

August 25, 2025

Mr. Michael W. Smith, P.E.  
Environmental Engineer Senior  
IDNR – Land Quality Bureau  
6200 Park Avenue, Suite 200  
Des Moines, Iowa 50321



**RE: SDP PERMIT RENEWAL  
PLYMOUTH COUNTY SLF  
IDNR PERMIT NO. 75-SDP-01-74P  
HLW PN 6052-23A.200**


Dear Mr. Smith:

Enclosed for the review and approval of the IDNR is the completed IDNR Form 50 for the Plymouth County SLF, IDNR Permit No. 75-SDP-01-74P and documentation supporting the permit renewal application. The SDP Permit for the Plymouth County Sanitary Landfill expires on December 5, 2025.

Portions of the Sidewall Liner, in accordance with the variance from IAC 567-114.26(11)"a"2 and 567-114.26(11)"a"3 dated November 1, 2006 (Doc #35030), will continue to be constructed and documented during the upcoming permit cycle with construction documentation provided to IDNR upon completion of each portion. No other additional disposal areas are anticipated to be constructed within the next permit cycle, so a conceptual design for the remaining disposal area at the facility (Cell 5-N) is not included in this Permit Renewal Documentation. If it is necessary to construct all or a portion of Cell 5-N during the upcoming permit cycle a conceptual design for Cell 5-N will be provided to IDNR for review and approval prior to construction starting.

Please let me know if you have any questions.

Respectfully Submitted,  
**HLW Engineering Group**

  
Douglas J. Luzbetak, P.E.  
Project Manager

cc: Kent Herbold, Site Manager, Plymouth County SLF (electronic copy, 1 hard copy)

# **PLYMOUTH COUNTY SANITARY LANDFILL**

## **2025 CONSTRUCTION AND DEMOLITION LANDFILL PERMIT RENEWAL**

**IDNR PERMIT NO. 75-SDP-01-74P**



**HLW Engineering Group, LLC  
204 West Broad Street, PO Box 314  
Story City, Iowa 50248  
(515) 733-4144**

HLW Project Number 6052-23A

**2025 CONSTRUCTION AND DEMOLITION LANDFILL PERMIT  
RENEWAL**

**PLYMOUTH COUNTY SANITARY LANDFILL**

**IDNR PERMIT NO. 75-SDP-01-74P**

	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.
	 8/25/25
	DOUGLAS J. LUZBETZKY, P.E. DATE License number 12654
	My license renewal date is December 31, 2026. Pages <u>44</u> of sheets covered by this seal.



IOWA DEPARTMENT OF NATURAL RESOURCES

Construction and Demolition Landfill

PERMIT APPLICATION FORM 50



- ☐ New Permit
- ☒ Permit Renewal (permit number) 75 -SDP- 01 - 74P
- ☐ Closure Permit

**SECTION 1: PERMIT APPLICATION REQUIREMENTS**

**Owner of site**

Name: Plymouth County Solid Waste Agency Phone: 712-546-6071  
Address: 34898 150th Street Fax: 712-546-8715  
City, State, Zip: LeMars, IA 51031 E-mail: landfill@co.plymouth.ia.us

**Certified Operator Responsible for Operation at Facility**

Name: Kent Herbold, Manager Phone: 712-546-6071  
Address: 34898 150th Street Fax: 712-546-8715  
City, State, Zip: LeMars, IA 51031 E-mail: landfill@co.plymouth.ia.us

**Permit Applicant**

Name: Plymouth County Solid Waste Agency Phone: 712-546-6071  
Address: 34898 150th Street Fax: 712-546-8715  
City, State, Zip: LeMars, IA 51031 E-mail: landfill@co.plymouth.ia.us

**Design Engineer (PE)**

Name: Douglas J. Luzbetak, P.E. Phone: 515-733-4144  
Address: 294 W. Broad St., PO Box 314 Fax: 515-733-4146  
City, State, Zip: Story City, IA 50248 E-mail: dluzbetak@hlwengineering.com  
Iowa Engineer License #: 12654 Expiration Date: 12/31/26

**Responsible Official for the Facility**

Name: Rick Bohle, Chair Phone: 712-546-6071  
Address: 34898 150th Street Fax: 712-546-8715  
City, State, Zip: LeMars, IA 51031 E-mail: landfill@co.plymouth.ia.us

**Agency and Responsible Official of Agency Served (if any)**

Name: Plymouth County Solid Waste Agency Phone: 712-546-6071  
Address: 34898 150th Street Fax: 712-546-8715  
City, State, Zip: LeMars, IA 51031 E-mail: landfill@co.plymouth.ia.us

**Facility**

Name: Plymouth County Sanitary Landfill  
Address: 34898 150th Street City, State, Zip: LeMars, IA 51031  
Legal Description:  
NE 1/4 of the NE 1/4 of Section 34, T93N, R45W, Plymouth County, Iowa

Type, source, and expected volume or weight of waste to be handled per day, per week, or year.  
C&D waste from the Plymouth County Solid Waste Agency planning area, approximately 9,000 tons/year

## SECTION 2: PERMIT APPLICATION SUPPORTING DOCUMENTATION

### PLANS AND SPECIFICATIONS

Checking the appropriate boxes below certifies that the documents submitted in conjunction with this application form are complete and in compliance with the applicable chapters of the Iowa Administrative Code. While some of the documents below may have been submitted previously, updated copies of each are required to be provided with each permit renewal application, unless a prior document remains current and is identified by Doc ID#, Section, and Page.

