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Tracking Number:

Authorization Number: 107189

**REGISTERED MAIL**

Belkorp Environmental Services Inc.  
Suite 900  
1508 West Broadway  
Vancouver BC V6J 1W8

AND

Village of Cache Creek  
P.O. Box 7  
Cache Creek BC V0K 1H0

Dear Operational Certificate Holder:

Enclosed is Amended Operational Certificate 107189 issued under the provisions of the *Environmental Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the operational certificate. An annual fee will be determined according to the Permit Fees Regulation.

This operational certificate does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the operational certificate holder. It is also the responsibility of the operational certificate holder to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Administration of this permit will be carried out by staff from the Environmental Protection Division's Regional Operations Branch. Plans, data and reports pertinent to the permit are to be submitted by email or electronic transfer to the Director, designated Officer, or as further instructed.

Yours truly,

Environmental Protection  
Division

Ministry of Environment and  
Climate Change Strategy

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South Region

Email: [Authorizations.South@gov.bc.ca](mailto:Authorizations.South@gov.bc.ca)  
Website: [www.gov.bc.ca/env](http://www.gov.bc.ca/env)

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Enclosure

cc: Environment Canada

DRAFT



OPERATIONAL CERTIFICATE

107189

Under the Provisions of the Environmental Management Act

In Accordance with the Environmental Assessment Certificate #WD09-02 and the Approved Thompson-Nicola Regional District Solid Waste Management Plan

Belkorp Environmental Services Inc. Suite 900 - 1508 West Broadway Vancouver, BC V6J 1W8

and

Village of Cache Creek Box 7 Cache Creek, BC V0K 1H0

are authorized to manage municipal solid waste and recyclable material and discharge residual solid waste to ground at a landfill located in Cache Creek, British Columbia, subject to the conditions listed herein. The two named parties are jointly and separately responsible for compliance with all Operational Certificate conditions. Contravention of any of these conditions is a violation of the Environmental Management Act and may result in prosecution.

1. AUTHORIZED DISCHARGES

1.1 This section applies to the discharge of municipal solid waste and other refuse specifically authorized in writing by the Director to the Cache Creek Solid Waste Facility. The site reference number for the overall discharge to the site is E305678.

1.1.1 The maximum rate of discharge is 750,000 tonnes per year.

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- 1.1.2 Municipal solid waste must originate from within the province of British Columbia.
- 1.1.3 The discharge to ground is authorized by the Thompson-Nicola Regional District's approved Solid Waste Management Plan and must satisfy the requirements of the Thompson-Nicola Regional District Solid Waste Management Plan.
- 1.1.4 Waste discharged to this landfill must not contravene or circumvent disposal bans established in the Regional District from which the waste originated.
- 1.1.5 The characteristics of the discharge must be municipal solid waste as defined in the *Environmental Management Act* and other wastes as specifically authorized in writing by the Director.

Waste asbestos may be discharged in accordance with section 40 of Hazardous Waste Regulation.

Materials prohibited from discharge include hazardous waste (excluding asbestos), bulk liquids (excluding leachate re-circulation), semi-solid waste containing free liquid, biomedical waste, incinerator ash or other materials that have the ability to create an exothermic reaction when hydrated (unless placed in a specially designed mono-fill cell) and the following:

- Recyclable Materials including:
  - a. used white goods,
  - b. auto hulks and other large metallic waste,
  - c. used tires,
  - d. used lead acid batteries,
  - e. gypsum wallboard (post 1990), and
  - f. corrugated cardboard.
- Any other waste and/or recyclable material regulated under the Ministry's Recycling Regulation when alternate recycling options become available.
- Other materials which may be designated by the Director when alternatives to disposal become available.

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- 1.1.6 Waste must not be discharged outside the landfill footprint identified in section 1.1.9.
- 1.1.7 The authorized works common to this section are a landfill with a double composite liner system consisting of an upper high density polyethylene membrane of a minimum 1.5 mm thickness over a geosynthetic clay liner and a lower high density polyethylene membrane of a minimum 2.0 mm thickness over a geosynthetic clay liner, locking gate to control access by the public, weigh scale, berms, covering material, surface water diversionary works, leachate collection and treatment works, environmental monitoring systems and related appurtenances located within the landfill footprint shown in Site Plan B.
- 1.1.8 All authorized works must be complete and in operation prior to commencement of discharging and remain fully operational at all times.
- 1.1.9 The legal description specific to the **footprint of the 31 ha engineered MSW landfill** is:  
  
Portion of Block C, Section 13, Township 21, Range 25, West of the Sixth Meridian, Kamloops Division Yale District  
  
And inclusive of the conditions set forth under section 2.12 of this operational certificate for a legal survey that identifies the metes and bounds for the landfill footprint.
- 1.1.10 The legal description of the **51 ha property boundary of the landfill** is:  
  
Block C, Section 13, Township 21, Range 25, West of the Sixth Meridian, Kamloops Division Yale District.
- 1.1.11 The Cache Creek Solid Waste Facility is located approximately 1.2 km west of the intersection of Highway 1 and Campbell Hill Drive West within the village limits of Cache Creek. The Cache Creek Solid Waste Facility is immediately west and adjacent to the existing Cache Creek Landfill / Annex authorized under operational certificate MR-07577 shown in Site Plan A.

## 2. **DESIGN AND PERFORMANCE REQUIREMENTS**

### 2.1 **Design, Operations and Closure Plan**

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The Operational Certificate holder must operate the facility authorized in Section 1 in accordance with a Design, Operations and Closure Plan (DOCP).

The DOCP must address each of the subsections in the ministry's Landfill Criteria for Municipal Solid Waste including performance, siting, design, operational, closure and post-closure criteria and the Guideline for Environmental Monitoring at Municipal Solid Waste Landfills. The DOCP must be certified by a qualified professional.

