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CLEAN HARBORS CANADA INC

2021 Compliance Audit Summary Report – Ryley Hazardous Waste Storage Facility and Landfill, Ryley, Alberta

Alberta Environment and Parks Approval Number 10348-03-00



December 17, 2021

Clean Harbors Canada, Inc.
P.O. Box 390
Ryley, Alberta
T0B 4A0

Attention: Mr. Stan Yuha
Facility Manager

2021 Compliance Audit Summary Report – Ryley Hazardous Waste Storage Facility
and Landfill

Dear Mr. Yuha:

Dillon Consulting Limited is pleased to submit the enclosed Final 2021 Compliance Audit Summary Report for the Ryley Facility (Facility or Site) to Clean Harbors Canada, Inc. This report describes the methodological approach used and highlights key findings resulting from the 2021 Triennial Compliance Audit completed at the Facility through a site visit conducted over September 1 to 2, 2021.

We hope you see this as a valuable tool to gain insight into current operations and Approval requirements, and discover the findings and recommendations described herein useful in informing continued operations at the Facility.

Sincerely,

DILLON CONSULTING LIMITED

A handwritten signature in blue ink, appearing to read "Jack Wallace".

Jack Wallace, P. Eng.
Lead Auditor

END:sls

cc: Mr. Mike Parker

Our file: 21-2502

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1.0 Introduction

Clean Harbors Canada, Inc. (Clean Harbors) is required to undergo a third-party compliance audit (compliance audit or audit) of construction, operations, and closure/post-closure care of its Ryley Facility (Facility or Site), located in Ryley, Alberta, as a requirement of the Site's Alberta Environment and Parks (AEP) Approval number 10348-03-00 (Approval), at a minimum of once every three years. The audit, as part of section 4.1.7 of the Approval (valid 2017-2027), is required to be performed at least once every three years, commencing on or before October 1, 2018. Dillon Consulting Limited (Dillon) was retained to perform the 2021 Triennial Compliance Audit (2021 Audit), for which the compliance audit kick-off was held on September 1, 2021, representing the commencement of the audit activities, followed by the formal site visit, conducted on September 1 and 2, 2021.

To prepare for this exercise, an audit checklist (Appendix A following this report) was established to account for every actionable item contained within the operating Approval. During the site visit, the auditors reviewed relevant documentation, interviewed facility staff members, and took part in the site visit and associated visual inspection of the facility in order to assess the compliance level of each item contained within the audit checklist. This report summarizes the findings and results of this audit.

1.1 Scope and Objectives

The objective of this audit was to determine if the Facility was in compliance with all requirements included in the Approval from the period of September 20, 2018 (2018 compliance audit completion) to September 1, 2021 (2021 Compliance Audit commenced). This is the second audit completed at the Facility since the new Approval came into effect in 2017.

Each of the 573 line items in the audit checklist were assessed and assigned one of the following statuses:

- Compliant;
- Non-compliant;
- Opportunity for Improvement; and
- Not Applicable/Information.

Each line item consists of a clear statement identifying an obligation of the Facility to the Approval. Line items are phrased in such a way where it is easy to assign one of the above statuses without cause for confusion. Approval requirements, which state numerous conditions under one larger, enveloping condition, have been separated and added as individual line items in the audit checklist to provide further clarity. A "Not Applicable/Information" status was assigned to items which were not applicable at the time of the audit, or were for information purposes only and do not represent compliance requirements. "Opportunity for Improvement" was assigned to items for which the Facility was clearly implementing compliance measures, but where Dillon identified room to improve.

In addition to assessing compliance with each item of the audit checklist, the auditors also recorded the supporting documentation (where available), which the auditors had reviewed prior to assigning a status to each line item. Documentation is generally the strongest evidence to support interviewee statements, and was revisited, as needed, to confirm statements. Documents reviewed included, but were not limited to:

- Site Approval;
- Annual Landfill Operations Report(s);
- Annual Landfill Operations Plan(s);
- Groundwater Monitoring Report(s);
- Calibration records;
- Sample analytical results;
- Regulatory documents and guidelines;
- Regulatory correspondence;
- Design drawings; and
- Emails.

To supplement documentation review, or in cases where documentation was not available or did not exist, a Facility tour was conducted by both auditors and three senior staff members of Clean Harbors. Visual observations and inspections were performed during the tour to verify compliance with certain items in the audit checklist.

Verbal confirmation provided by Clean Harbors' personnel was accepted in cases where assigning a status based on documentation or visual inspection was not feasible. Oftentimes, more than one staff member confirmed claims by the other, increasing the confidence of the auditors in assigning a status.

Clarification from AEP on Approval terms was not sought for this audit. Dillon's Auditors used professional judgement when evaluating the Approval terms and the Facility's compliance to them.

Requirements not explicitly identified in the Approval were outside the scope of this audit.

2.0 Discussion

The completed audit checklist, identifying the status of all Approval clauses, is provided as Appendix A, following the report text.

2.1 Resolution of 2018 Audit Findings

The 2018 audit completed at the Facility has identified two non-conformant items. Specifically, it was discovered that a groundwater monitoring well (MW-10) was found to have been damaged, resulting in well cap exposure, contravening Sections 4.1.4(vi) and Sections 4.9.10 (a) and (b) of the Approval. The 2021 audit observed that the monitoring well MW-10 had been repaired and locked. The second contravention found was relating to Section 4.6.16 (b) of the Approval, which states “All tanks containing hazardous waste and all tanks containing hazardous recyclables in each building shall be equipped, at a minimum, with all of the following: (b) A written operating procedure to prevent tank overfill”. Although the “Bulk Flammable Liquid Transfer Safe Operating Procedure (SOP) Document and Checklist” is available, it is not posted next to the tanks in question. During the field observations of the 2021 audit, the Bulk Flammable Liquid Transfer SOP had not been stored next to the flammable tanks. This resulted in the non-compliance of Section 4.6.16(b) of the Approval during the 2021 Audit.

The requirements of Section 7.1 – Landfill Cell Closure and Maintenance of the Approval, which states in Section 7.1.1 “The approval holder shall submit a Landfill Cell Closure Plan for individual landfill cell closure to the Director on or before September 30, 2017, unless otherwise authorized in writing by the Director” and Section 7.1.2 “The Landfill Cell Closure Plan submitted pursuant to 7.1.1 shall be signed and stamped by a professional registered with APEGA” were found to not necessarily portray the operating practices which are actually utilized by the Facility. It was observed in the 2018 audit that Sections 7.1.1 through Sections 7.1.2 required clarification from AEP to ensure compliance to the Approval is maintained. The latest landfill cell closure would be Cell 3B. Based on further discussion with Clean Harbors, the Landfill Cell Closure Plan was formed by the stamped design work completed as part of the issued for construction and final record drawing packages, and associated documents; as such, this item appears to be not applicable to ongoing operations. Further monitoring of this requirement is recommended for future landfill cell closure activities.

2.2 2021 Audit Summary of Findings

Appendix A includes the full checklist used during the audit. Table 1 below summarizes the statuses assigned to each line item in the audit checklist.

Table 1: Statuses Assigned to Line Items in the Audit Checklist

Status	Number Assigned
Compliant	391
Non-Compliant	2
Opportunity for Improvement	17
Not Applicable/Information	163
TOTAL	573

Two line items were assigned the status “non-compliant”. They are as follows:

1. Section 4.4.5 of the Approval states “The volume of liquid in the leak detection system, as monitored in Table 4.6-D shall not exceed the action leakage rate in any landfill cell”. Action leakage rate exceedances were noted and reported June 9, June 10, July 2, and July 9, 2020, and reported to AEP within acceptable time frames with no adverse impacts from the exceedances. Several action leakage rate exceedances were also determined to have not been reported. Notification to AEP was made as soon as this information was discovered (AEP 376183), with actions taken to ensure this is not repeated. No adverse impacts resulted due to the exceedances.
2. Section 4.6.16 (b) of the Approval states “All tanks containing hazardous waste and all tanks containing hazardous recyclables in each building shall be equipped, at a minimum, with all of the following: (b) A written operating procedure to prevent tank overfill”. Although the “Bulk Flammable Liquid Transfer SOP Document and Checklist” is available, it is not posted next to the tanks in question.

Several requirements of the Approval were identified as “informational” or “non-applicable” in nature by audit and the Facility’s personnel, and were assigned these identifiers accordingly. For example, Section 4.6.41 of the Approval states “The approval holder shall not dispose of hazardous waste in any Class II landfill cell”. No Class II landfill cells exist at the Facility, and no plans or permits are in place to allow a Class II landfill cell to be constructed in the future.

For continued Approval compliance in construction and operations, Dillon recommends that the Facility’s staff regularly review the Approval in depth, and engage the AEP Director as needed during approval amendment periods to modify clauses, which may no longer be applicable to site conditions.

Conclusions

The 2021 Compliance Audit of AEP Approval number 10348-03-00 revealed two non-compliances to Approval terms and conditions between the time of the last audit completion and commencement of this audit. These non-compliances relate to the following Approval clauses and consisted of the following:

- Clause 4.4.5: Action leakage rate exceedances were noted and reported June 9, June 10, July 2, , and July 9, 2020, and reported to AEP within acceptable time frames with no adverse impacts from the exceedances. Several action leakage rate exceedances were also determined to have not been reported. Notification to AEP was made as soon as this information was discovered (AEP 376183), with actions taken to ensure this is not repeated. No adverse impacts resulted due to the exceedances.
- Clause 4.6.16 (b): The SOP for tank filling and responding to overflows was available to staff on-site, but was not posted next to the bulk liquid storage tanks at the time of the audit.

Several opportunities for improvement were identified in the course of the audit, as identified in Appendix A. They include the following:

- Clause 2.3.1 (ii); 2.3.1(iii, A); and 2.3.1(iii, B): Although it appears that the Facility is adhering to the standards referenced for the collection, preservation, storage, and analysis of effluent or runoff water, a written SOP referencing the standards is recommended to be procured and included in the Operations Plan;
- Clause 4.1.4: A 24 hour "Hotline" is maintained at the Facility. Opportunity for improvement would be to post this number at the Facility's gate and office entrance;
- Clause 4.1.5(ii): Ponding was observed in roadways near potable water tanks, which can be managed on an ongoing basis;
- Clause 4.3.9 and 4.3.13(b): Results for the runoff control system testing of 48 hour static acute lethality test using daphnia magna could be included in the Summary of Batch Analysis presented in the 2020 Annual Landfill Operations Report, along with the lethality of effluents to rainbow trout testing;
- 4.6.29(a)-(e): The Facility is adhering to the information required in the Monthly Waste Management Report, viewed for July 2021. However, the reports are currently referencing the 10348-02-00 Approval. Dillon would recommended that the referenced Approval be updated to 10348-03-00;
- Clauses 4.6.24 (i); 4.6.30 (b); and 4.6.39 (b): Although it appears that the Facility is adhering to the document in question; "Industrial Waste Identification and Management Options, Alberta Environment, May 1996", it could be explicitly referred to in the Facility's Operations Plan; and
- Clause 7.1.1 and 7.1.2: It is understood that the Landfill Cell Closure Plan is formed by the stamped design work completed as part of the issued for construction and final record drawing packages, and associated documents. Assess the requirement for future Closure Plan submissions for future landfill cell closure activities.

Audit Limitations

This limited scope regulatory compliance audit relied upon information provided by representatives of Clean Harbors, and gathered during the site visit and document review conducted by Dillon during the course of the audit works undertaken. All information was verified to the extent possible through independent observations. However, Dillon cannot warrant that all information provided by Clean Harbors or other parties is completely accurate, transparent, or correct.

5.0

Closure

This audit and report have been completed in accordance with industry best practices subject to limitations outlined herein. If you should have any questions or concerns regarding the contents of this report or findings of the audit, please direct them to Jack Wallace at jwallace@dillon.ca or by calling 403.215.8880 ext. 4364.

Appendix A

Ryley Audit Checklist

Section 2 - General

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 2 - General							
2.1.1	The approval holder must immediately report to the Director by telephone any contravention of the terms and conditions of this approval at 1-780-422-4505.	X				<ul style="list-style-type: none"> Notification to AEP regarding odour complaint (ref. #380842), dated July 12, 2021. Report to AEP regarding landfill fire (ref. #375305), dated January 25, 2021. 	<ul style="list-style-type: none"> All complaints are called into the AEP number, which then assigns a reference number. The facility aims to call in within the hour. Contraventions are mostly odour complaints, which are called in to site then reported to AEP. There was a landfill fire early in 2021 due to a non-conforming waste stream, which was reported.
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.	X					Confirmed through review of records and discussion that all odour complaints are investigated and findings are submitted to the AEP within the reports.
2.1.3	The approval holder shall immediately notify the director if any of the following events occurs:				X	Not applicable.	Confirmed through discussion that the facility has not had any of these events occur.
2.1.3 (a)	The approval holder is served with a petition into bankruptcy.				X		
2.1.3 (b)	The approval holder files an assignment in bankruptcy or Notice of Intent to make a proposal.				X		
2.1.3 (c)	A receiver or receiver-manager is appointed.				X		
2.1.3 (d)	An application for protection from creditors is filed for the benefit of the approval holder under any creditor protection legislation.				X		
2.1.3 (e)	Any of the assets which are the subject matter of this approval are seized for any reason.				X		
2.1.4	The approval holder shall report any monitoring of substances or parameters which are the subject of operational limits as set out in the approval if they are monitored more frequently than specified by the approval. The additional results of such monitoring are to be included as an addendum in the reports required by the approval.				X	Not applicable.	Confirmed through discussion that the monitoring frequency as specified in Approval is followed.
2.1.5	The approval holder shall submit all monthly reports required by the approval to be compiled or submitted on or before the end of the month following the month in which the information was collected.	X				<ul style="list-style-type: none"> 2020 Annual Landfill Operations Report, dated March 31, 2021. 2020 Annual Air Monitoring Report, dated March 30, 2021. 	<ul style="list-style-type: none"> Air monitoring reporting is done monthly by GHD. Reporting requirements and data were viewed in the 2020 Annual Landfill Operations Report. No late submissions noted.
2.1.6	The approval holder shall submit all annual reports require by the 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.	X				<ul style="list-style-type: none"> 2020 Annual Landfill Operations Report, dated March 31, 2021. 2020 Annual Air Monitoring Report, dated March 30, 2021. 	Confirmed through discussion that all reporting has been on time to date.

Section 2 - General

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 2 - General							
2.2.1 (b)	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 10 years:	X				<ul style="list-style-type: none"> Record Retention Schedule dated November 14, 2014. WIN Web records. 	Compliance confirmed through a review of multiple files and windows in the Clean Harbors Facility Compliance View system (WIN Web).
2.2.1 (b, i)	The place, date and time of sampling.	X				<ul style="list-style-type: none"> pH at scrubber daily inspection for August 31, 2021. Leachate level quarterly sampling certificate of analysis dated March 17, 2020. 	Facility Compliance View system (WIN Web) is the electronic database and data is accessible for all records of daily scrubber pH data; leachate level log data; and surface water and leachate monitoring results.
2.2.1 (b, ii)	Sample type.	X					
2.2.1 (b, iii)	The dates the analyses were performed.	X					
2.2.1 (b, iv)	The analytical techniques, methods or procedures used in the analysis.	X					
2.2.1 (b, v)	The names of the persons who collected and analysed each sample.	X					
2.2.1 (b, vi)	The number of analyses.	X					
2.2.2	The approval holder shall keep and maintain an Operating Record as per 4.6.34(a) until the end of the landfill post-closure.	X				<ul style="list-style-type: none"> Landfill annual operations reports (submissions to AEP). Landfill Operations Plan and Ryley HWRSP Facility Plan, dated February 2021. (Operations Plan). HWRSP Standard Operating Procedures. 	<ul style="list-style-type: none"> Landfill and Facility Operations Plan is updated annually per Approval as required. Latest version is dated February 22, 2021. Updates for 2021: personnel listing, procedures for sampling of new or changed landfill cells, what cells are capped Operations Report available publicly or viewing any time on the Clean Harbors website.
2.2.3	The Operating Record shall include, at minimum, all of the following information:				X		
2.2.3 (a)	The information required in section 7.3(c) of the Standards for Landfills in Alberta .	X					
2.2.3 (b)	The name and contact information of all persons who discover any contravention	X					
2.2.3 (c)	The names and contact information of all persons who take any remedial actions arising from the contravention of the Act, the regulations, or the approval.	X					
2.2.3 (d)	A description of remedial measures taken in respect of a contravention of the Act, the regulations, or the Approval.	X					
2.2.4	The approval holder shall submit a copy of the most recent Operating Record to the Director upon written request from the Director within the timeline specified by the Director.	X					
2.3.1 (i, A)	Air monitoring analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the "Alberta Stack Sampling Code" (AEP, 1995).	X				GHD 2016 Quality Assurance Plan - Air Monitoring Program.	Exhaust stack sampling done once per week as per Section 4.2.9.
2.3.1 (i, B)	Air monitoring analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the "Methods Manual for Chemical Analysis of Atmospheric Pollutants" (AEP, 1993).	X				GHD 2016 Quality Assurance Plan - Air Monitoring Program.	Referred to in Air Monitoring Program.
2.3.1 (i, C)	Air monitoring analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the "Air Monitoring Directive" (AEP 1989).	X				GHD 2020 AEP annual Ambient Air Monitoring Report, dated March 30, 2021.	Standard referenced in the 2020 Annual Ambient Air Monitoring Report

Section 2 - General

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 2 - General							
2.3.1 (ii)	Industrial Wastewater, Industrial runoff, groundwater and domestic wastewater analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association, American Water Works Association, Water Environment Federation, 1998).			X		Industrial run-off report for July 2020 to AEP.	<ul style="list-style-type: none"> Clean Harbors staff collects samples then send them to the lab in Edmonton. Staff are trained in proper sampling techniques consistent with the methods indicated in the Approval. There is no formal written SOP for sampling industrial wastewater which makes reference to the Approval line test method.
2.3.1 (iii, A)	Whole effluent toxicity analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the "Biological Test Method: Reference Method for Determining the Acute Lethality of Effluents to Rainbow Trout" (Environment and Climate Change Canada, 2000).			X			
2.3.1 (iii, B)	Whole effluent toxicity analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the "Biological Test Method: Reference Method for Determining the Acute Lethality of Effluents to Daphnia Magna" (Environment and Climate Change Canada, 2000).			X			
2.3.1 (iii, C)	Whole effluent toxicity analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the "Biological Test Method: Growth Inhibition Test Using the Freshwater Alga <i>Selenastrum capricornutum</i> " (Environment and Climate Change Canada, 1992).				X	Review of Approval requirements (Table 4.3-B, 4.3-C, 4.3-D).	Not applicable. Whole effluent control system limits analysed as outlined by the Approval in Sections 4.6.8 are for: pH, COD, TDS, TSS, ammonia, chloride, sodium, sulphate, oil and other substances, 96-hour acute lethality test using rainbow trout, 48-hour acute lethality test using daphnia magna.
2.3.1 (iii, D)	Whole effluent toxicity analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the "Biological Test Method: Test of Reproduction and Survival Using the Cladoceran <i>Ceriodaphnia dubia</i> " (Environment and Climate Change Canada, 1992).				X		
2.3.1 (iii, E)	Whole effluent toxicity analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows" (Environment and Climate Change Canada, 1992).				X		
2.3.1 (iii, F)	Whole effluent toxicity analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the "Biological Test Method: Toxicity Test Using Luminescent Bacteria (<i>Photobacterium phosphoreum</i>)" (Environment and Climate Change Canada, 1992).				X		
2.3.1 (iv, A)	Soil analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the Soil Monitoring Directive (AEP, 2009).	X				2019 Soil Monitoring Program Report dated January 31, 2020.	Tetra Tech performs the soil sampling. Confirmed that the Soil Monitoring Directive was followed
2.3.1 (iv, B)	Soil analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: The Soil Quality Criteria Relative to Disturbance and Reclamation (Alberta Agriculture, 1987)				X	2019 Soil Monitoring Program Report dated January 31, 2020.	Not applicable. Information only as this pertains to reclamation. The site is still operating.

Section 2 - General

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	O/I	Info, N/A		
Part 2 - General							
2.3.1 (v, A)	Waste analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (USEPA, 1986).	X				Operations Plan.	All wastes are subject to a pre-acceptance review prior to receipt. Each waste stream will have a waste profile completed prior to the receipt of the waste which includes a third party Class II Landfill analysis Package - pH, BTEX, metals, delta T and flash point. Sampling of incoming loads is performed to verify characteristics of the shipment.
2.3.1 (v, B)	Waste analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the "Methods Manual for Chemical Analysis of Water and Wastes" (Alberta Environmental Centre, 1996).	X					
2.3.1 (v, C)	Waste analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the "Toxicity Characteristic Leaching Procedure (TCLP)" (USEPA Regulation 40 CFR261, Appendix II, Method No. 1311).	X					
2.3.1 (v, D)	Waste analytical requirements for collection, preservation, storage, handling, and analysis must be in accordance with: the "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association, American Water Works Association, Water Environment Federation, 2010).	X					
2.3.2	Labs retained for analysis of parameters required by the approval are accredited pursuant to ISO/IEC 17025.	X				Certificate of Analysis for Bureau Veritas and ALS Environmental in various reports.	<ul style="list-style-type: none"> Bureau Veritas and ALS Environmental are used for all water/leachate parameters (switched to ALS from BV in Q4 2020). Alberta Innovates is used for all air parameters. Confirmed accreditations for all labs.
2.3.4	The approval holder shall comply with the terms and conditions of any written authorization issued by the Director under 2.3.2.				X	Not applicable.	Not applicable. Information only.
2.4.1	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.				X	Not applicable.	Not applicable. Information only.
2.4.2	Any conflict between the Standards for Landfills in Alberta, as amended, and the terms and conditions of this approval shall be resolved in favour of this approval.				X	Not applicable.	Not applicable. Information only.
2.4.3	Environmental Protection and Enhancement Act Approval No. 10348-02-00, as amended, is cancelled.				X	Not applicable.	Not applicable. Information only.
2.4.4	All tanks shall conform to the "Guidelines for Secondary Containment for Above Ground Storage Tanks" (Alberta Environmental Protection, 1997).	X				Field observations.	<ul style="list-style-type: none"> Three get annually inspected by Petroleum Tank Industry (diesel tank and 2 liquid waste tanks). Safety Codes Council invoice viewed. PTMAA certificate no longer required after Aug. 31, 2020. Safety Codes Council is now the regulating body. Secondary containment observed in field.
2.4.5	All above ground storage tanks containing liquid hydrocarbons or organic compounds shall conform to the "Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks" (Canadian Council of Ministers of the Environment, 1995).	X				<ul style="list-style-type: none"> Safety Codes Council invoice dated June 10, 2021. Field observations. 	<ul style="list-style-type: none"> Waste tanks were connected to the vapour capture and scrubbing system. Leachate tank had a newly installed vapour capture and scrubbing system installed. Inspected the three waste tanks on site and the leachate tank.

Section 3 - Construction

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	O/I	Info. N/A		
Part 3 - Construction							
3.1.1	The approval holder shall not commence construction of Cell 4 unless and until updated financial security of the facility has been provided to include Cell 4 lateral expansion.	X				<ul style="list-style-type: none"> Letter to AEP regarding Cell 4 QA/QC Submission, dated February 19, 2019. Bond for financial security from Chubb dated August 16, 2021. AEP acceptance letter for bond, dated October 22, 2019. 	Compliance confirmed through a review of correspondence regarding changes to financial security for this period related to construction. AEP accepted the financial security bond for the construction period.
3.1.2	The approval holder shall construct each new Class 1 industrial landfill which has the following components, at a minimum:				X	Not applicable.	Not applicable. Information only.
3.1.2 (a)	A minimum of 0.45 metre thick cover of clean sand or soil placed over top of the uppermost drainage layer.	X				Tetra Tech Issued for Construction Drawings, dated March 2018.	Compliance confirmed; minimum of 450 mm is specified in drawing details.
3.1.2 (b, i)	GCL liner placed in direct contact with an underlying 80 mil HDPE geomembrane liner as a primary liner.	X				<ul style="list-style-type: none"> Tetra Tech Issued for Construction Drawings. AEP Letter amending GCL to Geosynthetic. 	Compliance confirmed; Detail 3 on Drawing C-04 shows GCL in direct contact with underlying geomembrane.
3.1.2 (b, ii)	GCL liner placed in direct contact with an underlying 80 mil HDPE geomembrane liner as a secondary liner.	X				<ul style="list-style-type: none"> Tetra Tech Issued for Construction Drawings. AEP Letter amending GCL to Geosynthetic. 	Compliance confirmed; Detail 3 on Drawing C-04 shows GCL in direct contact with underlying geomembrane as a secondary liner.
3.1.2 (b, iii, A)	GCL liner placed in direct contact with an underlying clay liner that has a minimum thickness of 1.0 metre at all points.	X				Tetra Tech Issued for Construction Drawings.	Compliance confirmed; 1000 mm indicated as a minimum thickness of the underlying clay liner, GCL indicated above in Detail 3 on Drawing C-04.
3.1.2 (b, iii, B)	GCL liner placed in direct contact with an underlying clay liner that has been compacted to achieve an in-place hydraulic conductivity of 1×10^{-9} m/s or less.	X				Clean Harbors Cell 4 Request for Quotation.	Compliance confirmed; GCL is required to have a conductivity of 5×10^{-9} cm/s at most (which is lower than the AEP requirements).
3.1.2 (c, i)	Leachate collection system that is placed over the primary liner.	X				Tetra Tech Issued for Construction Drawings.	Compliance confirmed; Detail 11 on Drawing C-06 shows LCS above primary layer.
3.1.2 (c, ii)	Leachate collection system that is capable of maintaining the acceptable leachate head.	X				Tetra Tech Issued for Construction Drawings.	Compliance confirmed; leachate collection system for most cells on timers, one cell has automatic pumping based on leachate level.
3.1.2 (c, iii, a)	Leachate collection system that consists of a geo-composite drainage layer with a transmissivity of at least 1×10^{-4} m ² /s placed over top of the primary layer.	X				Tetra Tech Issued for Construction Drawings.	Compliance confirmed; transmissivity is required to be 1×10^{-4} m ² /s at a minimum.
3.1.2 (c, iii, b)	Leachate collection system that consists of a network of perforated leachate collection pipes.	X				Tetra Tech Issued for Construction Drawings.	Compliance confirmed; Drawing C-05 shows perforation details for the leachate collection system.
3.1.2 (c, iii, c)	Leachate collection system that consists of a leachate collection sump placed over the primary layer.	X				Tetra Tech Issued for Construction Drawings.	Compliance confirmed; Drawing C-05 shows sump in both primary and secondary layer acting as one.
3.1.2 (d, i)	Leak detection system that is placed over the secondary layer.	X				Tetra Tech Issued for Construction Drawings.	Compliance confirmed; Detail 3 on Drawing C-04 shows leak detection system over the secondary layer.
3.1.2 (d, ii)	Leak detection system that is capable of detecting the leakage through the primary layer.	X				Tetra Tech Issued for Construction Drawings.	Compliance confirmed; Detail 3 on Drawing C-04 shows leak detection system under the primary layer.

