SCS ENGINEERS

Transmittal

West Des Moines, IA

PROJECT:	Muscatine Co,2025 LF Permit Renewal,IA 27225394.00	DATE:	8/4/2025
SUBJECT:	Muscatine Co Landfill Permit Renewal Application - Revised	TRANSMITTAL ID:	00002
PURPOSE:	For your approval	VIA:	Info Exchange

FROM

NAME	COMPANY	EMAIL	PHONE
Christine Collier West Des Moines, IA	SCS Engineers	CCollier@scsengineers.com	+1-515-631-6161

TO

NAME	COMPANY	EMAIL	PHONE
Mike Smith 502 East 9th Street Des Moines IA 50319-0034 United States	Iowa, State of	mike.smith@dnr.iowa.gov	515-725-8200
Becky Jolly		becky.jolly@dnr.iowa.gov	

REMARKS:

Mike -

I apologize. I caught a minor error on the cover letter after I hit submit. Please use this version.

Thank you
Christine

DESCRIPTION OF CONTENTS

QTY	DATED	TITLE	NOTES
1	8/4/2025	Muscatine Co LF Permit Renewal Application 08.04.2025 - Revised.pdf	

COPIES:

David Popp (Muscatine County Solid Waste Mgmt. Agency)
Nathan Ohrt (SCS Engineers)
Christine Collier (SCS Engineers)

August 4, 2025
File No. 27225394.00

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

Subject: 2025 Permit Renewal Application
Muscatine County Sanitary Landfill
Permit No. 70-SDP-02-75P

Dear Mr. Smith:

On behalf of the Muscatine County Solid Waste Management Agency (Agency), SCS Engineers (SCS) is pleased to submit this Permit Renewal Application for the Muscatine County Sanitary Landfill (Landfill) for your review.

Following standard practice, the permittee and SCS have reviewed the current permit and planning documents. Form 50 for permit renewal applications has been completed. Section 1 has been reviewed and updated. Section 2 has been prepared as required with the Executive Summary. Referenced documents are either included in this submittal if updates occurred or the DocDNA number of the current approved plans has been included. Upon review of this documentation and attachments, the Agency representative has provided signature in Section 3.

Please feel free to contact us if you have any questions, require additional information, or need any further clarification.

Sincerely,

Kasi D. Province

Kasi D. Province, P.E.
Project Professional
SCS Engineers

Christine L. Collier

Christine L. Collier, P.E.
Senior Project Manager
SCS Engineers

EHB/KDP/CLC

cc: David Popp, Manager, Muscatine County Solid Waste Management Agency

2025 Permit Renewal Application
Muscatine County Sanitary Landfill

Muscatine County Sanitary Landfill
Permit No. 70-SDP-02-75P

Prepared for:
Muscatine County Solid Waste Management Agency

I hereby certify that this document was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the state of Iowa.

Christine L. Collier, P.E.

Digitally signed by Christine L. Collier, P.E.
Date: 2025.08.04 17:40:03 -05'00'

Christine L. Collier Date

My license renewal date is: December 31, 2025
Pages or sheets covered by this seal:
Reviewed for compliance purposes only.

SCS ENGINEERS

Project No. 27225394.00 | August 2025

1690 All-State Court, Suite 100
West Des Moines, IA 50265
515-631-6160

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Appendices

1.0 IOWA DEPARTMENT OF NATURAL RESOURCES FORM 50

IOWA DEPARTMENT OF NATURAL RESOURCES

Municipal Solid Waste Landfill

PERMIT APPLICATION FORM 50

☐ **New Permit**

☒ **Permit Renewal (permit number)** 70 **- SDP -** 02 **-** 75P **MLF**

☐ **Closure Permit**

SECTION 1: PERMIT APPLICATION REQUIREMENTS

Owner of site

Name: Muscatine County Solid Waste Management Agency Phone: (563) 263-9689

Address: 1000 South Houser St. Fax: (563) 263-9688

City, State, Zip: Muscatine, IA 52761 E-mail: dpopp@muscatineiowa.gov

Certified Operator Responsible for Operation at Facility

Name: David Popp, City of Muscatine Solid Waste Phone: (563) 263-9689

Address: 1000 South Houser St. Fax: (563) 263-9688

City, State, Zip: Muscatine, IA 52761 E-mail: dpopp@muscatineiowa.gov

Permit Applicant

Name: Muscatine County Solid Waste Management Agency Phone: (563) 263-9689

Address: 1000 South Houser St. Fax: (563) 263-9688

City, State, Zip: Muscatine, IA 52761 E-mail:

Design Engineer (PE)