The DOCP must include, but is not limited to, information regarding:

- A filling plan for the design capacity of the landfill showing planned development of the individual phases and the cover borrow area. The plan must incorporate the concept of progressive closure required by Sections 6.1 & 6.2 and take into consideration environmental protection measures and the proposed end use of the site;
- Anticipated schedule for progressive closure activities;
- Estimated closure/post-closure costs and details of the financial security plan required in Section 5.1;
- Estimated final elevation contours;
- Cell size, compaction details, daily, intermediate and final cover including types of materials used;
- Actions taken to ensure slope stability;
- Measures to minimize leachate generation, including surface water diversion measures;
- Measures to minimize hazards to public safety;
- Measures to control vectors, odours, dust, wind-blown litter and scavenging;
- Fire prevention measures;
- List of recyclable materials accepted and how they are managed at the site;
- Incoming waste inspection, removal of unauthorized waste and staff supervision on the active face;
- A groundwater monitoring program in accordance with the requirements of Section 4.1;
- Contingencies to address environmental protection issues, including leachate, landfill gas management and slope stability, in the event of an earthquake or any other emergency;
- Recommended action plan to be undertaken as a result of the existing and subsequent leachate management assessment required in Section 3.13;
- Recommended actions as a result of the existing and subsequent geotechnical, hydrogeological, landfill gas and any other assessments;

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- A landfill gas management plan required by Section 2.5; and
- A contingency plan to close the landfill is to be developed should the landfill close for any other reason.

Should there be any inconsistency between this Operational Certificate and the DOCP, this Operational Certificate will take precedence unless otherwise agreed upon in writing by the Director.

The DOCP must be reviewed every five (5) years throughout the operating life of the landfill and updated to encompass the next 10 years of landfill operation and/or closure activities. The next updated Design, Operations and Closure Plan is required by **December 31, 2021**.

The Director may require additional reviews of the DOCP based on the compliance history and design performance of the site. The Director may also require the Operational Certificate holder to obtain an independent or third party review of some or all of the DOCP.

## 2.2 **Geotechnical and Seismic Assessment**

The Operational Certificate holder must submit a Geotechnical and Seismic Assessment for the landfill that meets the Landfill Criteria for Municipal Solid Waste. The assessment must address, at a minimum, slope stability during construction, operation, and post-closure as required. The Geotechnical and Seismic Assessment must be reviewed and updated every five (5) years. The next updated Geotechnical and Seismic Assessment is required by **December 31, 2021**. Actions recommended in the assessment and subsequent reviews must be incorporated into the Design, Operations and Closure Plan as required in Section 2.1.

## 2.3 **Hydrogeology and Hydrology Characterization Report**

The Operational Certificate holder must review the geology, hydrogeology and surface hydrology at and near the landfill authorized in Section 1.1 annually and submit results as part of the Annual Report required in Section 4.7. Actions recommended in the annual reviews must be incorporated into the Design, Operations and Closure Plan as required in Section 2.1 and form the basis of recommendations to the groundwater and surface water monitoring program as required in Section 4.1.

The assessment must meet the Landfill Criteria for Municipal Solid Waste and

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be reviewed and updated every five (5) years. The Operational Certificate holder must submit the next updated Hydrogeology and Hydrology Characterization Report of the landfill authorized in Section 1.1 by **December 31, 2021**.

#### 2.4 **Construction Report**

The Operational Certificate holder must submit a Construction Report after the completion of stage 1 construction and then after any significant construction and/or modification of the landfill facility. The Construction Report must meet the Landfill Criteria for Municipal Solid Waste. Each Construction Report must be submitted within six (6) months following completion of any significant addition and/or modification to the landfill and its authorized works.

#### 2.5 **Landfill Gas Management**

The Operational Certificate holder must manage landfill gas in accordance with the Landfill Gas Management Regulation, its guidance documents and this Operational Certificate.

At any time, based on any assessment, report or any other information, the Director may require the installation and operation of further gas recovery and/or pollution prevention works.

#### 2.6 **Use of Qualified Professional(s)**

The Operational Certificate holder must cause a qualified professional to:

- a) design and supervise the construction of the Facility, and,
- b) certify documents related to the Facility including plans, specifications, drawings, construction reports, assessments, reviews, investigations, studies, surveys, programs, reports and as-built record drawings.

#### 2.7 **Additional Facilities, Works, Plans or Operational Requirements**

The Director may require investigations, surveys, and the construction of additional facilities or works including, but not limited to, leachate and nuisance abatement measures. The Director may also amend any conditions required by this Operational Certificate including plans, programs, assessments and reports.

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## 2.8 **Public Health, Safety and Nuisance**

The landfill must be operated in a manner such that it will not create a public nuisance or become a significant threat to public health or safety with respect to landfill gas, unauthorized access, roads, traffic, airport activity, noise, dust, litter, vectors, or wildlife attraction.

## 2.9 **Surface Water Diversion**

Discharge of municipal solid waste and other waste materials into water is prohibited. The Operational Certificate holder must construct and maintain adequate surface water and groundwater diversion works to minimize surface water run-off and groundwater seepage from entering the landfill.

## 2.10 **Ground and Surface Water Quality Impairment**

The landfill must be operated in a manner such that ground or surface water quality conditions do not result in a risk of impairment of designated water uses at and beyond the property boundary or 150 metres from the landfill footprint, whichever is closer. Water quality assessments must utilize Approved and Working Water Quality Guidelines, background levels or other appropriate criteria as specified by the Director.

If exceedances to the specified water quality criteria occur as a result of landfill operations, the Director may require that control measures or works be undertaken in addition to those outlined in Section 3.13.

## 2.11 **Buffer Zones**

The Operational Certificate holder must maintain a buffer zone between the landfill footprint and the property boundary identified in Section 1.1.11 and Section 2.12 (excluding any existing or future right-of-ways).

