



January 29, 2021

DAMION SADD  
CONTINENTAL CEMENT COMPANY  
301 EAST FRONT STREET  
BUFFALO IA 52728

RE: Continental Cement Davenport Plant Operating CKD Landfill  
Permit #82-SDP-16-97P  
Permit Revision #3

Dear Mr. Sadd:

Enclosed is the revised permit for the Continental Cement Davenport Plant Operating CKD Landfill. The permit and the approved plans must be kept at the sanitary disposal project in accordance with solid waste rule 567 IAC 115.26(2)"c". Please review the permit with your operators, as they must become familiar with it.

The revised permit contains extensions to document submittal dates established in the previous permit revision. The extended submittal dates can be located in special provisions #2a, #2b, #3a, #4a, #4c, and #4d in the attached permit.

If you have any questions, please contact me at (515) 689-6548 or [mick.leat@dnr.iowa.gov](mailto:mick.leat@dnr.iowa.gov).

Sincerely,

A handwritten signature in blue ink that reads "Michael B. Leat". The signature is stylized with a cursive-like flow.

Michael B. "Mick" Leat  
Land Quality Bureau


cc: Krista Brodersen  
Blackstone Environmental  
514 17<sup>th</sup> Street, Box 206  
Moline, IL 61265

DNR Field Office #6

Lindsey E. James, R.G.  
Blackstone Environmental  
16200 Foster St.  
Overland Park, KS 66085

Kyle Kukuk, P.E.  
Blackstone Environmental  
16200 Foster St.  
Overland Park, KS 66085

**IOWA DEPARTMENT OF NATURAL RESOURCES  
SANITARY DISPOSAL PROJECT PERMIT  
FOR INDUSTRIAL MONOFILLS**

- I. Permit Number:** 82-SDP-16-97P  
Continental Cement Davenport Plant Operating  
CKD Landfill
- II. Permitted Agency:** Continental Cement Company, LLC
- III. Project Location:** A part of the N½ of the NE¼ of Section 23 and a part of the S½ of the SW¼ of the SE¼ of Section 14, both in T77N, R2E, Scott County, Iowa. The development fill area covered under this permit is located between N 1500 to N 2300 and W 300 to E 500, as shown in the Supplemental to Cement Kiln Dust Closure and Development Plan dated June 1997.
- IV. Responsible Official**
- Name: Joseph Pennings, Plant Manager  
Address: Continental Cement Company, LLC  
301 East Front Street  
Buffalo, IA 52728  
Phone: 563/328-6204  
FAX: 563/323-7001
- V. Licensed Design Engineer**
- Name: Kyle Kukuk, P.E.  
Address: Blackstone Environmental, Inc.  
16200 Foster  
Overland Park, KS 66085  
Phone: 913/495-9990  
Iowa License Number: 22790
- VI. Date Permit Issued:** September 25, 2018  
**Date 3<sup>rd</sup> Permit Revision:** January 29, 2021
- VII. Permit Expiration Date:** September 25, 2021
- VIII. Issued by:**   
Iowa Department of Natural Resources

## **IX. General Provisions**

The above named permitted agency is hereby authorized to operate a sanitary disposal project at the described location in conformance with Iowa Code section 455B, the rules pursuant thereto existing at the time of issuance, and any subsequent new rules which may be duly adopted, and any provisions contained in Section X of this permit.

The issuance of this permit in no way relieves the applicant of the responsibility for complying with all other local, state, and federal statutes, ordinances, and rules or other requirements applicable to the establishment and operation of this sanitary disposal project.

No legal or financial responsibility arising from the construction or operation of the approved project shall attach to the State of Iowa or the DNR due to the issuance of this permit.

If title to this project is transferred, the new owner must apply to the DNR for a transfer of this permit within thirty days of the date of title transfer pursuant to rule 115.9. This permit is void sixty days after the date of title transfer unless the DNR has transferred the permit.

In accordance with Iowa Code section 455B.310, the permit holder is exempted from solid waste tonnage fees for Cement Kiln Dust (CKD) disposal at the permitted sanitary disposal project. This exemption does not relieve the permit holder from tonnage reporting requirements listed below.