Section 3 - Construction

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	O/I	Info. N/A		
Part 3 - Construction							
3.1.2 (d, iii, a)	Leak detection system that consists of a geo-composite drainage layer with a transmissivity of at least $1 \times 10^{-4} \text{m}^2/\text{s}$ placed over the top of the secondary layer.	X				Tetra Tech Issued for Construction Drawings.	Compliance confirmed; Detail 3 on Drawing C-04 shows geocomposite leak detection system over the secondary layer. Transmissivity of geocomposite satisfies requirements.
3.1.2 (d, iii, b)	Leak detection system that consists of a network of perforated leak detection liquid collection pipes.	X				Tetra Tech Issued for Construction Drawings.	Compliance confirmed; Detail 10 on Drawing C-05 shows perforated leachate monitoring pipes.
3.1.2 (d, iii, c)	Leak collection system that consists of a leak detection liquid collection sump placed over the secondary layer.	X				Tetra Tech Issued for Construction Drawings.	Compliance confirmed; Drawing C-05 shows sump in both primary and secondary layer acting as one.
3.1.2 (e, i)	A final cover that meets the requirements in Section 6.1(c) of the "Standards for Landfills in Alberta" or as specified in the Landfill Cell Closure Plan submitted by the approval holder and authorized by the Director pursuant to 7.1.1 and 7.1.4 of the approval.	X				Dillon Annual Landfill Cell Closure Report (Cell 3B), dated March 2021.	Compliance confirmed; design and installation of the Cell 3B final cover system was completed in 2020.
3.1.2 (f)	A run-on control system capable of preventing flow onto the active landfill area from at least the peak discharge from a 1 in 25 year, 24 hour duration storm event at the facility.	X				Tetra Tech Issued for Construction Drawings.	Compliance confirmed; perimeter berm is evident in Drawing C-03.
3.1.2 (g)	A runoff control system capable of collecting and controlling at least the runoff volume resulting from a 1 in 25 year, 24 hour duration storm event at the facility.	X				Tetra Tech Issued for Construction Drawings.	Leachate collections system will handle all stormwater that falls in the landfill footprint.
3.1.3	The composite liner is constructed on a foundation or base that prevents failure of the liners due to settlement, compression or uplift.	X				Tetra Tech Issued for Construction Drawings.	1000 mm minimum of compacted clay liner specified on top of compacted backfill of an unknown thickness.
3.1.4	The approval holder shall submit to the Director the following plans and specifications for the proposed construction of each of the items listed in 3.1.2, signed and stamped by a professional registered with APEGA at least 3 months prior to construction:				X	Not applicable.	Not applicable. Information only.
3.1.4 (a)	Detailed Construction Plan and Specifications	X				Tetra Tech Construction Quality Assurance Report - Cell 4 and Laydown Pond - Earthworks, dated February 2019.	Construction started 3 months after submission of the referenced plans per the Approval.
3.1.4 (b)	Construction Quality Assurance Plan	X					
3.1.4 (c)	Construction Quality Control Plan	X					
3.1.5	The approval holder shall correct all deficiencies as outlined in the Detailed Construction Plan and Specifications outlined by the Director in the timeline specified by the Director.	X				Letter from AEP: Authorization of Cell 4 Construction, dated August 21, 2018.	Deficiencies were corrected on a per item basis until final issuance of approval to proceed on August 21, 2018.
3.1.6	The approval holder shall implement the Detailed Construction Plan and Specifications in 3.1.4 as authorized in writing by the Director.	X				Tetra Tech Construction Quality Assurance Report - Cell 4 and Laydown Pond - Earthworks, dated February 2019.	Report details the construction activities and identifies compliance with the Detailed Construction Plan.
3.1.7	During construction of any of the items listed in 3.1.2, the approval holder shall not deviate from the Detailed Construction Plan and Specifications unless the following conditions are met:				X	Not applicable.	Not applicable. Information only.

Section 3 - Construction

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	O/I	Info. N/A		
Part 3 - Construction							
3.1.7 (a)	The deviation results in a minor adjustment in order to suite field conditions encountered.	X				Dillon Annual Landfill Cell Closure Report (Cell 3B), dated March 2021.	Deviation results to be communicated to AEP following construction in the summary report, per Line Item 3.1.9.
3.1.7 (b)	The deviation will result in an equivalent or better design performance of the landfill.	X				Dillon Annual Landfill Cell Closure Report (Cell 3B), dated March 2021.	Deviation results to be communicated to AEP following construction in the summary report, per Line Item 3.1.9.
3.1.8	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.	X				<ul style="list-style-type: none"> • Tetra Tech Construction Quality Assurance Report - Cell 4 and Laydown Pond - Earthworks, dated February 2019. • Tetra Tech Construction Quality Assurance Report - Cell 4 and Laydown Pond Geosynthetics Installation, dated February 2019. • Dillon Annual Landfill Cell Closure Report (Cell 3B), dated March 2021. 	Confirmed through a review of the reports indicated.
3.1.9	The summary report in 3.1.9 shall contain the following information, at minimum:				X		Not applicable. Information only.
3.1.9 (a)	Confirmation that the landfill has been constructed according to the Construction Quality Assurance Plan, Construction Quality Control Plan, and the Detailed Construction Plan and Specifications.	X					Confirmed through a review of the reports indicated.
3.1.9 (b)	Description of any minor deviations as per 3.1.7	X					Confirmed that no deviations occurred.
3.1.9 (c)	Confirmation by the professional registered with APEGA, that deviations as per 3.1.7 will result in an equivalent or better design performance of the landfill.	X					Confirmed that no deviations occurred and that that design met or exceeded specifications.
3.1.9 (d)	"As-built" plans.	X					Confirmed, dated February 2019.
3.1.9 (e)	Photo-documentation of important stages of construction including any repair work or remediation activities to establish or maintain liner integrity.	X					Confirmed through a review of the reports indicated.
3.1.9 (f)	Any other information not listed or implied in 3.1.9 as required in writing by the Director.	X				Confirmed through a review of the reports indicated.	
3.1.10	The approval holder shall notify the Director in writing at least fourteen days prior to construction of commencing operations of any new landfill cell.	X				Letter to AEP, dated February 19, 2021.	Notifying that construction approval requirements fulfilled and that operations will commence in 14 days.
3.1.11	The approval holder shall construct the off-loading area as described in the application.				X	Not applicable.	Construction hasn't started on the off-loading area.
3.1.12	The approval holder shall manage landfill progression in a manner that has limited off-site visual impacts of the landfill, as described in the Landfill Cell Closure Plan.	X				<ul style="list-style-type: none"> • Dillon Annual Landfill Cell Closure Report (Cell 3B), dated March 2021. • Clean Harbors Closure and Post Closure Plan. 	Report details the construction activities and identifies compliance with the Closure and Post Closure Plan.
3.2.1 (a)	The waste stabilization area has been constructed in accordance with application No. 008-10348.	X				Correspondence between AEP and Clean Harbors.	<ul style="list-style-type: none"> • This has been completed within the constructed portions of Cell 3D to avoid tracking waste off-site. • Clean Harbors submitted specifications for stabilization area and did not receive any amendment requests from AEP.
3.2.1 (b)	The waste stabilization area has been constructed in accordance within a Class I landfill cell.	X					

Section 3 - Construction

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info. N/A		
Part 3 - Construction							
3.3.1	The approval holder shall salvage and conserve all topsoil for land reclamation of the landfill.	X				<ul style="list-style-type: none"> Field Observations Operations Plan. Annual Landfill Cell Closure Reports. 	<ul style="list-style-type: none"> Vegetated mounds for final Cell 3 closure at southern edge. Non-vegetated active stockpiles for Cell 4 construction at north end.
3.3.2	The approval holder shall salvage and conserve all upper subsoil for land reclamation of the landfill.	X					
3.3.3	The approval holder shall conserve and stockpile all topsoil separately from the upper subsoil.	X					Stockpiles are separated for topsoil and upper subsoil.
3.3.4 (a)	The approval holder shall place all top soil stockpiles at the landfill.	X					Stockpiles placed within the landfill boundary.
3.3.4 (b)	The approval holder shall place all upper subsoil stockpiles at the landfill.	X					
3.3.5 (a)	The approval holder shall stockpile all topsoil on stable foundations.	X					Topsoil stockpiles are placed on undisturbed topsoil and stable ground.
3.3.5 (b)	The approval holder shall stockpile all topsoil on undisturbed topsoil.	X					
3.3.6 (a)	The approval holder shall stockpile all upper subsoil on stable foundations.	X					Upper subsoil stockpiles are placed on areas with topsoil removed and stable ground.
3.3.6 (b)	The approval holder shall stockpile all upper subsoil on areas where the topsoil has been removed.	X					
3.3.7	The approval holder shall take all steps necessary to prevent any erosion due to wind or water.	X					Vegetation for closed stockpiles used for final closure of Cell 3. No other erosion measures required from AEP.
3.3.7 (a)	The approval holder shall revegetate stockpiles in order to prevent erosion.	X					Stockpiles appear to be vegetated from field observation.
3.3.7 (b)	The approval holder shall take all steps authorized in writing by the director in order to prevent erosion.	X					Erosion controls observed in place.
3.3.8 (a, i)	The approval holder shall suspend conservation of topsoil when wet or frozen condition would result in mixing, loss, degradation or compaction of topsoil.	X					Stockpiling of topsoil and upper subsoil is suspended during periods of adverse weather conditions, in accordance with facility operational practices.
3.3.8 (a, ii)	The approval holder shall suspend conservation of topsoil when high wind velocities or other field conditions would result in mixing, loss, or degradation of topsoil.	X					
3.3.8 (b, i)	The approval holder shall suspend conservation of upper subsoil when wet or frozen condition would result in mixing, loss, degradation or compaction of upper subsoil.	X					
3.3.8 (b, ii)	The approval holder shall suspend conservation of upper subsoil when wet or frozen condition would result in mixing, loss, degradation or compaction of upper subsoil.	X					

Section 3 - Construction

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	O/I	Info. N/A		
Part 3 - Construction							
3.3.9 (a)	The approval holder shall recommend conservation of topsoil when conditions in 3.3.8 no longer existed.				X	Not applicable.	Not applicable. Information only.
3.3.9 (b)	The approval holder shall recommend conservation of upper subsoil when conditions in 3.3.8 no longer existed.				X	Not applicable.	Not applicable. Information only.

Section 4 - Operations

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.1.1	The geographic boundaries of the landfill has been maintained to that located within SE ¼ of Section 9, Township 50, Range 17, West of the 4 th Meridian.	X				<ul style="list-style-type: none"> 2020 Annual Report Field observations. 	Confirmed that landfill is within the approved boundary.
4.1.2	The waste elevation of the landfill has not exceeded the maximum designated waste elevation.	X				Cell 3B Landfill Capping Top of Final Cover Elevations, Figure No. 3 in Dillon Annual Landfill Cell Closure Report (Cell 3B), dated March 2021.	<ul style="list-style-type: none"> Maximum elevation, per Part 1 (ggg) (definitions) is 714 masl. Most recent closure was Cell 3B, which is also the highest. Maximum elevation observed in final cover was 713.15 masl.
4.1.3	Access to the facility has been restricted to only authorized personnel.	X				Field observations.	<ul style="list-style-type: none"> Visitor sign in sheet at front desk. Scale house reporting for all vehicles. Security cameras on-site. Gated access.
4.1.4	A 24 hour "HOTLINE" number has been maintained for prompt response during an emergency.			X		Field observations.	A hotline is maintained but not posted at gate or office entrance. Hotline is 780-690-0614.
4.1.5	The approval owner shall operate and maintain the integrity of the following waste management facilities at the facility:				X		Not applicable. Information only.
4.1.5 (i)	HWRSP Facility	X					Confirmed during field inspection.
4.1.5 (ii)	Class I and II landfill, including Class I and II cells and waste stabilization areas.			X			Observed ponding in roadways near potable water tanks, which can be managed on an ongoing basis.
4.1.5 (iii)	Waste storage areas.	X					Confirmed during field inspection.
4.1.6	The approval holder shall operate and maintain the integrity of the following infrastructure components at the facility:				X		Not applicable. Information only.
4.1.6 (i)	Composite liner	X				<ul style="list-style-type: none"> 2020 Annual Report. Field observations. 	Confirmed during field inspection.
4.1.6 (ii)	Leachate collection system	X					Confirmed during field inspection.
4.1.6 (iii)	Leak detection system	X					Confirmed during field inspection.
4.1.6 (iv)	Run-on control system	X					Confirmed during field inspection.
4.1.6 (v)	Run-off control system	X					Confirmed during field inspection.
4.1.6 (vi)	Groundwater monitoring wells	X					<ul style="list-style-type: none"> Confirmed well MW-10 (near waste storage and HWRSP Facility) has been repaired and locked. All other wells were observed to be protected and locked.
4.1.6 (vii)	Weigh scale	X					Weigh scale is operational.
4.1.6 (viii)	Site access control	X				Field observations.	Confirmed that sign-in procedures in place, doors locked, etc.
Facility Audit							
4.1.7	The approval holder shall cause the facility to be audited by an independent third-party environmental consultant to assess compliance with the terms and conditions of this approval, commencing on or before October 1, 2018.	X				<ul style="list-style-type: none"> 2018 Compliance Audit Report. 2021 Compliance Audit Report. 	Compliance confirmed.
4.1.8	The approval holder shall submit the audit report required in 4.1.7 in the Annual Landfill Operations Report.	X				2020 Annual Report.	Reviewed the 2020 Annual Landfill Operations Report and confirmed previous Audit was included.
4.1.9	The requirements in 4.1.7 and 4.1.8 do not relieve the approval holder of any duty under the Act, or its associated regulations, or this approval.				X	Not applicable.	Not applicable. Information only.

Section 4 - Operations

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
Operations							
4.2.1	The approval holder shall not release any air effluent streams to the atmosphere except as authorized by this approval.				X	Not applicable.	Not applicable. Information only.
4.2.2	The approval holder shall only release air effluent streams to the atmosphere from the following sources: - Scrubber exhaust stack - Drum Processing Building exhaust vent - Staging Building exhaust vent - Administrative Building exhaust vents - Laboratory fume hood and exhaust vents - Maintenance Shop equipment and exhaust vents - Leachate Collection Tanks exhaust vents - Leachate transfer lines passive gas vents - Any other source authorized in writing by the Director	X				Field observations.	<ul style="list-style-type: none"> No other sources not listed in the approval. Requested in Approval Amendment (pending) to do quenching emulsions, only if non-toxic gases are emitted.
4.2.3	The approval holder shall not operate any process equipment unless and until the pollution abatement equipment associated with the corresponding process equipment is operational and operating.	X				<ul style="list-style-type: none"> Field observations. Verbal confirmation. Sept. 1, 2021 Transfer Station Daily Inspection (including scrubber inspection). 	All pollution abatement equipment is continuously operated.
4.2.4	The approval holder shall treat all air effluent streams from the exhaust vents of the Drum Processing or Staging or both Buildings with a caustic scrubber and an activated carbon filter before directing the air effluent streams to the scrubber exhaust stack for release to the atmosphere while: - Hazardous wastes/recyclables are being processed. - Hazardous wastes/recyclables are being transferred. - Containers of hazardous wastes/recyclables are open in the Drum Processing and/or Staging Buildings.	X				<ul style="list-style-type: none"> Field observations. Discussion with site staff. 	Monitored weekly and documented as per section below. All building air is treated through the pollution abatement equipment (scrubber and filter), including drum and tank vents.
4.2.5	The approval holder shall control fugitive emissions and any source not specified in 4.2.2 in accordance with 4.2.6 of this approval.	X				Field observations.	A carbon filter was added to the leachate tank.
4.2.6	With respect to fugitive emissions and any source not specified in 4.2.2, the approval holder shall not release a substance or cause to be released a substance that causes or may cause any of the following:				X	<ul style="list-style-type: none"> Operations Plan, Appendix C (Fugitive Dust and Odour Best Management Plan). Odour Complaint notification to Village and County, dated July 30, 2021. 	<ul style="list-style-type: none"> No fugitive emissions outside of what's permitted. Odour complaints are received and managed per BMPs (report reviewed and contained in Operations Plan). As part of the Amendment Application, AEP identified concerns regarding communications to the Village of Ryley and Beaver County. Clean Harbors now notifies the Village and County of all complaints and contraventions submitted to AEP.
4.2.6 (a)	Impairment, degradation or alteration of the quality of natural resources.	X					
4.2.6 (b)	Material discomfort, harm or adverse effect to the well being or health of a person.	X					
4.2.6 (c)	Harm to property or to vegetative or animal life.	X					
4.2.7	The approval holder shall not burn any debris by means of an open fire unless authorized in writing by the Director.	X				Correspondence with AEP	A fire occurred on property in January 2021, for which AEP was notified. No burning is conducted on site.
4.2.8	If the approval holder receives complaints of offensive odours, or fugitive dust, or both, beyond the facility boundaries, the approval holder shall:				X		
4.2.8 (a)	Conduct the following to reduce the release of those odours, or fugitive dust, or both by:	X				<ul style="list-style-type: none"> Operations Plan, Appendix C (Fugitive Dust and Odour Best Management Plan). Environmental Management Program SOP #90RY-410-00. Field observations. Discussion with site staff. 	<ul style="list-style-type: none"> Response is based on the type of complaint. Recently added a carbon filter on the leachate tank vent. Material receipt may be suspended during high wind days. Cover can be immediately placed for dust suppression and dispersion prevention. Receive typically 2-3 odour complaints per year.
4.2.8 (a, i)	Placing restrictions on types, or volumes, or both, of the wastes being handled or processed or deposited that are causing those odours, or fugitive dust, or both.	X					
4.2.8 (a, ii)	Increasing the frequency of cover placement, or modifying waste handling activities, or performing both, at the landfill.	X					
4.2.8 (a, iii)	Modifying waste handling activities at the HWRSP Facility.	X					
4.2.8 (a, iv)	Performing any combination of the above.	X					
4.2.8 (b)	Activate the Odour and Fugitive Dust Response Program as specified in the Landfill Operations Plan 4.6.34U).	X					

Section 4 - Operations

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
Limits							
4.2.9	The approval holder shall maintain the pH of the scrubbing liquid of the caustic scrubber referred to in 4.2.4 at 8.0 or higher.	X				<ul style="list-style-type: none"> Field observations. Recorded daily (viewed Aug. 22, 2021 and Nov. 5, 2020 examples) and maintained in the WIN Web system. 	<ul style="list-style-type: none"> pH data logger contains daily readings. Available to AEP upon request, confirmed in report that recordings are compliant. "Keep pH above 8.0" sign posted.
4.2.10	The approval holder shall replace activated carbon in the activated carbon filter referred to in 4.2.4 immediately when the concentration of total petroleum hydrocarbons in the air effluent streams released from the scrubber exhaust stack to the atmosphere exceeds 25 ppm.	X				<ul style="list-style-type: none"> Field observations. WIN Web records. 	<ul style="list-style-type: none"> Weekly total petroleum hydrocarbon readings are taken and recorded in log book next to the scrubber and in WINWEB. Carbon is typically replaced every 4-5 years or less frequent. Last replacement occurred July 2015. No exceedances or replacement of media in the last three year period (2019-2021).
Monitoring and Reporting							
4.2.11	The approval holder shall monitor, daily at a minimum, the pH of the scrubbing liquid of the caustic scrubber referred to in 4.2.4.	X				<ul style="list-style-type: none"> Monitoring records for Aug. 22, 2021 and Nov. 5, 2020 in WIN Web. Field observations. 	<ul style="list-style-type: none"> Data logger contains daily readings. Available to AEP upon request, confirmed in report that recordings are compliant. If pH readings are close to 8.0 limit, a secondary laboratory reading is performed to verify in-line pH meter accuracy. Aug. 22, 2021 and Nov. 5, 2020 dates sampled.
4.2.12	The approval holder shall monitor, weekly at a minimum, the air effluent streams released from the scrubber exhaust stack, using a portable total petroleum hydrocarbon analyzer while: <ul style="list-style-type: none"> - Hazardous wastes/recyclables are being processed. - Hazardous wastes/recyclables are being transferred. - Containers of hazardous wastes/recyclables are open in the Drum Processing and/or Staging Buildings. 	X				<ul style="list-style-type: none"> Field observations. WIN Web records. 	<ul style="list-style-type: none"> Weekly readings are taken and recorded in log book next to the scrubber. Carbon is replaced every 4-5 years or less frequency.
4.2.13	The portable total petroleum hydrocarbon analyzer referred to in 4.2.12 shall:				X	Not applicable.	Not applicable. Information only.
4.2.13 (a)	Have a detection limit of 1 ppm or lower for total petroleum hydrocarbons.	X				Field observations.	Confirmed that accuracy is to 0.1 ppm, as observed on calibration certificate.
4.2.13 (b)	Be located in a straight section of the scrubber exhaust stack, a minimum of one (1) metre downstream from the last flow disturbance.	X				Field observations.	Sampling location is on second story scaffolding within building, 1 m downstream from the last flow disturbance.
4.2.13 (c)	Be calibrated regularly in accordance with the analyzer manufacturer's specifications.	X				Calibration certificate from 2020.	Confirmed calibrated in 2020; expires in 2022.
4.2.14	The approval holder shall continue to implement the Ambient Air Monitoring Program as authorized in writing by the Director on June 24, 2009, unless and until otherwise authorized in writing by the Director pursuant to 4.2.18.	X					
4.2.15	The approval holder shall submit to the Director the results of the Ambient Air Monitoring Program in 4.2.14 with the following reports: <ul style="list-style-type: none"> - Monthly Ambient Air Monitoring Report - Annual Ambient Air Monitoring Report In accordance with the written authorization by the Director on June 24, 2009, unless and until otherwise authorized in writing by the Director pursuant to 4.2.18.	X				<ul style="list-style-type: none"> 2020 Operations Report. GHD Quality Assurance Plan - Air Monitoring Program Report, dated Dec. 31, 2016. "Ambient Air Monitoring Station Audit" letter from AEP, dated August 31, 2016. "Ambient Air Monitoring Station Audit" letter from AEP, dated Jan. 13, 2017 (closing out the audit findings). 	<ul style="list-style-type: none"> Clean Harbors was audited by AEP for adherence to the new Air Monitoring Directive released in 2016. Clean Harbors proposed dates and actions to address findings of the audit, which were accepted by AEP in letter December 2, 2016. Dec. 31, 2016 GHD report contains new Air Monitoring Program. AEP letter closing out the audit indicates that all findings addressed.
4.2.16	The approval holder shall submit a revised Ambient Air Monitoring Program, revised reporting requirements, or both, to the Director upon written request from the Director within the timeline specified in writing by the Director.	X					
4.2.17	If the revised Ambient Air Monitoring Program, reporting requirements, or both, submitted pursuant to 4.2.16 is found deficient by the Director, the approval holder shall correct all deficiencies as outlined in writing by the Director within the timeline specified in writing by the Director.	X					