The buffer zone must be a minimum distance of 10 metres between the landfill footprint and the property boundary of the existing Cache Creek Landfill / Annex authorized under operational certificate MR-07577 and a minimum distance of 50 metres between the landfill footprint and the remaining property boundaries to the north, west and south. The buffer zone will provide separation between the waste footprint and the property boundary but may allow for operational infrastructure such as containment berms, access roads, forest service roads, etc.

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## 2.12 Survey of the Landfill

The Operational Certificate holder must conduct a legal survey which identifies the metes and bounds for both the limits of the landfill footprint and the boundaries of the landfill site. Copies of the land surveys must be kept on file for review if requested by the Director. The corners and breakpoints of landfill site boundaries must be established and maintained in the field. The Operational Certificate holder must also conduct an annual survey of the height, contour, surface area and settlement of the landfill and submit the results as part of the annual report required in Section 4.7.

## 2.13 Authorization Requirements

Where this authorization provides that the Director may specify a matter or require an action to be carried out, the Operational Certificate holder must comply with the specification and carry out the action in accordance with the requirements of the Director.

# 3. OPERATIONAL REQUIREMENTS

## 3.1 Glossary

The following terms referred to in this authorization are defined in the Glossary below. Other terms used in this authorization have the same meaning as those defined in the *Environmental Management Act*, applicable regulations, and the Landfill Criteria for Municipal Solid Waste, Second Edition, June 2016.

“**commercial quality soil**” means soil which does not contain any substance with a concentration exceeding the lowest applicable numerical soil standard for commercial land use as set forth in the Contaminated Sites Regulation;

“**Facility**” means the Cache Creek Solid Waste Facility, including all facilities and works on the landfill site, located in Cache Creek, British Columbia. The Facility is distinct and separate from the existing Cache Creek Landfill / Annex authorized under operational certificate MR-07577;

“**Province**” means Her Majesty the Queen in right of British Columbia;

“**Regulatory Document**” means any document that the Operational Certificate holder is required to prepare or submit to the Director or the Province, pursuant

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to: (i) this authorization; (ii) any regulation made under the *Environmental Management Act* that regulates the Facility described in this authorization or the discharge of waste from that Facility; or (iii) any order issued under the *Environmental Management Act* directed against the Operational Certificate holder that is related to the Facility described in this authorization or the discharge of waste from that Facility;

“**suitable cover**” means soils utilized in accordance with Section 3.5 of this operational certificate or other material acceptable to the Director.

### 3.2 **Bypasses**

The discharge of effluent which has bypassed site control works as listed in Section 1.1.7 is prohibited unless the prior approval of the Director is obtained and confirmed in writing. In the event of an emergency, Section 3.3 must be followed.

### 3.3 **Emergency Procedures**

In the event of an emergency or condition beyond the control of the Operational Certificate holder including, but not limited to, unauthorized fires arising from spontaneous combustion or other causes, or detection of leachate impacting groundwater, the Operational Certificate holder must take appropriate remedial action and notify the Director immediately. The Director may reduce or suspend operations to protect the environment until the authorized works have been restored, and/or corrective steps taken to prevent unauthorized discharges.

### 3.4 **Inspections**

The Operational Certificate holder must inspect the authorized works regularly and maintain them in good working order. The Director must be immediately notified of any malfunction of these works.

The Operational Certificate holder must inspect the property boundaries regularly and notify the Director of any visual evidence of environmental impacts on adjacent properties.

### 3.5 **Soil Management**

Soil and rock excavated within the limits of the landfill property boundary as well as other soil meeting the commercial land use standard, as set forth in the

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Contaminated Sites Regulation, may be utilized for berm construction, daily, intermediate and final cover, top dressing and landscaping.

Soils utilized for liner, berm and road construction, daily, intermediate and final cover, top dressing and landscaping shall not be included in determining the rate of discharge specified in Section 1.1.1.

### 3.6 **Waste Compaction and Covering**

All waste must be placed in cells of a size determined by a qualified professional, and in accordance with the Design, Operations and Closure Plan (DOCP). The working face must be confined to the smallest practical area. The waste must be compacted and covered as per DOCP.

Daily cover consisting of a minimum of 0.15 metres of suitable cover material or a functionally alternate cover material, as authorized by the Director, must be applied to the working face at the end of each operating day. If alternate cover is utilized, then the working face must be covered with a minimum of 0.15 metres of suitable cover at least once every week or as approved by the Director. Intermediate cover, consisting of a minimum 0.30 metres of suitable cover material must be applied within thirty (30) days to any area of the landfill which will not receive any further waste for thirty (30) days. The Director may vary the frequency of covering when freezing conditions adversely affect normal operation.

### 3.7 **Completed Areas of the Landfill**

The Operational Certificate holder must apply final cover to any area of the landfill which will not receive any further waste. Final cover is to be applied within 365 days once the total area requiring final cover exceeds 1.5 hectares. Final cover must be applied in accordance with the DOCP required in Section 2.1 and must consist of a minimum of 1.0 metre of low permeability ( $<1 \times 10^{-5}$  cm/s) compacted soil (or equivalent) cap plus a minimum of 0.15 metre of topsoil and suitable vegetative cover, or as approved by the Director.

With the written approval of the Director, the topsoil used for the final cover may be mixed with conditioning agents such as compost and the like to add organics and improve the moisture holding capacity and nutrient value of the soil (excluding biosolids). Soil must be utilized in accordance with Section 3.5. Final cover must be constructed and maintained with adequate drainage and erosion controls and seeded with suitable native grasses. Surface water runoff

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must be directed away from the landfill footprint.

### 3.8 **Wildlife and Vector Management**

Vectors (carriers capable of transmitting a pathogen from one organism to another including, but not limited to, flies and other insects, rodents, and birds) must be controlled by the application of cover material at the required frequency per Section 3.6 or by such additional methods as specified by the DOCP. This landfill must be operated so as to minimize the attraction of wildlife such as bears and birds by applying cover at required frequencies and instituting a good housekeeping program.