The permit holder shall file a Quarterly Fee-Exempt Material Quarterly Report utilizing the DNR's Form 542-3276FE for all wastes disposed at the sanitary disposal project in accordance with Iowa Code section 455B.310. The Reports will be due January 1, April 1, July 1 and October 1 for the quarters ending September 30, December 31, March 31 and June 30, respectively. The permit holder shall mail the completed form to the Solid Waste Section, Wallace State Office Building, 502 East Ninth Street, Des Moines, Iowa 50319. This reporting procedure supersedes any previous conflicting permit provisions.

The permit holder shall weigh all solid waste collection vehicles and solid waste transport vehicles on a scale certified by the Iowa Department of Agriculture and Land Stewardship. If conditions are such that make it impractical to provide an on-site scale, then off-site scale facilities or an alternative method of calculating the tonnage disposed, may be used if justified and approved by the DNR. The permit holder shall comply with the waste weighing, record keeping and tonnage fee reporting requirements defined in rule 101.14(455B,455D). The scale weighing facilities shall comply with the certification and licensing requirements of the Iowa Department of Agriculture and Land Stewardship at all times. The permit holder shall maintain a current copy of the weighing scale facility licensing certificate issued by the Iowa Department of Agriculture and Land Stewardship at all times.

This facility shall be staked as necessary and inspected on a semiannual basis by a professional engineer licensed in the State of Iowa. The engineer shall prepare a brief report describing the site's conformance and nonconformance with the permit and the approved plans and specifications during the inspections. These reports shall be submitted by April 30 and October 31 each year to

the DNR's Main and local Field offices. The DNR shall be notified if any inspection reveals any nonconformance with the permit and approved plans and specifications.

The permit holder shall ensure that the sanitary disposal project does not (1) cause a discharge of pollutants into waters of the United States, including wetlands, that violates any requirements of the Clean Water Act, including, but not limited to, the National Pollutant Discharge Elimination System (NPDES) requirements, pursuant to Section 402 of the Clean Water Act, and (2) cause the discharge of a nonpoint source of pollution into waters of the United States, including wetlands, that violates any requirement of an areawide or statewide water quality management plan that has been approved under Section 208 or 319 of the Clean Water Act.

The permit holder shall submit an updated Sanitary Landfill Financial Assurance Report Form no later than April 1<sup>st</sup>, annually, pursuant to rule 115.31(455B). Use of this form provides permit holders a uniform means of submitting all required documentation to ensure that closure and postclosure cost estimates and applicable financial assurance instruments are updated as required.

Failure to comply with Iowa Code Chapter 455B, or any rule of order promulgated pursuant thereto, or any or all provisions of this permit may result in 1) a civil penalty of up to \$5000 for each day of violation, pursuant to Iowa Code section 455B.307, or 2) the suspension or revocation of this permit, pursuant to Iowa Code section 455B.305.

#### **X. Special Provisions**

1. The permit holder is authorized to accept Cement Kiln Dust (CKD) generated from plant cement production for disposal. Wastes disposed at this site shall not exhibit free liquids, toxic or hazardous properties. No hazardous wastes as defined by Iowa Code section 455B.411 may be disposed at this landfill.
2. The permit holder shall develop and operate the site in accordance with the hereby-approved Industrial Monofill Permit Renewal Application, dated May 18, 2018 (doc #92386), as submitted by Terracon Consultants, and the following:
  - a. The permit holder shall evaluate the existing leachate collection system performance and submit a leachate system performance feasibility study report by June 11, 2021 that provides explanations for the exceedances of the maximum allowable leachate head and a thorough evaluation of the existing leachate control system. The report shall include plans, with an implementation schedule, to remedy the exceedances, and plans for all other maintenance or upgrades to the current leachate collection system to maintain compliance.
  - b. A revised Site Operations Plan shall be submitted by August 29, 2021.
  - c. CKD waste disposal is limited to the Active Phase II Cell as shown in Figure No. 3 contained in Appendix A of the Permit Renewal. The site vertical height shall not exceed a maximum waste elevation of 610 feet. Any further expansion beyond the Phase II Area shall require prior DNR approval.

