is taken and executed within a reasonable timeframe and that the necessary internal and external notifications are completed as necessary. The AWMF manager will ensure that any regulatory agency reporting requirements with respect to the complaint are met. Records and summary of complaints received must be provided to the AWMF manager for record keeping and annual reporting.

The AWMF complaint form template is attached in Appendix X.

### 14.0 PUBLIC DROP-OFF

The PDO promotes waste diversion and redirects traffic from the working face to minimize exposure from active landfill operations. The PDO was designed on raised pavement using Z-wall structure. Recyclable materials, household hazardous waste, and municipal waste are accepted within the PDO. Clients will be directed to the PDO at discretion of the scale house dependent on load type, quantity, and site conditions.

The PDO contains the following:

- 2 municipal waste bins;
- 1 bin for tires;
- 1 bin for scrap metals; and
- 1 bin for yard waste.

### 15.0 HOUSEHOLD HAZARDOUS WASTE

The AWMF currently accepts HHW. Clients will be directed to deposit of HHW in designated tables and containers within the PDO. Staff will store and transfer the waste as appropriate. The following household hazardous wastes accepted in the PDO:

- Household cleaning products (e.g., disinfectants, cleaners, and polishes/waxes);
- Gardening and pest control products (e.g., insecticides, pesticides, and fertilizer);
Beauty products (e.g., nail polish and remover, hairsprays, and hair color);

Automotive products (e.g., brake and transmission fluid, motor oil, containers, batteries, antifreeze, and rust inhibitor/removers); and

Other household hazardous products (e.g., fluorescents, batteries, propane, mercury thermometers, and cooking oil).

16.0 CONSTRUCTION AND DEMOLITION WASTE

Vehicles disposing of Class III waste (e.g., shingles, structural wood) are directed to drop off areas dependent on load type, quantity, and site conditions. Clients will deposit their waste in designated storage areas on non-permeable pavement. Construction and demolition wastes include the following:

- Concrete;
- Asphalt pavement;
- Bricks and blocks;
- Natural stone;
- Porcelain;
- Shingles;
- Drywall; and
- General metals.

17.0 SITE INSPECTION

Regular site inspections will be conducted to verify that nuisance issues associated with ongoing landfill operations (e.g., dust, litter, and odor) are adequately controlled, thereby preventing nuisances from developing into more serious environmental issues. The inspections presented herein shall be undertaken by adequately trained landfill personnel on a monthly basis. Landfill personnel shall maintain records of the inspections and associated action items that require attention.

Monthly inspection records shall be filed on site and archived for future reference in the event of an environmental release. Any deficiencies identified will result in either immediate repair/correction or the preparation of a corrective action plan. The deficiencies and corrective action will be documented for annual reporting.

The inspection form is included in Appendix X.

17.1 Surface Water Management Systems

Maintenance of the surface water management systems will include the maintenance of surface watercourses and ponds.
Grass lined surface watercourses shall be periodically inspected, while undertaking inspection of the cover system, for signs of deterioration and erosion. Maintenance will include periodic trimming of grass, repairs to side-walls, and dredging of sediment build-up.

Culverts should be inspected and cleaned on a regular basis to ensure free drainage of surface water from the landfill's ditching systems.

The ponds will also require periodic inspection and maintenance. Inspections shall be undertaken for evidence of erosion and sideslope sloughing or tension cracks forming along the crest of the sideslope berms. Regular maintenance will include dredging of sediments to ensure the structure maintains the required capacity.

17.2 Leachate Management

Leachate levels will be monitored regularly as per Section 8.3.

Regular inspection of all intermediate and final cover slopes shall be undertaken for evidence of leachate surface seeps. In the event that leachate seepage is identified, remedial measures will be immediately undertaken to contain the seepage in order to prevent impacts to surface watercourses, and affect repair to the final cover in the area where seepage is observed.

In the event that leachate seepage has impacted surface watercourses, temporary controls, such as berming, should be implemented to prevent the migration of impacted surface water downstream. Where possible, the impacted surface water should be redirected to the landfill by excavating a vertical channel into the waste mass and allowing the leachate to infiltrate into the waste.