Additional works may be required or other operating instructions may be issued by the Director, should a wildlife nuisance or hazard arise.

### 3.9 **Electric Fencing**

The Operational Certificate holder must maintain an electrified bear fence, at a minimum, around the landfill footprint, or implement alternative bear-proofing measures, acceptable to the Director, that will deter bears from entering the landfill footprint. Any significant occurrences or observations of wildlife (medium and large carnivores) at the landfill must be immediately reported to the Ministry's Conservation Officer Service.

### 3.10 **Litter Control**

Litter must be controlled by compacting the waste, minimizing the working face, applying cover at the required frequencies, providing litter control fences and instituting a regular litter pickup and general good housekeeping program, or as specified by the Director.

### 3.11 **Fire Prevention and Control**

The Operational Certificate holder must take all reasonable measures necessary to prevent fires from occurring at the site and is responsible for complying with all local fire safety requirements. The Operational Certificate holder must provide adequate fire breaks that are free of combustibles around the perimeter of the landfill footprint.

The Operational Certificate holder must maintain firefighting equipment and materials as required. In the event of a landfill fire, the Operational Certificate

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holder must immediately notify the local fire department, the Provincial Emergency Program and the Director.

### 3.12 **Posting of Signs**

The Operational Certificate holder must post signage at the entrance of the landfill site with the following current information including:

- Site name;
- Owner and operator;
- Contact telephone number and address for the owner and operator;
- 24 hour telephone number in case of emergency;
- Hours of operation;
- Materials and wastes accepted for recycling and landfilling;
- Prohibited materials and wastes; and
- Tipping fees (if the site is open to the public).

### 3.13 **Leachate Management**

The Operational Certificate holder must take measures to minimize leachate generation, including but not limited to, providing effective covering and surface water management. Actions taken and their effectiveness must be detailed in the annual report as required in Section 4.7.

The Operational Certificate holder must submit a Leachate Management Plan for the landfill authorized in Section 1.1 to the Director, by **December 31, 2016**. The plan must meet the Landfill Criteria for Municipal Solid Waste and the Guidelines for Environmental Monitoring at Municipal Solid Waste Landfills and must be reviewed and updated every five (5) years thereafter.

The Leachate Management Plan, prepared by a qualified professional, must review the adequacy of the works in place to protect the receiving environment and identify any necessary upgrades and include a schedule for their implementation. Once implemented, the upgraded works shall form part of the authorized works identified in Section 1.1.7.

#### 3.13.1 **Leachate Re-Circulation**

Re-circulation of landfill leachate on designated areas within the landfill footprint may be conducted subject to the following conditions:

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- a) The maximum leachate application per re-circulation event and frequency of re-circulation (minimum days between irrigation events) must be determined on the advice of a qualified professional and must be reviewed and revised as applicable by a qualified professional every year.
- b) Re-circulation events should be managed (scheduled, timed and interrupted as necessary) to ensure that spray drift and surface runoff beyond the designated area is minimized.

The Operational Certificate holder must develop a Contingency Plan for leachate management that can be deployed in the event that the leachate re-circulation cannot be utilized for the management of leachate.

#### 4. **MONITORING AND REPORTING REQUIREMENTS**

##### 4.1 **Environmental Monitoring Plan**

The Operational Certificate holder must submit to the Director an Environmental Monitoring Plan certified by an appropriate qualified professional(s) by **December 31, 2016**. The Plan must meet the requirements set forth in the Landfill Criteria for Municipal Solid Waste, the Guideline for Environmental Monitoring at Municipal Solid Waste Landfills and the Landfill Gas Management Facilities Design Guidelines (for aspects related to landfill gas management).

The Environmental Monitoring Plan must be kept up-to-date at all times and the Operational Certificate holder must maintain records of all monitoring program data and analyses available for inspection. Any changes to the Environmental Monitoring Plan require the Operational Certificate holder to resubmit the entire plan with the changes to the Director.

Based on the information submitted in the annual report, or any other information relevant to the site, the Director may vary the frequency, location and analyses of environmental monitoring as warranted.

The Operational Certificate holder must create an appendix at the end of the Environmental Monitoring Plan that tracks all changes made to program over the years.

##### 4.1.1 **Slope Stability Monitoring**

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The Operational Certificate holder shall regularly monitor for evidence of slope instability as part of regular operations for evidence of tension cracking, veneer instability or failure.

#### 4.2 **Sampling Procedures**

Sampling is to be carried out in accordance with the procedures described in the "British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples, 2013 Edition (Permittee)", or most recent edition, or by suitable alternative procedures as approved by the Director.

A copy of the above manual is available on the Ministry web page at <https://www2.gov.bc.ca/gov/content/environment/research-monitoring-reporting/monitoring/laboratory-standards-quality-assurance>.

#### 4.3 **Analytical Procedures**

Analyses are to be carried out in accordance with procedures described in the "British Columbia Laboratory Manual (2015 Permittee Edition)", or the most recent edition, or by suitable alternative procedures as approved by the Director.

A copy of the above manual is available on the Ministry web page at <https://www2.gov.bc.ca/gov/content/environment/research-monitoring-reporting/monitoring/laboratory-standards-quality-assurance>.

#### 4.4 **Waste and Recyclable Materials Recording**

The Operational Certificate holder must record the quantity, in tonnes, of waste, recycling, organics and soil received at the landfill. Also, the quantity of recyclable materials, organics and soil removed from these facilities must be recorded.

#### 4.5 **Records Management**

The Operational Certificate holder must maintain the following information and records, current and suitably tabulated, at the landfill site office for inspection:

- A copy of Operational Certificate 107189;
- Training procedures and personnel training records;

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- Contingency plans and notification procedures;
- The current Design, Operations and Closure Plan;
- Inspection records from staff and regulatory agencies;
- Most recent hydrogeological, hydrology, geotechnical and landfill gas management assessments;
- Incoming waste records;
- Environmental monitoring results and interpretations;
- Records of commercial quality soil used as cover material identified in Section 3.5 along with records of soil shipped offsite; and
- Annual Operations and Monitoring Reports for the previous 5 years.