Section 4 - Operations

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.2.18	The approval holder shall implement the revised Ambient Air Monitoring Program, reporting requirements, or both, submitted pursuant to 4.2.16 as authorized in writing by the Director within the timeline specified in writing by the Director.	X					
Operations							
4.3.1	The approval holder shall not release any substances from the facility to the surrounding watershed except as authorized by this approval.	X				Field observations.	Compliance confirmed. 100% of the leachate is disposed of via deep well injection. Runon/runoff control systems in place and inspected during field observations.
4.3.2	The approval holder shall operate and maintain the integrity of:				X	Not applicable.	Not applicable. Information only.
4.3.2 (a)	The run-on control system to prevent flow onto the active landfill area from at least the peak discharge from a 1 in 25 year, 24 hour duration storm event at the facility.	X				Field observations.	Compliance confirmed. Run on/run off control systems were completed during Cell 4 construction. As built drawings reviewed.
4.3.2 (b)	The runoff control system for the facility to collect and control at least the runoff volume resulting from a 1 in 25 year, 24 hour duration storm event at the facility.	X				Field observations.	Compliance confirmed. Run on/run off control systems were completed during Cell 4 construction. As built drawings reviewed.
4.3.3	All runoff from the facility developed area shall be directed to the runoff control system as described in:				X	Not applicable.	Not applicable. Information only.
4.3.3 (a)	Application No. 012-10348, prior to decommissioning and reclamation of the old surface water detention pond.	X				Not applicable.	Confirmed. The old surface water detention pond was decommissioned in August 2018 prior to this audit.
4.3.3 (b)	The application, after decommissioning and reclamation of the old surface water detention pond.	X					
4.3.4	Prior to decommissioning and reclamation of the old surface water detention pond and subject to 4.3.7, the approval holder shall only make or permit a release from the old surface water detention pond:				X	Not applicable.	Not applicable. Information only.
4.3.4 (a)	At the release point as designated in application No. 012-10348, which is: • Located in the south east corner of the old surface water detention pond. • Referred to as sampling location A 1 in 4.3.11.	X				<ul style="list-style-type: none"> • 2020 Annual Report. • Field observations. • Operations Plan. • Discussions with site staff. 	Decommissioning of the old surface water detention pond was completed in August 2018. Observations were made of the new surface water detention pond, drainage ditch, and discharge point.
4.3.4 (b)	Through a pump and a release hose over the south berm into the drainage control ditch, east of the landfill access road, to the new surface water detention pond, under normal operating conditions.	X					
4.3.4 (c)	Through a pump and a release hose over the south berm directly to the culvert under Highway 854, during periods of high runoff exceeding the holding capacity of the old surface water detention pond.	X					
4.3.5	Subject to 4.3.7, the approval holder shall only make or permit a release from the new surface water detention pond:	X					
4.3.5 (a)	At the release point as designated in application No. 012-10348, which is: • Located in the north east corner of the new surface water detention pond. • Referred to as sampling location 81 in 4.3.11.	X					<ul style="list-style-type: none"> • Observed the discharge point at the new surface water detention pond. • Composite sampling is performed prior to any discharge consistent with the approval.
4.3.5 (b)	Through a pump and a release hose over the east berm into the culvert under Highway 854.	X					
4.3.6	The approval holder shall only dispose of industrial wastewaters, or specified runoff in Table 4.3-A, or both, by one or more of the following methods:				X	<ul style="list-style-type: none"> • 2020 Annual Report. • Field observations. • Operations Plan. • Discussions with site staff. 	<ul style="list-style-type: none"> • All stormwaters are discharged through pond with testing prior to discharge. • No non-compliant discharges have occurred. • When TSS exceeds limits, further settling time is done prior to re-testing and discharge, or flocculant is added. • No change to discharge.
4.3.6 (a)	To facilities holding a current Act authorization to accept such waste.	X					
4.3.6 (b)	To facilities approved by a local environmental authority outside of Alberta to accept such waste.	X					
4.3.6 (c)	To a disposal well approved by AER.	X					
4.3.6 (d)	As per 4.6.51.	X					
4.3.6 (e)	As otherwise authorized in writing by the Director.	X					

Section 4 - Operations

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
Limits							
4.3.7	Releases of runoff from the following to the surrounding watershed shall comply with the limits specified in Table 4.3-B: - The old surface water detention pond. - The new surface water detention pond. - Or, both ponds.	X				<ul style="list-style-type: none"> 2020 Annual Report. Operations Plan. 	Compliance confirmed through a review of release analytical records.
4.3.8	Releases of runoff from within the tank farm bermed area to the old or new or both surface water detention ponds shall comply with the limits specified in Table 4.3-C.				X	Not applicable.	Not applicable: <ul style="list-style-type: none"> Tank farm bermed area water goes into landfill. This volume is pumped and solidified for disposal in the landfill.
Monitoring and Reporting							
4.3.9	The approval holder shall monitor the runoff control system as required in Table 4.3-D, subject to 4.3.12.			X		Surface Water Detention Pond B Summary of Batch Analysis, 2020 Annual Report.	Results for the runoff control system testing of 48 hour static acute lethality test using daphnia magna could be included in the Summary of Batch Analysis presented in the 2020 Annual Landfill Operations Report; along with the lethality of effluents to rainbow trout testing.
4.3.10	The approval holder shall report to the Director the results of the runoff control system monitoring as required in Table 4.3-D, subject to 4.3.12.	X				2020 Annual Report.	Monitoring findings reported to AEP.
4.3.11	For the purpose of Table 4.3-D:				X	Not applicable	Not applicable. Information only.
4.3.11 (a)	Sampling location A 1 is defined as the old surface water detention pond release point.				X	Field observations.	Not applicable. Old surface water detention pond has been decommissioned.
4.3.11 (b)	Sampling location A2 is defined as the old surface water detention pond.				X	Field observations.	Facility actively monitors releases.
4.3.11 (c)	Sampling location B1 is defined as the new surface water detention pond release point.	X				Field observations.	Facility actively monitors detention pond.
4.3.11 (d)	Sampling location B2 is defined as the new surface water detention pond.	X				Field observations.	Water collected in bermed area of tank farm is solidified for disposal in landfill as per 4.3.8
4.3.11 (e)	Sampling location C is defined as the tank farm bermed area.	X				Field observations.	Not applicable. The old surface water detention pond was decommissioned in August, 2018 prior to this audit.
4.3.12	The monitoring and reporting requirements in 4.3.9 and 4.3.10 for the old surface water detention pond (sampling locations A1 and A2) shall not apply after decommissioning and reclamation of the old surface water detention pond.				X	Not applicable.	Not applicable. Information only.
4.3.13	The monitoring and reporting required in Table 4.3-D for the acute lethality tests shall comply with:				X	Not applicable.	Summary of results all pass for the Surface Water Detention Pond B Summary of Batch Analyses.
4.3.13 (a)	The Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout, Environment Canada, Environment Protection Series 1/RM/13, December 2000, as amended.	X				Surface Water Detention Pond B Summary of Batch Analysis - 2020 Annual Landfill Operations Report	<ul style="list-style-type: none"> Monthly Runoff and Industrial Wastewater Report. Surface Water Detention Pond B Summary of Batch Analysis - 2020 Annual Report. Results for the runoff control system testing of 48 hour static acute lethality test using daphnia magna could be included in the Summary of Batch Analysis presented in the 2020 Annual Landfill Operations Report; along with the lethality of effluents to rainbow trout testing.
4.3.13 (b)	The Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Daphnia Magna, Environment Canada, Environmental Protection Series 1/RM/14, December 2000, as amended.			X		Not applicable.	Not applicable. No deviation from corresponding test method has occurred.
4.3.14	The approval holder shall: - Treat any acute lethality test that deviates from the corresponding test method referred to in 4.3.13 as invalid. - Repeat the test as soon as logistically possible.				X	Not applicable.	Not applicable. All testing passed the criteria.
4.3.15	In the event that less than 50% of the rainbow trout survived in the 100% concentration sample, the approval holder shall: - Implement a program immediately to identify the source of the toxicity. - Submit to the Director within 90 days after the test result is available, a proposed program to reduce the toxicity of the runoff.				X	Not applicable.	Verbal confirmation from multiple parties confirming the reports are forwarded to AEP.
4.3.16	The approval holder shall submit the Monthly Runoff and Industrial Wastewater Report in Table 4.3-D to the Director.	X				Monthly Runoff and Industrial Wastewater Report.	Not applicable. Monthly reports contained in annual report, but only need to be submitted with discharges.
4.3.17	The Monthly Runoff and Industrial Wastewater Report shall include, at a minimum, all of the following information:				X	Not applicable.	

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.3.17 (a)	A monthly assessment of the monitoring results relative to the limits in Table 4.3-B.	X				Monthly Runoff and Industrial Wastewater Report.	Included in Report.
4.3.17 (b)	A monthly assessment of the monitoring results relative to the limits in Table 4.3-C.	X				Monthly Runoff and Industrial Wastewater Report.	Included in Report.
4.3.17 (c)	A monthly assessment of the performance of the: - Runoff control system. - Pollution abatement equipment. - Monitoring equipment.	X				Monthly Runoff and Industrial Wastewater Report.	Included in Report.
4.3.17 (d)	A monthly summary of management and disposal of the industrial wastewaters and specified runoff, as per 4.3.6.	X				Monthly Runoff and Industrial Wastewater Report.	Included in Report.
4.3.17 (e)	A monthly summary of management and disposal of runoff in general.	X				Monthly Runoff and Industrial Wastewater Report.	Included in Report.
4.3.17 (f)	A monthly summary of runoff contraventions reported pursuant to 2. 1. 1.	X				Monthly Runoff and Industrial Wastewater Report.	Included in Report.
4.3.17 (g)	Any other information as required in writing by the Director.	X				Monthly Runoff and Industrial Wastewater Report.	Included in Report.
4.3.18	The approval holder shall submit the Annual Runoff and Industrial Wastewater Report in Table 4.3-D to the Director.	X				Annual Runoff and Industrial Wastewater Report.	Verbal confirmation and included with annual report.
4.3.19	The Annual Runoff and Industrial Wastewater Report shall include, at a minimum, all of the following information:			X		Not applicable.	Not applicable. Information only.
4.3.19 (a)	An annual summary assessment of the monitoring results relative to the limits in Table 4.3-B.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.
4.3.19 (b)	An annual summary assessment of the monitoring results relative to the limits in Table 4.3-C.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.
4.3.19 (c)	An annual summary assessment of the performance of the: - Runoff control system. - Pollution abatement equipment. - Monitoring equipment.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.
4.3.19 (d)	An annual summary of management and disposal of the industrial wastewaters and specified runoff, as per 4.3.6.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.
4.3.19 (e)	An annual summary and evaluation of management and disposal of runoff in general.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.
4.3.19 (f)	An annual summary of the results pursuant to 4.3.21.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.3.19 (g)	An annual summary of runoff contraventions reported pursuant to 2. 1. 1.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.
4.3.19 (h)	Any other information as required in writing by the Director.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.
4.3.20	The approval holder shall:				X	Not applicable.	Not applicable. Information only.
4.3.20 (a)	Collect a representative grab sample from the old surface water detention pond at least once per year, prior to decommissioning and reclamation of the pond.				X	Not applicable.	Not applicable. Old surface water detention pond has been decommissioned.
4.3.20 (b)	Collect a representative grab sample from the new surface water detention pond at least once per year.	X				Annual Runoff and Industrial Wastewater Report	Details included in Report.
4.3.20 (c)	Analyze the sample(s) for all of the parameters specified in Table 4.3-E.	X				Annual Runoff and Industrial Wastewater Report	Details included in Report.
4.3.21	The approval holder shall submit the results of the analyses in 4.3.20 to the Director in the Annual Runoff and Industrial Wastewater Report.	X				Annual Runoff and Industrial Wastewater Report	Details included in Report.
Operations							
4.4.1	The approval holder shall only dispose of leachate removed from the leachate collection system by one or more of the following methods:				X	Not applicable.	Not applicable. Information only.
4.4.1 (a)	To facilities holding a current Act authorization to accept such waste.				X	Not applicable.	Not applicable. Option not used by the facility.
4.4.1 (b)	To facilities approved by a local environmental authority outside of Alberta to accept such waste.				X	Not applicable.	Not applicable. Option not used by the facility.
4.4.1 (c)	To a disposal well approved by AER.	X				<ul style="list-style-type: none"> • Alberta Energy Regulator (AER) approval for deep well. • Appendix E of 2020 Annual Report. 	Leachate is hauled to Class I deep well in Calmar. Volume summary included in annual report.
4.4.1 (d)	As per 4.6.51.				X	Not applicable.	Not applicable. Information only.
4.4.2	The approval holder shall only dispose of liquid removed from the leak detection system by one or more of the following methods:				X	Not applicable.	Not applicable. Information only.
4.4.2 (a)	To facilities holding a current Act authorization to accept such waste.				X	Not applicable.	Not applicable. Option not used by the facility.
4.4.2 (b)	To facilities approved by a local environmental authority outside of Alberta to accept such waste.				X	Not applicable.	Not applicable. Option not used by the facility.
4.4.2 (c)	To a disposal well approved by AER.	X				<ul style="list-style-type: none"> • AER approval for deep well. • Appendix E of 2020 Annual Landfill Operations Report. 	Leachate is hauled to Class I deep well in Calmar. Volume summary included in annual report.
4.4.2 (d)	As per 4.6.51.				X	Not applicable.	Option not used by the facility.
Limits							
4.4.3	Subject to 4.4.4, the approval holder shall not exceed the maximum acceptable leachate head in any landfill cell.	X				Leachate Head Level Table.	Leachate levels recorded daily. Field logs for 2020 observed, contain following parameters: - Date, time, condition, level status, personnel initial
4.4.4	Subsequent to a storm event, the leachate head in any landfill cell shall not exceed the maximum acceptable leachate head for more than fourteen (14) days, unless otherwise authorized in writing by the Director.	X				Leachate Head Level Table.	Leachate pumping infrastructure on timers in most cells, (all but Cell 1). A fire January 12, 2020 caused a fire (AEP Reference No. 362650) which destroyed the Cell 2 Leachate building until pumping capacity was restored June 30, 2020. Infrastructure is capable of removing leachate generated from a storm event in fewer than 14 days.
4.4.5	The volume of liquid in the leak detection system, as monitored in Table 4.6-D, shall not exceed the action leakage rate in any landfill cell.		X			2020 Annual Report.	Action Leakage Rate (ALR) Exceedances were noted June 9, 2020, June 10, 2020, July 2, 2020, July 9, 2020. Section 14.6 of the Annual Landfill Operations Report detail several ALR exceedances that were not reported. No negative impacts were observed and clarification of the reporting requirements were made with the Facility Manager to ensure this is not repeated in the future. (AEP 376183)

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
Monitoring and Reporting							
4.4.6	The approval holder shall monitor the leachate collection and leak detection systems as required in Table 4.6-D and for all parameters specified in Table 4.4-A, subject to 4.4.8 and 4.4.9.	X				Primary Leachate Analysis Results Appendix D of 2020 Annual Report.	Leachate levels recorded daily. Field logs for 2020 observed, contain following parameters: • Date, time, condition, level status, personnel initial.
4.4.7	The approval holder shall report to the Director the results of the leachate collection and leak detection systems monitoring as required in Table 4.6-D, including the results of the analyses for all parameters specified in Table 4.4-A, subject to 4.4.8 and 4.4.9.	X				Primary Leachate Analysis Results Appendix D of 2020 Annual Report.	Submitted to AEP.
4.4.8	The requirements in 4.4.6 and 4.4.7 for monitoring and reporting the parameters in Table 4.4-A for leachate shall not apply if insufficient leachate is available for conducting the analyses.				X	Not applicable.	Not applicable. Information only.
4.4.9	The requirements in 4.4.6 and 4.4.7 for monitoring and reporting the parameters in Table 4.4-A for leak detection liquid shall not apply if insufficient leak detection liquid is available for conducting the analyses.				X	Not applicable.	Not applicable. Information only.
4.4.10	If the volume of liquid removed from the leak detection system exceeds the action leakage rate, in addition to reporting pursuant to 2.1.1, the approval holder shall submit a Response Action Plan to the Director within 30 days of the exceedance.	X				2020 Annual Report.	(AEP 376183) links exceedances to excessive rainfall and details steps taken to solve infiltration.
Monitoring and Reporting							
4.5.1	The approval holder shall, unless the approval holder is not granted access by the landowner:				X	Not applicable.	Not applicable. Information only.
4.5.1 (a)	Collect a representative sample from each of the dugouts and each of the water wells, within an approximate 1.6 kilometre radius around the facility.	X				Tetra Tech 2020 Dugout Sampling Program Report, dated March 2, 2021.	Details included in Report.
4.5.1 (b)	Analyze the sample for the parameters listed in Table 4.5-A.	X					Details included in Report.
4.5.2	The monitoring required in 4.5.1 shall be conducted once each year in October unless otherwise authorized in writing by the Director.	X					Details included in Report.
4.5.3	The approval holder shall record the analytical results of the sampling information required in 4.5.1 in an Annual Dugout and Water Well Sampling Program Report.	X					Details included in Report.
4.5.4	The approval holder shall submit the Annual Dugout and Water Well Sampling Program Report to the Director pursuant to 4.6.58(i).	X					Details included in Report.
General							
4.6.1	The approval holder shall not receive, process, dispose of, or perform any combination of the above for any of the following wastes, individually or in any combination, at the places specified below respectively: - Explosives (Class 1 TDGR wastes), at the facility. - Radioactive wastes (Class 7 TDGR wastes), at the facility. - Radioactive wastes regulated under the Nuclear Safety and Control Act (Canada), at the facility. - Biomedical waste, at the facility. - Waste containing free liquids, at the landfill, excluding the waste stabilization area. - Material containing ozone depleting substances, at the landfill. - Municipal solid waste, at the facility. - NORM waste, at the facility.	X				• Field observations. • Discussions with site staff.	Site field observations and verbal confirmation were received regarding materials receipt. Cross checked against Facility Operations Plan and SOPs for individual waste materials. WINWEB system also performs checks on waste compatibility and will issue warnings of any non-conforming waste
4.6.2	Incompatible wastes and incompatible hazardous recyclables shall be prevented from mixing.	X				• Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Landfill Operations (SOPL001). • WIN Web (compatibility workbench).	Relevant Facility SOPs confirm procedures are appropriate to prevent incompatible wastes and recyclables from mixing.
4.6.3	The approval holder shall dispose of wastes generated at the facility only:				X	Not applicable	Information only.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.6.3 (a)	To facilities holding a current Act authorization.	X				Discussions with site staff.	Confirmed that regulations are being followed.
4.6.3 (b)	To facilities approved by a local environmental authority outside of Alberta.	X				Discussions with site staff.	Confirmed that regulations are being followed.
4.6.3 (c)	As otherwise authorized in writing by the Director.	X				Discussions with site staff.	Confirmed that regulations are being followed.
HWRSP Facility							
Operations Plan							
4.6.4	The approval holder shall develop, keep up-to-date, and implement an HWRSP Facility Operations Plan.	X				<ul style="list-style-type: none"> Facility Standard Operating Procedures (SOPs) Operations Plan. 	Most recently dated as February 2021, with annual updates required. In 2020, procedures for Cell 4 added.
4.6.5	The approval holder shall:				X	Not applicable.	Not applicable. Information only.
4.6.5 (a)	Review the HWRSP Facility Operations Plan annually, at a minimum.	X				<ul style="list-style-type: none"> 2020 Annual Report. Operations Plan. 	This is performed in line with the annual reporting required under the Approval.
4.6.5 (b)	Update the HWRSP Facility Operations Plan if any of the following circumstances apply: - There are facility expansions or changes in site operations or equipment. - There is an applicable change to an applicable regulation. - An update is required in writing by the Director.	X				<ul style="list-style-type: none"> 2020 Annual Report. Operations Plan. 	Section 14 added to 2017 Annual Report, addressing HWRSP facility operations.
4.6.6	The approval holder shall retain a copy of the most recent HWRSP Facility Operations Plan at the facility.	X				<ul style="list-style-type: none"> 2020 Annual Report. Operations Plan. 	Held on-site electronically and in hard copy.
4.6.7	The approval holder shall submit a copy of the most recent HWRSP Facility Operations Plan to the Director upon written request from the Director within the timeline specified in writing by the Director.	X				<ul style="list-style-type: none"> 2020 Annual Report. Operations Plan. 	Submitted in the 2020 Annual Report.
4.6.8	If the HWRSP Facility Operations Plan submitted pursuant to 4.6.7 is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.				X	Not applicable.	Not applicable. No response received from AEP on 2020 Annual Report.
4.6.9	The approval holder shall implement the latest HWRSP Facility Operations Plan, unless otherwise authorized in writing by the Director.	X				Operations Plan.	Up to date plan available and utilized.
Operations							
4.6.10	The approval holder shall only transfer wastes and hazardous recyclables at designated transfer areas designed to contain spills and leaks.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Relevant Facility SOPs confirm procedures for transferring wastes in the HWRSP.
4.6.11	The approval holder shall use the following when transferring substances to, from, and between containers, tanks, and trucks:				X	Not applicable.	Not applicable. Information only.
4.6.11 (a)	Couplings equipped with seals that are compatible with the substance transferred.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Reviewed and compliance confirmed during site visit.
4.6.11 (b)	The necessary precautions to prevent spills when the couplings are disconnected.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Reviewed and compliance confirmed during site visit.
4.6.11 (c)	Emergency shut-off valves.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Reviewed and compliance confirmed during site visit.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.6.11 (d)	Established transfer areas and associated curbing, paving and catchment areas.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Reviewed and compliance confirmed during site visit.
4.6.11 (e)	Drip trays to capture potential losses under coupling devices and other connections.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Reviewed and compliance confirmed during site visit.
4.6.11 (f)	Manual inspections of the transfer area for leaks and spills during and after waste transfer.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Reviewed and compliance confirmed during site visit.
4.6.12	All wastes and all hazardous recyclables that are unloaded shall be immediately transferred to the waste storage area.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Reviewed and compliance confirmed during site visit.
4.6.13	All containers and unrinsed empty containers shall be stored in the waste storage area.	X				Field observations.	Confirmed during Site visit.
4.6.14	The approval holder shall:				X	Not applicable.	Not applicable. Information only.
4.6.14 (a)	Provide and maintain an adequate aisle space between containers in the waste storage area to allow inspection and unobstructed movement of personnel, fire protection equipment, spill control equipment and decontamination equipment to any area of the waste storage area.	X				Field observations.	Site field operations consistent with fire code for spacing between containers.
4.6.14 (b)	Arrange inspection aisles in the waste storage area such that the identification label on each container is readable.	X				Field observations.	Identification labels clear for all containers.
4.6.15	All tanks within the tank farm area shall be equipped, at a minimum, with all of the following:				X	Not applicable.	Not applicable. Information only.
4.6.15 (a)	Sensors for detecting the level in each tank.	X				Field observations.	Sensors, alarms, and shut-off devices observed and active for each tank. The aqueous tank within the building does not contain a high level alarm but is not considered part of the tank farm.
4.6.15 (b)	High level alarms that activate when a tank overflow is imminent.	X					
4.6.15 (c)	Automatic shut-off devices or sufficient free board space above the high level sensor to allow operators time to prevent overflow from occurring.	X					
4.6.15 (d)	Earthen dikes or equivalent secondary containment structures capable of containing 110% of the volume of the largest tank within the bermed area plus 10% of the aggregate capacity of all other tanks in the bermed area.	X				Field observations.	Entire waste storage area is the building floor, which is drained to holding tank in central manhole and can be pumped.
4.6.16	All tanks containing hazardous waste and all tanks containing hazardous recyclables in each building shall be equipped, at a minimum, with all of the following:				X	Not applicable.	Not applicable. Information only.
4.6.16 (a)	Sensors or gauges for detecting the level in each tank.	X				Field observations.	Sensors observed and active for tanks.
4.6.16 (b)	A written operating procedure to prevent tank overflow.		X			<ul style="list-style-type: none"> Field observation Bulk Flammable Liquid Transfer SOP 	Bulk Flammable Liquid Transfer SOP Document and Checklist is available (part of Facility SOPs) in office area but is not stored next to tanks.
4.6.16 (c)	Secondary containment structures capable of containing 110% of the volume of the largest tank within the building plus 10% of the aggregate capacity of all other tanks containing hazardous waste and hazardous recyclables in the same building.	X				Field observations.	Secondary containment structures observed in the field.
4.6.17	Hazardous waste and hazardous recyclables stored in containers and tanks shall be stored in accordance with the Hazardous Waste Storage Guidelines, June 1988, Alberta Environment, as amended.	X				<ul style="list-style-type: none"> Field observations. Bulk Flammable Liquid Transfer SOP. 	Facility observed to be following governing regulations.
4.6.18	The approval holder shall only carry out the following activities, individually or in any combination, at the HWRSF Facility in relation to hazardous waste or hazardous recyclables or both:	X				<ul style="list-style-type: none"> Field observations. 	Field observations reviewed the activities that occur on site; which was confirmed through review of the Facility and Landfill
4.6.18 (a)	Commingling of hazardous waste or hazardous recyclables to make maximum use of available container or tank capacity, only if the resultant mixture has the same TDGR hazard classification as any one of the individual components.	X					
4.6.18 (b)	Phase separation by gravity settling, only without the addition of any chemicals designed to accelerate settling.	X					
4.6.18 (c)	Dispersion of solids into liquids by natural or mechanical means, only if the resultant mixture has the same TDGR hazard classification as the original waste.	X					