- d. Leachate collected from the leachate control system shall be used or treated in one of the following manners: 1) sprayed onto the active area of CKD disposal to control dust; 2) utilized in the cement manufacturing process; 3) evaporated; 4) treated in an on-site facility with an NPDES permit; or 5) discharged to a publicly owned treatment works (POTW). If the discharge is to a POTW with a pretreatment program approved by the DNR, the discharge must comply with the terms and conditions of a local permit issued for the discharge by the POTW. If the discharge is to a POTW without an approved pretreatment program a completed treatment agreement form shall be submitted to the DNR's Wastewater Section. Copies of the local permit or treatment agreement shall be provided to the DNR's Solid Waste Section and the local Field office. The treatment agreement must be on DNR Form 31 (542-3221) and must comply with the requirements of subrule 64.3(5).

In addition, the permit holder shall monthly measure leachate head levels and elevations at all piezometers and record the volume of leachate collected and transported to the treatment works. Records of leachate contaminants testing required by the treatment works and any NPDES permit for on-site treated leachate discharges shall be maintained.

The leachate control system shall be operated and maintained in accordance with the approved permit documents. After implementation of the leachate control system, the permit holder shall routinely collect the necessary information and evaluate the effectiveness of the system in controlling the leachate. All documentation shall be summarized in a Leachate Control System Performance Evaluation (LCSPE) Report. Effective control shall be considered as maintaining compliance with maximum leachate head as defined in 567 IAC 115.26(11)"a"(1), achieving the lowest possible leachate head as required in 567 IAC 115.26(12)"b"(2), and maintaining surface and groundwater quality standards at compliance monitoring points.

The permit holder shall annually submit the LCSPE Report, including record data, as a supplement to the facility Annual Water Quality Report, as defined in 567 IAC 115.26(8)"d". The performance evaluation shall include proposed additional leachate control measures and an implementation schedule in the event that the constructed system is not performing effectively.

- e. Surface water shall be diverted around the fill area and surface drainage shall be provided at the toe of the working face.
- f. An all weather fill area accessible during all weather conditions under which CKD waste is received and disposed at the site shall be provided at all times.
- g. During CKD transport activities from the plant to the disposal site, all necessary measures shall be taken to prevent blowing dust. The CKD will be conditioned (pelletized) prior to disposal in order to reduce the potential for dust generation. The conditioned material will be wetted and compacted during disposal to minimize permeability and enhance the strength of the CKD deposit.

The sub-freezing weather dust control/wetting plan submitted by Shive-Hattery, Inc. under transmittal letter dated February 10, 2003, and approved on July 1, 2003; is incorporated as part of the permit documents.

- h. In accordance with the variance approval of July 30, 1997, the permit holder is not required to place daily or weekly soil cover, as long as wind and water do not erode the disposed waste and dust emissions are controlled.

The permit holder shall apply an intermediate soil cover of two feet to areas of the landfill that will not be utilized for more than two months.

The active work face shall be kept to a minimum and shall be smoothed out and compacted to promote drainage of precipitation while reducing erosion and infiltration.

- i. In accordance with the variance approval of July 30, 1997, the permit holder is exempt from having a certified sanitary landfill operator on duty during all hours of operation at the site as required by 567 IAC 115.29(1). However, Continental Cement is required to have a certified operator at the generation station to direct and monitor landfill operation as proposed. The certified operator shall visit the landfill site as often as necessary but not less than once a week.
- j. The updated Emergency Response and Remedial Action Plan (ERRAP) contained in Appendix K of the Permit Renewal Application, as submitted by Terracon Consultants in compliance with 567 IAC 115.30(455B), is approved. An updated ERRAP shall be submitted at the time of each permit renewal application. An updated ERRAP shall be included with any request for permit modification to incorporate a facility expansion or significant changes in facility operation that require modification of the currently approved ERRAP.
- k. The following must be recorded by the permit holder and reported in the LCSPER for each leachate thickness measurement that equals or exceeds 12 inches at UL-1, UL-2, or UL-3:
  - 1) Date of original and any verification measurement.
  - 2) If 12 inch or greater leachate column is verified, specific actions taken by the certified operator to lower leachate thickness, or an explanation why specific actions were not necessary.
  - 3) Date and results of follow-up measurement.
  - 4) Repeat steps 2 and 3 as necessary until a compliant measurement is collected.
- l. Routine annual leachate sampling and analyses are required from MW-9, MW-10, UL-1, UL-2, UL-3, or the leachate sump for the routine and supplemental analytes listed in Permit Special Provision #4g.