#### 4.6 **Monitoring Committee**

A Monitoring Committee must be established with representatives from the community including the Bonaparte and Ashcroft First Nation Bands. Details of site development, operations, closure, post-closure and on-going environmental monitoring and interpretation must be shared with the committee. The purpose of the Monitoring Committee is to promote environmentally sound operations and effective monitoring.

#### 4.7 **Reporting**

The Operational Certificate holder must prepare an Annual Operations and Monitoring Report that meets the Landfill Criteria for Municipal Solid Waste and must include, but is not limited to, the following:

- Summaries of waste and recyclable material records, with the amount of waste landfilled reported as a volume and tonnage;
- Updated estimates for the remaining capacity, closure date for the current phase and closure date for the current landfill footprint;
- An update on the financial security for the site including a statement of the current dollar value of the post closure fund and any other details required under Section 5.1 of the Operational Certificate;
- Results of the annual survey required under Section 2.12;
- An evaluation of leachate generation control measures including the amount of leachate stored in each underground storage tank, how much leachate was re-circulated into the landfill and how much leachate was shipped offsite;
- Results of the landfill gas capture, destruction/utilization (when applicable) and monitoring;
- Recommendations to update the Design, Operations and Closure Plan;

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- Revised Environmental Monitoring Plan;
- Identification of operating problems and corrective actions taken;
- A summary of environmental complaints received and their resolution;
- A summary of significant occurrences or observations of wildlife (medium and large carnivores) at the landfill;
- In the event of any non-compliance with the conditions of this Operational Certificate, an action plan and schedule to achieve compliance; and
- The results of all monitoring programs as specified in this Operational Certificate including data interpretation, trend analysis and comparison to the receiving environment water quality guidelines and performance criteria in the Landfill Criteria for Municipal Solid Waste, the Guidelines for Environmental Monitoring at Municipal Solid Waste Landfills. Where applicable, data should be considered in conjunction with data/information related to the adjacent closed landfill, and any other applicable local activities and land uses.

The annual report for the preceding 12 month period from January 1 to December 31 must be submitted electronically to the Director, Environmental Protection, by **March 31** of each year.

The report is intended as an operational update and monitoring report and also a self-assessment and review of compliance with the conditions of this Operational Certificate. The content of the report should provide the Ministry sufficient details to confirm that monitoring activities for the site have been completed for the subject year and to make an informed assessment of the environmental performance of the site.

#### 4.8 **Submission of Routine Reporting**

The Operational Certificate holder must submit all routine Regulatory Documents required by this operational certificate by email to the Ministry's Routine Environmental Reporting Submission Mailbox at [EnvAuthorizationsReporting@gov.bc.ca](mailto:EnvAuthorizationsReporting@gov.bc.ca) or as otherwise instructed by the Director. For guidelines on how to properly name the files and email subject lines or for more information visit the Ministry website <https://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/routine-environmental-reporting-submission-mailbox>.

#### 4.9 **Non-compliance Notification**

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The Operational Certificate holder must immediately notify the Director or designate by email at [EnvironmentalCompliance@gov.bc.ca](mailto:EnvironmentalCompliance@gov.bc.ca), or as otherwise instructed by the Director, of any non-compliance with the requirements of this authorization by the Operational Certificate holder and take remedial action to remedy any effects of such non-compliance.

The Operational Certificate holder must provide the Director with written confirmation of all such non-compliance events, including available test results within 24 hours of the original notification by email at [EnvironmentalCompliance@gov.bc.ca](mailto:EnvironmentalCompliance@gov.bc.ca), or as otherwise instructed by the Director.

#### 4.10 **Non-compliance Reporting**

If the Operational Certificate holder fails to comply with any of the requirements of this authorization, the Operational Certificate holder must, within 30 days of such non-compliance, submit to the Director a written report that is satisfactory to the Director and includes, but is not necessarily limited to, the following:

- a) all relevant test results obtained by the Operational Certificate holder related to the non-compliance,
- b) an explanation of the most probable cause(s) of the non-compliance, and
- c) a description of remedial action planned and/or taken by the Operational Certificate holder to prevent similar non-compliance(s) in the future.

The Operational Certificate holder must submit all non-compliance reporting to be submitted under this section by email to the Ministry's Compliance Reporting Submission Mailbox at [EnvironmentalCompliance@gov.bc.ca](mailto:EnvironmentalCompliance@gov.bc.ca) or as otherwise instructed by the Director. For guidelines on how to report a non-compliance or for more information visit the Ministry website <https://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/compliance-reporting-mailbox>.

#### 4.11 **Publication of Documents**

The Ministry of Environment and Climate Change Strategy publishes Regulatory Documents on its website for the purpose of research, public education and to provide transparency in the administration of environmental

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laws. The Operational Certificate holder acknowledges that the Province may publish any Regulatory Document excluding information that would be excepted from disclosure if the document was disclosed pursuant to a request under section 5 of the *Freedom of Information and Protection of Privacy Act*, and the Operational Certificate holder consents to such publication by the Province.

## 5. FINANCIAL SECURITY REQUIREMENTS

### 5.1 Financial Security Plan

The Operational Certificate holder must submit a Financial Security Plan by **December 31, 2016**. The Financial Security Plan must incorporate the requirements of Sections 5.2 and 5.3 of the Operational Certificate.

The Financial Security Plan must be reviewed by the Operational Certificate holder at the commencement of each new landfill phase, when there has been a significant design revision, or when the Director determines it is necessary. Regardless, during all phases of the landfill, including post-closure, the period for review and updating security must not exceed five (5) years. After a review has been conducted, the Operational Certificate holder must submit an updated Financial Security Plan to the Director and if provided for in the Financial Security Plan, post additional security amounts as per Sections 5.2 and 5.3. The Director may review any Financial Security Plan submitted under this Section 5.1 and require further information or analysis or adjustments consistent with Sections 5.2 and 5.3.