#### Required Plans and Specifications

- ☒ Executive Summary  
An executive summary shall address the following:
- Summary of modifications, if any, to the approved plans and specifications that occurred during the current permit cycle.
  - Summary of each special provision of the current permit to determine if it is to remain the same, be revised or be removed.
  - Provide documentation and certification as required for new permit amendment requests, if any.
  - Provide documentation and certification as required for new waiver requests from Iowa Administrative Code requirements, if any.
- ☒ A map or aerial photograph locating boundaries and other environs in accordance with paragraphs 114.13(3)"a-f".  
**No Revision Required** - See Doc ID#, Section, and Page: \_\_\_\_\_
- ☒ An organizational chart in accordance with subrule 114.13(5).  
**No Revision Required** - See Doc ID#, Section, and Page: \_\_\_\_\_
- ☐ A detailed description of the disposal process to be used in accordance with subrule 114.13(6).  
**No Revision Required** - See Doc ID#, Section, and Page: 103957
- ☒ A table listing the equipment to be used, its design capacities and expected loads in accordance with subrule 114.13(7).  
**No Revision Required** - See Doc ID#, Section, and Page: \_\_\_\_\_
- ☐ A contingency plan detailing specific procedures to be followed in case of equipment breakdown, or fire in equipment or vehicles, including methods to be used to remove or dispose of accumulated waste in accordance with subrule 114.13(8).  
**No Revision Required** - See Doc ID#, Section, and Page: 103957
- ☐ Proof of the applicant's ownership of the site or legal entitlement to use the site for the disposal of solid waste for the term of the permit for which application is made in accordance with subrule 114.13(9).  
**No Revision Required** - See Doc ID#, Section, and Page: 103957
- ☒ A hydrogeologic investigation report and a hydrologic monitoring system plan in accordance with rules 114.14(455B) through 114.24(455B) and subrules 114.26(3) through 114.26(9).  
**No Revision Required** - See Doc ID#, Section, and Page: 80499 (HIR), 105974 (HMSP)
- ☒ Design and operational plans and specifications for the facility, including quality control and assurance in accordance with subrules 114.26(1) through 114.26(2); subrules 114.26(11) through 114.26(12); and rules 114.27(455B) through 114.29(455B).  
**No Revision Required** - See Doc ID#, Section, and Page: 105974
- ☒ A closure and postclosure plan in accordance with subrules 114.13(10); 114.26(10); and 114.26(13) through 114.26(14).  
**No Revision Required** - See Doc ID#, Section, and Page: 103957
- ☒ An explosive gas control plan in accordance with subrule 114.26(15).  
**No Revision Required** - See Doc ID#, Section, and Page: 103957
- ☒ An emergency response and remedial action plan in accordance with rule 114.30(455B).  
**No Revision Required** - See Doc ID#, Section, and Page: 103957

If the department finds the permit application information to be incomplete, the department shall notify the applicant of that fact and of the specific deficiencies. If the applicant fails to correct the noted deficiencies within 30 days, the department may reject the application and return the application materials to the applicant. The applicant may reapply without prejudice.

**SECTION 3: APPLICANT SIGNATURE**

**Signature of Permit Applicant:**

*Rick Bohle*

**Date:**

*8-20-25*

**Printed Name:** Rick Bohle

**Title:** Chair

Applications for sanitary disposal projects must be accompanied by the plans, specifications and additional information required by the applicable solid waste rules under Iowa Administrative Code.

Send completed applications with attached information to the DNR project officer via email or file sharing platform.

For questions concerning this application contact Brian Rath at 515-537-4051, [brian.rath@dnr.iowa.gov](mailto:brian.rath@dnr.iowa.gov)

## SECTION A

### Executive Summary

## **EXECUTIVE SUMMARY**

### **Summary of Modifications to the approved Plans and Specifications:**

Numerous modifications have been made to the approved Plans and Specifications during the current permit cycle. These changes to date are listed in Special Provision XI, “Permit Renewal and Revision History”, of the SDP Permit Revision dated December 18, 2024. The following have been modified and included in this permit renewal documentation:

A map and aerial photograph are included in Section B.

An updated Organizational Chart is included in Section C.

A detailed description of the disposal process was included in the 2022 Permit Renewal Documentation (Doc #103957). The 2022 Permit Renewal Documentation was approved in the SDP Permit dated December 5, 2022. The previously submitted documentation is generally applicable with the exception of Item 5. Waste is covered with one foot of cover once a week in accordance with IAC 567-114.28(2)b. Item 5 erroneously states that six inches of cover are applied weekly.

A table listing equipment on site available for use is included in Section D.

A contingency plan was included in the 2022 Permit Renewal Documentation (Doc #103957). The 2022 Permit Renewal Documentation was approved in the SDP Permit dated December 5, 2022. The previously submitted documentation is still applicable.

Proof of Agency ownership was included in the 2022 Permit Renewal Documentation (Doc #103957). The 2022 Permit Renewal Documentation was approved in the SDP Permit dated December 5, 2022.

A Hydrogeologic Assessment Report for the facility, as well as follow-up documentation requested by the IDNR, were submitted to the IDNR in Appendix 3 of the 2014 Permit Renewal Documentation dated June 2, 2014 (Doc #80499). The 2014 Permit Renewal Documentation was approved in the SDP Permit dated May 1, 2015. The previously submitted documentation is still applicable. A Hydrologic Monitoring System Plan (HMSP) was included in the additional information submitted for the 2022 Permit Renewal (Doc #105974). The 2022 Permit Renewal Documentation was approved in the SDP Permit dated December 5, 2022. Minor updates to the approved HMSP are included in Section E.