Because sufficient leachate quantities have not been consistently measured any of the above locations, the permit holder must be prepared to sample these points during each of the monthly leachate elevation monitoring events required in Special Provision #2b until a single annual sample has been collected from one of the points. The leachate sampling results shall be submitted as part of the LCSPER.

3. The permit holder shall construct the liner and leachate collection system in accordance with the Design Plans, previously approved on August 25, 1997, and the Design and Operational Plans contained in Appendix H of the Permit Renewal Application dated May 18, 2018 (doc #92386), as submitted by Terracon Consultants; and the following:
  - a. Updated Phase 3 landfill design plans shall be submitted by October 1, 2021.
  - b. Any further construction of a liner and leachate collection system beyond the Phase II Area as shown in Figure No. 3 contained in Appendix A of the Permit Renewal requires prior approval by the DNR.
  - c. In accordance with 567 IAC 115.26(11)“d”, the DNR shall be notified and the site inspected when the initial construction of each phase of the leachate control system has been completed. Prior to the inspection, construction certification reports shall be submitted to the DNR’s Main and local Field offices. No waste disposal shall commence in any newly constructed unit or portion thereof until it has been inspected and approved by the DNR.
  - d. The construction certification report for Phase 1 dated June 2, 1999 and Phase 1 Record Drawings dated May 24, 1999, all as submitted by Shive-Hattery, Inc. and approved on June 8, 1999; are incorporated into the permit.
  - e. The construction certification report for Phase 2 dated September 20, 2002, as submitted by Shive-Hattery, Inc. and approved on July 1, 2003; is incorporated into the permit.
4. Hydrologic monitoring at the site shall be conducted in accordance with the Hydrologic Monitoring System Plan (HMSP) contained in Appendix G of the Permit Renewal Application dated May 18, 2018 (doc #92386), as submitted by Terracon; and the following provisions:
  - a. A revised HMSP shall be submitted by March 30, 2021 unless otherwise approved by DNR.
  - b. The HMSP shall include upgradient groundwater monitoring points MW-1A, MW-1B, MW-2A, MW-3, and MW-7, and downgradient groundwater monitoring points MW-2CR, MW-3L, MW-4, MW-4L, MW-5, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, MW-16L, MW-18, and MW-19, and Quarry Sump.

Subliner/lysimeters LL1, LL2, and LL3 are also added as routine monitoring points when sufficient water is present. Purging of the lysimeters prior to sampling is unnecessary. After sampling, each lysimeter shall be evacuated and the evacuation volume recorded.
  - c. Monitoring well(s) must be installed east of the closed, unlined landfill that are screened within the Silurian aquifer. The well(s) shall be constructed to minimize the possibility of cross contamination from potential contaminant sources located above the Silurian strata. The work plan to construct this well, or multiple wells if deemed necessary by the DNR, shall be submitted by April 9, 2021 unless otherwise approved.

The permit holder shall submit updated cross sections of the site upon construction of the above well(s) in accordance with the correspondence from the permit holder dated June 1, 2015 (doc#83815).