### 5.2 Security Required for the Design and Operational Period

**5.2.1 Requirement for ILOC or Bond.** The Operational Certificate holder must post security in the form of one or more Irrevocable Letters of Credit (ILOCs) or Surety Bonds prior to commencement of discharge to the landfill. Such security must be in a form acceptable to the Director and must remain in place until:

- a) such time as the landfill has permanently ceased receiving waste;
- b) the post-closure plan required in Section 6.3 has been approved by the Director;
- c) the landfill has been closed in accordance with the then current closure

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plan required in Section 6.2; and

- d) the Director has confirmed in writing that the amounts held in the then current Reclamation Security Trust required in Section 5.3 are sufficient to cover post-closure activities, and emergency contingencies during the post-closure period.

Notwithstanding paragraph (d), the Director may elect for the Operational Certificate holder to post an ILOC as security for emergency contingencies during the post-closure period, rather than including an equivalent amount for such purpose in the Reclamation Security Trust.

**5.2.2 Amounts Secured by ILOC or Bond.** Subject to this Section 5.2.2, during all phases of the landfill until the landfill has permanently ceased receiving waste, the amounts secured by Surety Bonds or ILOCs must be sufficient to cover liabilities throughout the operating life of the site, including costs of early or planned closure, emergency contingencies, and post-closure activities if closure were to occur at the end of the relevant phase. Provided that if the Operational Certificate holder provides security in the form of one or more ILOCs or Surety Bonds in an aggregate amount that secures liabilities associated with closure and emergency contingencies (the “**Closure/Contingency Security**”) and one or more separate ILOCs or Surety Bonds in an aggregate amount that secures liabilities associated with post-closure activities, including emergency contingencies during post-closure (the “**Early Post-Closure Security**”),

- a) the amount secured by the Closure/Contingency Security during any phase of the landfill must be sufficient to cover closure activities and emergency contingencies assuming no more waste is received after the end of that phase;
- b) the Director may adjust the amount secured by the Early Post-Closure Security so that the aggregate of the amount of the Early Post-Closure Security and the amount contained in the Reclamation Security Trust required in Section 5.3, equals the amount required for post-closure activities (including emergency contingencies during post-closure) assuming closure at the end of or during the relevant phase. Adjustments in this paragraph (b) will not affect the amount required to be secured by the Closure/Contingency Security.

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**5.2.3 Calculation of Costs.** Amounts held in security will be based on the cost of activities identified in the most recent Financial Security Plan, provided that in all cases the amounts required must be calculated using methods identified in the Landfill Criteria for Municipal Solid Waste, as it is amended from time to time, or other appropriate guidance or regulation in place at the time, as determined by the Director.

**5.2.4 Liabilities Secured.** Notwithstanding the specific liabilities for which the Closure/Contingency Security and the Early Post-Closure Security was created as reflected in Section 5.2.2, each ILOC or Surety Bond provided to satisfy this Section 5.2 must, while in effect in accordance this Operational Certificate, secure all obligations under this Operational Certificate, including all reclamation obligations for closure, emergency contingencies and post-closure activities (including emergency contingencies during the post-closure period). For greater certainty:

- a) the Director may use all or part of the security to study, assess and/or correct a potential impact to the environment and/or inadequacy of the works as it relates to the construction, operation, maintenance and/or closure, when the Operational Certificate holder does not take necessary environmental protection measures in a timely and sufficient manner as determined by the Director. The Operational Certificate holder must replenish all dispensed security within 60 days;
- b) if the Operational Certificate holder fails to provide additional security in the form of ILOCs or Surety Bonds in accordance with this Operational Certificate, the Director may realize all or part of the security to, at the option of the Director, hold in a form determined by the Director for the purposes of securing obligations under this Operational Certificate or to forfeit to the Province of British Columbia, provided that the funds may not be forfeited to the Province unless the Operational Certificate holder fails to provide additional security as required by this Operational Certificate within 30 days of written notice from the Province or the Director to the Operational Certificate holder that the holder is out of compliance with its obligation to provide additional security and further provided that the Operational Certificate holder's liability hereunder, and the amount required by the Operational Certificate holder to be secured, will be reduced by the amount of the forfeited funds.

### **5.3 Security Required for the Post-Closure Period**

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Prior to the commencement of discharge to the landfill, the Operational Certificate holder must establish a dedicated Reclamation Security Trust in conformance with the requirements of a Qualifying Environmental Trust (QET) within the meaning of the *Income Tax Act* (Canada) for the sole purpose of funding reclamation obligations related to the landfill, including post-closure activities, and emergency contingencies related to the reclamation.

The Reclamation Security Trust must be established pursuant to a trust indenture in a form and substance satisfactory to the Director.

The Reclamation Security Trust must be reviewed at the commencement of each new landfill phase or where there has been a significant design revision. Regardless, the period for review and updating the Trust must not exceed five (5) years and the results of the review should inform the updates to the Financial Security Plan under Section 5.1. The review should also, if necessary, propose changes to the terms, conditions and investment strategies associated with the Reclamation Security Trust.

## 6. **CLOSURE AND POST-CLOSURE REQUIREMENTS**

### 6.1 **Progressive Closure Plan**

The Operational Certificate holder must submit a progressive closure plan for the facilities authorized in Section 1 as part of the Design, Operations and Closure Plan to the Director. The Plan must be reviewed and updated every five (5) years or until the site is decommissioned and a post closure-plan under Section 6.3 is approved. The Plan must be prepared by a qualified professional and include information that meets the Landfill Criteria for Municipal Solid Waste including:

- Phasing Plan showing areas to be progressively closed;
- Plan area of each progressive closure;
- Schedule for each progressive closure;
- Proposed cover system profile, defining materials and material properties for each cover system layer. Specifications for the re-vegetation strategy should also be included;
- Stability analysis demonstrating cover system will be stable under design storm conditions;
- Analysis of landfill gas production and the need for venting of LFG from beneath the cover system; and

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- A materials management plan indicating the quantity of each material required for closure, where it will be sourced, and where it will be stored on-site during closure construction.