17.3 Buffer Zones

Buffer zones should generally be vegetated with native species and should be self-supporting. As such, with the exception of potential remedial measures to address landfill derived impacts, maintenance should generally not be required. In the event of landfill derived impacts (i.e., vegetative stress associated with landfill gas, sediment accumulation or leachate seepage) an assessment of the cause of the impact shall be undertaken and appropriate measure put in place.

17.4 Fencing and Site Security

All fencing and gates should be maintained. If fencing/gates are found to be damaged or in disrepair, then the existing fence/gate should be repaired or replaced as needed to ensure the protection of the site's environmental controls. The need for existing fencing and/or additional fencing should be reviewed on an annual basis.

17.5 Access Roads

Access roads shall be repaired should any erosion, rutting, or potholes occur. Snow clearing of the access road shall be performed on an as-required basis.

17.6 Environmental Monitoring Infrastructure

Existing groundwater monitoring wells and soil gas monitoring probes should remain in place and operational throughout the operational and post-closure care period of the AWMF. Monitoring wells should be inspected at the
time of undertaking monitoring/sampling for proper operation. Any broken valves, fittings, casings, locks or seals should be replaced immediately. Should existing or any new monitoring wells/probes be damaged beyond repair or abandoned, they will be decommissioned as soon as reasonably possible.

In the event of ponding or surface water accumulation at the base of a groundwater monitoring well installation, remedial measures shall be undertaken to regrade the area and re-establish vegetative cover. Alternatively, consideration can be given to decommissioning the monitoring well and installing a replacement in an adjacent location which will not be impacted by surface water.

### 18.0 UNDERDRAIN WATER MANAGEMENT

Phases 3D and 3E are equipped with an underdrain collection system to prevent the uplift of the liner by hydrostatic forces from groundwater. The higher the water levels within the underdrain collection manholes, the greater the uplift forces on the clay liner within these cells. Once sufficient waste has been placed into the cell, the weight of the waste will counter the uplift forces from the groundwater and removal of water from the underdrain collection manholes will no longer be required.

Monitoring and removal of the groundwater from the underdrain collection manholes must continue until waste within the entire phase has reached the elevation of the top of the perimeter berms.

#### 18.1 Underdrain Water Level Monitoring

The water levels in the manholes should be measured on a weekly basis and recorded. These measurements are the distance from the manhole rim to the level of the water. The recorded data is to be forwarded to the landfill manager and the engineer at the end of each month.

<table>
<thead>
<tr>
<th>Manhole</th>
<th>Rim Elevation (m)</th>
<th>Location</th>
<th>Invert Elevation (m)</th>
<th>Dept that Pumping from Manhole is to Commence (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MH 3D-2</td>
<td>861.57</td>
<td>South Invert</td>
<td>852.21</td>
<td>8.16</td>
</tr>
<tr>
<td>MH 3D-4</td>
<td>862.36</td>
<td>South Invert</td>
<td>853.02</td>
<td>8.34</td>
</tr>
<tr>
<td>MH 3D-6</td>
<td>863.52</td>
<td>South Invert</td>
<td>854.17</td>
<td>8.35</td>
</tr>
<tr>
<td>MH 3E-2</td>
<td>861.12</td>
<td>West Invert</td>
<td>853.00</td>
<td>7.12</td>
</tr>
<tr>
<td>MH 3E-4</td>
<td>862.41</td>
<td>West Invert</td>
<td>853.00</td>
<td>8.41</td>
</tr>
</tbody>
</table>

#### 18.2 Underdrain Water Removal

The water in the underdrain collection manholes for Phases 3D and 3E must be pumped out once the level in the manholes reach a level 1.0 metre above the invert of the pipe. The depths with which pumping must commence are listed in Table 19-1. The water removed can be discharged to the run-on control system.

The water level must be measured and recorded both prior to and following pumping. All pumping volumes and level measurement data shall be recorded and copies forwarded to the landfill manager and engineer.