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.6.18 (d)	Physical segregation of hazardous from non-hazardous articles or components from the same container, only if no process equipment is used.	X				<ul style="list-style-type: none"> Operations Plan. Facility SOPs. 	Operations Plan and Facility SOPs.
4.6.18 (e)	Washing of drums or other objects, only for the purpose of removing hazardous residue.	X					
4.6.18 (f)	Crushing or shredding of used filters, rags, absorbent materials, or empty containers, only for the purpose of volume reduction or liquid recovery, unless otherwise authorized in writing by the Director.	X					
4.6.18 (g)	Treatment of hazardous waste, only as authorized in writing by the Director.	X					
4.6.19	Notwithstanding 4.6.1 B(g), the approval holder shall not incinerate waste at the facility.	X					
Limits							
4.6.20	The approval holder shall not store a total of more than 752,500 litres of hazardous waste or hazardous recyclables or both at the HWRSP Facility at any time.	X				WIN Web inventory management software.	Maximum capacity not exceeded as of September 2, 2021, per the below volumes.
4.6.21	In addition to the storage limits in 4.6.20, the approval holder shall not exceed the waste storage limits as specified in TABLE 4.6-A.	X				WIN Web inventory management software.	Observations of inventory software made on September 2, 2021: <ul style="list-style-type: none"> 254,681 L of all wastes (hazardous and non-hazardous) 64,856 L of hazardous waste in containers (drums) 15,340 L of bulk liquids
4.6.22	Containers other than 205 litre drums shall be prorated to 205 litre drum equivalents based on their nominal volumes, e.g., 10 X 20 litre pails= 1 X 205 litre drum.	X				WIN Web inventory management software.	Software automatically calculates drum equivalents.
4.6.23	The limits referred to in 4.6.20 and 4.6.21 shall be calculated based on the:				X	Not applicable.	Not applicable. Information only.
4.6.23 (a)	Total nominal volumes of all containers, treating all partially filled containers as if they were full.				X	Not applicable.	Not applicable. Information only.
4.6.23 (b)	Total filled capacities of all tanks.				X	Not applicable.	Not applicable. Information only.
Monitoring and Reporting							
4.6.24	The approval holder shall identify, characterize, and classify all waste streams and all hazardous recyclables, generated or received at the HWRSP Facility, not including runoff, industrial wastewater streams and air effluent streams in accordance with the:				X	Not applicable.	Not applicable. Information only.
4.6.24 (i)	Industrial Waste Identification and Management Options, Alberta Environment, May 1996, as amended.			X		Facility and Landfill Operations Report, Section B	The document is not referenced specifically in Landfill Operations Plan, although review of documentation indicates adherence to this standard. Recommended that this be included in the Operations Plan as a specific reference.
4.6.24 (ii)	Alberta User Guide for Waste Managers, Alberta Environment, August 1996, as amended.	X				Facility and Landfill Operations Report, Section B	Referenced in Landfill Operations Plan.
4.6.25	The approval holder shall measure or, when not feasible to measure, estimate, the quantity of each waste and hazardous recyclable identified in 4.6.24 each year.	X				Facility and Landfill Operations Report	Addressed in Appendix A of Operations Report.
4.6.26	The approval holder shall keep a daily total and inventory of all materials being stored at the HWRSP Facility.	X				<ul style="list-style-type: none"> Field observations. Various inventory logs (WIN Web). 	Observed documentation in the field.
4.6.27	The daily total and inventory records in 4.6.26 shall be available at the facility at all times for inspection by the Director or an inspector.	X				<ul style="list-style-type: none"> Field observations. Various inventory logs (WIN Web). 	Available at the time of the audit.
4.6.28	The approval holder shall submit a Monthly Waste Management Report to the Director.	X				<ul style="list-style-type: none"> July 2021 Waste Inventory Report. Discussion with site staff. 	Verbal confirmation that the monthly reports are submitted to AEP. Different documents for internal use and submission confirms submission.
4.6.29	The approval holder shall compile all of the information indicated in Table 4.6-B in the Monthly Waste Management Report which shall contain, at minimum, all of the following information:				X	Not applicable.	Not applicable. Information only.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.6.29 (a)	An opening waste and hazardous recyclables inventory balance in kilograms or litres by waste class or material type.			X		<ul style="list-style-type: none"> July 2021 Waste Inventory Report. Discussion with site staff. 	Compliance confirmed; included in report. The Facility is adhering to the information required in the Monthly Waste Management Report, viewed for July 2021. However the reports are currently referencing the 10348-02-00 Approval. Dillon would recommend that the referenced Approval be updated to 10348-03-00.
4.6.29 (b)	The amount and type of waste and hazardous recyclables received: - Within the province. - From outside of the province.			X			
4.6.29 (c)	The amount and type of waste and hazardous recyclables: - Shipped for recycling or product. - Shipped off-site for disposal. - Disposed on-site.			X			
4.6.29 (d)	Any adjustments, including but not limited to, consolidation, reclassification, losses to processing, spills, volume miscalculations, or any other circumstances, which would affect the mass balance of the monthly inventory report.			X			
4.6.29 (e)	Closing balance in kilograms or litres.			X			
4.6.29 (f)	A summary of contraventions reported pursuant to 2. 1. 1 related to waste and hazardous recyclables.	X				<ul style="list-style-type: none"> July 2021 Waste Inventory Report. Discussion with site staff. 	No contraventions identified in monthly report.
4.6.29 (g)	Any other information as required in writing by the Director.	X				<ul style="list-style-type: none"> July 2021 Waste Inventory Report. Discussion with site staff. 	No additional requirements by AEP.
4.6.30	The approval holder shall compile all the information required by 4.6.24 and 4.6.25 in an Annual Waste Management Summary Report:				X	Not applicable.	Not applicable. Information only.
4.6.30 (a)	As specified in Table 4.6-C.	X				2020 Annual Waste Management Summary - Table 4.6-D, Hazardous Waste Landfilled, included in the 2020 Annual Report.	In Appendix A of Operations Report.
4.6.30 (b)	In accordance with the: - Industrial Waste Identification and Management Options, Alberta Environment, May 1996, as amended. - Alberta User Guide for Waste Managers, Alberta Environment, August 1996, as amended.			X		2020 Annual Waste Management Summary - Table 4.6-D, Hazardous Waste Landfilled, included in the 2020 Annual Report.	The first document is not referenced specifically in Landfill Operations Plan, although review of documentation indicates adherence to this standard. Recommended that this be included in the Operations Plan as a specific reference.
4.6.31	The approval holder shall submit the Annual Waste Management Summary Report to the Director.	X				2020 Annual Waste Management Summary - Table 4.6-D, Hazardous Waste Landfilled, included in the 2020 Annual Report.	Submitted as part of the Annual Report for the Facility.
Landfill							
Operations Plan							
4.6.32	The approval holder shall develop, keep up-to-date, and implement a Landfill Operations Plan that does not contravene with the requirements of this approval.	X				Operations Plan.	Approval requirements are being examined in this checklist.
4.6.33	The approval holder shall:				X	Not applicable.	Not applicable. Information only.
4.6.33 (a)	Review the Landfill Operations Plan annually, at a minimum.	X				Operations Plan.	Revision date on the 2021 Facility and Landfill Operations Plan is February, 2021.
4.6.33 (b)	Update the Landfill Operations Plan if any of the following circumstances apply: - There are facility expansions or changes in site operations or equipment. - There is an applicable change to the Standards for Landfills in Alberta, as amended. - An update is required in writing by the Director. - There is an update to an applicable regulation.	X				Operations Plan.	Updates to the operations plan reflect Cell 4 and Cell 3B changes.
4.6.34	The Landfill Operations Plan shall include, at a minimum, all of the following:				X	Not applicable.	Not applicable. Information only.
4.6.34 (a)	SOP for keeping and maintaining an Operating Record.	X				Operations Plan.	Addressed in section A of Operations Plan.
4.6.34 (b)	SOP for waste control, run-on and runoff controls, and nuisance controls.	X				Operations Plan.	Addressed in section B of Operations Plan.
4.6.34 (c)	SOP for the waste stabilization area operations.	X				Operations Plan.	Addressed in section C of Operations Plan.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.6.34 (d)	SOP for the acceptance, handling and disposal of wastes, including: - Waste characterization and classification at source. - Waste manifesting and tracking. - QA/QC waste acceptance procedures. - Waste sampling.	X				Operations Plan.	Addressed in Sections D of Operations Plan.
4.6.34 (e)	SOP for detecting, preventing and disposal of unauthorized wastes.	X				Operations Plan.	Addressed in Sections E of Operations Plan.
4.6.34 (f)	SOP for placing waste in a landfill cell including: - Working face width. - Lift depth. - Compaction. - Waste placement location using a grid system	X				Operations Plan.	Addressed in Sections F of Operations Plan.
4.6.34 (g)	SOP for managing contaminated sulphur and sulphur containing wastes.	X				Operations Plan.	Addressed in Sections G of Operations Plan.
4.6.34 (h)	SOP for managing asbestos wastes.	X				Operations Plan.	Addressed in Sections H of Operations Plan.
4.6.34 (i)	SOP for placing leachate, leak detection liquid, or other authorized wastes and liquids over the surface of the active landfill area for the purpose of evaporation or dust suppression.	X				Operations Plan.	Addressed in Sections I of Operations Plan.
4.6.34 (j)	An Odour and Fugitive Dust Response Program.	X				Operations Plan.	Addressed in Sections J of Operations Plan, referencing the Fugitive Dust and Odour Best Management Plan in Appendix C.
4.6.34 (k)	A Fugitive Dust and Odour Best Management Plan.	X				Operations Plan.	Addressed in Sections K of Operations Plan, referencing the Fugitive Dust and Odour Best Management Plan in Appendix C.
4.6.34 (l)	A runoff and industrial wastewater monitoring and management program.	X				Operations Plan.	Addressed in Sections L of Operations Plan.
4.6.34 (m)	A leachate monitoring and management program.	X				• Operations Plan. • SOPL002-003 Landfill Leachate System.	Addressed in Sections M of Operations Plan.
4.6.34 (n)	A leak detection liquid monitoring and management program.	X				• Operations Plan. • SOPL002-003 Landfill Leachate System.	Addressed in Sections M/N of Operations Plan.
4.6.34 (o)	A groundwater monitoring program.	X				Operations Plan.	Addressed in Sections O of Operations Plan.
4.6.34 (p)	A Remediation Plan to deal with groundwater quality deterioration.	X				Groundwater Remediation Plan.	Addressed in Sections P of Operations Plan.
4.6.34 (q)	A soil monitoring program.	X				Operations Plan.	Addressed in Sections Q of Operations Plan. Submitted in late 2019 and the first soil monitoring program report was submitted to AEP on January 31, 2020.
4.6.34 (r)	A soil management program.	X				Operations Plan.	Addressed in Sections R of Operations Plan. Confirmation of acceptance from AEP September 18, 2020.
4.6.34 (s)	A landfill cell cover system.	X				Operations Plan.	Addressed in Sections S of Operations Plan. Cell cover system is prepared by consultants and conforms to provincial regulations.
4.6.34 (t)	A monitoring and maintenance program for the scale house and heavy operational equipment.	X				• Operations Plan. • Maintenance Dashboard. • Scale maintenance records	Addressed in Sections T of Operations Plan. Scales calibrated twice per year, maintenance program in place.
4.6.34 (u)	A health and safety program.	X				Health and Safety Program.	Addressed in Sections U of Operations Plan. Health and Safety program in place, training records are kept accounted for, and notifications when training comes due. Employees sign-off on Health and Safety program.
4.6.34 (v)	An emergency response program, including SOP for handling fires, substance releases to the environment, and health concerns.	X				Contingency Plan in Appendix A of the Operations Plan.	Addressed in Sections V of Operations Plan, referencing the facility's Contingency Plan in Appendix A. A system exists to track each employees training and provides management with information such as: training expiring, which training each employee requires, etc.
4.6.34 (w)	An up-to-date plan of the landfill layout with survey records showing the location of all infrastructure components of the landfill including final cover elevations and contours.	X				Operations Plan.	Addressed in Section W of Operations Plan, referencing Appendix D.
4.6.35	The approval holder shall retain a copy of the most recent Landfill Operations Plan at the facility.	X				Operations Plan.	Hard copy of 2021 Operations Plan viewed
4.6.36	The approval holder shall submit to the Director the most recent Landfill Operations Plan when requested in writing by the Director within the timeline specified in writing by the Director.	X				Discussions with site staff.	Compliance confirmed; submitted annually.
4.6.37	The approval holder shall correct all deficiencies in the Landfill Operations Plan submitted pursuant to 4.6.36, as outlined in writing by the Director, within the timeline specified in writing by the Director.				X	Not applicable.	Not applicable. Information only.
4.6.38	The approval holder shall implement the latest Landfill Operations Plan, unless otherwise authorized in writing by the Director.	X				Operations Plan.	2021 Operations Plan observed.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
Operations							
4.6.39	The approval holder shall classify all materials entering the landfill in accordance with the:				X	Not applicable.	Not applicable. Information only.
4.6.39 (a)	Waste Control Regulation (AR 192196).	X				Operations Plan, Section B.	Referenced in Landfill Operations Plan.
4.6.39 (b)	Industrial Waste Identification and Management Options, Alberta Environment, May 1996, as amended.			X		Operations Plan.	The document is not referenced specifically in Landfill Operations Plan, although review of documentation indicates adherence to this standard. Recommended that this be included in the Operations Plan as a specific reference.
4.6.39 (c)	Alberta User Guide for Waste Managers, May 1995, as amended.	X				Operations Plan, Section B.	Referenced in Landfill Operations Plan.
4.6.40	The approval holder shall obtain a detailed representative physical and chemical analysis of a waste prior to disposal of the waste into the landfill at the following times, at a minimum:				X	Not applicable.	Not applicable. Information only.
4.6.40 (a)	The first time a waste is received from a new generator.	X				• Operations Plan, Sections B-D • Waste Profile from WIN Web viewed.	Compliance confirmed: • Procedures and acceptance criteria in the Landfill Operations Plan are compliant with Approval. • All waste profiles renewed annually, either by customers or Clean Harbors on-site.
4.6.40 (b)	The first time a delivery is received from a different process associated with a known waste generator.	X					
4.6.40 (c)	The first time a waste is received from a different location associated with a known waste generator.	X					
4.6.40 (d)	When the nature or composition of the waste that was previously characterized by the generator changes.	X					
4.6.41	The approval holder shall not dispose of hazardous waste in any Class II landfill cell.				X	Not applicable.	Not applicable. The site is not a Class II landfill.
4.6.42	The approval holder shall:				X	Not applicable.	Not applicable. Information only.
4.6.42 (a)	Only carry out waste stabilization or solidification or both within the waste stabilization area.	X				Site field observations.	Solidification and waste stabilization activities consistent with Approval requirements during field observations.
4.6.42 (b)	Not transfer waste from the waste stabilization area to the Class I landfill cell before the waste stabilization or solidification or both have completed.	X					
4.6.43	The approval holder shall only dispose of any liquid collected within the waste stabilization area by one or more of the following methods:				X	Not applicable.	Not applicable. Information only.
4.6.43 (a)	To facilities holding a current Act authorization to accept such waste.				X	Not applicable.	Not applicable. This option not used by the facility.
4.6.43 (b)	To facilities approved by a local environmental authority outside of Alberta to accept such waste.				X	Not applicable.	Not applicable. This option not used by the facility.
4.6.43 (c)	To a disposal well approved by AER.or	X				AER approval for deep well.	• Liquid waste is hauled to Class I deep well in Calmar. • AER approval for deep well (leased from Seller's Oilfield Services to CH) observed. Approval No. WM 077 A, dated July 25, 2011.
4.6.43 (d)	As otherwise authorized in writing by the Director.				X	Not applicable.	Option not used by the Facility.
4.6.44	The approval holder shall conduct:				X	Not applicable.	Not applicable. Information only.
4.6.44 (a)	Annually, in-house visual inspections for corrosion.	X				Discussion with site staff.	Confirmed that annual visual inspections performed.
4.6.44 (b)	Biennially, ultrasonic testing to monitor thickness of the steel plate liner of the stabilization pits in the waste stabilization area, unless otherwise authorized in writing by the Director.	X				Inspection report from Integrity Testing Services Inc., dated August 2021.	Performed yearly, tracked by compliance calendar.
4.6.45	The approval holder shall dispose of asbestos wastes in accordance with "Guidelines for the Disposal of Asbestos Waste": Environmental Protection Services, Alberta Environment, 1989, as amended.	X				Operations Plan, Section H.	Referenced in Landfill Operations Plan.
4.6.46	The approval holder shall dispose of sulphur waste in accordance with "Guidelines for Landfill Disposal of Sulphur Wastes and Remediation of Sulphur Containing Soils", Alberta Environment, 2011, as amended.	X				Operations Plan, Section G.	Referenced in Landfill Operations Plan.
4.6.47	The approval holder shall only dispose of wastes that the landfill is not authorized to dispose of:				X	Not applicable.	Not applicable. Information only.
4.6.47 (a)	To facilities holding a current Act authorization.	X				Discussion with site staff.	Compliance confirmed. All waste receipts are screened at the site entry scale and any non-authorized loads, as determined through manifest, are rejected.
4.6.47 (b)	To facilities approved by a local environmental authority outside of Alberta. Or:	X					
4.6.47 (c)	As otherwise authorized in writing by the Director.	X					
4.6.48	If an unauthorized waste is received at the landfill, the approval holder shall remove the waste from the landfill within seven (7) days of the receipt, unless otherwise authorized in writing by the Director.				X	Not applicable.	Not applicable. Not observed during the audit. Non authorized waste not received in the landfill.
4.6.49	The approval holder shall restrict the working face of each landfill cell to the smallest practical area.				X		
4.6.50	For any waste disposed of at the landfill that is subject to wind dispersal, the approval holder shall:				X		
4.6.50 (a)	Wet the waste to prevent dispersal of particulate matter.or	X				Operations Plan, Appendix C (Fugitive Dust and Odour Best Management Plan).	Documents reviewed have procedures for managing dust and particulate matter through waste placement in landfill and in waste stabilization.
4.6.50 (b)	Immediately apply cover on top of the waste to minimize entrainment of particulate matter.	X					

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.6.51	Notwithstanding 4.6.1 (v), the approval holder may place any of the following wastes over the surface of the active landfill area for the purpose of dust suppression, provided that placement of such wastes will not cause offensive odours:	X				Discussion with site staff.	Compliance confirmed. Pond water for dust suppression. Leachate is never used due to odour.
4.6.51 (a)	Specified runoff.				X		
4.6.51 (b)	Leachate.				X		
4.6.51 (c)	Leak detection liquid.				X		
4.6.51 (d)	Sump waste of car wash bays or similar operations.				X	Not applicable.	Not applicable. Pond water is used for dust suppression only.
4.6.51 (e)	Waste from hydrovac excavation operations.				X		
4.6.51 (f)	Any other waste authorized by the Alberta User Guide for Waste Managers, May 1995, as amended.				X		
4.6.52	The approval holder shall inspect the landfill, at a minimum:				X	Not applicable.	Not applicable. Information only.
4.6.52 (a)	Weekly.	X					
4.6.52 (b)	Immediately after each storm event to: - Detect evidence of deterioration of any infrastructure components, including the composite liner. - Detect any malfunction or improper operation of the run-on and runoff control systems, leachate collection system, or leak detection system. - Take corrective measures to repair any damage to infrastructure components, including the composite liner.	X				<ul style="list-style-type: none"> Discussion with site staff. September 1, 2021 daily inspection record. 	Compliance confirmed through review of inspection record.
4.6.53	The approval holder shall do the following, the Director in writing along with any corrective measures taken or proposed:				X	Not applicable.	Not applicable. Information only.
4.6.53 (a)	Keep a record of inspections conducted pursuant to 4.6.52.	X					
4.6.53 (b)	Have the record of inspections available for review upon written request from the Director.	X				Landfill inspection records.	Compliance confirmed through review of electronic records.
4.6.53 (c)	Immediately report any deficiencies detected by the inspection in 4.6.52 to the Director in writing along with any corrective measures taken or proposed	X				Landfill inspection records.	Reported if there is a contravention. If not, a work ticket is created and the issue is fixed.
4.6.54	The approval holder shall not stockpile waste exceeding the maximum designated waste elevation of the landfill for a period of more than two (2) weeks, unless otherwise authorized in writing by the Director.	X				Site survey, dated January 4, 2021.	The site is surveyed twice per year, and no contours exceed the maximum designated waste elevation.
4.6.55	The approval holder shall take all practical measures to prevent off-site tracking of waste from vehicles and equipment leaving the facility.	X				Discussion with site staff.	Mud and waste tracking from the haul trucks is addressed as needed.
Monitoring and Reporting							
4.6.56	The approval holder shall monitor the landfill operations as required in Table 4.6-D.	X				2020 Annual Report.	All criteria in Table 4.6-D is included.
4.6.57	The approval holder shall report to the Director the results of the landfill operations monitoring as required in Table 4.6-D.	X				2020 Annual Report.	Submitted to AEP.
4.6.58	The Annual Landfill Operations Report required in Table 4.6-D shall include, at a minimum, all of the following:				X	Not applicable.	Not applicable. Information only.
4.6.58 (a)	the name and contact information of the person responsible for the facility.	X				2020 Annual Report.	Addressed in Section 2.0 of Annual Report.
4.6.58 (b)	A summary of all information collected as required in Table 4.6-D.	X				2020 Annual Report.	Addressed in Section 3.0 of Annual Report.
4.6.58 (c)	A summary of the results of any audit conducted in accordance with 4.1.7.	X				2020 Annual Report.	2018 Triennial Compliance Audit included in Appendix D of Annual Report.
4.6.58 (d)	A summary of the operations of the waste stabilization area.	X				2020 Annual Report.	Addressed in Section 5.0 and Appendix I of Annual Report.
4.6.58 (e)	A summary of the performance of the run-on and runoff control systems, including a comparison to the limits in Tables 4.3-8 and 4.3-C.	X				2020 Annual Report.	Addressed in Section 6.0 of Annual Report.
4.6.58 (f)	A summary of the performance of the leachate collection system, including a comparison to the maximum acceptable leachate head.	X				2020 Annual Report.	Addressed in Section 7.0 of Annual Report.
4.6.58 (g)	A summary of the performance of the leak detection system, including a comparison to the action leakage rate limit.	X				2020 Annual Report.	Addressed in Section 8.0 of Annual Report.
4.6.58 (h)	The Response Action Plan for the leak detection system pursuant to 4.4.1 O.	X				2020 Annual Report.	Addressed in Section 9.0 and Appendix J of Annual Report.
4.6.58 (i)	The Annual Dugout and Water Well Sampling Program Report pursuant to 4.5.4.	X				2020 Annual Report.	Addressed in Section 10.0 Appendix K of Annual Report.
4.6.58 (j)	A summary of all revisions to the Landfill Operations Plan pursuant to 4.6.33(b).	X				2020 Annual Report.	Addressed in Section 11.0 and Appendix L of Annual Report.
4.6.58 (k)	Any groundwater remedial action taken pursuant to 4.6.34(p).	X				2020 Annual Report.	Addressed in Section 12.0 of Annual Report.
4.6.58 (l)	A summary of records of landfill inspections pursuant to 4.6.53.	X				2020 Annual Report.	Addressed in Section 13.0 and Appendix M of Annual Report.
4.6.58 (m)	A summary of: - Operational issues encountered. - Emergencies occurred. - Measures or actions taken.	X				2020 Annual Report.	Addressed in Section 14.0 of Annual Report.
4.6.58 (n)	A summary of records of: - Public complaints. - The approval holder's responses	X				2020 Annual Report.	Addressed in Section 15.0 and Appendix Q of Annual Report.