## 6.2 **Landfill Closure Plan**

The Operational Certificate holder must submit to the Director a Closure Plan as part of the Design, Operations and Closure Plan, for the facilities authorized in Section 1. The Plan must be reviewed and updated every five (5) years or until the site is decommissioned and a Post-Closure Plan under Section 6.3 is approved.

The Plan must include information that meets the Landfill Criteria for Municipal Solid Waste including:

- Estimated total waste volumes and tonnage and the closure date;
- A topographical plan showing the final elevation contours of the landfill and surface water diversion and drainage controls;
- Design of the final cover including the thickness and permeability of barrier layers and drainage layers and information on topsoil, vegetative cover and erosion prevention controls;
- Rodent and nuisance wildlife control procedures;
- Proposed end use of the property after closure;
- A post-closure monitoring program for groundwater, surface water, landfill gas, erosion and settlement based on the contaminating lifespan assessment;
- Post-closure operation of pollution abatement engineering works such as leachate and landfill gas collection/treatment systems based on the contaminating lifespan assessment; and
- Contingencies to address environmental impact concerns which may arise during the post-closure period based on the contaminating lifespan assessment.

## 6.3 **Post-Closure Plan**

A Post-closure Plan must be submitted not less than two (2) years prior to decommissioning of the landfill that meets the Landfill Criteria for Municipal Solid Waste. The Post-closure Plan must be reviewed every five (5) years following closure and updated to encompass the next 10 years of post-closure activities.

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The Post-closure Plan and subsequent updates must be prepared by an independent qualified professional or by a qualified professional that has obtained independent review by a qualified third party to evaluate the Plan in relation to the Landfill Criteria for Municipal Solid Waste. In the latter case, the qualified professional must take into consideration the results of the independent review prior to certifying the Plan.

The Post-closure Plan and subsequent updates must be submitted to the Director for approval and include, at a minimum, the following:

- Incorporation of the Closure Plan(s) required in section 6.1 and 6.2;
- A complete review and assessment report of the overall integrity of the landfill;
- Procedures for notifying the public about the closure and alternative waste disposal facilities;
- A detailed timetable for post-closure procedures and correction of any deficiency identified in the review and assessment report;
- A detailed schedule of inspection, monitoring and maintenance to be carried out for a post-closure period based on the contaminating lifespan assessment required by the criteria; and
- A process for the administration of the post-closure trust required under Section 5.3 of this Operational Certificate.

#### 6.4 **Declaration of Landfill**

Landfills sited on titled land must register a covenant that the property was used for the purpose of waste disposal as a charge against the title to the property as provided for under Section 219 (1) of the *Land Title Act* as well as a requirement that binds successors in title to uphold the continued implementation of the approved closure plan.

Landfills located on crown land must have a “notation on file” registered that the property was used for the purpose of waste disposal as well as a requirement that binds successors in title to uphold the continued implementation of the approved closure plan under Sections 6.2 and/or 6.3. The Operational Certificate holder cannot cancel its lease with the Province on the land in question until such time that the Ministry of Environment agrees to the cancellation. The registration of the charge or legal notification must be submitted to the Director.

#### 6.5 **Site Decommissioning**

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In accordance with Section 40 of the *Environmental Management Act* and Part 2 of the Contaminated Sites Regulation, the Operational Certificate holder must submit a site profile to the Director not less than 10 days prior to decommissioning the facilities authorized in Section 1.

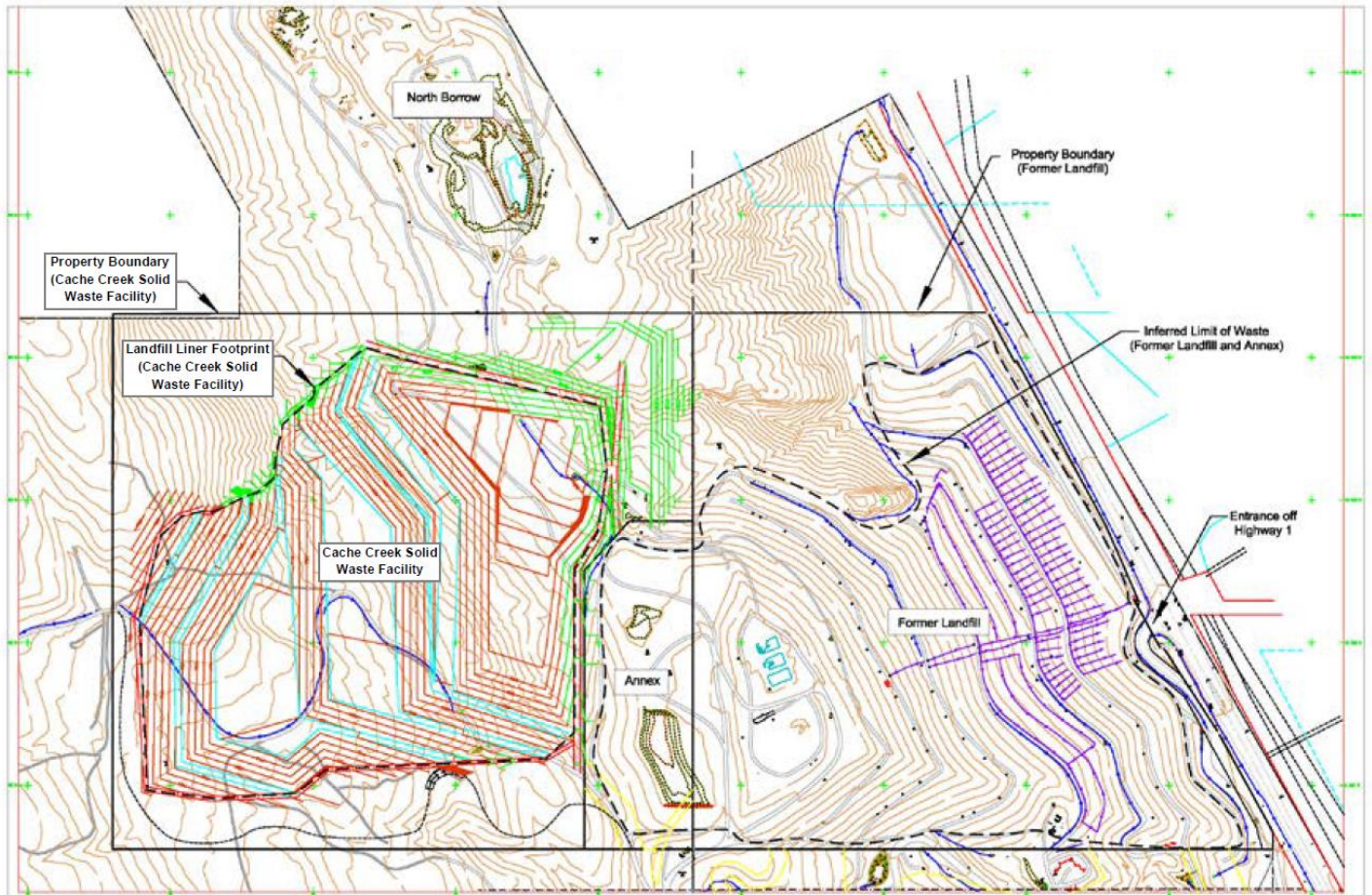
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SITE PLAN A