Design and Operational Plans were included in the additional information submitted for the 2022 Permit Renewal (Doc #105974). The 2022 Permit Renewal Documentation was approved in the SDP Permit dated December 5, 2022. Minor updates to the approved Design and Operational Plans are included in Section F.



**Plymouth County Sanitary Landfill  
Executive Summary  
Permit No. 75-SDP-01-74P**

A Closure/Postclosure Plan was included in the 2022 Permit Renewal Documentation (Doc #103957). The 2022 Permit Renewal Documentation was approved in the SDP Permit dated December 5, 2022. The previously submitted documentation is generally applicable with the exception of the Postclosure Care section. The site is inspected annually in accordance with IAC 567-114.26(2). The Postclosure Care section erroneously states that the “site will be inspected semiannually”.

An Explosive Gas Control Plan was included in the 2022 Permit Renewal Documentation (Doc #103957). The 2022 Permit Renewal Documentation was approved in the SDP Permit dated December 5, 2022. Minor updates to the approved Explosive Gas Control Plan are included in Section G.

An Emergency Response and Remedial Action Plan (ERRAP) was included in the 2022 Permit Renewal Documentation (Doc #103957). The 2022 Permit Renewal Documentation was approved in the SDP Permit dated December 5, 2022. Minor updates to the approved ERRAP are included in Section H.

**Summary of each Special Provision of the existing SDP Permit:**

1. No changes.
2. Updates to the approved Design and Operational Plans are included in Section F of this submittal. Updates to the approved Emergency Response and Remedial Action Plan (ERRAP) are included in Section H of this submittal.
3. No changes.
4. Updates to the approved Hydrologic Monitoring System Plan (HMSP) are included in Section E of this submittal.
5. Updates to the approved Explosive Gas Control Plan are included in Section G of this submittal.
6. Shingles are no longer accepted for recycling so this provision should be removed.
7. No changes.
8. No changes.
9. No changes.
10. No changes.
11. No changes.
12. No changes.
13. A minor change to the approved Closure/Postclosure Plan is discussed in the “Summary of Modifications to the approved Plans and Specifications” section of this Executive Summary.

**Summary of each Permit Amendment:**

No amendments have been issued during this permit period as IDNR has issued Permit Revisions to replace permit amendments. The date of each Permit Revision, brief comments on which Special Provision(s) were modified, replaced, added, removed, etc. with each Permit

**Plymouth County Sanitary Landfill  
Executive Summary  
Permit No. 75-SDP-01-74P**

Revision, and the location in the Permit Revision for the modifications, replacements, additions, removals, etc. are included in Special Provision XI, “Permit Renewal and Revision History”, of the SDP Permit Revision dated December 18, 2024. All of these items have been incorporated into the SDP Permit so no permit amendments have been issued during this permit period.

**Summary of new Permit Amendment Requests:**

None at this time.

**Summary of Equivalency Review Requests:**

None at this time.

**Summary of new Variance Requests:**

None at this time.















## SECTION B

### Site Map and Aerial Photography





## LEGEND

	EXISTING GROUND SURFACE (2 FT. CONTOUR INTERVAL)
	APPROXIMATE PROPERTY BOUNDARY
	LOCATED WASTE BOUNDARY
	INTERPOLATED WASTE BOUNDARY
	PROPOSED FUTURE WASTE BOUNDARY
	BUILDING
	GRAVEL ROAD
	FENCELINE
	CULVERT
	EXISTING CELL BOUNDARY
	APPROXIMATE LOCATION OF MONITORING WELL
	APPROXIMATE LOCATION OF LEACHATE WELL
	LANDFILL GAS VENT
	APPROVED SIDEWALL LINER (BY SCS ENGINEERS) (IDNR DOC # 106908/107394/107395)
	2024 SIDEWALL LINER (NOVEMBER 6, 2024)

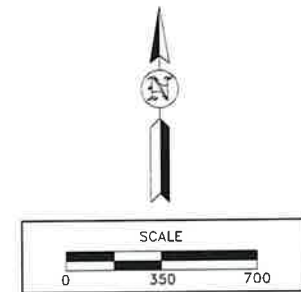


FIGURE: 1		NO.	DATE
DRAWN JGH	REVISION	PROJECT NO. 6052-23A	DATE 8/4/25

# SITE OVERVIEW

## 2025 PERMIT RENEWAL

### PLYMOUTH COUNTY SANITARY LANDFILL LE MARS, IOWA

HLW Engineering Group  
204 West Broad Street, P.O. Box 314  
Story City, Iowa 50248  
Phone: (515) 733-4144  
FAX: (515) 733-4146

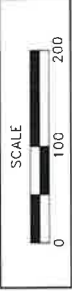






LEGEND

- EXISTING GROUND SURFACE (2 FT. CONTOUR INTERVAL)
- APPROXIMATE PROPERTY BOUNDARY
- LOCATED WASTE BOUNDARY
- INTERPOLATED WASTE BOUNDARY
- PROPOSED FUTURE WASTE BOUNDARY
- BUILDING
- GRAVEL ROAD
- FENCELINE
- CULVERT
- EXISTING CELL BOUNDARY
- APPROXIMATE LOCATION OF MONITORING WELL
- APPROXIMATE LOCATION OF LEACHATE WELL
- LANDFILL GAS VENT
- APPROVED SIDEWALL LINER (IDNR DOC # 107394/107395)
- APPROVED 2024 SIDEWALL LINER (IDNR DOC # 111515)
- 2025 SIDEWALL LINER (UNDER CONSTRUCTION)



AERIAL DATED 8/12/23

AERIAL PROVIDED BY THE IOWA STATE UNIVERSITY GEOGRAPHIC INFORMATION SYSTEMS SUPPORT AND RESEARCH FACILITY IN COOPERATION WITH THE IOWA DEPARTMENT OF NATURAL RESOURCES, THE USDA NATURAL RESOURCES CONSERVATION SERVICES, AND THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY.