The landfill manager must be notified in the event a detection of odour or water colour is identified.
19.0 PIPELINES

Numerous gas and oil pipelines and other utilities cross the landfill property. Adequate marking of these utilities must be maintained at all times. A minimum of 1.8 metres of earth cover must be maintained at all pipeline crossings.

20.0 BURNING

Burning is not permitted at the landfill unless a Permit to Burn is obtained from Alberta Sustainable Resource Development’s Forest Protection Branch, as well as approval from the local Fire Department. The landfill personnel should be adequately prepared to control the spread of a fire and extinguish it.

21.0 SPILL MANAGEMENT

Since the site does not accept liquid waste, the potential for spills on site is limited to leachate and fuel or oil derived products that are used in the site’s equipment. Any spill that has the potential to cause an adverse effect on the environment will be reported.

Should a spill occur on site, refer to the emergency response plan attached in Appendix C.

The AWMF manager or designated representative will do everything practicable to:

- Stop the spill from continuing;
- Place spill control material such as socks, soil and absorbent;
- Request assistance as necessary;
- Ensure a supervisor remains at the spill location until assistance arrives;
- Clean up spill and dispose of any contaminated material at an approved facility; and
- Notify proper authorities including AEP.

As a follow-up to a spill, the AWMF manager will take corrective action to prevent recurrence of the release. An incident report will be completed and retained on file detailing:

- Date/time of the incident or its discovery;
- Type of release and effects;
- Source;
- Response and effectiveness;
- Agencies contacted;
- Corrective action planned; and
- Revisions to operating procedures as appropriate.
22.0 EMERGENCY RESPONSE PLAN

The emergency response plan is located in the site administrative office.

23.0 CONTRAVENTION PROCEDURE

In the event of contravention to the Approval, the AWMF manager will report immediately to AEP at 1.780.422.4505, submit a written report within seven days, and provide addendums to operating procedures as required. The written report and associated addendums will be included in the annual report.

24.0 REVISIONS TO OPERATIONS PLAN

The operations plan will be reviewed annually or in the event of significant change(s) by the AWMF and/or qualified contractor as per Section 4.2.3 of the Approval. The revision history will be maintained at the beginning of the operations plan and include the following:

- Date of review; and
- Name of reviewer.

24.1 Revisions Procedure

The operations plan will be revised if any physical, operational, or regulatory changes, which affects the standard procedures, occur. Such changes include, but not limited to:

- Changes to site operations and equipment;
- Changes to the Standards for Landfills in Alberta or the Approval; or
- Updates per request of director.

All or part of the operations plan may be revised at any time if required. The revision history will be maintained at the beginning of the operations plan and include:

- Number of revision;
- Date of revision; and
- Summary of changes.

If only an appendix is revised and it is not necessary to revise the body of the operations plan, note the revision number and date only on the revised appendix. The draft amendments will be submitted to AEP and implemented only when approved.
25.0 CLOSURE

We trust this document meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,
Tetra Tech Canada Inc.

Prepared by:
Jerad Bech, P.Eng.
Project Engineer
Solid Waste Management Practice
Direct Line: 780.914.1036
Jerad.Bech@tetratech.com

Reviewed by:
Michel Lefebvre, P.Eng.
Manager
Solid Waste Management Practice
Direct Line: 587.460.3549
Michel.Lefebvre@tetratech.com
## Summary Material Activity Report