- d. By December 31, 2021, unless otherwise approved, the permit holder shall submit a Groundwater Remedial Action/Mitigation Plan to alleviate or reduce contamination to the fullest extent possible at site monitoring points MW-2CR, MW-3L, MW-4, MW-4L, MW-5, MW-7, MW-11, MW-12, MW-14, and MW-18, in accordance with 567 IAC 115.26(9)"d" and as described in the DNR letter dated September 9, 2020.
- e. Monitoring points not used for water quality analysis may be retained as water level measuring points.
- f. The DNR required a groundwater quality assessment of the site be performed on November 17, 2008. Assessment report submittals dated September 29, 2011 (doc#66074); July 19, 2012 (doc#73383); October 1, 2014 (doc#81342); June 1, 2015 (doc#83815); August 12, 2016 (doc#86938); March 28, 2017 (doc#88832); and August 7, 2017 (doc#90110) have been received and the assessment remains ongoing.
- g. DNR construction documentation form 542-1277 and boring logs for all monitoring wells and piezometers shall be submitted within 30 days of installation. DNR construction documentation form 542-1323 shall be submitted within 30 days of establishing surface water monitoring points.
- h. First year quarterly samples shall be collected from any designated new monitoring well, dewatering system, and any monitoring point which lacks four quarterly samplings and analyzed for total arsenic, barium, calcium, chromium, fluoride, lead, lithium, magnesium, manganese, molybdenum, potassium, and sodium; and pH, specific conductance, chloride, sulfate, bicarbonate alkalinity, nitrates, and nitrites. All statistical evaluations shall include the updated baseline and subsequent sampling documentation.

Continued semiannual sampling shall take place in March and September for the parameters listed above and the following supplemental parameters- aluminum, boron, bromate, cobalt, nickel, phosphorus, vanadium, thallium, and total dissolved solids. Supplemental samples shall not be filtered and all analyses shall be reported as totals. Any parameters may be removed from the supplemental list if undetected for 3 consecutive sampling events, and the permit holder submits a request to discontinue sampling for that parameter that is subsequently approved by the DNR.

- i. The elevation of water in each monitoring well shall be measured and recorded on a monthly basis.
- j. The Method Detection Limit (MDL) for the test parameters shall not exceed action levels as defined in 567 IAC Chapter 133 or Statewide Standards for a protected groundwater source as listed in 567 IAC 137. If the action levels cannot be feasibly achieved using procedures described in 567 IAC 115.26(5), then the MDL shall not exceed the lowest feasible level.



- k. Samples collected for total analyses shall not be filtered prior to laboratory analysis.
  - l. Surface monitoring points must be clearly marked in the field and a method for measuring the flow rate at each sampling point shall be devised.
  - m. Construction documentation for monitoring wells MW-13 and MW-14, as contained in the October 1, 2014 letter submitted by Terracon, is incorporated into the permit.
  - n. Construction documentation for monitoring wells MW-15, MW-16, MW-16L, MW-17, MW-18, MW-19, and MW-2CR, and abandonment documentation for MW-17, as contained in the August 7, 2017 submittal from Terracon, are incorporated into the permit.
  - o. An Annual Water Quality Report (AWQR) summarizing the effects the facility is having on groundwater and surface water quality shall be submitted by November 30 each year. The report must contain an evaluation of lysimeter data to determine the source of water collected and shall include the groundwater measurements conducted at the monitoring points, groundwater contaminant plume maps, all sample analytical results, and the associated DNR sampling forms 542-1322 and 542-1324.
5. In accordance with the variance approval dated August 21, 1997, the permit holder is exempt from monitoring and reporting methane gas levels in site structures and at the property boundary, as required by paragraph 115.26(15)“b”. Variance approval was based on the inorganic nature of CKD waste deposited at this site.

However, in the event that methane gas is found to be present at the site, gas monitoring shall be immediately implemented.

6. The permit holder shall close the landfill site in accordance with the Closure and Development Plan dated January 1997, and the Supplement to Cement Kiln Dust Closure and Development Plan dated June 1997, both as submitted by Lafarge Corporation Corporate Technical Services and approved on August 25, 1997; as contained in Appendix I of the 2018 Permit Renewal (doc #92386), and the following:
- a. The review comments, dated August 10, 2004 from the Scott County Soil & Water Conservation District relative to compliance with wind and soil loss limit regulations, in accordance with 567 IAC 115.26(1)“j” for all development areas, is incorporated as part of the permit documents.
  - b. The Construction Compliance Report, pertaining to the final cover construction for Cell No. 1, dated October 25, 2005 and approved on November 21, 2005, is incorporated as part of the permit documents.
  - c. The site is subject to a 30-year post closure period in accordance with 567 IAC 115.3(4) and 115.26(14).