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		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.6.58 (o)	An up-to-date financial security estimate pursuant to 5.1.2.	X				2020 Annual Report.	Addressed in Section 16.0 and Appendix N of Annual Report.
4.6.58 (p)	An updated site development plan showing the status of the landfill progression at the end of the operating year, including but not limited to: - Contour mapping. - The location of active and inactive disposal areas. - Areas where a final cover has been placed. - The location of new landfill cell(s) constructed.	X				2020 Annual Report.	Addressed in Section 17.0 and Appendix O of Annual Report.
4.6.58 (q)	The Annual Landfill Cell Closure Report pursuant to 7.1.7.	X				2020 Annual Report.	Addressed in Section 18.0 Appendix P of Annual Report.
4.6.58 (r)	A summary of contraventions reported pursuant to 2.1.1 related to landfill operations.	X				2020 Annual Report.	Addressed in Section 19.0 Appendix Q of Annual Report.
4.6.58 (s)	Any other information as required in writing by the Director.	X				2020 Annual Report.	Addressed in Section 20 of Annual Report. No additional information was required by the Director.
4.6.59	The approval holder shall submit the Annual Landfill Operations Report to the Director.	X				Discussion with site staff.	Confirmation of submission prior to deadline (March 24, 2021 for last items).
Operations							
4.7.1	The approval holder shall not release any substances from the domestic wastewater system to the surrounding watershed except as authorized by this approval.	X				Discussion with site staff.	Wastewater is directed to an isolated holding tank.
4.7.2	The approval holder shall direct all domestic wastewater to the domestic wastewater system.	X					
4.7.3	The approval holder shall only dispose of substances from the domestic wastewater system:				X	Not applicable.	Not applicable. Information only.
4.7.3 (a)	To facilities holding a current Act authorization.	X					
4.7.3 (b)	To facilities approved by a local environmental authority outside of Alberta or	X				Discussion with site staff.	Wastewater from holding tank taken across the street to authorized treatment lagoon (Contractor).
4.7.3 (c)	As otherwise authorized in writing by the Director.	X					
Not used at this time.							
Monitoring							
4.9.1	The approval holder shall continue to implement the existing Groundwater Monitoring Program as authorized in writing by the Director, unless and until otherwise authorized in writing by the Director pursuant to 4.9.4.	X				Tetra Tech 2020 Groundwater Monitoring Program, dated March 2, 2020.	Groundwater reporting is being conducted in conformance with the Groundwater Monitoring Program.
4.9.2	The approval holder shall submit a revised Groundwater Monitoring Program to the Director on or before September 30, 2017, unless otherwise authorized in writing by the Director.	X				Discussion with site staff.	Submitted before the September 30th, 2017 deadline.
4.9.3	If the revised Groundwater Monitoring Program submitted pursuant to 4.9.2 is found deficient by the Director, the approval holder shall correct all deficiencies as outlined in writing by the Director within the timeline specified in writing by the Director.	X				Discussion with site staff.	AEP did not identify any deficiencies with the program.
4.9.4	The approval holder shall implement the revised Groundwater Monitoring Program submitted pursuant to 4.9.2 as authorized in writing by the Director within the timeline specified in writing by the Director.	X				Discussion with site staff.	Implemented after submittal.
4.9.5	The approval holder shall:				X	Not applicable.	Not applicable. Information only.
4.9.5 (a)	Collect a representative groundwater sample from each of the groundwater monitor wells specified in the Groundwater Monitoring Program, including the groundwater monitoring wells designated as points of compliance.	X				Tetra Tech 2020 Groundwater Monitoring Program, dated March 2, 2020.	Compliance confirmed; all wells in monitoring program are sampled.
4.9.5 (b)	Analyze each sample for the parameters listed in Table 4.9-A.	X					Compliance confirmed; all parameters are sampled for.
4.9.6	The monitoring required in 4.9.5 shall be conducted at the following frequencies, unless otherwise authorized in writing by the Director:				X	Not applicable.	Not applicable. Information only.
4.9.6 (a)	A minimum of once per year during each of the active landfill life, landfill cell closure, final landfill closure, and post-closure periods.	X				Tetra Tech 2020 Groundwater Monitoring Program, dated March 2, 2020.	Compliance confirmed; groundwater is monitored once per year.
4.9.6 (b)	A minimum of four times per year following detection of leachate constituents in groundwater at levels above those specified in 4.9.7, and until the levels specified in 4.9.7 have been met.	X				Discussion with site staff.	Compliance confirmed; no leachate constituents have ever been found.
4.9.7	The groundwater quality in the monitoring wells, designated as points of compliance in the Groundwater Monitoring Program, shall not exceed the higher of:				X	Not applicable.	Not applicable. Information only.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.9.7 (a)	The objectives established in the water quality objectives in the Canadian Environmental Quality Guidelines (CEQG) for drinking water published by the Canadian Council of Ministers of the Environment (CCME), as amended.	X				Tetra Tech 2020 Groundwater Monitoring Program, dated March 2, 2020.	Several exceedances noted in GW report, however these are due to the natural composition of the groundwater in the area.
4.9.7 (b)	Background groundwater chemistry as determined through a statistical analysis, as a derived alternate groundwater performance standard.	X					
4.9.8	The approval holder shall implement the Remediation Plan as specified in the Landfill Operations Plan, when groundwater quality exceeds the groundwater performance criteria in 4.9.7.				X		Remediation Plan has not been required to be implemented. Exceedances are normal for the groundwater in the area.
4.9.9	The samples extracted from the groundwater monitor wells shall be collected using scientifically acceptable purging, sampling and preservation procedures so that a representative groundwater sample is obtained.	X				2020 GW Monitoring Report, dated March 2, 2021 from Tetra Tech	Compliance confirmed; acceptable procedures are being followed.
4.9.10	The approval holder shall for all groundwater monitoring wells:				X	Not applicable.	Not applicable. Information only.
4.9.10 (a)	Protect from damage.	X				Field observations.	Compliance confirmed; all wells were observed to be protected and locked.
4.9.10 (b)	Keep locked except when being sampled.	X					
4.9.11	If a representative groundwater sample cannot be collected because the groundwater monitoring well is damaged or is no longer capable of producing a representative groundwater sample, the approval holder shall:				X	Not applicable.	Not applicable. Information only.
4.9.11 (a)	Clean, repair or replace the groundwater monitoring well.				X	Not applicable.	Not applicable. No damaged or non-functional wells.
4.9.11 (b)	Collect and analyse a representative groundwater sample prior to the next scheduled sampling event.	X				Tetra Tech 2020 Groundwater Monitoring Program, dated March 2, 2020.	Compliance confirmed; groundwater monitoring consistent with schedule.
4.9.12	In addition to the sampling information recorded in 2.2.1, the approval holder shall record the following sampling information for all groundwater samples collected:				X	Not applicable.	Not applicable. Information only.
4.9.12 (a)	A description of purging and sampling procedures.	X				Tetra Tech 2020 Groundwater Monitoring Program, dated March 2, 2020.	Refer to Section 5.2.
4.9.12 (b)	The static elevations above sea level, and depth below ground surface of fluid phases in the groundwater monitoring well prior to purging.	X					Compliance confirmed; groundwater levels were recorded.
4.9.12 (c)	The temperature of each sample at the time of sampling.	X					Compliance confirmed; temperature was recorded at the time of sampling.
4.9.12 (d)	The pH of each sample at the time of sampling.	X					Compliance confirmed; pH was recorded at the time of sampling.
4.9.12 (e)	The specific conductance of each sample at the time of sampling.	X					Compliance confirmed; recorded as mS at the time of sampling.
4.9.13	The approval holder shall carry out remediation of the groundwater in accordance with the following:				X	Not applicable.	Not applicable. Information only.
4.9.13 (a)	Alberta Tier 1 Soil and Groundwater Remediation Guidelines, Alberta Environment, February 2009, as amended.				X		Not applicable. Groundwater remediation has not been deemed necessary.
4.9.13 (b)	Alberta Tier 2 Soil and Groundwater Remediation Guidelines, Alberta Environment, February 2009, as amended.				X		
Reporting							
4.9.14	The approval holder shall compile an Annual Groundwater Monitoring Program Report which shall include, at a minimum, all of the following information:				X	Not applicable.	Not applicable. Information only.

Section 4 - Operations

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.9.14 (a)	A completed Record of Site Condition Form, Alberta Environment, 2009, as amended.	X					
4.9.14 (b)	A legal land description of the facility and a map illustrating the facility boundaries.	X					
4.9.14 (c)	A topographic map of the facility.	X					
4.9.14 (d)	A description of the industrial activity and processes.	X					
4.9.14 (e)	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 1.6 kilometre radius of the facility.	X					
4.9.14 (f)	A general hydrogeological characterization of the region within a five kilometre radius of the facility.	X					
4.9.14 (g)	A detailed hydrogeological characterization of the facility, including an interpretation of groundwater flow patterns.	X					
4.9.14 (h)	Cross-sections showing depth to water table, patterns of groundwater movement and hydraulic gradients at the facility.	X					
4.9.14 (i)	Borehole logs and completion details for groundwater monitoring wells.	X					
4.9.14 (j)	A map showing locations of all known buried channels within at least five kilometre of the facility.	X				<ul style="list-style-type: none"> • Tetra Tech 2019 Groundwater Monitoring Program, dated March 10, 2020. • Tetra Tech 2020 Groundwater Monitoring Program, dated March 2, 2020. 	Compliance confirmed through a review of the report. Submission to AEP confirmed through review of correspondence.
4.9.14 (k)	A map of surface drainage within the facility and surrounding area to include nearby water bodies.	X					
4.9.14 (l)	A map of groundwater monitoring well locations and a table summarizing the existing groundwater monitoring program for the facility.	X					
4.9.14 (m)	A summary of any changes to the groundwater monitoring program made since the last groundwater monitoring report.	X					
4.9.14 (n)	Analytical data recorded as required in 4.9.5 and 4.9.11(b).	X					
4.9.14 (o)	A summary of fluid elevations recorded as required in 4.9.12(b) and an interpretation of changes in fluid elevations.	X					
4.9.14 (p)	An interpretation of QA/QC program results.	X					
4.9.14 (q)	An interpretation of all the data in this report, including the following: - Diagrams indicating the location and extent of any contamination. - A description of probable sources of contamination. - A site map showing the location and type of current and historical potential sources of groundwater contamination	X					
4.9.14 (v)	Recommendations for: - Changes to the groundwater monitoring program to make it more effective. - Remediation, risk assessment or risk management of contamination identified.	X					
4.9.15	The approval holder shall submit the Annual Groundwater Monitoring Program Report to the Director.	X					
4.9.16	If the Annual Groundwater Monitoring Program Report is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director, within the timeline specified in writing by the Director.				X	Not applicable.	Not applicable. AEP did not identify any deficiencies.
4.10.1	In addition to any other requirements specified in this approval, the approval holder shall conduct all of the following activities related to soil monitoring and soil management required by this approval in accordance with the Soil Monitoring Directive, Alberta Environment, 2009, as amended:	X				Tetra Tech 2017 Soil Management Program Proposal, including Soil Monitoring Program.	Compliance confirmed: • March 21, 2017 - Soil Management Program Proposal (incl. monitoring program submitted to AEP). • September 11, 2017 - Supplemental Information to Soil Management Program Proposal (revisions), submitted to AEP. • September 13, 2017 - Approval letter from AEP regarding Soil Management Program Proposal.
4.10.1 (a)	Designing and developing proposals for the Soil Monitoring Program.	X					
4.10.1 (b)	Designing and developing proposals for the Soil Management Program.	X					
4.10.1 (c)	All other actions, including sampling, analysing, and reporting, associated with the Soil Monitoring Program.	X				Tetra Tech 2019 Soil Monitoring Program Report, dated January 31, 2020.	Actions in program reflect the 2019 Soil Monitoring Program Proposal and Deficiency Response Letter.
4.10.1 (d)	All other actions, including sampling, analysing and reporting, associated with the Soil Management Program.	X				Tetra Tech 2019 Soil Monitoring Program Report, dated January 31, 2020.	Actions in program reflect the 2019 Soil Monitoring Program Proposal and Deficiency Response Letter.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
Soil Monitoring and Reporting							
4.10.2	The approval holder shall submit the Soil Monitoring Program proposal to the Director according to the following schedule: - For the first soil monitoring event on or before January 31, 2019. - For the second soil monitoring event on or before January 31, 2024.	X				Tetra Tech 2017 Soil Management Program Proposal, including Soil Monitoring Program.	Compliance confirmed: • March 21, 2017 - Soil Management Program Proposal (incl. monitoring program submitted to AEP). • September 11, 2017 - Supplemental Information to Soil Management Program Proposal (revisions), submitted to AEP. • September 13, 2017 - Approval letter from AEP regarding Soil Management Program Proposal.
4.10.3	If any Soil Monitoring Program proposal is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.	X					
4.10.4	Subject to 4.10.3, the approval holder shall implement the Soil Monitoring Program as authorized in writing by the Director.	X				Tetra Tech 2019 Soil Monitoring Program.	Confirmed that this was completed in Fall 2019.
4.10.5	If an authorization or a deficiency letter is not issued within 120 days of the applicable date required by 4.10.2, the approval holder shall implement the Soil Monitoring Program in accordance with the program as set out in the proposal submitted by the approval holder and within 270 days after the applicable date required by 4.10.2	X				Tetra Tech 2019 Soil Monitoring Program.	Confirmed that this was completed in Fall 2019.
4.10.6	The approval holder shall submit to the Director each Soil Monitoring Program Report obtained from the soil monitoring referred to in 4.10.4 and 4.10.5 according to the following schedule:	X				Tetra Tech 2019 Soil Monitoring Program.	Confirmed that this was completed in Fall 2019.
4.10.6 (a)	For the first Soil Monitoring Program Report on or before January 31, 2020.	X				Tetra Tech 2019 Soil Monitoring Program Report, dated January 31, 2020.	Submit to the AEP on time, January 31, 2020
4.10.6 (b)	For the second Soil Monitoring Program Report on or before January 31, 2025.				X	Not applicable.	Not applicable. To be completed in the summer of 2024.
4.10.7	If any Soil Monitoring Program Report is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.	X				Tetra Tech 2019 Soil Monitoring Program Report, dated January 31, 2020.	Actions in program reflect the 2019 Soil Monitoring Program Proposal and Deficiency Response Letter.
Soil Management Program							
4.10.8	If the Soil Monitoring Program, or any other soil monitoring, reveals that there are substances present in the soil at concentrations greater than any of the applicable concentrations set out in the standards in the Soil Monitoring Directive, Alberta Environment, 2009, as amended, the approval holder shall develop a Soil Management Program Proposal.	X				• Tetra Tech 2017 Soil Management Program Proposal, including Soil Monitoring Program. • Tetra Tech Soil Management Program 2017 Cell 4 Soil Sampling, dated March 12, 2018.	Soil Management Program Proposal was developed and compliance was confirmed through a review.
4.10.9	If a Soil Management Program Proposal is required pursuant to 4.10.8, the approval holder shall submit a Soil Management Program Proposal to the Director according to the following schedule:				X	Not applicable.	Not applicable. Information only
4.10.9 (a)	For Soil Management Program Proposal that is triggered by the findings from the first soil monitoring event on or before the date in 4.10.6(a).	X				Soil Management Program - 2017 Cell 4 Soil Sampling	Updated Soil Management Plan and recommendations are being followed by consultant.
4.10.9 (b)	For Soil Management Program Proposal that is triggered by the findings from a second soil monitoring event on or before the date in 4.10.6(b).	X				Soil Management Program - 2017 Cell 4 Soil Sampling	Updated Soil Management Plan and recommendations are being followed by consultant.
4.10.9 (c)	For any other soil monitoring event not specified in this approval within six months of completion of the soil monitoring event.				X	Not applicable.	Not applicable. Information only
4.10.10	If any Soil Management Program Proposal is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.	X				Soil Management Program - 2017 Cell 4 Soil Sampling	Updated Soil Management Plan and recommendations are being followed by consultant.
4.10.11	The approval holder shall implement the Soil Management Program as authorized in writing by the Director.	X				Soil Management Program - 2017 Cell 4 Soil Sampling	Updated Soil Management Plan and recommendations are being followed by consultant.
4.10.12	If the approval holder is required to implement a Soil Management Program pursuant to 4.10.11, the approval holder shall submit a written Soil Management Program Report to the Director on or before March 31 of each year following the year in which the information was collected.	X				Soil Management Program - 2017 Cell 4 Soil Sampling	Updated Soil Management Plan and recommendations are being followed by consultant.
4.10.13	If any Soil Management Program Report is found deficient by the Director, the approval holder shall correct all deficiencies identified by the Director by the date specified in writing by the Director.				X	Not applicable.	Not applicable. No deficiencies identified by the Director.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.1.1	The geographic boundaries of the landfill has been maintained to that located within SE ¼ of Section 9, Township 50, Range 17, West of the 4 th Meridian.	X				<ul style="list-style-type: none"> 2020 Annual Report Field observations. 	Confirmed that landfill is within the approved boundary.
4.1.2	The waste elevation of the landfill has not exceeded the maximum designated waste elevation.	X				Cell 3B Landfill Capping Top of Final Cover Elevations, Figure No. 3 in Dillon Annual Landfill Cell Closure Report (Cell 3B), dated March 2021.	<ul style="list-style-type: none"> Maximum elevation, per Part 1 (ggg) (definitions) is 714 masl. Most recent closure was Cell 3B, which is also the highest. Maximum elevation observed in final cover was 713.15 masl.
4.1.3	Access to the facility has been restricted to only authorized personnel.	X				Field observations.	<ul style="list-style-type: none"> Visitor sign in sheet at front desk. Scale house reporting for all vehicles. Security cameras on-site. Gated access.
4.1.4	A 24 hour "HOTLINE" number has been maintained for prompt response during an emergency.			X		Field observations.	A hotline is maintained but not posted at gate or office entrance. Hotline is 780-690-0614.
4.1.5	The approval owner shall operate and maintain the integrity of the following waste management facilities at the facility:				X		Not applicable. Information only.
4.1.5 (i)	HWRSP Facility	X					Confirmed during field inspection.
4.1.5 (ii)	Class I and II landfill, including Class I and II cells and waste stabilization areas.			X			Observed ponding in roadways near potable water tanks, which can be managed on an ongoing basis.
4.1.5 (iii)	Waste storage areas.	X					Confirmed during field inspection.
4.1.6	The approval holder shall operate and maintain the integrity of the following infrastructure components at the facility:				X		Not applicable. Information only.
4.1.6 (i)	Composite liner	X				<ul style="list-style-type: none"> 2020 Annual Report. Field observations. 	Confirmed during field inspection.
4.1.6 (ii)	Leachate collection system	X					Confirmed during field inspection.
4.1.6 (iii)	Leak detection system	X					Confirmed during field inspection.
4.1.6 (iv)	Run-on control system	X					Confirmed during field inspection.
4.1.6 (v)	Run-off control system	X					Confirmed during field inspection.
4.1.6 (vi)	Groundwater monitoring wells	X					<ul style="list-style-type: none"> Confirmed well MW-10 (near waste storage and HWRSP Facility) has been repaired and locked. All other wells were observed to be protected and locked.
4.1.6 (vii)	Weigh scale	X					Weigh scale is operational.
4.1.6 (viii)	Site access control	X				Field observations.	Confirmed that sign-in procedures in place, doors locked, etc.
Facility Audit							
4.1.7	The approval holder shall cause the facility to be audited by an independent third-party environmental consultant to assess compliance with the terms and conditions of this approval, commencing on or before October 1, 2018.	X				<ul style="list-style-type: none"> 2018 Compliance Audit Report. 2021 Compliance Audit Report. 	Compliance confirmed.
4.1.8	The approval holder shall submit the audit report required in 4.1.7 in the Annual Landfill Operations Report.	X				2020 Annual Report.	Reviewed the 2020 Annual Landfill Operations Report and confirmed previous Audit was included.
4.1.9	The requirements in 4.1.7 and 4.1.8 do not relieve the approval holder of any duty under the Act, or its associated regulations, or this approval.				X	Not applicable.	Not applicable. Information only.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
Operations							
4.2.1	The approval holder shall not release any air effluent streams to the atmosphere except as authorized by this approval.				X	Not applicable.	Not applicable. Information only.
4.2.2	The approval holder shall only release air effluent streams to the atmosphere from the following sources: - Scrubber exhaust stack - Drum Processing Building exhaust vent - Staging Building exhaust vent - Administrative Building exhaust vents - Laboratory fume hood and exhaust vents - Maintenance Shop equipment and exhaust vents - Leachate Collection Tanks exhaust vents - Leachate transfer lines passive gas vents - Any other source authorized in writing by the Director	X				Field observations.	<ul style="list-style-type: none"> No other sources not listed in the approval. Requested in Approval Amendment (pending) to do quenching emulsions, only if non-toxic gases are emitted.
4.2.3	The approval holder shall not operate any process equipment unless and until the pollution abatement equipment associated with the corresponding process equipment is operational and operating.	X				<ul style="list-style-type: none"> Field observations. Verbal confirmation. Sept. 1, 2021 Transfer Station Daily Inspection (including scrubber inspection). 	All pollution abatement equipment is continuously operated.
4.2.4	The approval holder shall treat all air effluent streams from the exhaust vents of the Drum Processing or Staging or both Buildings with a caustic scrubber and an activated carbon filter before directing the air effluent streams to the scrubber exhaust stack for release to the atmosphere while: - Hazardous wastes/recyclables are being processed. - Hazardous wastes/recyclables are being transferred. - Containers of hazardous wastes/recyclables are open in the Drum Processing and/or Staging Buildings.	X				<ul style="list-style-type: none"> Field observations. Discussion with site staff. 	Monitored weekly and documented as per section below. All building air is treated through the pollution abatement equipment (scrubber and filter), including drum and tank vents.
4.2.5	The approval holder shall control fugitive emissions and any source not specified in 4.2.2 in accordance with 4.2.6 of this approval.	X				Field observations.	A carbon filter was added to the leachate tank.
4.2.6	With respect to fugitive emissions and any source not specified in 4.2.2, the approval holder shall not release a substance or cause to be released a substance that causes or may cause any of the following:				X	<ul style="list-style-type: none"> Operations Plan, Appendix C (Fugitive Dust and Odour Best Management Plan). Odour Complaint notification to Village and County, dated July 30, 2021. 	<ul style="list-style-type: none"> No fugitive emissions outside of what's permitted. Odour complaints are received and managed per BMPs (report reviewed and contained in Operations Plan). As part of the Amendment Application, AEP identified concerns regarding communications to the Village of Ryley and Beaver County. Clean Harbors now notifies the Village and County of all complaints and contraventions submitted to AEP.
4.2.6 (a)	Impairment, degradation or alteration of the quality of natural resources.	X					
4.2.6 (b)	Material discomfort, harm or adverse effect to the well being or health of a person.	X					
4.2.6 (c)	Harm to property or to vegetative or animal life.	X					
4.2.7	The approval holder shall not burn any debris by means of an open fire unless authorized in writing by the Director.	X				Correspondence with AEP	A fire occurred on property in January 2021, for which AEP was notified. No burning is conducted on site.
4.2.8	If the approval holder receives complaints of offensive odours, or fugitive dust, or both, beyond the facility boundaries, the approval holder shall:				X		
4.2.8 (a)	Conduct the following to reduce the release of those odours, or fugitive dust, or both by:	X				<ul style="list-style-type: none"> Operations Plan, Appendix C (Fugitive Dust and Odour Best Management Plan). Environmental Management Program SOP #90RY-410-00. Field observations. Discussion with site staff. 	<ul style="list-style-type: none"> Response is based on the type of complaint. Recently added a carbon filter on the leachate tank vent. Material receipt may be suspended during high wind days. Cover can be immediately placed for dust suppression and dispersion prevention. Receive typically 2-3 odour complaints per year.
4.2.8 (a, i)	Placing restrictions on types, or volumes, or both, of the wastes being handled or processed or deposited that are causing those odours, or fugitive dust, or both.	X					
4.2.8 (a, ii)	Increasing the frequency of cover placement, or modifying waste handling activities, or performing both, at the landfill.	X					
4.2.8 (a, iii)	Modifying waste handling activities at the HWRSP Facility.	X					
4.2.8 (a, iv)	Performing any combination of the above.	X					
4.2.8 (b)	Activate the Odour and Fugitive Dust Response Program as specified in the Landfill Operations Plan 4.6.34U).	X					

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
Limits							
4.2.9	The approval holder shall maintain the pH of the scrubbing liquid of the caustic scrubber referred to in 4.2.4 at 8.0 or higher.	X				<ul style="list-style-type: none"> Field observations. Recorded daily (viewed Aug. 22, 2021 and Nov. 5, 2020 examples) and maintained in the WIN Web system. 	<ul style="list-style-type: none"> pH data logger contains daily readings. Available to AEP upon request, confirmed in report that recordings are compliant. "Keep pH above 8.0" sign posted.
4.2.10	The approval holder shall replace activated carbon in the activated carbon filter referred to in 4.2.4 immediately when the concentration of total petroleum hydrocarbons in the air effluent streams released from the scrubber exhaust stack to the atmosphere exceeds 25 ppm.	X				<ul style="list-style-type: none"> Field observations. WIN Web records. 	<ul style="list-style-type: none"> Weekly total petroleum hydrocarbon readings are taken and recorded in log book next to the scrubber and in WINWEB. Carbon is typically replaced every 4-5 years or less frequent. Last replacement occurred July 2015. No exceedances or replacement of media in the last three year period (2019-2021).
Monitoring and Reporting							
4.2.11	The approval holder shall monitor, daily at a minimum, the pH of the scrubbing liquid of the caustic scrubber referred to in 4.2.4.	X				<ul style="list-style-type: none"> Monitoring records for Aug. 22, 2021 and Nov. 5, 2020 in WIN Web. Field observations. 	<ul style="list-style-type: none"> Data logger contains daily readings. Available to AEP upon request, confirmed in report that recordings are compliant. If pH readings are close to 8.0 limit, a secondary laboratory reading is performed to verify in-line pH meter accuracy. Aug. 22, 2021 and Nov. 5, 2020 dates sampled.
4.2.12	The approval holder shall monitor, weekly at a minimum, the air effluent streams released from the scrubber exhaust stack, using a portable total petroleum hydrocarbon analyzer while: <ul style="list-style-type: none"> - Hazardous wastes/recyclables are being processed. - Hazardous wastes/recyclables are being transferred. - Containers of hazardous wastes/recyclables are open in the Drum Processing and/or Staging Buildings. 	X				<ul style="list-style-type: none"> Field observations. WIN Web records. 	<ul style="list-style-type: none"> Weekly readings are taken and recorded in log book next to the scrubber. Carbon is replaced every 4-5 years or less frequency.
4.2.13	The portable total petroleum hydrocarbon analyzer referred to in 4.2.12 shall:				X	Not applicable.	Not applicable. Information only.
4.2.13 (a)	Have a detection limit of 1 ppm or lower for total petroleum hydrocarbons.	X				Field observations.	Confirmed that accuracy is to 0.1 ppm, as observed on calibration certificate.
4.2.13 (b)	Be located in a straight section of the scrubber exhaust stack, a minimum of one (1) metre downstream from the last flow disturbance.	X				Field observations.	Sampling location is on second story scaffolding within building, 1 m downstream from the last flow disturbance.
4.2.13 (c)	Be calibrated regularly in accordance with the analyzer manufacturer's specifications.	X				Calibration certificate from 2020.	Confirmed calibrated in 2020; expires in 2022.
4.2.14	The approval holder shall continue to implement the Ambient Air Monitoring Program as authorized in writing by the Director on June 24, 2009, unless and until otherwise authorized in writing by the Director pursuant to 4.2.18.	X					
4.2.15	The approval holder shall submit to the Director the results of the Ambient Air Monitoring Program in 4.2.14 with the following reports: <ul style="list-style-type: none"> - Monthly Ambient Air Monitoring Report - Annual Ambient Air Monitoring Report In accordance with the written authorization by the Director on June 24, 2009, unless and until otherwise authorized in writing by the Director pursuant to 4.2.18.	X				<ul style="list-style-type: none"> 2020 Operations Report. GHD Quality Assurance Plan - Air Monitoring Program Report, dated Dec. 31, 2016. "Ambient Air Monitoring Station Audit" letter from AEP, dated August 31, 2016. "Ambient Air Monitoring Station Audit" letter from AEP, dated Jan. 13, 2017 (closing out the audit findings). 	<ul style="list-style-type: none"> Clean Harbors was audited by AEP for adherence to the new Air Monitoring Directive released in 2016. Clean Harbors proposed dates and actions to address findings of the audit, which were accepted by AEP in letter December 2, 2016. Dec. 31, 2016 GHD report contains new Air Monitoring Program. AEP letter closing out the audit indicates that all findings addressed.
4.2.16	The approval holder shall submit a revised Ambient Air Monitoring Program, revised reporting requirements, or both, to the Director upon written request from the Director within the timeline specified in writing by the Director.	X					
4.2.17	If the revised Ambient Air Monitoring Program, reporting requirements, or both, submitted pursuant to 4.2.16 is found deficient by the Director, the approval holder shall correct all deficiencies as outlined in writing by the Director within the timeline specified in writing by the Director.	X					

