

February 10, 2026

Mr. Mike Smith, P.E.
Land Quality Bureau
Iowa Department of Natural Resources
6200 Park Avenue, Suite 200
Des Moines, Iowa 50321



**RE: Post-Closure Care - Reduction Termination Plan (PCC-RTP)
Delaware County Sanitary Landfill, IDNR Permit #28-SDP-01-74C**

Dear Mr. Smith:

It has come to my attention that Permit Amendment #16, dated April 18, 2025 (Doc #112888) requires the submittal of a Post-Closure Care Reduction/Termination Plan (PCC-RTP) prior to December 31, 2025.

Although submitted after the deadline, the attached PCC-RTP has been an active document since IDNR's issuance of Permit Amendment #16, dated April 18, 2025 (Doc #112888).

A draft of the attached PCC-RTP was submitted to the Delaware County Solid Waste Commission on May 13, 2025, for review. Items in the draft PCC-RTP were then presented and discussed on August 6, 2025, at the Delaware County Solid Waste Commission meeting.

Supplemental field study was also performed to aid in completion of the PCC-RTP in July of 2025, and the landfill facility was sampled in accordance with Permit requirements in September of 2025. The 2025 Annual Water Quality Report was also submitted to IDNR on January 30, 2026 (Doc #115958).

Based on the attached PCC-RTP additional site characterizations related to water quality at MW-8 and related to landfill gas are currently underway at the site in accordance with the attached PCC-RTP.

I apologize for the tardy submittal of the attached PCC-RTP. Please contact the HLW Engineering Group office at (515) 733-4144 with any questions.

Sincerely,

HLW Engineering Group

A handwritten signature in blue ink, appearing to read "Todd Whipple", is written over a light blue horizontal line.

Todd D. Whipple, CPG.
Project Manager

cc: Michael Schmitz, Chair, Delaware County Solid Waste Commission
Erin Learn, Secretary/Treasurer, Delaware County Solid Waste Commission



February 9, 2026

Mr. Mike Smith, P.E.
Land Quality Bureau
Iowa Department of Natural Resources
6200 Park Avenue, Suite 200
Des Moines, Iowa 50321



**RE: Post-Closure Care - Reduction Termination Plan
Proposed End to Regulation under IAC 567, Chapter 113 and Proposed End to the Closure Permit
Delaware County Sanitary Landfill, IDNR Permit #28-SDP-01-74C**

Dear Mr. Smith:

The Delaware County Solid Waste Commission (DCSWC) is requesting the termination of the Closure Permit for the Delaware County Sanitary Landfill (28-SDP-01-74C) issued June 30, 2000, and the end of regulation of the facility under Iowa Administrative Code (IAC) 567, Chapter 113 (and 1998 Chapter 103).

This Post-Closure Care Reduction-Termination Plan (PCC RTP) is offered to satisfy Special Provision X.9 of the Closure Permit (Amendment #16, dated April 18, 2025 (Doc #112888)). Figure 1, Site Plan, is attached illustrating the site features, monitoring wells, and gas probes.

In lieu of regulation under IAC 567, Chapter 113, the DCSWC proposes that the limited on-going maintenance items warranted at the facility can be appropriately supervised and managed by the DCSWC. The DCSWC understands that certain legal instruments will be required to facilitate the end of IDNR regulation of the facility.

The basis of this proposal is rooted in the observed condition of the facility and the lack of perceived risk-based concerns associated with the facility as it exists in its current condition.

CURRENT CONDITIONS

Leachate Management

As per Special Provision X.6 of the Closure Permit (Doc #112888), the site is conditionally exempt from providing and operating a leachate collection system.

As reported in past semi-annual Engineer's inspection reports, persistent leachate seeps have not been noted at the landfill.

The DCSWC is both willing to and capable of effectively performing continued cap maintenance tasks related to infiltration and erosion control and thereby controlling leachate generation and potential seeps.

Gas Control

Landfill gas was historically monitored in the breathing zone at the site perimeter. Between 2016 and the present, subsurface landfill gas has been monitored in the headspace of monitoring wells MW-5, MW-8, MW-11, MW-20, MW-21, and MW-23 (beginning 2016) and in dedicated gas monitoring probes GP-1, GP-2, and GP-3 (beginning in 2018).