**January 01, 2018 to December 31, 2018**

**Confirmed Qty Applied to Billing**

<table>
<thead>
<tr>
<th>Material</th>
<th>Weight</th>
<th>Volume</th>
<th>Count</th>
<th>Billing Qty</th>
<th>Material Total</th>
<th>Tax Total</th>
<th>Total</th>
<th>Item Count</th>
<th>Ticket Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMERCIAL WASTE</td>
<td>9,005,540.00</td>
<td>1.00</td>
<td>0.00</td>
<td>9,005.54 MT</td>
<td>$703,302.50</td>
<td>$0.00</td>
<td>$703,302.50</td>
<td>2894</td>
<td></td>
</tr>
<tr>
<td>DIVERTED / LEACHET</td>
<td>507,870.00</td>
<td>4,750.00</td>
<td>0.00</td>
<td>699.13 MT</td>
<td>$29,377.00</td>
<td>$0.00</td>
<td>$29,377.00</td>
<td>1585</td>
<td></td>
</tr>
<tr>
<td>RECYCLING</td>
<td>601,210.00</td>
<td>0.00</td>
<td>0.00</td>
<td>601.21 MT</td>
<td>$45,463.00</td>
<td>$0.00</td>
<td>$45,463.00</td>
<td>771</td>
<td></td>
</tr>
<tr>
<td>LIQUID WASTE</td>
<td>0.00</td>
<td>9,400.00</td>
<td>0.00</td>
<td>9.40 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>SCRAP METAL</td>
<td>507,870.00</td>
<td>191,260.00</td>
<td>0.00</td>
<td>3.39 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>OIL FILTERS</td>
<td>0.00</td>
<td>3,680.00</td>
<td>0.00</td>
<td>3.68 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>BATTERIES</td>
<td>0.00</td>
<td>3,390.00</td>
<td>0.00</td>
<td>3.97 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>CARDBOARD</td>
<td>0.00</td>
<td>319,965.00</td>
<td>0.00</td>
<td>319.97 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>135</td>
<td></td>
</tr>
<tr>
<td>CFCs</td>
<td>6,510.00</td>
<td>46.00</td>
<td>0.00</td>
<td>46.00 UN</td>
<td>$2,760.00</td>
<td>$0.00</td>
<td>$2,760.00</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION &amp; DEMOLITION</td>
<td>4,501,010.00</td>
<td>14.00</td>
<td>0.00</td>
<td>4,501.01 MT</td>
<td>$303,239.00</td>
<td>$0.00</td>
<td>$303,239.00</td>
<td>5835</td>
<td></td>
</tr>
<tr>
<td>CLEAN FILL</td>
<td>178,550.00</td>
<td>0.00</td>
<td>0.00</td>
<td>178.55 MT</td>
<td>$962.50</td>
<td>$0.00</td>
<td>$962.50</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>E-WASTE</td>
<td>32,405.00</td>
<td>1.00</td>
<td>0.00</td>
<td>51.39 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>431</td>
<td></td>
</tr>
<tr>
<td>GEOTEXTILES</td>
<td>(32,767.00)</td>
<td>0.00</td>
<td>0.00</td>
<td>53.00 EA</td>
<td>$79,500.00</td>
<td>$0.00</td>
<td>$79,500.00</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>HOUSEHOLD HAZARD WASTE</td>
<td>26,295.00</td>
<td>11,100.00</td>
<td>0.00</td>
<td>37.40 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>392</td>
<td></td>
</tr>
<tr>
<td>ASBESTOS</td>
<td>1,830.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.83 MT</td>
<td>$400.00</td>
<td>$0.00</td>
<td>$400.00</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>CONCRETE</td>
<td>601,600.00</td>
<td>0.00</td>
<td>0.00</td>
<td>601.60 MT</td>
<td>$10,427.50</td>
<td>$0.00</td>
<td>$10,427.50</td>
<td>156</td>
<td></td>
</tr>
<tr>
<td>HOUSE WASTE - MSW</td>
<td>2,813,300.00</td>
<td>17.00</td>
<td>0.00</td>
<td>2,813.30 MT</td>
<td>$223,568.00</td>
<td>$0.00</td>
<td>$223,568.00</td>
<td>4357</td>
<td></td>
</tr>
<tr>
<td>RESI RECYCLING</td>
<td>7,130.00</td>
<td>187,610.00</td>
<td>0.00</td>
<td>194.74 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>207</td>
<td></td>
</tr>
<tr>
<td>PROPANE TANK</td>
<td>0.00</td>
<td>700.00</td>
<td>0.00</td>
<td>0.70 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>CONTAMINATED SOIL</td>
<td>17,441,220.00</td>
<td>0.00</td>
<td>0.00</td>
<td>17,441.22 MT</td>
<td>$300,715.00</td>
<td>$0.00</td>
<td>$300,715.00</td>
<td>655</td>
<td></td>
</tr>
<tr>
<td>TIRES</td>
<td>52,020.00</td>
<td>53,080.00</td>
<td>0.00</td>
<td>105.10 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>286</td>
<td></td>
</tr>
<tr>
<td>COMPOST</td>
<td>36,320.00</td>
<td>0.00</td>
<td>0.00</td>
<td>36.32 MT</td>
<td>$3,386.50</td>
<td>$0.00</td>
<td>$3,386.50</td>
<td>579</td>
<td></td>
</tr>
</tbody>
</table>