HLW Engineering Group  
204 West Broad Street, P.O. Box 314  
Story City, Iowa 50248  
Phone: (515) 733-4144  
FAX: (515) 733-4146

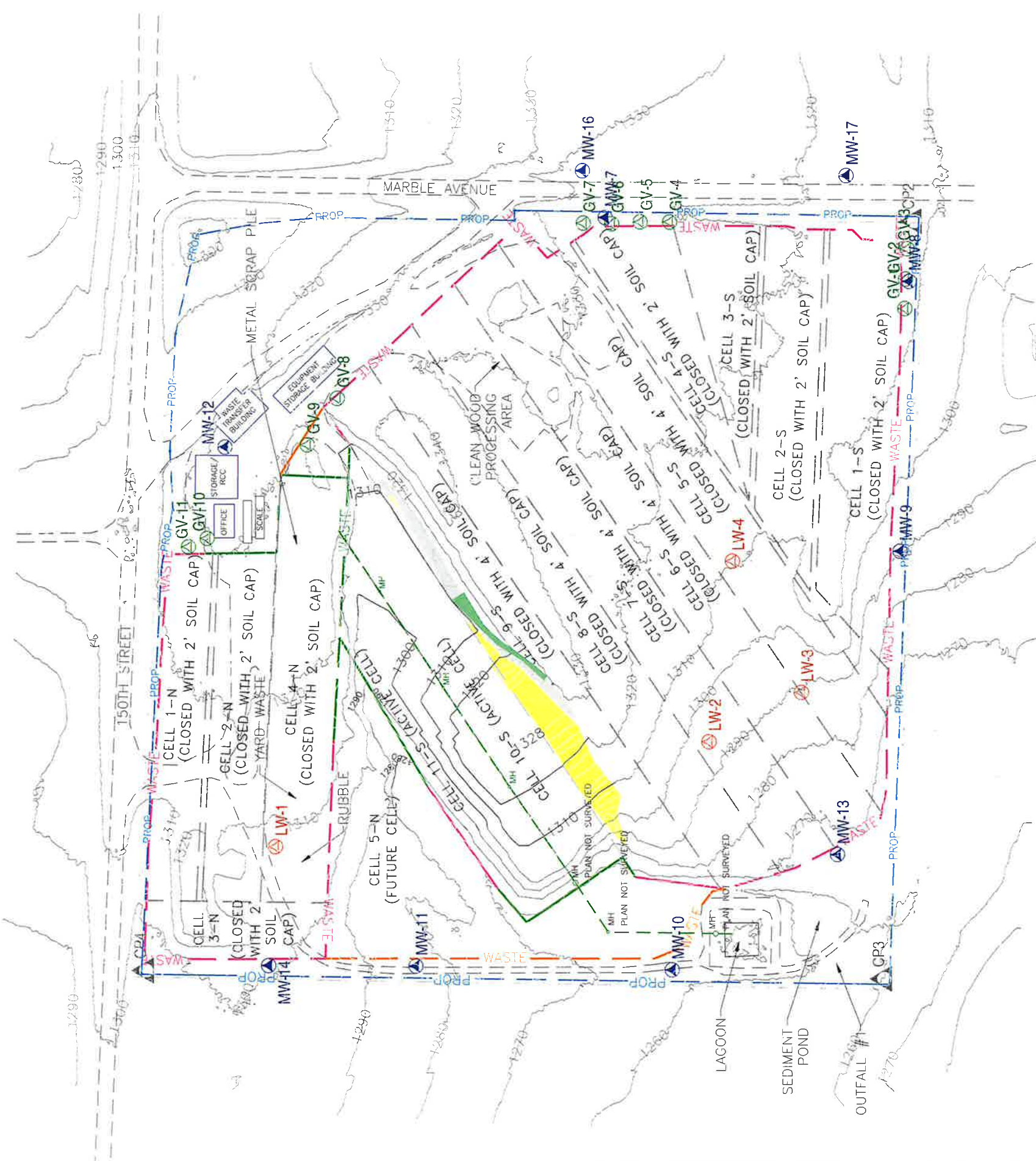
SITE AERIAL  
2025 PERMIT RENEWAL

PLYMOUTH COUNTY SANITARY LANDFILL  
LE MARS, IOWA

FIGURE: 2

REVISION	NO.	DATE
DRAWN	PROJECT NO. 6052-23A	DATE 8/5/25
JGH		





LEGEND

- EXISTING GROUND SURFACE  
(2 FT. CONTOUR INTERVAL)
- APPROXIMATE PROPERTY BOUNDARY
- LOCATED WASTE BOUNDARY
- INTERPOLATED WASTE BOUNDARY
- PROPOSED FUTURE WASTE BOUNDARY
- BUILDING
- GRAVEL ROAD
- FENCELINE
- CULVERT
- EXISTING CELL BOUNDARY
- APPROXIMATE LOCATION OF MONITORING WELL
- APPROXIMATE LOCATION OF LEACHATE WELL
- LANDFILL GAS VENT
- APPROVED SIDEWALL LINER  
(IDNR DOC # 107394/107395)
- APPROVED 2024 SIDEWALL LINER  
(IDNR DOC # 111515)
- 2025 SIDEWALL LINER  
(UNDER CONSTRUCTION)