Since subsurface monitoring began in 2016 explosive gas (as percent lower explosive limit) has only been detected to date at GP-3. The reported concentrations detected at GP-3 are intermittent and range from 0 to 27% LEL in the dedicated gas probe. The reported gas concentration in all other dedicated probes and monitoring wells is reported as 0% since 2016/2018.

Gas generation curves typically illustrate gas generation peaking in the second or third decade of waste burial (e.g. EPA LMOP studies), it is anticipated that landfill gas generation will decrease with time.

On March 17, 2025, MW-8 and Sump-2 were sampled and the water was analyzed for dissolved methane. Methane was detected at MW-8 (439.0 ug/L) and at Sump-2 (30.5 ug/L).

On September 17, 2025, MW-8 and Sump-3 were sampled and the water was analyzed for dissolved methane. Methane was detected at MW-8 (1310 ug/L) and at Sump-3 (2360 ug/L).

Additional gas study is warranted along the south side of the landfill as part of the PCC RTP.

Ground Water Quality

Groundwater has been monitored at perimeter monitoring wells at the site since at least the early 1990's. At the Delaware County Sanitary Landfill, the following monitoring wells exist and are routinely monitored on a semi-annual frequency: MW-11 (background), MW-20 (background), MW-5, MW-6, MW-7, MW-8, MW-21, MW-23, MW-24, and MW-25.

The 2025 Annual Water Quality Report (AWQR), which was submitted to IDNR on January 30, 2026 (Doc #115958) is cited in support of the interpretation of the water quality.

Water quality is summarized as documenting low-level detections of several volatile organic compounds (VOC) at numerous downgradient site monitoring wells. All reported VOC detections are classified as Statistically Significant Increases (SSI) and have required no active responses other than supplemental sampling as part of the assessment monitoring system.

In the 2025 Annual Water Quality Report (AWQR) submitted to IDNR on January 30, 2026 (Doc #115958), VOC were reported in MW-5, MW-8, MW-21, MW-23, and MW-24. All reported VOC concentrations in March and September of 2025 are at approximately 1% to 4% of GWPS concentrations. No VOC plumes are documented, and VOC concentrations are anticipated to further decline with time.

Over the course of the last several years monitoring wells MW-5, MW-6, MW-7, MW-8, MW-21, MW-23, MW-24, and MW-25 have documented SSI for inorganics. Only MW-8 has recorded Statistically Significant Levels (SSL) for cobalt (historically also for arsenic and nickel).

Further study at MW-8 is currently under way until 2027, as approved by IDNR on July 16, 2024 (Doc #110483). *The outcome of the additional study at MW-8 should be incorporated into the PCC RTP.*

Storm Water Quality

The site closure (completed 2006) has well established vegetation, well maintained erosion controls, and maintained diversion structures in place. No leachate seeps are documented. Stormwater impacts would be minimal, and surface water sampling ceased in 2016.

Final Cover Condition (settlement/ponding/slope stability) and Maintenance

The final cover and site closure were completed in 2006 in accordance with the approved plans. Landfill Inspections have been performed semi-annually since the closure permit was issued. Settlement over the past 20 years has not resulted in undue ponding, terrace flow line failures, or diversion let-down failures. Diversion and drainage systems are in good shape with no evidence of erosion.

Vegetation

The landfill vegetation is in good condition and is mowed annually to control the growth of undesirable vegetation and saplings. Some bare spots and thin vegetation are noted in the inspections. The cause of the bare and thinly

vegetated areas is anticipated to be gas related. Additional study is planned in 2026 related to gas impacts in the cap. *Additional gas study is warranted in the cap of the landfill as part of the PCC RTP.*

POST-CLOSURE CARE REDUCTION-TERMINATION PLAN (PCC RTP)

Leachate Management

No actions are required as part of the PCC RTP.