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.2.18	The approval holder shall implement the revised Ambient Air Monitoring Program, reporting requirements, or both, submitted pursuant to 4.2.16 as authorized in writing by the Director within the timeline specified in writing by the Director.	X					
Operations							
4.3.1	The approval holder shall not release any substances from the facility to the surrounding watershed except as authorized by this approval.	X				Field observations.	Compliance confirmed. 100% of the leachate is disposed of via deep well injection. Runon/runoff control systems in place and inspected during field observations.
4.3.2	The approval holder shall operate and maintain the integrity of:				X	Not applicable.	Not applicable. Information only.
4.3.2 (a)	The run-on control system to prevent flow onto the active landfill area from at least the peak discharge from a 1 in 25 year, 24 hour duration storm event at the facility.	X				Field observations.	Compliance confirmed. Run on/run off control systems were completed during Cell 4 construction. As built drawings reviewed.
4.3.2 (b)	The runoff control system for the facility to collect and control at least the runoff volume resulting from a 1 in 25 year, 24 hour duration storm event at the facility.	X				Field observations.	Compliance confirmed. Run on/run off control systems were completed during Cell 4 construction. As built drawings reviewed.
4.3.3	All runoff from the facility developed area shall be directed to the runoff control system as described in:				X	Not applicable.	Not applicable. Information only.
4.3.3 (a)	Application No. 012-10348, prior to decommissioning and reclamation of the old surface water detention pond.	X				Not applicable.	Confirmed. The old surface water detention pond was decommissioned in August 2018 prior to this audit.
4.3.3 (b)	The application, after decommissioning and reclamation of the old surface water detention pond.	X					
4.3.4	Prior to decommissioning and reclamation of the old surface water detention pond and subject to 4.3.7, the approval holder shall only make or permit a release from the old surface water detention pond:				X	Not applicable.	Not applicable. Information only.
4.3.4 (a)	At the release point as designated in application No. 012-10348, which is: • Located in the south east corner of the old surface water detention pond. • Referred to as sampling location A 1 in 4.3.11.	X				<ul style="list-style-type: none"> • 2020 Annual Report. • Field observations. • Operations Plan. • Discussions with site staff. 	Decommissioning of the old surface water detention pond was completed in August 2018. Observations were made of the new surface water detention pond, drainage ditch, and discharge point.
4.3.4 (b)	Through a pump and a release hose over the south berm into the drainage control ditch, east of the landfill access road, to the new surface water detention pond, under normal operating conditions.	X					
4.3.4 (c)	Through a pump and a release hose over the south berm directly to the culvert under Highway 854, during periods of high runoff exceeding the holding capacity of the old surface water detention pond.	X					
4.3.5	Subject to 4.3.7, the approval holder shall only make or permit a release from the new surface water detention pond:	X					
4.3.5 (a)	At the release point as designated in application No. 012-10348, which is: • Located in the north east corner of the new surface water detention pond. • Referred to as sampling location 81 in 4.3.11.	X					<ul style="list-style-type: none"> • Observed the discharge point at the new surface water detention pond. • Composite sampling is performed prior to any discharge consistent with the approval.
4.3.5 (b)	Through a pump and a release hose over the east berm into the culvert under Highway 854.	X					
4.3.6	The approval holder shall only dispose of industrial wastewaters, or specified runoff in Table 4.3-A, or both, by one or more of the following methods:				X	<ul style="list-style-type: none"> • 2020 Annual Report. • Field observations. • Operations Plan. • Discussions with site staff. 	<ul style="list-style-type: none"> • All stormwaters are discharged through pond with testing prior to discharge. • No non-compliant discharges have occurred. • When TSS exceeds limits, further settling time is done prior to re-testing and discharge, or flocculant is added. • No change to discharge.
4.3.6 (a)	To facilities holding a current Act authorization to accept such waste.	X					
4.3.6 (b)	To facilities approved by a local environmental authority outside of Alberta to accept such waste.	X					
4.3.6 (c)	To a disposal well approved by AER.	X					
4.3.6 (d)	As per 4.6.51.	X					
4.3.6 (e)	As otherwise authorized in writing by the Director.	X					

Section 4 - Operations

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
Limits							
4.3.7	Releases of runoff from the following to the surrounding watershed shall comply with the limits specified in Table 4.3-B: - The old surface water detention pond. - The new surface water detention pond. - Or, both ponds.	X				<ul style="list-style-type: none"> 2020 Annual Report. Operations Plan. 	Compliance confirmed through a review of release analytical records.
4.3.8	Releases of runoff from within the tank farm bermed area to the old or new or both surface water detention ponds shall comply with the limits specified in Table 4.3-C.				X	Not applicable.	Not applicable: <ul style="list-style-type: none"> Tank farm bermed area water goes into landfill. This volume is pumped and solidified for disposal in the landfill.
Monitoring and Reporting							
4.3.9	The approval holder shall monitor the runoff control system as required in Table 4.3-D, subject to 4.3.12.			X		Surface Water Detention Pond B Summary of Batch Analysis, 2020 Annual Report.	Results for the runoff control system testing of 48 hour static acute lethality test using daphnia magna could be included in the Summary of Batch Analysis presented in the 2020 Annual Landfill Operations Report; along with the lethality of effluents to rainbow trout testing.
4.3.10	The approval holder shall report to the Director the results of the runoff control system monitoring as required in Table 4.3-D, subject to 4.3.12.	X				2020 Annual Report.	Monitoring findings reported to AEP.
4.3.11	For the purpose of Table 4.3-D:				X	Not applicable	Not applicable. Information only.
4.3.11 (a)	Sampling location A 1 is defined as the old surface water detention pond release point.				X	Field observations.	Not applicable. Old surface water detention pond has been decommissioned.
4.3.11 (b)	Sampling location A2 is defined as the old surface water detention pond.				X	Field observations.	Facility actively monitors releases.
4.3.11 (c)	Sampling location B1 is defined as the new surface water detention pond release point.	X				Field observations.	Facility actively monitors detention pond.
4.3.11 (d)	Sampling location B2 is defined as the new surface water detention pond.	X				Field observations.	Water collected in bermed area of tank farm is solidified for disposal in landfill as per 4.3.8
4.3.11 (e)	Sampling location C is defined as the tank farm bermed area.	X				Field observations.	Not applicable. The old surface water detention pond was decommissioned in August, 2018 prior to this audit.
4.3.12	The monitoring and reporting requirements in 4.3.9 and 4.3.10 for the old surface water detention pond (sampling locations A1 and A2) shall not apply after decommissioning and reclamation of the old surface water detention pond.				X	Not applicable.	Not applicable. Information only.
4.3.13	The monitoring and reporting required in Table 4.3-D for the acute lethality tests shall comply with:				X	Not applicable.	Summary of results all pass for the Surface Water Detention Pond B Summary of Batch Analyses.
4.3.13 (a)	The Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout, Environment Canada, Environment Protection Series 1/RM/13, December 2000, as amended.	X				Surface Water Detention Pond B Summary of Batch Analysis - 2020 Annual Landfill Operations Report	<ul style="list-style-type: none"> Monthly Runoff and Industrial Wastewater Report. Surface Water Detention Pond B Summary of Batch Analysis - 2020 Annual Report. Results for the runoff control system testing of 48 hour static acute lethality test using daphnia magna could be included in the Summary of Batch Analysis presented in the 2020 Annual Landfill Operations Report; along with the lethality of effluents to rainbow trout testing.
4.3.13 (b)	The Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Daphnia Magna, Environment Canada, Environmental Protection Series 1/RM/14, December 2000, as amended.			X		Not applicable.	Not applicable. No deviation from corresponding test method has occurred.
4.3.14	The approval holder shall: - Treat any acute lethality test that deviates from the corresponding test method referred to in 4.3.13 as invalid. - Repeat the test as soon as logistically possible.				X	Not applicable.	Not applicable. All testing passed the criteria.
4.3.15	In the event that less than 50% of the rainbow trout survived in the 100% concentration sample, the approval holder shall: - Implement a program immediately to identify the source of the toxicity. - Submit to the Director within 90 days after the test result is available, a proposed program to reduce the toxicity of the runoff.				X	Not applicable.	Verbal confirmation from multiple parties confirming the reports are forwarded to AEP.
4.3.16	The approval holder shall submit the Monthly Runoff and Industrial Wastewater Report in Table 4.3-D to the Director.	X				Monthly Runoff and Industrial Wastewater Report.	Not applicable. Monthly reports contained in annual report, but only need to be submitted with discharges.
4.3.17	The Monthly Runoff and Industrial Wastewater Report shall include, at a minimum, all of the following information:				X	Not applicable.	

Section 4 - Operations

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.3.17 (a)	A monthly assessment of the monitoring results relative to the limits in Table 4.3-B.	X				Monthly Runoff and Industrial Wastewater Report.	Included in Report.
4.3.17 (b)	A monthly assessment of the monitoring results relative to the limits in Table 4.3-C.	X				Monthly Runoff and Industrial Wastewater Report.	Included in Report.
4.3.17 (c)	A monthly assessment of the performance of the: - Runoff control system. - Pollution abatement equipment. - Monitoring equipment.	X				Monthly Runoff and Industrial Wastewater Report.	Included in Report.
4.3.17 (d)	A monthly summary of management and disposal of the industrial wastewaters and specified runoff, as per 4.3.6.	X				Monthly Runoff and Industrial Wastewater Report.	Included in Report.
4.3.17 (e)	A monthly summary of management and disposal of runoff in general.	X				Monthly Runoff and Industrial Wastewater Report.	Included in Report.
4.3.17 (f)	A monthly summary of runoff contraventions reported pursuant to 2. 1. 1.	X				Monthly Runoff and Industrial Wastewater Report.	Included in Report.
4.3.17 (g)	Any other information as required in writing by the Director.	X				Monthly Runoff and Industrial Wastewater Report.	Included in Report.
4.3.18	The approval holder shall submit the Annual Runoff and Industrial Wastewater Report in Table 4.3-D to the Director.	X				Annual Runoff and Industrial Wastewater Report.	Verbal confirmation and included with annual report.
4.3.19	The Annual Runoff and Industrial Wastewater Report shall include, at a minimum, all of the following information:			X		Not applicable.	Not applicable. Information only.
4.3.19 (a)	An annual summary assessment of the monitoring results relative to the limits in Table 4.3-B.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.
4.3.19 (b)	An annual summary assessment of the monitoring results relative to the limits in Table 4.3-C.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.
4.3.19 (c)	An annual summary assessment of the performance of the: - Runoff control system. - Pollution abatement equipment. - Monitoring equipment.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.
4.3.19 (d)	An annual summary of management and disposal of the industrial wastewaters and specified runoff, as per 4.3.6.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.
4.3.19 (e)	An annual summary and evaluation of management and disposal of runoff in general.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.
4.3.19 (f)	An annual summary of the results pursuant to 4.3.21.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.

Section 4 - Operations

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.3.19 (g)	An annual summary of runoff contraventions reported pursuant to 2. 1. 1.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.
4.3.19 (h)	Any other information as required in writing by the Director.	X				Annual Runoff and Industrial Wastewater Report.	Included in Report.
4.3.20	The approval holder shall:				X	Not applicable.	Not applicable. Information only.
4.3.20 (a)	Collect a representative grab sample from the old surface water detention pond at least once per year, prior to decommissioning and reclamation of the pond.				X	Not applicable.	Not applicable. Old surface water detention pond has been decommissioned.
4.3.20 (b)	Collect a representative grab sample from the new surface water detention pond at least once per year.	X				Annual Runoff and Industrial Wastewater Report	Details included in Report.
4.3.20 (c)	Analyze the sample(s) for all of the parameters specified in Table 4.3-E.	X				Annual Runoff and Industrial Wastewater Report	Details included in Report.
4.3.21	The approval holder shall submit the results of the analyses in 4.3.20 to the Director in the Annual Runoff and Industrial Wastewater Report.	X				Annual Runoff and Industrial Wastewater Report	Details included in Report.
Operations							
4.4.1	The approval holder shall only dispose of leachate removed from the leachate collection system by one or more of the following methods:				X	Not applicable.	Not applicable. Information only.
4.4.1 (a)	To facilities holding a current Act authorization to accept such waste.				X	Not applicable.	Not applicable. Option not used by the facility.
4.4.1 (b)	To facilities approved by a local environmental authority outside of Alberta to accept such waste.				X	Not applicable.	Not applicable. Option not used by the facility.
4.4.1 (c)	To a disposal well approved by AER.	X				<ul style="list-style-type: none"> • Alberta Energy Regulator (AER) approval for deep well. • Appendix E of 2020 Annual Report. 	Leachate is hauled to Class I deep well in Calmar. Volume summary included in annual report.
4.4.1 (d)	As per 4.6.51.				X	Not applicable.	Not applicable. Information only.
4.4.2	The approval holder shall only dispose of liquid removed from the leak detection system by one or more of the following methods:				X	Not applicable.	Not applicable. Information only.
4.4.2 (a)	To facilities holding a current Act authorization to accept such waste.				X	Not applicable.	Not applicable. Option not used by the facility.
4.4.2 (b)	To facilities approved by a local environmental authority outside of Alberta to accept such waste.				X	Not applicable.	Not applicable. Option not used by the facility.
4.4.2 (c)	To a disposal well approved by AER.	X				<ul style="list-style-type: none"> • AER approval for deep well. • Appendix E of 2020 Annual Landfill Operations Report. 	Leachate is hauled to Class I deep well in Calmar. Volume summary included in annual report.
4.4.2 (d)	As per 4.6.51.				X	Not applicable.	Option not used by the facility.
Limits							
4.4.3	Subject to 4.4.4, the approval holder shall not exceed the maximum acceptable leachate head in any landfill cell.	X				Leachate Head Level Table.	Leachate levels recorded daily. Field logs for 2020 observed, contain following parameters: - Date, time, condition, level status, personnel initial
4.4.4	Subsequent to a storm event, the leachate head in any landfill cell shall not exceed the maximum acceptable leachate head for more than fourteen (14) days, unless otherwise authorized in writing by the Director.	X				Leachate Head Level Table.	Leachate pumping infrastructure on timers in most cells, (all but Cell 1). A fire January 12, 2020 caused a fire (AEP Reference No. 362650) which destroyed the Cell 2 Leachate building until pumping capacity was restored June 30, 2020. Infrastructure is capable of removing leachate generated from a storm event in fewer than 14 days.
4.4.5	The volume of liquid in the leak detection system, as monitored in Table 4.6-D, shall not exceed the action leakage rate in any landfill cell.		X			2020 Annual Report.	Action Leakage Rate (ALR) Exceedances were noted June 9, 2020, June 10, 2020, July 2, 2020, July 9, 2020. Section 14.6 of the Annual Landfill Operations Report detail several ALR exceedances that were not reported. No negative impacts were observed and clarification of the reporting requirements were made with the Facility Manager to ensure this is not repeated in the future. (AEP 376183)

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
Monitoring and Reporting							
4.4.6	The approval holder shall monitor the leachate collection and leak detection systems as required in Table 4.6-D and for all parameters specified in Table 4.4-A, subject to 4.4.8 and 4.4.9.	X				Primary Leachate Analysis Results Appendix D of 2020 Annual Report.	Leachate levels recorded daily. Field logs for 2020 observed, contain following parameters: • Date, time, condition, level status, personnel initial.
4.4.7	The approval holder shall report to the Director the results of the leachate collection and leak detection systems monitoring as required in Table 4.6-D, including the results of the analyses for all parameters specified in Table 4.4-A, subject to 4.4.8 and 4.4.9.	X				Primary Leachate Analysis Results Appendix D of 2020 Annual Report.	Submitted to AEP.
4.4.8	The requirements in 4.4.6 and 4.4.7 for monitoring and reporting the parameters in Table 4.4-A for leachate shall not apply if insufficient leachate is available for conducting the analyses.				X	Not applicable.	Not applicable. Information only.
4.4.9	The requirements in 4.4.6 and 4.4.7 for monitoring and reporting the parameters in Table 4.4-A for leak detection liquid shall not apply if insufficient leak detection liquid is available for conducting the analyses.				X	Not applicable.	Not applicable. Information only.
4.4.10	If the volume of liquid removed from the leak detection system exceeds the action leakage rate, in addition to reporting pursuant to 2.1.1, the approval holder shall submit a Response Action Plan to the Director within 30 days of the exceedance.	X				2020 Annual Report.	(AEP 376183) links exceedances to excessive rainfall and details steps taken to solve infiltration.
Monitoring and Reporting							
4.5.1	The approval holder shall, unless the approval holder is not granted access by the landowner:				X	Not applicable.	Not applicable. Information only.
4.5.1 (a)	Collect a representative sample from each of the dugouts and each of the water wells, within an approximate 1.6 kilometre radius around the facility.	X				Tetra Tech 2020 Dugout Sampling Program Report, dated March 2, 2021.	Details included in Report.
4.5.1 (b)	Analyze the sample for the parameters listed in Table 4.5-A.	X					Details included in Report.
4.5.2	The monitoring required in 4.5.1 shall be conducted once each year in October unless otherwise authorized in writing by the Director.	X					Details included in Report.
4.5.3	The approval holder shall record the analytical results of the sampling information required in 4.5.1 in an Annual Dugout and Water Well Sampling Program Report.	X					Details included in Report.
4.5.4	The approval holder shall submit the Annual Dugout and Water Well Sampling Program Report to the Director pursuant to 4.6.58(i).	X					Details included in Report.
General							
4.6.1	The approval holder shall not receive, process, dispose of, or perform any combination of the above for any of the following wastes, individually or in any combination, at the places specified below respectively: - Explosives (Class 1 TDGR wastes), at the facility. - Radioactive wastes (Class 7 TDGR wastes), at the facility. - Radioactive wastes regulated under the Nuclear Safety and Control Act (Canada), at the facility. - Biomedical waste, at the facility. - Waste containing free liquids, at the landfill, excluding the waste stabilization area. - Material containing ozone depleting substances, at the landfill. - Municipal solid waste, at the facility. - NORM waste, at the facility.	X				• Field observations. • Discussions with site staff.	Site field observations and verbal confirmation were received regarding materials receipt. Cross checked against Facility Operations Plan and SOPs for individual waste materials. WINWEB system also performs checks on waste compatibility and will issue warnings of any non-conforming waste
4.6.2	Incompatible wastes and incompatible hazardous recyclables shall be prevented from mixing.	X				• Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Landfill Operations (SOPL001). • WIN Web (compatibility workbench).	Relevant Facility SOPs confirm procedures are appropriate to prevent incompatible wastes and recyclables from mixing.
4.6.3	The approval holder shall dispose of wastes generated at the facility only:				X	Not applicable	Information only.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.6.3 (a)	To facilities holding a current Act authorization.	X				Discussions with site staff.	Confirmed that regulations are being followed.
4.6.3 (b)	To facilities approved by a local environmental authority outside of Alberta.	X				Discussions with site staff.	Confirmed that regulations are being followed.
4.6.3 (c)	As otherwise authorized in writing by the Director.	X				Discussions with site staff.	Confirmed that regulations are being followed.
HWRSP Facility							
Operations Plan							
4.6.4	The approval holder shall develop, keep up-to-date, and implement an HWRSP Facility Operations Plan.	X				<ul style="list-style-type: none"> Facility Standard Operating Procedures (SOPs) Operations Plan. 	Most recently dated as February 2021, with annual updates required. In 2020, procedures for Cell 4 added.
4.6.5	The approval holder shall:				X	Not applicable.	Not applicable. Information only.
4.6.5 (a)	Review the HWRSP Facility Operations Plan annually, at a minimum.	X				<ul style="list-style-type: none"> 2020 Annual Report. Operations Plan. 	This is performed in line with the annual reporting required under the Approval.
4.6.5 (b)	Update the HWRSP Facility Operations Plan if any of the following circumstances apply: - There are facility expansions or changes in site operations or equipment. - There is an applicable change to an applicable regulation. - An update is required in writing by the Director.	X				<ul style="list-style-type: none"> 2020 Annual Report. Operations Plan. 	Section 14 added to 2017 Annual Report, addressing HWRSP facility operations.
4.6.6	The approval holder shall retain a copy of the most recent HWRSP Facility Operations Plan at the facility.	X				<ul style="list-style-type: none"> 2020 Annual Report. Operations Plan. 	Held on-site electronically and in hard copy.
4.6.7	The approval holder shall submit a copy of the most recent HWRSP Facility Operations Plan to the Director upon written request from the Director within the timeline specified in writing by the Director.	X				<ul style="list-style-type: none"> 2020 Annual Report. Operations Plan. 	Submitted in the 2020 Annual Report.
4.6.8	If the HWRSP Facility Operations Plan submitted pursuant to 4.6.7 is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.				X	Not applicable.	Not applicable. No response received from AEP on 2020 Annual Report.
4.6.9	The approval holder shall implement the latest HWRSP Facility Operations Plan, unless otherwise authorized in writing by the Director.	X				Operations Plan.	Up to date plan available and utilized.
Operations							
4.6.10	The approval holder shall only transfer wastes and hazardous recyclables at designated transfer areas designed to contain spills and leaks.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Relevant Facility SOPs confirm procedures for transferring wastes in the HWRSP.
4.6.11	The approval holder shall use the following when transferring substances to, from, and between containers, tanks, and trucks:				X	Not applicable.	Not applicable. Information only.
4.6.11 (a)	Couplings equipped with seals that are compatible with the substance transferred.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Reviewed and compliance confirmed during site visit.
4.6.11 (b)	The necessary precautions to prevent spills when the couplings are disconnected.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Reviewed and compliance confirmed during site visit.
4.6.11 (c)	Emergency shut-off valves.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Reviewed and compliance confirmed during site visit.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.6.11 (d)	Established transfer areas and associated curbing, paving and catchment areas.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Reviewed and compliance confirmed during site visit.
4.6.11 (e)	Drip trays to capture potential losses under coupling devices and other connections.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Reviewed and compliance confirmed during site visit.
4.6.11 (f)	Manual inspections of the transfer area for leaks and spills during and after waste transfer.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Reviewed and compliance confirmed during site visit.
4.6.12	All wastes and all hazardous recyclables that are unloaded shall be immediately transferred to the waste storage area.	X				Facility SOPs: Drum Staging and Storage (SOPOP002), Drum Sampling (SOPOP003), Container Management (SOPOP004), Spills on Site (SOPOP008).	Reviewed and compliance confirmed during site visit.
4.6.13	All containers and unrinsed empty containers shall be stored in the waste storage area.	X				Field observations.	Confirmed during Site visit.
4.6.14	The approval holder shall:				X	Not applicable.	Not applicable. Information only.
4.6.14 (a)	Provide and maintain an adequate aisle space between containers in the waste storage area to allow inspection and unobstructed movement of personnel, fire protection equipment, spill control equipment and decontamination equipment to any area of the waste storage area.	X				Field observations.	Site field operations consistent with fire code for spacing between containers.
4.6.14 (b)	Arrange inspection aisles in the waste storage area such that the identification label on each container is readable.	X				Field observations.	Identification labels clear for all containers.
4.6.15	All tanks within the tank farm area shall be equipped, at a minimum, with all of the following:				X	Not applicable.	Not applicable. Information only.
4.6.15 (a)	Sensors for detecting the level in each tank.	X				Field observations.	Sensors, alarms, and shut-off devices observed and active for each tank. The aqueous tank within the building does not contain a high level alarm but is not considered part of the tank farm.
4.6.15 (b)	High level alarms that activate when a tank overflow is imminent.	X					
4.6.15 (c)	Automatic shut-off devices or sufficient free board space above the high level sensor to allow operators time to prevent overflow from occurring.	X					
4.6.15 (d)	Earthen dikes or equivalent secondary containment structures capable of containing 110% of the volume of the largest tank within the bermed area plus 10% of the aggregate capacity of all other tanks in the bermed area.	X				Field observations.	Entire waste storage area is the building floor, which is drained to holding tank in central manhole and can be pumped.
4.6.16	All tanks containing hazardous waste and all tanks containing hazardous recyclables in each building shall be equipped, at a minimum, with all of the following:				X	Not applicable.	Not applicable. Information only.
4.6.16 (a)	Sensors or gauges for detecting the level in each tank.	X				Field observations.	Sensors observed and active for tanks.
4.6.16 (b)	A written operating procedure to prevent tank overflow.		X			<ul style="list-style-type: none"> Field observation Bulk Flammable Liquid Transfer SOP 	Bulk Flammable Liquid Transfer SOP Document and Checklist is available (part of Facility SOPs) in office area but is not stored next to tanks.
4.6.16 (c)	Secondary containment structures capable of containing 110% of the volume of the largest tank within the building plus 10% of the aggregate capacity of all other tanks containing hazardous waste and hazardous recyclables in the same building.	X				Field observations.	Secondary containment structures observed in the field.
4.6.17	Hazardous waste and hazardous recyclables stored in containers and tanks shall be stored in accordance with the Hazardous Waste Storage Guidelines, June 1988, Alberta Environment, as amended.	X				<ul style="list-style-type: none"> Field observations. Bulk Flammable Liquid Transfer SOP. 	Facility observed to be following governing regulations.
4.6.18	The approval holder shall only carry out the following activities, individually or in any combination, at the HWRSF Facility in relation to hazardous waste or hazardous recyclables or both:	X				<ul style="list-style-type: none"> Field observations. 	Field observations reviewed the activities that occur on site; which was confirmed through review of the Facility and Landfill
4.6.18 (a)	Commingling of hazardous waste or hazardous recyclables to make maximum use of available container or tank capacity, only if the resultant mixture has the same TDGR hazard classification as any one of the individual components.	X					
4.6.18 (b)	Phase separation by gravity settling, only without the addition of any chemicals designed to accelerate settling.	X					
4.6.18 (c)	Dispersion of solids into liquids by natural or mechanical means, only if the resultant mixture has the same TDGR hazard classification as the original waste.	X					