NOTE: CONTOURS IN CELLS 10-S AND 11-S FROM FIELD SURVEY CONDUCTED JUNE, 6, 2025. CONTOURS OUTSIDE CELLS 10-S AND 11-S FROM 2021 HISTORICAL INFORMATION PROVIDED BY OTHERS.



HLW Engineering Group  
204 West Broad Street, P.O. Box 314  
Story City, Iowa 50248  
Phone: (515) 733-4144  
FAX: (515) 733-4146

PLAN VIEW  
2025 PERMIT RENEWAL  
PLYMOUTH COUNTY SANITARY LANDFILL  
LE MARS, IOWA

FIGURE: 3

REVISION	NO.	DATE
DRAWN	PROJECT NO. 6052-23A	DATE 8/5/25
JGH		

## SECTION C

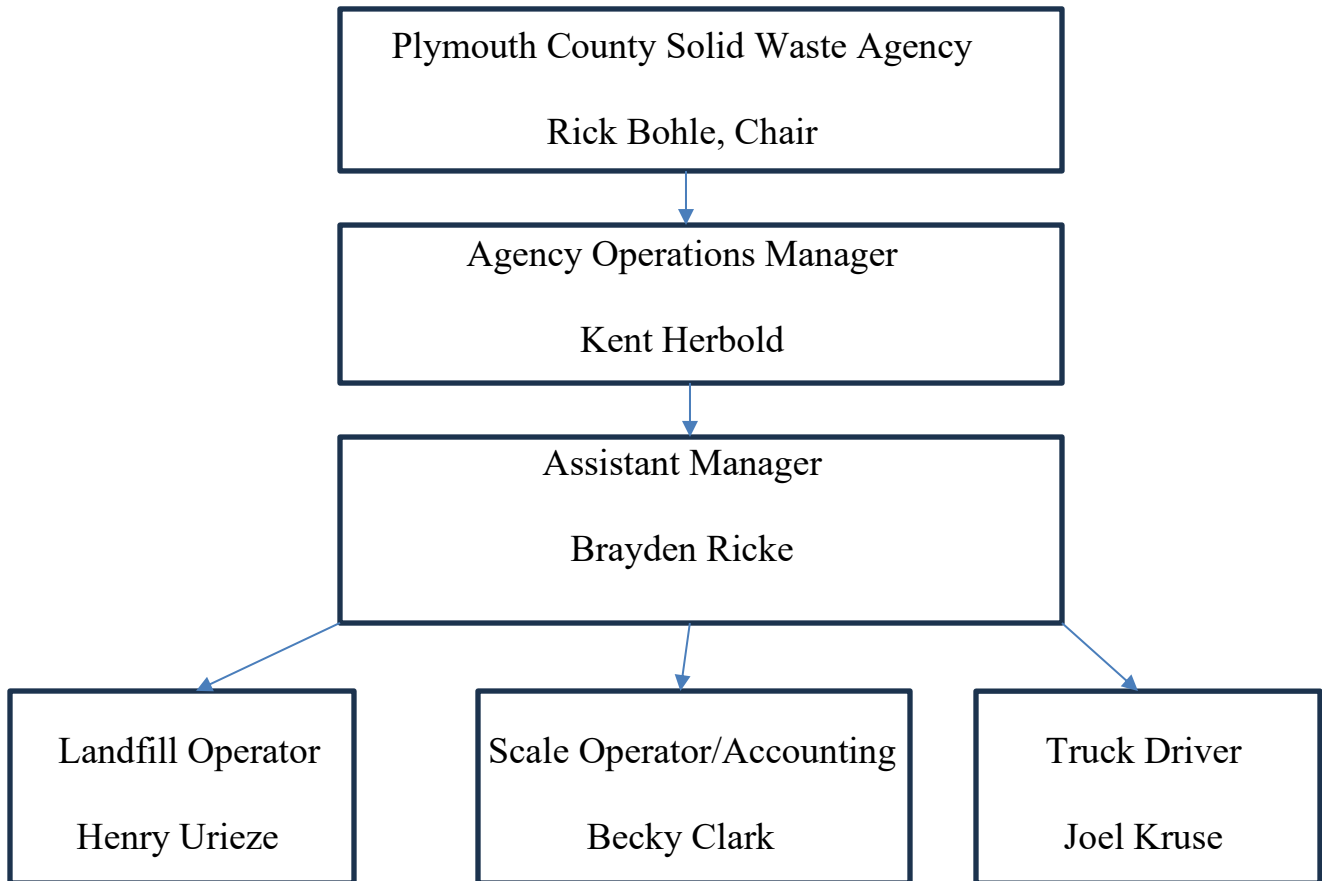
### Organizational Chart

# Plymouth County Sanitary Landfill

## Organization Chart

August, 2025

The Plymouth County Solid Waste Agency Board is comprised of 15 members, one from each member city, one from the Board of Supervisors, and three from rural areas. The landfill organizational chart is below. Note that the organizational chart may change during the permit period.