Gas Control

Landfill gas is anecdotally the suspected source of observed water quality impacts and vegetation impacts at the site. Additional study in the south portion of the site and on the closure cap is warranted to quantify the subsurface gas concentrations. Based on the outcome of the gas investigation(s), a source control for gas can be planned and implemented (as warranted) prior to the pursuit of an environmental covenant.

The gas investigations are planned for the fall of 2025 and 2026, with conclusions and recommendations being completed in the AWQR due by January 31, 2027.

Ground Water Quality

Groundwater in the vicinity of MW-8 is currently in an investigative and evaluation program through 2027 in accordance with approved plans. Water elevation in MW-8 and water quality in MW-8 are being correlated in order to determine the effects of drought conditions on the water quality in the well. In addition, MW-6, MW-7, MW-8, MW-23, Sump-1, Sump-2, and Sump-3 will be sampled and analyzed for dissolved methane to be incorporated into the study. The dissolved methane data will be useful in determining whether any water quality impacts along the south side of the site are attributable to landfill gas.

Upon completion of the water quality evaluation in 2027, responses and source control measures (as appropriate) will be planned and implemented prior to the pursuit of an environmental covenant.

Storm Water Quality

No actions are required as part of the PCC RTP.

Final Cover Condition (settlement/ponding/slope stability) and Maintenance

No actions are required as part of the PCC RTP.

Vegetation

As discussed above in the Gas Control Section, the concentration of passive gas immediately below the closure cap will be further evaluated. Areas with poor vegetation and elevated gas migration will be identified. Responses (as appropriate) aimed at improving the climax vegetation at the site will be planned and implemented prior to the pursuit of an environmental covenant.

ENVIRONMENTAL COVENANT DEVELOPMENT

Based on observations recorded during the recent inspections, the facility is in general conformance with the expectations of the Closure Permit and conditions at the site continue to improve. The integrity of the final cover is being maintained; however, it appears improvements in vegetation (in areas) should be completed.

Additionally, the water quality at MW-8 needs to have a successful demonstration indicating that water quality trends are improving (or that the water quality impacts are artifacts of subsurface conditions, rather than landfill impact). The passive movement of landfill gas will also need to have controls implemented to facilitate the upward and outward release of landfill gas, removing the impetus for landfill gas to migrate laterally in the subsurface. A method of passive long term source control for landfill gas appears to be an integral part of maintaining water quality, maintaining climax vegetation, and mitigating any potential future gas migration issues.

The three (3) areas of evaluation (landfill gas, water quality at MW-8, and closure cap vegetation) are identified and are addressed by the PCC RTP. Based on the outcome of the evaluations discussed in the PCC RTP, permanent source controls will be placed prior to the preparation of the Environmental Covenant.

The DCSWC understands that on-going inspection and maintenance of the cap, the diversion systems, the drainage systems, and the vegetation is necessary moving forward. These tasks are merely maintenance items necessary for the perpetuation of the well-established and enduring cap/cover features. Now established, these features do not warrant on-going regulation by the State, rather warrant management by the DCSWC. The DCSWC is both willing to and capable of effectively performing the required maintenance tasks moving forward.

Conclusions

The DCSWC seeks a pathway to end regulation of the facility under IAC 567, Chapter 113, while providing the IDNR the appropriate assurances that the facility maintenance tasks will be on-going, as appropriate, to maintain the facility in conformance with the risk-based decision to end IDNR oversight.

The DCSWC appreciates your consideration of the PCC RTP, and we look forward to your reply. Please consider whether you believe the proposed PCC RTP is sufficient and whether completion of the PCC RTP will make DCSWC a candidate to successfully file an Environmental Covenant in coordination with IDNR's participation.

Please contact the HLW Engineering Group office at (515) 733-4144 with any questions you may have or to schedule and coordinate a site visit with DCSWC and HLW staff.

Sincerely,

HLW Engineering Group



Todd D. Whipple, CPG.
Project Manager

cc: Michael Schmitz, Chair, Delaware County Solid Waste Commission
Erin Learn, Secretary/Treasurer, Delaware County Solid Waste Commission



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SITE PLAN

DELAWARE COUNTY SANITARY LANDFILL
DELHI, IOWA

FIGURE:

1

REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6039	DATE 9-24-25