**Total Weight:** 35,782,023.00 kg

**Total Volume:** 4,783.00 YD

MHORVATH 08/03/2021 8:28 AM

GFL10 - DRAYTON VALLEY (ASPEN) (WIT)
### Summary Material Activity Report
January 01, 2019 to December 31, 2019

#### All Facilities
**All Materials**

*Confirmed Qty Applied to Billing*

<table>
<thead>
<tr>
<th>Material</th>
<th>Weight Inbound</th>
<th>Weight Outbound</th>
<th>Volume Inbound</th>
<th>Volume Outbound</th>
<th>Count Inbound</th>
<th>Count Outbound</th>
<th>Billing Qty</th>
<th>Material Total</th>
<th>Tax Total</th>
<th>Total Item Count</th>
<th>Ticket Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMERCIAL WASTE</td>
<td>7,582,932.00</td>
<td>0.00 KG</td>
<td>10.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>7,582.94 MT</td>
<td>$591,791.50</td>
<td>$0.00</td>
<td>591,791.50</td>
<td>2372</td>
</tr>
<tr>
<td>DIVERTED / LEACHETE</td>
<td>0.00</td>
<td>2,112,750.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>2,112.75 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>0.00</td>
<td>272</td>
</tr>
<tr>
<td>RECYCLING</td>
<td>606,193.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>606.20 MT</td>
<td>$45,790.50</td>
<td>$0.00</td>
<td>45,790.50</td>
<td>743</td>
</tr>
<tr>
<td>LIQUID WASTE</td>
<td>0.00</td>
<td>7,210.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>7.21 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>0.00</td>
<td>7</td>
</tr>
<tr>
<td>SCRAP METAL</td>
<td>430,720.00</td>
<td>164,770.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>595.51 MT</td>
<td>$26,485.00</td>
<td>$0.00</td>
<td>26,485.00</td>
<td>1319</td>
</tr>
<tr>
<td>OIL FILTERS</td>
<td>0.00</td>
<td>580.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>0.58 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>0.00</td>
<td>1</td>
</tr>
<tr>
<td>BATTERIES</td>
<td>0.00</td>
<td>3,640.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>3.64 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>0.00</td>
<td>5</td>
</tr>
<tr>
<td>CARDBOARD</td>
<td>0.00</td>
<td>242,140.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>242.14 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>0.00</td>
<td>96</td>
</tr>
<tr>
<td>CFCs</td>
<td>1,341.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>72.00</td>
<td>0.00</td>
<td>72.00 UN</td>
<td>$4,320.00</td>
<td>$0.00</td>
<td>4,320.00</td>
<td>65</td>
</tr>
<tr>
<td>CONSTRUCTION &amp; DEMOLITION</td>
<td>4,920,402.00</td>
<td>0.00 KG</td>
<td>5,252.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>4,920.41 MT</td>
<td>$331,474.50</td>
<td>$0.00</td>
<td>331,474.50</td>
<td>4832</td>
</tr>
<tr>
<td>CLEAN FILL</td>
<td>467,650.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>467.65 MT</td>
<td>$2,372.00</td>
<td>$0.00</td>
<td>2,372.00</td>
<td>65</td>
</tr>
<tr>
<td>E-WASTE</td>
<td>24,014.00</td>
<td>28,580.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>52.60 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>0.00</td>
<td>405</td>
</tr>
<tr>
<td>GEOTEXTILES</td>
<td>72,803.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>36.00</td>
<td>0.00</td>
<td>36.00 EA</td>
<td>$54,000.00</td>
<td>$0.00</td>
<td>54,000.00</td>
<td>36</td>
</tr>
<tr>
<td>HOUSEHOLD HAZARD WASTE</td>
<td>25,964.00</td>
<td>14,900.00 KG</td>
<td>3.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>40.87 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>0.00</td>
<td>401</td>
</tr>
<tr>
<td>CONCRETE</td>
<td>652,483.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>652.49 MT</td>
<td>$11,272.00</td>
<td>$0.00</td>
<td>11,272.00</td>
<td>144</td>
</tr>
<tr>
<td>HOUSE WASTE - MSW</td>
<td>3,617,912.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>3,617.95 MT</td>
<td>$286,511.50</td>
<td>$0.00</td>
<td>286,511.50</td>
<td>5330</td>
</tr>
<tr>
<td>RESI RECYCLING</td>
<td>17,128.00</td>
<td>355,567.00 KG</td>
<td>1.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>372.70 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>0.00</td>
<td>242</td>
</tr>
<tr>
<td>PROpane TANK</td>
<td>0.00</td>
<td>440.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>0.44 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>0.00</td>
<td>1</td>
</tr>
<tr>
<td>CONTAMINATED SOIL</td>
<td>5,860,000.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>5,860.00 MT</td>
<td>$77,991.50</td>
<td>$0.00</td>
<td>77,991.50</td>
<td>259</td>
</tr>
<tr>
<td>SPECIAL WASTE</td>
<td>191,863.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>191.86 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>0.00</td>
<td>1</td>
</tr>
<tr>
<td>TIRES</td>
<td>51,728.00</td>
<td>20,250.00 KG</td>
<td>4,000.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>71.98 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>0.00</td>
<td>241</td>
</tr>
<tr>
<td>COMPOST</td>
<td>69,956.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>69.96 MT</td>
<td>$4,241.00</td>
<td>$0.00</td>
<td>4,241.00</td>
<td>748</td>
</tr>
</tbody>
</table>