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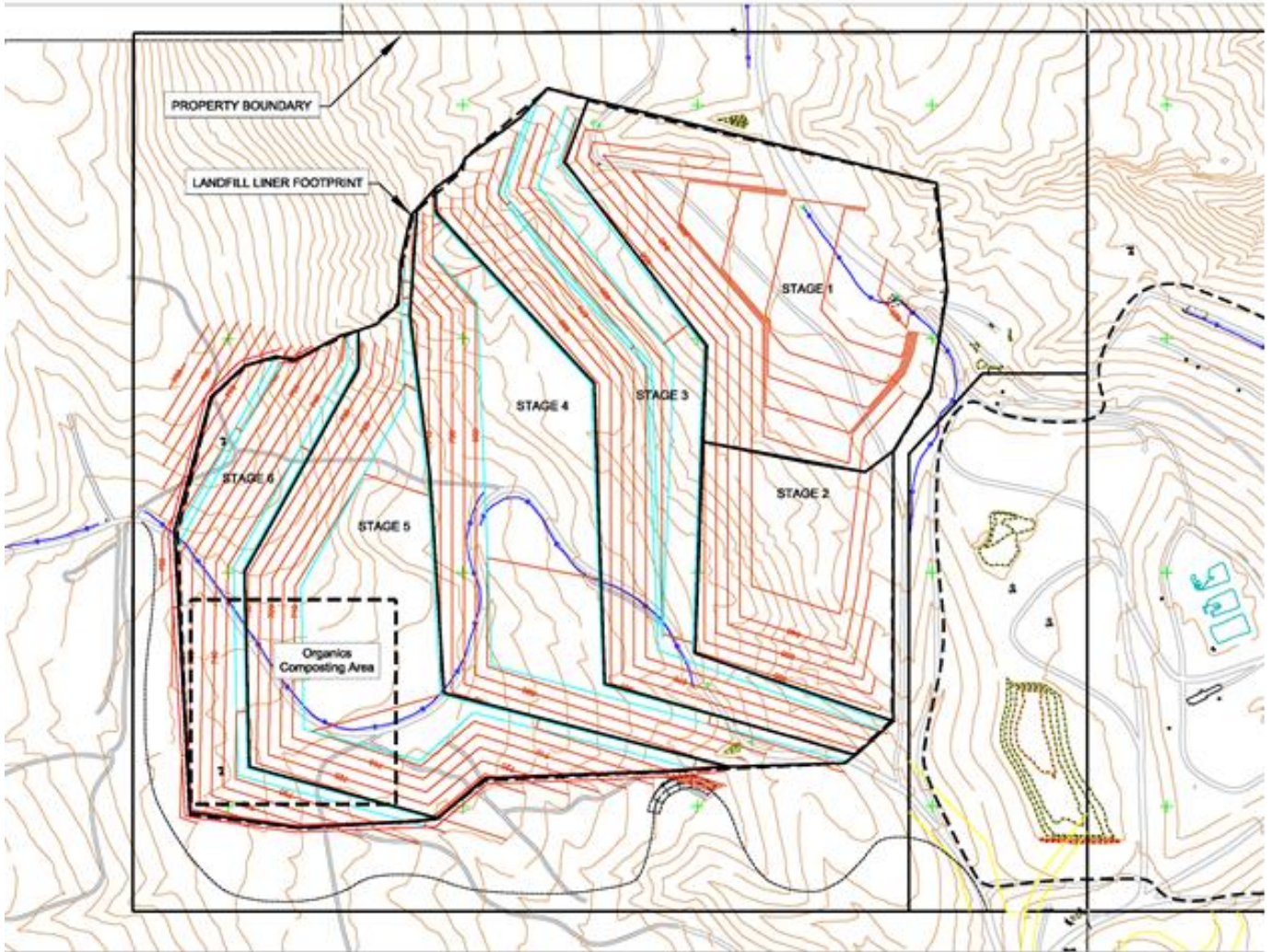
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SITE PLAN B



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### LOCATION MAP



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