## SECTION D

### On Site Equipment Table

Year	Make	Model	Description
1980	John Deere	4240	Tractor
1996	John Deere		Mower
1999	Container		Roll-Off
1999	Container		Roll-Off
2002	Sterling	LT9500	Dump Truck
2003	Westendorf		Box Blade
2008	Aljon	500J3	Compactor
2010	Bobcat	Grapple	Bucket
2011	Freightliner	CA125DC	Spare Semi
2011	Chevy	Silverado	3/4 Ton Pickup
2012	Freightliner	5D114	Roll-Off
2012	John Deere	855-D	UTV
2012	(4) containers		Roll-Off
2014	Trailer		Enclosed Trailer
2017	Sany	SY215CLC	Excavator
2020	Wilkens	4825 AOTW	Walking Floor Trailer
2021	Wilkens	4825 AOTW	Walking Floor Trailer
2022	Chevy	Silverado	3/4 Ton Pickup
2022	Volvo	ECR40D	Excavator
2022	Volvo	EC60E	Excavator
2023	(2) containers	40 yard	Roll-Off
2023	Caterpillar	299D3	skid steer
2023	Mack	Granite	Semi
2024	Rice Lake	Survivor	Scale
2024	Caterpillar	#953	Trac Loader
2025	Wilkens	4825 AOTW	Walking Floor Trailer

## SECTION E

### Hydrologic Monitoring System Plan

### **HYRDOLOGIC MONITORING SYSTEM PLAN**

A Hydrologic Monitoring System Plan (HMSP) was included in the additional information submitted for the 2022 Permit Renewal (Doc #105974). The 2022 Permit Renewal Documentation was approved in the SDP Permit dated December 5, 2022. The previously approved HMSP is still applicable except as noted below:

#### **114.26(3) Hydrologic Monitoring Systems**

Groundwater monitoring shall be as per the approved Hydrologic Monitoring System Plan (HMSP). The ten (10) HMSP wells are as follows: MW-17 (background), MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, and MW-16.

#### **114.26(4) Hydrologic Monitoring System Operating Requirements**

Surface water monitoring is not warranted at the site and is not included in the HMSP.

Groundwater monitoring shall be as per the HMSP approved by IDNR on October 17, 2024 (Doc #111082).

The HMSP includes no-flow sampling methods as detailed in the HMSP.

Groundwater analysis will be for compounds as defined in IAC 567, Chapter 114.26(4)"e" and 114.26(4)"f". There are seven (7) supplemental volatile organic compounds (benzene, cis-1,2-dichloroethene, 1,2-dichloropropane, methylene chloride, tetrachloroethene, trichloroethene, and vinyl chloride) sampled at seven (7) monitoring wells (MW-17 (background), MW-7, MW-8, MW-10, MW-12, MW-14, and MW-16).

#### **114.26(5) Laboratory Procedures**

All analyses are performed by a laboratory that is certified by the State of Iowa. All laboratory methods are according to EPA SW-846 and/or the following:

chloride – SW846-9251  
specific conductance - field measurement  
pH - field measurement  
ammonia nitrogen – EPA-350.1  
iron, dissolved – SW846-6010D  
COD – SW846-5220D  
Temperature - field measurement  
TOX – SW-846-9020B  
Phenol - SW846-9066  
Volatile organic compounds by GC/MS – SW846-8260D

114.26(6) Analysis of Sampling Data

Statistical Analysis is performed using the DUMPSTAT statistical program. Interwell statistical methods are included in the approved HMSP.

114.26(7) Additional Sampling

There are seven (7) supplemental volatile organic compounds (benzene, cis-1,2-dichloroethene, 1,2-dichloropropane, methylene chloride, tetrachloroethene, trichloroethene, and vinyl chloride) sampled at seven (7) monitoring wells (MW-17 (background), MW-7, MW-8, MW-10, MW-12, MW-14, and MW-16).

114.26(8) Record Keeping and Recording

Field measurements are recorded in the field at the time of sampling by Plymouth County Sanitary Landfill staff. All records are retained by staff.

Annual Water Quality Reports (AWQR) are submitted by November 30 of each year.

114.26(9) Groundwater Quality Assessment Plan

A Groundwater Quality Assessment Report related to VOC impacts on the east site of the facility was submitted to the IDNR on September 29, 2021 (Doc #101310). The Groundwater Quality Assessment Report was completed in accordance with the Groundwater Quality Assessment Plan submitted on June 27, 2019 (Doc #95503) and approved by IDNR in the SDP Permit dated December 5, 2019.

## SECTION F

### Design and Operational Plans

**DESIGN AND OPERATIONAL PLANS**

Design and Operational Plans were included in the additional information submitted for the 2022 Permit Renewal (Doc #105974). The 2022 Permit Renewal Documentation was approved in the SDP Permit renewal dated December 5, 2022. The previously submitted Design and Operational Plans are still applicable except as noted below:

Section 1, Introduction

114.13(1)d, Design Engineer

Douglas J. Luzbetak, P.E.  
HLW Engineering Group  
204 W. Broad, PO Box 314  
Story City, IA 50248  
(515)733-4144  
[dluzbetak@hlwengineering.com](mailto:dluzbetak@hlwengineering.com)  
Iowa Engineer License #12654, Expiration Date 12/31/2026

Section 2, General Operating Requirements

114.26(2)j

The landfill will be inspected annually in accordance with 114.26(2)j.