| Total                     | 24,593,089.00  | 2,950,827.00 KG | 9,266.00       | 0.00 YD         | 108.00        | 0.00           | 36.00 EA    | $1,436,249.50 | $0.00     | $1,436,249.50 | 17585 | 17533 |

MHORVATH 08/03/2021 8:27 AM GFL10 - DRAYTON VALLEY (ASPEN) (WIT)
## Summary Material Activity Report

**Date:** January 01, 2020 to December 31, 2020

**All Facilities**

**All Materials**

<table>
<thead>
<tr>
<th>Material</th>
<th>Inbound</th>
<th>Outbound</th>
<th>Volume Inbound</th>
<th>Outbound</th>
<th>Count Inbound</th>
<th>Outbound</th>
<th>Billing Qty</th>
<th>Material Total</th>
<th>Tax Total</th>
<th>Total Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMERCIAL WASTE</td>
<td>6,470,390.00</td>
<td>0.00 KG</td>
<td>1.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>6,470.39 MT</td>
<td>$504,906.50</td>
<td>$0.00</td>
<td>1981</td>
</tr>
<tr>
<td>DIVERTED / LEACHET</td>
<td>0.00</td>
<td>4,803,241.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>4,803.24 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>572</td>
</tr>
<tr>
<td>RECYCLING</td>
<td>629,200.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>629.20 MT</td>
<td>$47,595.00</td>
<td>$0.00</td>
<td>746</td>
</tr>
<tr>
<td>LIQUID WASTE</td>
<td>0.00</td>
<td>330.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>0.33 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>1</td>
</tr>
<tr>
<td>SCRAP METAL</td>
<td>470,180.00</td>
<td>555,630.00 KG</td>
<td>1.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>1,025.82 MT</td>
<td>$29,294.00</td>
<td>$0.00</td>
<td>1813</td>
</tr>
<tr>
<td>OIL FILTERS</td>
<td>0.00</td>
<td>12,610.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>12.61 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>20</td>
</tr>
<tr>
<td>BATTERIES</td>
<td>0.00</td>
<td>3,900.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>3.90 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>4</td>
</tr>
<tr>
<td>CARDBOARD</td>
<td>0.00</td>
<td>453,242.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>453.24 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>142</td>
</tr>
<tr>
<td>CFCs</td>
<td>3,940.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>6600 UN</td>
<td>$3,960.00</td>
<td>$0.00</td>
<td>56</td>
</tr>
<tr>
<td>CONSTRUCTION &amp; DEMOLITION</td>
<td>4,891,620.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>4,891.69 MT</td>
<td>$330,073.00</td>
<td>$0.00</td>
<td>6233</td>
</tr>
<tr>
<td>CLEAN FILL</td>
<td>10,432,476.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>10,432.48 MT</td>
<td>$52,278.50</td>
<td>$0.00</td>
<td>640</td>
</tr>
<tr>
<td>E-WASTE</td>
<td>43,948.00</td>
<td>19,920.00 KG</td>