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.6.18 (d)	Physical segregation of hazardous from non-hazardous articles or components from the same container, only if no process equipment is used.	X				<ul style="list-style-type: none"> Operations Plan. Facility SOPs. 	Operations Plan and Facility SOPs.
4.6.18 (e)	Washing of drums or other objects, only for the purpose of removing hazardous residue.	X					
4.6.18 (f)	Crushing or shredding of used filters, rags, absorbent materials, or empty containers, only for the purpose of volume reduction or liquid recovery, unless otherwise authorized in writing by the Director.	X					
4.6.18 (g)	Treatment of hazardous waste, only as authorized in writing by the Director.	X					
4.6.19	Notwithstanding 4.6.1 B(g), the approval holder shall not incinerate waste at the facility.	X					
Limits							
4.6.20	The approval holder shall not store a total of more than 752,500 litres of hazardous waste or hazardous recyclables or both at the HWRSP Facility at any time.	X				WIN Web inventory management software.	Maximum capacity not exceeded as of September 2, 2021, per the below volumes.
4.6.21	In addition to the storage limits in 4.6.20, the approval holder shall not exceed the waste storage limits as specified in TABLE 4.6-A.	X				WIN Web inventory management software.	Observations of inventory software made on September 2, 2021: <ul style="list-style-type: none"> 254,681 L of all wastes (hazardous and non-hazardous) 64,856 L of hazardous waste in containers (drums) 15,340 L of bulk liquids
4.6.22	Containers other than 205 litre drums shall be prorated to 205 litre drum equivalents based on their nominal volumes, e.g., 10 X 20 litre pails= 1 X 205 litre drum.	X				WIN Web inventory management software.	Software automatically calculates drum equivalents.
4.6.23	The limits referred to in 4.6.20 and 4.6.21 shall be calculated based on the:				X	Not applicable.	Not applicable. Information only.
4.6.23 (a)	Total nominal volumes of all containers, treating all partially filled containers as if they were full.				X	Not applicable.	Not applicable. Information only.
4.6.23 (b)	Total filled capacities of all tanks.				X	Not applicable.	Not applicable. Information only.
Monitoring and Reporting							
4.6.24	The approval holder shall identify, characterize, and classify all waste streams and all hazardous recyclables, generated or received at the HWRSP Facility, not including runoff, industrial wastewater streams and air effluent streams in accordance with the:				X	Not applicable.	Not applicable. Information only.
4.6.24 (i)	Industrial Waste Identification and Management Options, Alberta Environment, May 1996, as amended.			X		Facility and Landfill Operations Report, Section B	The document is not referenced specifically in Landfill Operations Plan, although review of documentation indicates adherence to this standard. Recommended that this be included in the Operations Plan as a specific reference.
4.6.24 (ii)	Alberta User Guide for Waste Managers, Alberta Environment, August 1996, as amended.	X				Facility and Landfill Operations Report, Section B	Referenced in Landfill Operations Plan.
4.6.25	The approval holder shall measure or, when not feasible to measure, estimate, the quantity of each waste and hazardous recyclable identified in 4.6.24 each year.	X				Facility and Landfill Operations Report	Addressed in Appendix A of Operations Report.
4.6.26	The approval holder shall keep a daily total and inventory of all materials being stored at the HWRSP Facility.	X				<ul style="list-style-type: none"> Field observations. Various inventory logs (WIN Web). 	Observed documentation in the field.
4.6.27	The daily total and inventory records in 4.6.26 shall be available at the facility at all times for inspection by the Director or an inspector.	X				<ul style="list-style-type: none"> Field observations. Various inventory logs (WIN Web). 	Available at the time of the audit.
4.6.28	The approval holder shall submit a Monthly Waste Management Report to the Director.	X				<ul style="list-style-type: none"> July 2021 Waste Inventory Report. Discussion with site staff. 	Verbal confirmation that the monthly reports are submitted to AEP. Different documents for internal use and submission confirms submission.
4.6.29	The approval holder shall compile all of the information indicated in Table 4.6-B in the Monthly Waste Management Report which shall contain, at minimum, all of the following information:				X	Not applicable.	Not applicable. Information only.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.6.29 (a)	An opening waste and hazardous recyclables inventory balance in kilograms or litres by waste class or material type.			X		<ul style="list-style-type: none"> July 2021 Waste Inventory Report. Discussion with site staff. 	Compliance confirmed; included in report. The Facility is adhering to the information required in the Monthly Waste Management Report, viewed for July 2021. However the reports are currently referencing the 10348-02-00 Approval. Dillon would recommend that the referenced Approval be updated to 10348-03-00.
4.6.29 (b)	The amount and type of waste and hazardous recyclables received: - Within the province. - From outside of the province.			X			
4.6.29 (c)	The amount and type of waste and hazardous recyclables: - Shipped for recycling or product. - Shipped off-site for disposal. - Disposed on-site.			X			
4.6.29 (d)	Any adjustments, including but not limited to, consolidation, reclassification, losses to processing, spills, volume miscalculations, or any other circumstances, which would affect the mass balance of the monthly inventory report.			X			
4.6.29 (e)	Closing balance in kilograms or litres.			X			
4.6.29 (f)	A summary of contraventions reported pursuant to 2. 1. 1 related to waste and hazardous recyclables.	X				<ul style="list-style-type: none"> July 2021 Waste Inventory Report. Discussion with site staff. 	No contraventions identified in monthly report.
4.6.29 (g)	Any other information as required in writing by the Director.	X				<ul style="list-style-type: none"> July 2021 Waste Inventory Report. Discussion with site staff. 	No additional requirements by AEP.
4.6.30	The approval holder shall compile all the information required by 4.6.24 and 4.6.25 in an Annual Waste Management Summary Report:				X	Not applicable.	Not applicable. Information only.
4.6.30 (a)	As specified in Table 4.6-C.	X				2020 Annual Waste Management Summary - Table 4.6-D, Hazardous Waste Landfilled, included in the 2020 Annual Report.	In Appendix A of Operations Report.
4.6.30 (b)	In accordance with the: - Industrial Waste Identification and Management Options, Alberta Environment, May 1996, as amended. - Alberta User Guide for Waste Managers, Alberta Environment, August 1996, as amended.			X		2020 Annual Waste Management Summary - Table 4.6-D, Hazardous Waste Landfilled, included in the 2020 Annual Report.	The first document is not referenced specifically in Landfill Operations Plan, although review of documentation indicates adherence to this standard. Recommended that this be included in the Operations Plan as a specific reference.
4.6.31	The approval holder shall submit the Annual Waste Management Summary Report to the Director.	X				2020 Annual Waste Management Summary - Table 4.6-D, Hazardous Waste Landfilled, included in the 2020 Annual Report.	Submitted as part of the Annual Report for the Facility.
Landfill							
Operations Plan							
4.6.32	The approval holder shall develop, keep up-to-date, and implement a Landfill Operations Plan that does not contravene with the requirements of this approval.	X				Operations Plan.	Approval requirements are being examined in this checklist.
4.6.33	The approval holder shall:				X	Not applicable.	Not applicable. Information only.
4.6.33 (a)	Review the Landfill Operations Plan annually, at a minimum.	X				Operations Plan.	Revision date on the 2021 Facility and Landfill Operations Plan is February, 2021.
4.6.33 (b)	Update the Landfill Operations Plan if any of the following circumstances apply: - There are facility expansions or changes in site operations or equipment. - There is an applicable change to the Standards for Landfills in Alberta, as amended. - An update is required in writing by the Director. - There is an update to an applicable regulation.	X				Operations Plan.	Updates to the operations plan reflect Cell 4 and Cell 3B changes.
4.6.34	The Landfill Operations Plan shall include, at a minimum, all of the following:				X	Not applicable.	Not applicable. Information only.
4.6.34 (a)	SOP for keeping and maintaining an Operating Record.	X				Operations Plan.	Addressed in section A of Operations Plan.
4.6.34 (b)	SOP for waste control, run-on and runoff controls, and nuisance controls.	X				Operations Plan.	Addressed in section B of Operations Plan.
4.6.34 (c)	SOP for the waste stabilization area operations.	X				Operations Plan.	Addressed in section C of Operations Plan.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.6.34 (d)	SOP for the acceptance, handling and disposal of wastes, including: - Waste characterization and classification at source. - Waste manifesting and tracking. - QA/QC waste acceptance procedures. - Waste sampling.	X				Operations Plan.	Addressed in Sections D of Operations Plan.
4.6.34 (e)	SOP for detecting, preventing and disposal of unauthorized wastes.	X				Operations Plan.	Addressed in Sections E of Operations Plan.
4.6.34 (f)	SOP for placing waste in a landfill cell including: - Working face width. - Lift depth. - Compaction. - Waste placement location using a grid system	X				Operations Plan.	Addressed in Sections F of Operations Plan.
4.6.34 (g)	SOP for managing contaminated sulphur and sulphur containing wastes.	X				Operations Plan.	Addressed in Sections G of Operations Plan.
4.6.34 (h)	SOP for managing asbestos wastes.	X				Operations Plan.	Addressed in Sections H of Operations Plan.
4.6.34 (i)	SOP for placing leachate, leak detection liquid, or other authorized wastes and liquids over the surface of the active landfill area for the purpose of evaporation or dust suppression.	X				Operations Plan.	Addressed in Sections I of Operations Plan.
4.6.34 (j)	An Odour and Fugitive Dust Response Program.	X				Operations Plan.	Addressed in Sections J of Operations Plan, referencing the Fugitive Dust and Odour Best Management Plan in Appendix C.
4.6.34 (k)	A Fugitive Dust and Odour Best Management Plan.	X				Operations Plan.	Addressed in Sections K of Operations Plan, referencing the Fugitive Dust and Odour Best Management Plan in Appendix C.
4.6.34 (l)	A runoff and industrial wastewater monitoring and management program.	X				Operations Plan.	Addressed in Sections L of Operations Plan.
4.6.34 (m)	A leachate monitoring and management program.	X				<ul style="list-style-type: none"> Operations Plan. SOP002-003 Landfill Leachate System. 	Addressed in Sections M of Operations Plan.
4.6.34 (n)	A leak detection liquid monitoring and management program.	X				<ul style="list-style-type: none"> Operations Plan. SOP002-003 Landfill Leachate System. 	Addressed in Sections M/N of Operations Plan.
4.6.34 (o)	A groundwater monitoring program.	X				Operations Plan.	Addressed in Sections O of Operations Plan.
4.6.34 (p)	A Remediation Plan to deal with groundwater quality deterioration.	X				Groundwater Remediation Plan.	Addressed in Sections P of Operations Plan.
4.6.34 (q)	A soil monitoring program.	X				Operations Plan.	Addressed in Sections Q of Operations Plan. Submitted in late 2019 and the first soil monitoring program report was submitted to AEP on January 31, 2020.
4.6.34 (r)	A soil management program.	X				Operations Plan.	Addressed in Sections R of Operations Plan. Confirmation of acceptance from AEP September 18, 2020.
4.6.34 (s)	A landfill cell cover system.	X				Operations Plan.	Addressed in Sections S of Operations Plan. Cell cover system is prepared by consultants and conforms to provincial regulations.
4.6.34 (t)	A monitoring and maintenance program for the scale house and heavy operational equipment.	X				<ul style="list-style-type: none"> Operations Plan. Maintenance Dashboard. Scale maintenance records 	Addressed in Sections T of Operations Plan. Scales calibrated twice per year, maintenance program in place.
4.6.34 (u)	A health and safety program.	X				Health and Safety Program.	Addressed in Sections U of Operations Plan. Health and Safety program in place, training records are kept accounted for, and notifications when training comes due. Employees sign-off on Health and Safety program.
4.6.34 (v)	An emergency response program, including SOP for handling fires, substance releases to the environment, and health concerns.	X				Contingency Plan in Appendix A of the Operations Plan.	Addressed in Sections V of Operations Plan, referencing the facility's Contingency Plan in Appendix A. A system exists to track each employees training and provides management with information such as: training expiring, which training each employee requires, etc.
4.6.34 (w)	An up-to-date plan of the landfill layout with survey records showing the location of all infrastructure components of the landfill including final cover elevations and contours.	X				Operations Plan.	Addressed in Section W of Operations Plan, referencing Appendix D.
4.6.35	The approval holder shall retain a copy of the most recent Landfill Operations Plan at the facility.	X				Operations Plan.	Hard copy of 2021 Operations Plan viewed
4.6.36	The approval holder shall submit to the Director the most recent Landfill Operations Plan when requested in writing by the Director within the timeline specified in writing by the Director.	X				Discussions with site staff.	Compliance confirmed; submitted annually.
4.6.37	The approval holder shall correct all deficiencies in the Landfill Operations Plan submitted pursuant to 4.6.36, as outlined in writing by the Director, within the timeline specified in writing by the Director.				X	Not applicable.	Not applicable. Information only.
4.6.38	The approval holder shall implement the latest Landfill Operations Plan, unless otherwise authorized in writing by the Director.	X				Operations Plan.	2021 Operations Plan observed.

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
Operations							
4.6.39	The approval holder shall classify all materials entering the landfill in accordance with the:				X	Not applicable.	Not applicable. Information only.
4.6.39 (a)	Waste Control Regulation (AR 192196).	X				Operations Plan, Section B.	Referenced in Landfill Operations Plan.
4.6.39 (b)	Industrial Waste Identification and Management Options, Alberta Environment, May 1996, as amended.			X		Operations Plan.	The document is not referenced specifically in Landfill Operations Plan, although review of documentation indicates adherence to this standard. Recommended that this be included in the Operations Plan as a specific reference.
4.6.39 (c)	Alberta User Guide for Waste Managers, May 1995, as amended.	X				Operations Plan, Section B.	Referenced in Landfill Operations Plan.
4.6.40	The approval holder shall obtain a detailed representative physical and chemical analysis of a waste prior to disposal of the waste into the landfill at the following times, at a minimum:				X	Not applicable.	Not applicable. Information only.
4.6.40 (a)	The first time a waste is received from a new generator.	X				• Operations Plan, Sections B-D • Waste Profile from WIN Web viewed.	Compliance confirmed: • Procedures and acceptance criteria in the Landfill Operations Plan are compliant with Approval. • All waste profiles renewed annually, either by customers or Clean Harbors on-site.
4.6.40 (b)	The first time a delivery is received from a different process associated with a known waste generator.	X					
4.6.40 (c)	The first time a waste is received from a different location associated with a known waste generator.	X					
4.6.40 (d)	When the nature or composition of the waste that was previously characterized by the generator changes.	X					
4.6.41	The approval holder shall not dispose of hazardous waste in any Class II landfill cell.				X	Not applicable.	Not applicable. The site is not a Class II landfill.
4.6.42	The approval holder shall:				X	Not applicable.	Not applicable. Information only.
4.6.42 (a)	Only carry out waste stabilization or solidification or both within the waste stabilization area.	X				Site field observations.	Solidification and waste stabilization activities consistent with Approval requirements during field observations.
4.6.42 (b)	Not transfer waste from the waste stabilization area to the Class I landfill cell before the waste stabilization or solidification or both have completed.	X					
4.6.43	The approval holder shall only dispose of any liquid collected within the waste stabilization area by one or more of the following methods:				X	Not applicable.	Not applicable. Information only.
4.6.43 (a)	To facilities holding a current Act authorization to accept such waste.				X	Not applicable.	Not applicable. This option not used by the facility.
4.6.43 (b)	To facilities approved by a local environmental authority outside of Alberta to accept such waste.				X	Not applicable.	Not applicable. This option not used by the facility.
4.6.43 (c)	To a disposal well approved by AER.or	X				AER approval for deep well.	• Liquid waste is hauled to Class I deep well in Calmar. • AER approval for deep well (leased from Seller's Oilfield Services to CH) observed. Approval No. WM 077 A, dated July 25, 2011.
4.6.43 (d)	As otherwise authorized in writing by the Director.				X	Not applicable.	Option not used by the Facility.
4.6.44	The approval holder shall conduct:				X	Not applicable.	Not applicable. Information only.
4.6.44 (a)	Annually, in-house visual inspections for corrosion.	X				Discussion with site staff.	Confirmed that annual visual inspections performed.
4.6.44 (b)	Biennially, ultrasonic testing to monitor thickness of the steel plate liner of the stabilization pits in the waste stabilization area, unless otherwise authorized in writing by the Director.	X				Inspection report from Integrity Testing Services Inc., dated August 2021.	Performed yearly, tracked by compliance calendar.
4.6.45	The approval holder shall dispose of asbestos wastes in accordance with "Guidelines for the Disposal of Asbestos Waste": Environmental Protection Services, Alberta Environment, 1989, as amended.	X				Operations Plan, Section H.	Referenced in Landfill Operations Plan.
4.6.46	The approval holder shall dispose of sulphur waste in accordance with "Guidelines for Landfill Disposal of Sulphur Wastes and Remediation of Sulphur Containing Soils", Alberta Environment, 2011, as amended.	X				Operations Plan, Section G.	Referenced in Landfill Operations Plan.
4.6.47	The approval holder shall only dispose of wastes that the landfill is not authorized to dispose of:				X	Not applicable.	Not applicable. Information only.
4.6.47 (a)	To facilities holding a current Act authorization.	X				Discussion with site staff.	Compliance confirmed. All waste receipts are screened at the site entry scale and any non-authorized loads, as determined through manifest, are rejected.
4.6.47 (b)	To facilities approved by a local environmental authority outside of Alberta. Or:	X					
4.6.47 (c)	As otherwise authorized in writing by the Director.	X					
4.6.48	If an unauthorized waste is received at the landfill, the approval holder shall remove the waste from the landfill within seven (7) days of the receipt, unless otherwise authorized in writing by the Director.				X	Not applicable.	Not applicable. Not observed during the audit. Non authorized waste not received in the landfill.
4.6.49	The approval holder shall restrict the working face of each landfill cell to the smallest practical area.				X		
4.6.50	For any waste disposed of at the landfill that is subject to wind dispersal, the approval holder shall:				X		
4.6.50 (a)	Wet the waste to prevent dispersal of particulate matter.or	X				Operations Plan, Appendix C (Fugitive Dust and Odour Best Management Plan).	Documents reviewed have procedures for managing dust and particulate matter through waste placement in landfill and in waste stabilization.
4.6.50 (b)	Immediately apply cover on top of the waste to minimize entrainment of particulate matter.	X					

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Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.6.51	Notwithstanding 4.6.1 (v), the approval holder may place any of the following wastes over the surface of the active landfill area for the purpose of dust suppression, provided that placement of such wastes will not cause offensive odours:	X				Discussion with site staff.	Compliance confirmed. Pond water for dust suppression. Leachate is never used due to odour.
4.6.51 (a)	Specified runoff.				X		
4.6.51 (b)	Leachate.				X		
4.6.51 (c)	Leak detection liquid.				X		
4.6.51 (d)	Sump waste of car wash bays or similar operations.				X	Not applicable.	Not applicable. Pond water is used for dust suppression only.
4.6.51 (e)	Waste from hydrovac excavation operations.				X		
4.6.51 (f)	Any other waste authorized by the Alberta User Guide for Waste Managers, May 1995, as amended.				X		
4.6.52	The approval holder shall inspect the landfill, at a minimum:				X	Not applicable.	Not applicable. Information only.
4.6.52 (a)	Weekly.	X					
4.6.52 (b)	Immediately after each storm event to: - Detect evidence of deterioration of any infrastructure components, including the composite liner. - Detect any malfunction or improper operation of the run-on and runoff control systems, leachate collection system, or leak detection system. - Take corrective measures to repair any damage to infrastructure components, including the composite liner.	X				<ul style="list-style-type: none"> Discussion with site staff. September 1, 2021 daily inspection record. 	Compliance confirmed through review of inspection record.
4.6.53	The approval holder shall do the following, the Director in writing along with any corrective measures taken or proposed:				X	Not applicable.	Not applicable. Information only.
4.6.53 (a)	Keep a record of inspections conducted pursuant to 4.6.52.	X					
4.6.53 (b)	Have the record of inspections available for review upon written request from the Director.	X				Landfill inspection records.	Compliance confirmed through review of electronic records.
4.6.53 (c)	Immediately report any deficiencies detected by the inspection in 4.6.52 to the Director in writing along with any corrective measures taken or proposed	X				Landfill inspection records.	Reported if there is a contravention. If not, a work ticket is created and the issue is fixed.
4.6.54	The approval holder shall not stockpile waste exceeding the maximum designated waste elevation of the landfill for a period of more than two (2) weeks, unless otherwise authorized in writing by the Director.	X				Site survey, dated January 4, 2021.	The site is surveyed twice per year, and no contours exceed the maximum designated waste elevation.
4.6.55	The approval holder shall take all practical measures to prevent off-site tracking of waste from vehicles and equipment leaving the facility.	X				Discussion with site staff.	Mud and waste tracking from the haul trucks is addressed as needed.
Monitoring and Reporting							
4.6.56	The approval holder shall monitor the landfill operations as required in Table 4.6-D.	X				2020 Annual Report.	All criteria in Table 4.6-D is included.
4.6.57	The approval holder shall report to the Director the results of the landfill operations monitoring as required in Table 4.6-D.	X				2020 Annual Report.	Submitted to AEP.
4.6.58	The Annual Landfill Operations Report required in Table 4.6-D shall include, at a minimum, all of the following:				X	Not applicable.	Not applicable. Information only.
4.6.58 (a)	the name and contact information of the person responsible for the facility.	X				2020 Annual Report.	Addressed in Section 2.0 of Annual Report.
4.6.58 (b)	A summary of all information collected as required in Table 4.6-D.	X				2020 Annual Report.	Addressed in Section 3.0 of Annual Report.
4.6.58 (c)	A summary of the results of any audit conducted in accordance with 4.1.7.	X				2020 Annual Report.	2018 Triennial Compliance Audit included in Appendix D of Annual Report.
4.6.58 (d)	A summary of the operations of the waste stabilization area.	X				2020 Annual Report.	Addressed in Section 5.0 and Appendix I of Annual Report.
4.6.58 (e)	A summary of the performance of the run-on and runoff control systems, including a comparison to the limits in Tables 4.3-8 and 4.3-C.	X				2020 Annual Report.	Addressed in Section 6.0 of Annual Report.
4.6.58 (f)	A summary of the performance of the leachate collection system, including a comparison to the maximum acceptable leachate head.	X				2020 Annual Report.	Addressed in Section 7.0 of Annual Report.
4.6.58 (g)	A summary of the performance of the leak detection system, including a comparison to the action leakage rate limit.	X				2020 Annual Report.	Addressed in Section 8.0 of Annual Report.
4.6.58 (h)	The Response Action Plan for the leak detection system pursuant to 4.4.1 O.	X				2020 Annual Report.	Addressed in Section 9.0 and Appendix J of Annual Report.
4.6.58 (i)	The Annual Dugout and Water Well Sampling Program Report pursuant to 4.5.4.	X				2020 Annual Report.	Addressed in Section 10.0 Appendix K of Annual Report.
4.6.58 (j)	A summary of all revisions to the Landfill Operations Plan pursuant to 4.6.33(b).	X				2020 Annual Report.	Addressed in Section 11.0 and Appendix L of Annual Report.
4.6.58 (k)	Any groundwater remedial action taken pursuant to 4.6.34(p).	X				2020 Annual Report.	Addressed in Section 12.0 of Annual Report.
4.6.58 (l)	A summary of records of landfill inspections pursuant to 4.6.53.	X				2020 Annual Report.	Addressed in Section 13.0 and Appendix M of Annual Report.
4.6.58 (m)	A summary of: - Operational issues encountered. - Emergencies occurred. - Measures or actions taken.	X				2020 Annual Report.	Addressed in Section 14.0 of Annual Report.
4.6.58 (n)	A summary of records of: - Public complaints. - The approval holder's responses	X				2020 Annual Report.	Addressed in Section 15.0 and Appendix Q of Annual Report.