NEW SECTION, QUALITY CONTROL AND ASSURANCE PLAN

114.26(1)g(3)

A Quality Control and Assurance Plan is included in Attachment 1 of this Section.

## ATTACHMENT 1



**Quality Control and Assurance Plan**

QC&A Officer: Douglas J. Luzbetak, P.E.  
HLW Engineering Group, LLC  
204 West Broad Street  
PO Box 314  
Story City, Iowa 50248  
(515)733-4144  
FAX: (515)733-4146  
Cell: (515)290-0247  
[dluzbetak@hlwengineering.com](mailto:dluzbetak@hlwengineering.com)

Resident Project Representative (RPR):  
To be determined at the time of construction

The quality control and assurance requirements will be as specified below. Specific details for the construction of individual disposal or closure areas will be submitted to IDNR along with the plans and specifications for each project prior to construction. Listed below are general requirements for the Quality Control and Assurance (QC&A) Plan.

Subgrade: The RPR will observe subgrade preparation and look for the presence of trees, stumps, roots, boulders, debris, frozen soil, litter, and other unsuitable materials. Unsuitable materials are as listed above or are defined as any material not having adequate stability to act as a proper foundation for the liner or cap system. Suitability of materials shall be determined by the QC&A Officer. Unsuitable materials on the subgrade will be removed and replaced with suitable material as necessary. If core outs are required, the unsuitable foundation materials shall be cored out to a minimum depth of 2' below surface elevation and be replaced with material capable of providing a suitable foundation.

The subgrade will be proof rolled or scarified to a minimum depth of 8" (liner subgrade) or 6" (cap subgrade) and recompacted prior to installation of the base liner or infiltration layer. The minimum allowable density after recompaction is 95% (liner subgrade) or 90% (cap subgrade) of the determined Standard Proctor Density. If the subgrade is scarified and recompacted, the subgrade will be tested for density control with a nuclear density meter at a *minimum* interval of one test per acre of prepared subgrade. Areas where the tests fail will be recompacted and retested until passing tests are achieved.

Compacted Clay Base Liner: The compacted clay liner will be constructed from glacial till materials approved by the QC&A Officer. The hydraulic conductivity of potential base liner soils will be evaluated in the laboratory by determining the hydraulic conductivity of sample soils in

**Plymouth County Sanitary Landfill  
QC&A Plan  
Permit No. 75-SDP-01-74P**

relation to the Standard Proctor Density and Standard Proctor moisture content. The maximum allowable hydraulic conductivity of a base liner soil is  $1 \times 10^{-7}$  cm/sec.

The material will be placed in lifts no thicker than 8 inches after compaction. The base liner will be tested for moisture and density control with a nuclear density meter at a minimum interval of one test per 8 inch lift per acre of base liner constructed. The minimum allowable density is 95% of the determined Standard Proctor Density or the minimum allowable density as determined by an acceptable zone determination. Minimum moisture content is the optimum moisture content as determined by the Standard Proctor Method or the minimum allowable moisture content as determined by an acceptable zone determination. The maximum moisture content is 5% above the optimum moisture content as determined by the Standard Proctor Method or the maximum allowable moisture content as determined by an acceptable zone determination. Note that reference to the acceptable zone determination above does not establish that this method will be utilized for all soils. Areas where the moisture/density tests fail will have moisture adjusted (if necessary), be recompacted, and be retested until passing tests are achieved. The soil may have to be removed and replaced to obtain passing tests.

The subgrade will be surveyed prior to the start of compacted clay liner installation to establish starting grades for the liner. Progress stakes will be provided for the compacted clay liner as necessary, and the surface of the liner will be surveyed to document liner thickness of a minimum of 4.25'. The grade will be spot checked as needed to determine elevation compliance of the Contractor's GPS equipment. The surface of the compacted clay liner shall be graded to a tolerance of 0 to 0.1'.

All laboratory test results, hydraulic conductivity/compaction/moisture content curves and plots, and field density reports will be submitted to the IDNR in the QC&A Report prior to certification of the area for solid waste deposition.

Note that the testing regimen detailed above will also apply to the infiltration layer in a closure cap.

Leachate Piping: The HDPE piping used for the leachate piping will be fusion welded in accordance with manufacturers recommendations. Connections between new and existing piping will be made in the presence of the RPR. Rock backfilling of the pipes will also be done in the presence of the RPR. Tees, fittings, and other appurtenances shall conform to the manufacturers recommendations.

Drainage Layer: The drainage layer will be composed of a minimum of 12 inches of a high hydraulic conductivity material with a hydraulic conductivity of at least  $1 \times 10^{-3}$  cm/sec. Drainage layer material will have hydraulic conductivity verified in the laboratory before use is

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allowed. A copy of the laboratory hydraulic conductivity tests will be submitted to IDNR in the final QC&A Report.

Note that drainage layer material is not required in conjunction with the construction of the Sidewall Liner as per the variance approved by IDNR on November 1, 2006.

Drainage layer material will be installed in the presence of the RPR. Drainage layer thickness will be physically measured by the RPR with a shovel and tape (or another acceptable method) incrementally as the material is installed to document drainage layer material thickness. Measurement shall be at least once for every 100 foot by 100 foot area of drainage layer installed. Drainage layer depth will also be checked at the toe of slopes and other significant grade changes. The surface of the drainage layer shall be graded to a tolerance of 0 to +0.1'.