<td>1.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>63.86 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>648</td>
</tr>
<tr>
<td>GEOTEXTILES</td>
<td>0.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>13.00</td>
<td>13.00</td>
<td>13.00 EA</td>
<td>$19,500.00</td>
<td>$0.00</td>
<td>13</td>
</tr>
<tr>
<td>HOUSEHOLD HAZARD WASTE</td>
<td>43,346.00</td>
<td>10,510.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>53.85 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>568</td>
</tr>
<tr>
<td>ASBESTOS</td>
<td>3,390.00</td>
<td>0.00 KG</td>
<td>3.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>3.39 MT</td>
<td>$612.50</td>
<td>$0.00</td>
<td>8</td>
</tr>
<tr>
<td>CONCRETE</td>
<td>1,026,950.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>1,026.95 MT</td>
<td>$17,767.00</td>
<td>$0.00</td>
<td>241</td>
</tr>
<tr>
<td>HOUSE WASTE - MSW</td>
<td>4,296,796.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>4,296.88 MT</td>
<td>$341,112.50</td>
<td>$0.00</td>
<td>5301</td>
</tr>
<tr>
<td>RESI RECYCLING</td>
<td>14,107.00</td>
<td>322,739.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>336.85 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>304</td>
</tr>
<tr>
<td>PROPANE TANK</td>
<td>0.00</td>
<td>480.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>0.48 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>1</td>
</tr>
<tr>
<td>CONTAMINATED SOIL</td>
<td>854,490.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>854.49 MT</td>
<td>$16,462.50</td>
<td>$0.00</td>
<td>101</td>
</tr>
<tr>
<td>SPECIAL WASTE</td>
<td>4,480.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>4.84 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>1</td>
</tr>
<tr>
<td>TIRES</td>
<td>2,942,266.00</td>
<td>120,370.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>3,062.63 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>413</td>
</tr>
<tr>
<td>COMPOST</td>
<td>2,183,601.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>2,183.61 MT</td>
<td>$5,593.50</td>
<td>$0.00</td>
<td>896</td>
</tr>
<tr>
<td>SAND</td>
<td>1,180,510.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>1,180.51 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>107</td>
</tr>
<tr>
<td>YARDWASTE</td>
<td>69,410.00</td>
<td>0.00 KG</td>
<td>0.00</td>
<td>0.00 YD</td>
<td>0.00</td>
<td>0.00</td>
<td>69.41 MT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>17</td>
</tr>
</tbody>
</table>

**Total Weight:** 35,561,100.00 KG **Total Volume:** 6,302,972.00 KG **Total Count:** 2,207.00 YD **Total Count:** 79.00 **Total Quantity:** 13.00 EA **Total Material:** 41,860.29 MT **Total Unit:** 660 UN **Total Count:** 20827 **Total Count:** 20801