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		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.6.58 (o)	An up-to-date financial security estimate pursuant to 5.1.2.	X				2020 Annual Report.	Addressed in Section 16.0 and Appendix N of Annual Report.
4.6.58 (p)	An updated site development plan showing the status of the landfill progression at the end of the operating year, including but not limited to: - Contour mapping. - The location of active and inactive disposal areas. - Areas where a final cover has been placed. - The location of new landfill cell(s) constructed.	X				2020 Annual Report.	Addressed in Section 17.0 and Appendix O of Annual Report.
4.6.58 (q)	The Annual Landfill Cell Closure Report pursuant to 7.1.7.	X				2020 Annual Report.	Addressed in Section 18.0 Appendix P of Annual Report.
4.6.58 (r)	A summary of contraventions reported pursuant to 2.1.1 related to landfill operations.	X				2020 Annual Report.	Addressed in Section 19.0 Appendix Q of Annual Report.
4.6.58 (s)	Any other information as required in writing by the Director.	X				2020 Annual Report.	Addressed in Section 20 of Annual Report. No additional information was required by the Director.
4.6.59	The approval holder shall submit the Annual Landfill Operations Report to the Director.	X				Discussion with site staff.	Confirmation of submission prior to deadline (March 24, 2021 for last items).
Operations							
4.7.1	The approval holder shall not release any substances from the domestic wastewater system to the surrounding watershed except as authorized by this approval.	X				Discussion with site staff.	Wastewater is directed to an isolated holding tank.
4.7.2	The approval holder shall direct all domestic wastewater to the domestic wastewater system.	X					
4.7.3	The approval holder shall only dispose of substances from the domestic wastewater system:				X	Not applicable.	Not applicable. Information only.
4.7.3 (a)	To facilities holding a current Act authorization.	X					
4.7.3 (b)	To facilities approved by a local environmental authority outside of Alberta or	X				Discussion with site staff.	Wastewater from holding tank taken across the street to authorized treatment lagoon (Contractor).
4.7.3 (c)	As otherwise authorized in writing by the Director.	X					
Not used at this time.							
Monitoring							
4.9.1	The approval holder shall continue to implement the existing Groundwater Monitoring Program as authorized in writing by the Director, unless and until otherwise authorized in writing by the Director pursuant to 4.9.4.	X				Tetra Tech 2020 Groundwater Monitoring Program, dated March 2, 2020.	Groundwater reporting is being conducted in conformance with the Groundwater Monitoring Program.
4.9.2	The approval holder shall submit a revised Groundwater Monitoring Program to the Director on or before September 30, 2017, unless otherwise authorized in writing by the Director.	X				Discussion with site staff.	Submitted before the September 30th, 2017 deadline.
4.9.3	If the revised Groundwater Monitoring Program submitted pursuant to 4.9.2 is found deficient by the Director, the approval holder shall correct all deficiencies as outlined in writing by the Director within the timeline specified in writing by the Director.	X				Discussion with site staff.	AEP did not identify any deficiencies with the program.
4.9.4	The approval holder shall implement the revised Groundwater Monitoring Program submitted pursuant to 4.9.2 as authorized in writing by the Director within the timeline specified in writing by the Director.	X				Discussion with site staff.	Implemented after submittal.
4.9.5	The approval holder shall:				X	Not applicable.	Not applicable. Information only.
4.9.5 (a)	Collect a representative groundwater sample from each of the groundwater monitor wells specified in the Groundwater Monitoring Program, including the groundwater monitoring wells designated as points of compliance.	X				Tetra Tech 2020 Groundwater Monitoring Program, dated March 2, 2020.	Compliance confirmed; all wells in monitoring program are sampled.
4.9.5 (b)	Analyze each sample for the parameters listed in Table 4.9-A.	X					Compliance confirmed; all parameters are sampled for.
4.9.6	The monitoring required in 4.9.5 shall be conducted at the following frequencies, unless otherwise authorized in writing by the Director:				X	Not applicable.	Not applicable. Information only.
4.9.6 (a)	A minimum of once per year during each of the active landfill life, landfill cell closure, final landfill closure, and post-closure periods.	X				Tetra Tech 2020 Groundwater Monitoring Program, dated March 2, 2020.	Compliance confirmed; groundwater is monitored once per year.
4.9.6 (b)	A minimum of four times per year following detection of leachate constituents in groundwater at levels above those specified in 4.9.7, and until the levels specified in 4.9.7 have been met.	X				Discussion with site staff.	Compliance confirmed; no leachate constituents have ever been found.
4.9.7	The groundwater quality in the monitoring wells, designated as points of compliance in the Groundwater Monitoring Program, shall not exceed the higher of:				X	Not applicable.	Not applicable. Information only.

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		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
4.9.7 (a)	The objectives established in the water quality objectives in the Canadian Environmental Quality Guidelines (CEQG) for drinking water published by the Canadian Council of Ministers of the Environment (CCME), as amended.	X				Tetra Tech 2020 Groundwater Monitoring Program, dated March 2, 2020.	Several exceedances noted in GW report, however these are due to the natural composition of the groundwater in the area.
4.9.7 (b)	Background groundwater chemistry as determined through a statistical analysis, as a derived alternate groundwater performance standard.	X					
4.9.8	The approval holder shall implement the Remediation Plan as specified in the Landfill Operations Plan, when groundwater quality exceeds the groundwater performance criteria in 4.9.7.				X		Remediation Plan has not been required to be implemented. Exceedances are normal for the groundwater in the area.
4.9.9	The samples extracted from the groundwater monitor wells shall be collected using scientifically acceptable purging, sampling and preservation procedures so that a representative groundwater sample is obtained.	X				2020 GW Monitoring Report, dated March 2, 2021 from Tetra Tech	Compliance confirmed; acceptable procedures are being followed.
4.9.10	The approval holder shall for all groundwater monitoring wells:				X	Not applicable.	Not applicable. Information only.
4.9.10 (a)	Protect from damage.	X				Field observations.	Compliance confirmed; all wells were observed to be protected and locked.
4.9.10 (b)	Keep locked except when being sampled.	X					
4.9.11	If a representative groundwater sample cannot be collected because the groundwater monitoring well is damaged or is no longer capable of producing a representative groundwater sample, the approval holder shall:				X	Not applicable.	Not applicable. Information only.
4.9.11 (a)	Clean, repair or replace the groundwater monitoring well.				X	Not applicable.	Not applicable. No damaged or non-functional wells.
4.9.11 (b)	Collect and analyse a representative groundwater sample prior to the next scheduled sampling event.	X				Tetra Tech 2020 Groundwater Monitoring Program, dated March 2, 2020.	Compliance confirmed; groundwater monitoring consistent with schedule.
4.9.12	In addition to the sampling information recorded in 2.2.1, the approval holder shall record the following sampling information for all groundwater samples collected:				X	Not applicable.	Not applicable. Information only.
4.9.12 (a)	A description of purging and sampling procedures.	X				Tetra Tech 2020 Groundwater Monitoring Program, dated March 2, 2020.	Refer to Section 5.2.
4.9.12 (b)	The static elevations above sea level, and depth below ground surface of fluid phases in the groundwater monitoring well prior to purging.	X					Compliance confirmed; groundwater levels were recorded.
4.9.12 (c)	The temperature of each sample at the time of sampling.	X					Compliance confirmed; temperature was recorded at the time of sampling.
4.9.12 (d)	The pH of each sample at the time of sampling.	X					Compliance confirmed; pH was recorded at the time of sampling.
4.9.12 (e)	The specific conductance of each sample at the time of sampling.	X					Compliance confirmed; recorded as mS at the time of sampling.
4.9.13	The approval holder shall carry out remediation of the groundwater in accordance with the following:				X	Not applicable.	Not applicable. Information only.
4.9.13 (a)	Alberta Tier 1 Soil and Groundwater Remediation Guidelines, Alberta Environment, February 2009, as amended.				X		Not applicable. Groundwater remediation has not been deemed necessary.
4.9.13 (b)	Alberta Tier 2 Soil and Groundwater Remediation Guidelines, Alberta Environment, February 2009, as amended.				X		
Reporting							
4.9.14	The approval holder shall compile an Annual Groundwater Monitoring Program Report which shall include, at a minimum, all of the following information:				X	Not applicable.	Not applicable. Information only.

Section 4 - Operations

Approval Line Item	Action	Finding				Documents Reviewed	Details		
		Compliant	Non-Compliant	OFI	Info, N/A				
Part 4 - Operations, Limits, Monitoring, and Reporting									
4.9.14 (a)	A completed Record of Site Condition Form, Alberta Environment, 2009, as amended.	X							
4.9.14 (b)	A legal land description of the facility and a map illustrating the facility boundaries.	X							
4.9.14 (c)	A topographic map of the facility.	X							
4.9.14 (d)	A description of the industrial activity and processes.	X							
4.9.14 (e)	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 1.6 kilometre radius of the facility.	X							
4.9.14 (f)	A general hydrogeological characterization of the region within a five kilometre radius of the facility.	X							
4.9.14 (g)	A detailed hydrogeological characterization of the facility, including an interpretation of groundwater flow patterns.	X							
4.9.14 (h)	Cross-sections showing depth to water table, patterns of groundwater movement and hydraulic gradients at the facility.	X							
4.9.14 (i)	Borehole logs and completion details for groundwater monitoring wells.	X							
4.9.14 (j)	A map showing locations of all known buried channels within at least five kilometre of the facility.	X				<ul style="list-style-type: none"> • Tetra Tech 2019 Groundwater Monitoring Program, dated March 10, 2020. • Tetra Tech 2020 Groundwater Monitoring Program, dated March 2, 2020. 	Compliance confirmed through a review of the report. Submission to AEP confirmed through review of correspondence.		
4.9.14 (k)	A map of surface drainage within the facility and surrounding area to include nearby water bodies.	X							
4.9.14 (l)	A map of groundwater monitoring well locations and a table summarizing the existing groundwater monitoring program for the facility.	X							
4.9.14 (m)	A summary of any changes to the groundwater monitoring program made since the last groundwater monitoring report.	X							
4.9.14 (n)	Analytical data recorded as required in 4.9.5 and 4.9.11(b).	X							
4.9.14 (o)	A summary of fluid elevations recorded as required in 4.9.12(b) and an interpretation of changes in fluid elevations.	X							
4.9.14 (p)	An interpretation of QA/QC program results.	X							
4.9.14 (q)	An interpretation of all the data in this report, including the following: - Diagrams indicating the location and extent of any contamination. - A description of probable sources of contamination. - A site map showing the location and type of current and historical potential sources of groundwater contamination	X							
4.9.14 (v)	Recommendations for: - Changes to the groundwater monitoring program to make it more effective. - Remediation, risk assessment or risk management of contamination identified.	X							
4.9.15	The approval holder shall submit the Annual Groundwater Monitoring Program Report to the Director.	X							
4.9.16	If the Annual Groundwater Monitoring Program Report is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director, within the timeline specified in writing by the Director.				X			Not applicable.	Not applicable. AEP did not identify any deficiencies.
4.10.1	In addition to any other requirements specified in this approval, the approval holder shall conduct all of the following activities related to soil monitoring and soil management required by this approval in accordance with the Soil Monitoring Directive, Alberta Environment, 2009, as amended:	X						Tetra Tech 2017 Soil Management Program Proposal, including Soil Monitoring Program.	Compliance confirmed: • March 21, 2017 - Soil Management Program Proposal (incl. monitoring program submitted to AEP). • September 11, 2017 - Supplemental Information to Soil Management Program Proposal (revisions), submitted to AEP. • September 13, 2017 - Approval letter from AEP regarding Soil Management Program Proposal.
4.10.1 (a)	Designing and developing proposals for the Soil Monitoring Program.	X							
4.10.1 (b)	Designing and developing proposals for the Soil Management Program.	X							
4.10.1 (c)	All other actions, including sampling, analysing, and reporting, associated with the Soil Monitoring Program.	X				Tetra Tech 2019 Soil Monitoring Program Report, dated January 31, 2020.	Actions in program reflect the 2019 Soil Monitoring Program Proposal and Deficiency Response Letter.		
4.10.1 (d)	All other actions, including sampling, analysing and reporting, associated with the Soil Management Program.	X				Tetra Tech 2019 Soil Monitoring Program Report, dated January 31, 2020.	Actions in program reflect the 2019 Soil Monitoring Program Proposal and Deficiency Response Letter.		

Section 4 - Operations

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 4 - Operations, Limits, Monitoring, and Reporting							
Soil Monitoring and Reporting							
4.10.2	The approval holder shall submit the Soil Monitoring Program proposal to the Director according to the following schedule: - For the first soil monitoring event on or before January 31, 2019. - For the second soil monitoring event on or before January 31, 2024.	X				Tetra Tech 2017 Soil Management Program Proposal, including Soil Monitoring Program.	Compliance confirmed: • March 21, 2017 - Soil Management Program Proposal (incl. monitoring program submitted to AEP). • September 11, 2017 - Supplemental Information to Soil Management Program Proposal (revisions), submitted to AEP. • September 13, 2017 - Approval letter from AEP regarding Soil Management Program Proposal.
4.10.3	If any Soil Monitoring Program proposal is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.	X					
4.10.4	Subject to 4.10.3, the approval holder shall implement the Soil Monitoring Program as authorized in writing by the Director.	X				Tetra Tech 2019 Soil Monitoring Program.	Confirmed that this was completed in Fall 2019.
4.10.5	If an authorization or a deficiency letter is not issued within 120 days of the applicable date required by 4.10.2, the approval holder shall implement the Soil Monitoring Program in accordance with the program as set out in the proposal submitted by the approval holder and within 270 days after the applicable date required by 4.10.2	X				Tetra Tech 2019 Soil Monitoring Program.	Confirmed that this was completed in Fall 2019.
4.10.6	The approval holder shall submit to the Director each Soil Monitoring Program Report obtained from the soil monitoring referred to in 4.10.4 and 4.10.5 according to the following schedule:	X				Tetra Tech 2019 Soil Monitoring Program.	Confirmed that this was completed in Fall 2019.
4.10.6 (a)	For the first Soil Monitoring Program Report on or before January 31, 2020.	X				Tetra Tech 2019 Soil Monitoring Program Report, dated January 31, 2020.	Submit to the AEP on time, January 31, 2020
4.10.6 (b)	For the second Soil Monitoring Program Report on or before January 31, 2025.				X	Not applicable.	Not applicable. To be completed in the summer of 2024.
4.10.7	If any Soil Monitoring Program Report is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.	X				Tetra Tech 2019 Soil Monitoring Program Report, dated January 31, 2020.	Actions in program reflect the 2019 Soil Monitoring Program Proposal and Deficiency Response Letter.
Soil Management Program							
4.10.8	If the Soil Monitoring Program, or any other soil monitoring, reveals that there are substances present in the soil at concentrations greater than any of the applicable concentrations set out in the standards in the Soil Monitoring Directive, Alberta Environment, 2009, as amended, the approval holder shall develop a Soil Management Program Proposal.	X				• Tetra Tech 2017 Soil Management Program Proposal, including Soil Monitoring Program. • Tetra Tech Soil Management Program 2017 Cell 4 Soil Sampling, dated March 12, 2018.	Soil Management Program Proposal was developed and compliance was confirmed through a review.
4.10.9	If a Soil Management Program Proposal is required pursuant to 4.10.8, the approval holder shall submit a Soil Management Program Proposal to the Director according to the following schedule:				X	Not applicable.	Not applicable. Information only
4.10.9 (a)	For Soil Management Program Proposal that is triggered by the findings from the first soil monitoring event on or before the date in 4.10.6(a).	X				Soil Management Program - 2017 Cell 4 Soil Sampling	Updated Soil Management Plan and recommendations are being followed by consultant.
4.10.9 (b)	For Soil Management Program Proposal that is triggered by the findings from a second soil monitoring event on or before the date in 4.10.6(b).	X				Soil Management Program - 2017 Cell 4 Soil Sampling	Updated Soil Management Plan and recommendations are being followed by consultant.
4.10.9 (c)	For any other soil monitoring event not specified in this approval within six months of completion of the soil monitoring event.				X	Not applicable.	Not applicable. Information only
4.10.10	If any Soil Management Program Proposal is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.	X				Soil Management Program - 2017 Cell 4 Soil Sampling	Updated Soil Management Plan and recommendations are being followed by consultant.
4.10.11	The approval holder shall implement the Soil Management Program as authorized in writing by the Director.	X				Soil Management Program - 2017 Cell 4 Soil Sampling	Updated Soil Management Plan and recommendations are being followed by consultant.
4.10.12	If the approval holder is required to implement a Soil Management Program pursuant to 4.10.11, the approval holder shall submit a written Soil Management Program Report to the Director on or before March 31 of each year following the year in which the information was collected.	X				Soil Management Program - 2017 Cell 4 Soil Sampling	Updated Soil Management Plan and recommendations are being followed by consultant.
4.10.13	If any Soil Management Program Report is found deficient by the Director, the approval holder shall correct all deficiencies identified by the Director by the date specified in writing by the Director.				X	Not applicable.	Not applicable. No deficiencies identified by the Director.

Section 6 - Decommissioning

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFl	Info, N/A		
Part 6 - Decommissioning and Land Reclamation							
6.1.1	The approval holder shall apply for an amendment to this approval to reclaim the HWRSP Facility by submitting to the Director: - A Decommissioning Plan. - A Land Reclamation Plan.				X	Not applicable.	Not applicable. Facility is still operational and expanding.
6.1.2	The approval holder shall submit the Decommissioning Plan and Land Reclamation Plan referred to in 6.1.1 within six (6) months of the HWRSP Facility ceasing operation, except for repairs and maintenance, unless otherwise authorized in writing by the Director.				X		
6.2.1	The Decommissioning Plan referred to in 6.1.1 shall include, at a minimum, all of the following:				X	Not applicable.	Not applicable. Facility is still operational and expanding.
6.2.1 (a)	A plan for dismantling the HWRSP Facility.				X		
6.2.1 (b)	A comprehensive study to determine the nature, degree and extent of contamination at the HWRSP Facility and affected lands.				X		
6.2.1 (c)	A plan to manage all wastes at the HWRSP Facility.				X		
6.2.1 (d)	Evaluation of remediation technologies proposed to be used at the HWRSP Facility and affected lands.				X		
6.2.1 (e)	A plan for decontamination of the HWRSP Facility and affected lands in accordance with the following: - For soil or groundwater, Alberta Tier 1 Soil and Groundwater Remediation Guidelines, Alberta Environment, February 2009, as amended. - For soil or groundwater, Alberta Tier 2 Soil and Groundwater Remediation Guidelines, Alberta Environment, February 2009, as amended. - For drinking water, Canadian Environmental Quality Guidelines, Canadian Council of Ministers of the Environment, PN 1299, 1999, as amended. - For surface water, Surface Water Quality Guidelines for Use in Alberta, Alberta Environment, November 1999, as amended.				X		
6.2.1 (f)	Confirmatory testing to indicate compliance with the remediation objectives.				X		
6.2.1 (g)	A plan for maintaining and operating contaminant monitoring systems.				X		
6.2.1 (h)	A schedule for activities (a) through (g) above.				X		
6.2.1 (i)	Any other information as required in writing by the Director.				X		
6.2.2	If the Decommissioning Plan is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.				X		

Section 6 - Decommissioning

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFl	Info, N/A		
6.3.1	The Land Reclamation Plan referred to in 6.1.1 shall include, at a minimum, all of the following:				X	Not applicable.	Not applicable. Facility is still operational and expanding.
6.3.1 (a)	The final use of the reclaimed area and how equivalent land capability will be achieved.				X		
6.3.1 (b)	Removal of infrastructure.				X		
6.3.1 (c)	Restoration of drainage.				X		
6.3.1 (d)	Soil replacement.				X		
6.3.1 (e)	Erosion control.				X		
6.3.1 (f)	Revegetation and conditioning of the HWRSP Facility including: - Species list, seed source and quality, seeding rates and methods. - Fertilization rates and methods. - Reclamation schedule.				X		
6.3.1 (g)	Reclamation schedule.				X		
6.3.1 (h)	Any other information as required in writing by the Director.				X		
6.3.2	If the Land Reclamation Plan is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.				X		

Section 7 - Final Closure

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	O/I	Info. N/A		
Part 7 - Final Landfill Closure and Post-Closure							
7.1.1	The approval holder shall submit a Landfill Cell Closure Plan for individual landfill cell closure to the Director on or before September 30, 2017, unless otherwise authorized in writing by the Director.			X		Construction and record drawing packages for Cell 3B.	Based on further discussion with Clean Harbors, the Landfill Cell Closure Plan is formed by the stamped design work completed as part of the issued for construction and final record drawing packages and associated documents, and as such, we have considered this matter closed. Further monitoring of this requirement is recommended for future landfill cell closure activities.
7.1.2	The Landfill Cell Closure Plan submitted pursuant to 7.1.1 shall be signed and stamped by a professional registered with APEGA.			X			
7.1.3	If the Landfill Cell Closure Plan submitted pursuant to 7.1.1 is found deficient by the Director, the approval holder shall correct all deficiencies as outlined in writing by the Director within the timeline specified in writing by the Director.				X	Not applicable.	Not applicable. Information only.
7.1.4	The approval holder shall implement the Landfill Cell Closure Plan submitted pursuant to 7.1.1 as authorized in writing by the Director.				X	Not applicable.	Not applicable. Information only.
7.1.5	The approval holder shall maintain the closed landfill cells to:				X	Not applicable.	Not applicable. Information only.
7.1.5 (a)	Protect and maintain the integrity of the final cover and surface water drainage systems.	X				Field observations.	<ul style="list-style-type: none"> • Surface run-off goes to perimeter ditch system. • Vegetated final caps. • Sloping and drainage per approved designs. • Leachate collection system and storage tanks. • No subsidence or settlement observed. Monitoring consistent with Operations Plan.
7.1.5 (b)	Prevent erosion.	X					
7.1.5 (c)	Prevent surface water ponding.	X					
7.1.5 (d)	Remediate areas affected by subsidence and differential settlement.	X					
7.1.5 (e)	Prevent leachate break out.	X					
7.1.6	If the approval holder completes landfill cell closure in a year, the approval holder shall prepare an Annual Landfill Cell Closure Report, and include, at a minimum, all of the following information in the Report:				X	Not applicable.	Not applicable. Information only.
7.1.6 (a)	As-built plans and details on the location of landfill cells that have been closed.	X				Annual Landfill Cell Closure Report - Cell 3B, report from Dillon Consulting dated March 2, 2021.	Confirmed that the Closure Report was submitted in the 2020 Annual Report.
7.1.6 (b)	Certified construction QA/QC procedures employed during cover construction and installation.	X					
7.1.6 (c)	Survey reports showing the final cover depths.	X					
7.1.7	The approval holder shall submit the Annual Landfill Cell Closure Report with the Annual Landfill Operations Report required in 4.6.58.	X					

Section 7 - Final Closure

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	Ofl	Info. N/A		
7.2.1	The approval holder shall apply for an amendment to this approval for final landfill closure by submitting to the Director: - A Detailed Final Landfill Closure Plan. - A Landfill Post-Closure Plan.				X	Not applicable.	The landfill is still operational and expanding. Landfill Closure Plan and Post-Closure Plan is to be submitted 180 days prior to implementation.
7.2.2	The approval holder shall submit the Detailed Final Closure Plan and Landfill Post-Closure Plan referred to in 7.2.1 within six (6) months of the landfill ceasing operations, unless otherwise authorized in writing by the Director.				X	Not applicable.	The landfill is still operational and expanding.
Detailed Final Closure Plan							
7.2.3	The Detailed Final Landfill Closure Plan shall be developed in accordance with sections 6.1 (b) and 6.1 (c) of the Standards for Landfills in Alberta, as amended.				X	Not applicable.	The landfill is still operational and expanding.
7.2.4	In addition to 7.2.3, the Detailed Final Landfill Closure Plan shall include, at a minimum, all of the following:				X	Not applicable.	The landfill is still operational and expanding.
7.2.4 (a)	A plan for replacement of soil.				X	Not applicable.	The landfill is still operational and expanding.
7.2.4 (b)	A QA/QC Program.				X	Not applicable.	The landfill is still operational and expanding.
7.2.4 (c)	Any deviations from the most recently submitted closure plan.				X	Not applicable.	The landfill is still operational and expanding.
7.2.5	The Detailed Final Landfill Closure Plan shall be signed and stamped by a professional registered with APEGA.				X	Not applicable.	The landfill is still operational and expanding.
7.2.6	If the Detailed Final Landfill Closure Plan is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.				X	Not applicable.	The landfill is still operational and expanding.
7.2.7	The approval holder shall implement the Detailed Final Landfill Closure Plan as authorized in writing by the Director.				X	Not applicable.	The landfill is still operational and expanding.
Landfill Post-Closure Plan							
7.2.8	The Landfill Post-Closure Plan shall be developed in accordance with sections 6.2 and 6.3 of the Standards for Landfills in Alberta, as amended.				X	Not applicable.	The landfill is still operational and expanding.
7.2.9	In addition to 7.2.8, the Landfill Post-Closure Plan shall include, at a minimum, all of the following:				X	Not applicable.	The landfill is still operational and expanding.
7.2.9 (a)	The groundwater monitoring program including performance standards and points of compliance.				X	Not applicable.	The landfill is still operational and expanding.
7.2.9 (b)	The subsurface landfill gas monitoring program and performance standards at points of compliance.				X	Not applicable.	The landfill is still operational and expanding.
7.2.9 (c)	A plan for erosion control.				X	Not applicable.	The landfill is still operational and expanding.
7.2.9 (d)	A plan for maintaining vegetative cover.				X	Not applicable.	The landfill is still operational and expanding.
7.2.9 (e)	Any other information requested in writing by the Director.				X	Not applicable.	The landfill is still operational and expanding.

Section 7 - Final Closure

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	O/I	Info, N/A		
7.2.10	The Landfill Post-Closure Plan shall be signed and stamped by a professional registered with APEGA.				X	Not applicable.	The landfill is still operational and expanding.
7.2.11	If the Landfill Post-Closure Plan is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.				X	Not applicable.	The landfill is still operational and expanding.
7.2.12	The approval holder shall implement the Landfill Post-Closure Plan as authorized in writing by the Director.				X	Not applicable.	The landfill is still operational and expanding.

Section 8 - SWM Pond Closure

Approval Line Item	Action	Finding				Documents Reviewed	Details
		Compliant	Non-Compliant	OFI	Info, N/A		
Part 8 - Decommissioning and Land Reclamation of Old Surface Water Detention Pond							
8.1.1	The approval holder shall decommission and reclaim the old surface water detention pond prior to construction of Cell 4.	X				<ul style="list-style-type: none"> Soil Management Program - 2017 Cell 4 Soil Sampling, report dated March 12, 2018 from Tetra Tech. 	Confirmed that this was done concurrent with earthworks for Cell 4 construction.
8.1.2	The approval holder shall submit a Decommissioning and Land Reclamation Plan for the old surface water detention pond to the Director a minimum of six (6) months prior to decommissioning and land reclamation of the pond.	X				<ul style="list-style-type: none"> Soil Management Program - 2018 Cell 4 Remediation Report, May 31, 2019 from Tetra Tech. 	<ul style="list-style-type: none"> Soil Management Program (2017 Cell 4 Soil Sampling) submitted to AEP Industrial Reporting email address on March 23, 2018. Soil Management Program (2018 Cell 4 Remediation Report) submitted June 11, 2019. Report details pond draining and soil sampling following remediation to meet guidelines and approval.
8.1.3	If the Decommissioning and Land Reclamation Plan is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.	X				Not applicable.	AEP did not comment on any deficiencies.