Quality Control and Assurance Report: A final QC&A Report will be submitted to IDNR upon the completion of construction. A copy of the final report will also be maintained at the landfill. At a minimum, the final report shall include the following:

- Title page and index
- Name and permit number of the Plymouth County SLF
- Contact information for the QC&A Officer
- Contact information for all contractors associated with the construction of the project
- Applicable soil and drainage layer test results
- Copies of the Resident Project Representative's reports
- Representative photos from various stages of the construction process
- A signed/sealed statement by the QC&A Officer that the unit was constructed in general accordance with rule 113.7 (455B) and the approved plans and specifications

Record Drawings showing variations from the plans will also be submitted to the IDNR. Note that the Record Drawings may be submitted separately from the QC&A report to expedite the submission of the QC&A report.

## SECTION G

### Explosive Gas Control Plan

### **EXPLOSIVE GAS CONTROL PLAN**

An Explosive Gas Control Plan was included in the 2022 Permit Renewal Documentation (Doc #103957). The 2022 Permit Renewal Documentation was approved in the SDP Permit dated December 5, 2022. The previously approved Explosive Gas Monitoring Plan is still applicable except as noted below:

#### **114.26(15) Explosive Gas Monitoring Plan/Gas Control**

The Gas Monitoring System Plan (GMSP) dated October 11, 2004 (Doc #35025) was approved by IDNR on June 20, 2005 (Doc #35023). Modification of the GMSP related to groundwater quality assessment and gas venting was approved by IDNR on February 20, 2009 (Doc #38235). Gas venting was completed on August 14, 2020 with construction records included in the September 29, 2021 Groundwater Quality Assessment Report (Doc #101310).

The current GMSP monitoring points are as reported in the 2020 Annual Water Quality Report (AWQR) dated November 30, 2020 (Doc #99033). Changes to the current GMSP monitoring points are not recommended.

Current monitoring points include:

<u>Passive Gas Vents (Control)</u>	<u>Monitoring Wells (Vadose)</u>	<u>Buildings</u>
GV-1	MW-7	Equipment Building
GV-2	MW-8	Transfer Station
GV-3	MW-9	Storage/RCC
GV-4	MW-10	Office
GV-5	MW-11	Scale Pit
GV-6	MW-12	
GV-7	MW-13	
GV-8	MW-14	
GV-9	MW-16	
GV-10	MW-17	
GV-11		

## SECTION H

### Emergency Response and Remedial Action Plan

**EMERGENCY RESPONSE AND REMEDIAL ACTION PLAN**

An Emergency Response and Remedial Action Plan (ERRAP) was included in the 2022 Permit Renewal Documentation (Doc #103957). The 2022 Permit Renewal Documentation was approved in the SDP Permit renewal dated December 5, 2022. The previously submitted ERRAP is still applicable except as noted below:

Attachment B, Emergency Contact List

The Emergency Contract List has been updated and is included in Attachment 1 of this Section.

Attachment E, List of At-Risk Populations Within a Five-Mile Radius

The list in Attachment E of the ERRAP should be reviewed by landfill staff and updated as necessary. In the event of an emergency, the Le Mars Police Department and the Plymouth County Sheriff's Office will be alerted to aid in the notification of special populations within a 5 mile radius of the landfill.

## ATTACHMENT 1



## EMERGENCY CONTACT LIST

### **TELEPHONE LOCATIONS:**

Location of Nearest Telephones .....Scale House/Office  
Operations Manager mobile telephone .....(712) 260-2395

### **FIRE:**

Fire Department/ Rescue ..... 911

### **MEDICAL/ DOCTOR:**

Ambulance..... 911 or 546-6500  
Hospital: Floyd Valley Healthcare..... (712) 546-7871  
Estimated Drive Time:..... 6 minutes (3.6 miles)  
Directions to Hospital/Clinic:..... Directions: See Attachment D

### **LANDFILL MANAGEMENT- NOTIFICATION LIST:**

#### Operations Manager:

Kent Herbold..... Mobile: (712) 260-2395  
..... Office: (712) 546-6071

### **COUNTY EMERGENCY MANAGER:**

#### Plymouth County Emergency Management Coordinator

Rebecca Socknat ..... Office: (712) 546-8101

### **MEDIA:**

#### **Radio:**

KIWA - AM.....(712) 324-2597  
KIWA- FM.....(712) 324-2597  
KLEM-AM/FM.....(712) 546-4121

#### **Newspaper:**

Le Mars Daily Sentinel. .... (712) 546-7031

#### **Television:**

KTIV- Sioux City.....(712) 239-4100

## **EMERGENCY CONTACT LIST (CONTINUED)**

### **STATE OF IOWA:**

IDNR Field Office #3, Spencer, Iowa ..... (712) 262-4177  
Iowa Homeland Security and Emergency Management..... (515) 725-3231  
IDNR Spill Response (24 hours) ..... (515) 725-8694

### **EPA:**

National Response Center..... (800) 424-8802

### **UTILITIES:**

**Telephone:** Frontier ..... (800) 570-6341  
**Water:** Southern Sioux County Rural Water System ..... (712) 278-2212  
**Electricity:** Northwest Rural Electric Cooperative ..... (800) 766-2099  
**Propane:** Siouxland Propane Co ..... (800) 747-2828  
Hentges Oil Ltd ..... (800) 228-9303  
Sapp Brothers ..... (712) 546-8052  
**One Call (prior to digging).....811**

### **ENGINEER OF RECORD:**

HLW Engineering ..... (515) 733-4144