Name: Christine L. Collier, P.E. Phone: (515) 631-6160

Address: 1690 All State Court, Suite 100 Fax: (515) 256-0152

City, State, Zip: West Des Moines, IA 50265 E-mail: ccollier@scsengineers.com

Iowa Engineer License #: 17963 Expiration Date: 12/31/2025

Responsible Official for the Facility

Name: David Popp, City of Muscatine Solid Waste Phone: (563) 263-9689

Address: 1000 South Houser St. Fax: (563) 263-9688

City, State, Zip: Muscatine, IA 52761 E-mail: dpopp@muscatineiowa.gov

Agency and Responsible Official of Agency Served (if any)

Name: Muscatine County Solid Waste Management Agency Phone: (563) 263-9689

Address: 1000 South Houser St. Fax: (563) 263-9688

City, State, Zip: Muscatine, IA 52761 E-mail: dpopp@muscatineiowa.gov

Facility

Name: Muscatine County Sanitary Landfill

Address: 3700 US-61 City, State, Zip: Blue Grass, Iowa 52762

Legal Description:

Parcel located in Sections 33&34 Township78 N & in Sections 3&4 in Township 77 N, all in Range 1 E of Fifth PM in Muscatine Co. IA

Landfill is part of the following solid waste comprehensive planning area:

Planning Area Name: Bi-State Regional Planning Area

Date of Last Approved Plan: July 21, 2023

Service area of the landfill (include unincorporated areas and out of state generators):

All cities, excluding Wilton, and unincorporated portions of Muscatine County.

Population Served: 39,216 (2024 from Census.gov excluding Wilton)

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 equivalency review requests, if any.
- Provide documentation and certification as required for new variance requests from Iowa Administrative Code requirements, if any.

☒ An organizational chart in accordance with Iowa Administrative Code 567 paragraph 113.5(1)"b".

No Revision Required - See Doc ID#, Section, and Page: _____

☐ A site exploration and characterization report for the facility that complies with the requirements of subrule 113.6(4).

No Revision Required - See Doc ID#, Section, and Page: DocDNA#50613, Sec. C; #87577 App. 8

☐ Design plans and specifications for the facility, and quality control and assurance plans, that comply with the requirements of rule 113.7(455B).

No Revision Required - See Doc ID#, Section, and Page: DocDNA #87577, App. 2.A

☒ A development and operations (DOPS) plan for the facility, an emergency response and remedial action plan (ERRAP), and proof of MSWLF Operator Certification that comply with the requirements of rule 113.8(455B) .

No Revision Required - See Doc ID#, Section, and Page: DocDNA #98325, Appendix 5

☒ An environmental monitoring plan that complies with the requirements of rules 113.9(455B) and 113.10(455B).

No Revision Required - See Doc ID#, Section, and Page: DocDNA #98325 LGP

☐ The project goals and time lines, and other documentation as necessary to comply with subrule 113.4(10) and other requirements of the Department if an RD&D permit is being requested or renewed.

No Revision Required - See Doc ID#, Section, and Page: Not required

☒ Proof of financial assurance in compliance with rule 113.14(455B).

No Revision Required - See Doc ID#, Section, and Page: _____

☐ A closure and postclosure plan that complies with the requirements of rules 113.12(455B) and 113.13(455B).

No Revision Required - See Doc ID#, Section, and Page: DocDNA #87577, Appendix 5

☒ Comprehensive plan requirements. Attach a copy of the most recent comprehensive plan approval or amendment letter.

No Revision Required - See Doc ID#, Section, and Page: _____

In addition to the documents required above, the permit holder shall comply with the implementation plan requirements of subrule 113.2(9), the public notice requirements of subrule 113.4(12), and the record-keeping and reporting requirements of rule 113.11(455B).

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: _____ **Date:** 7-31-2025

Printed Name: David Popp **Title:** Solid Waste Manager

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

2.0 EXECUTIVE SUMMARY

2.1 INTRODUCTION

The information required in the Executive Summary is listed in Section 2.0 of the Permit Application Form 50 and includes a summary of modifications, special provisions, permit amendments, and documentation and certification as required for new permit amendment requests and new waiver requests.

2.2 SUMMARY OF MODIFICATIONS

Modifications to the current plans and specifications during the current permit cycle (November 02, 2020 to present) are summarized in Table 1.

Table 1. Permit Modifications History

Date	Permit Modification
11/2/2020	Permit Renewal
1/29/2021	Inserted new Special Provision X.8. to use wood chips with soil for daily cover. Renumbered following provisions.
9/18/2023	Inserted new Special Provision X.9. to use foundry sand with soil for daily cover. Renumbered following provisions.
6/13/2024	X.4. and X.4.a. – Approves the Selection of Remedy and Corrective Action Groundwater Monitoring Program and revised the Hydrologic Monitoring System Plan.

2.3 SPECIAL PROVISIONS OF CURRENT PERMIT

Following is a summary of each special provision (Section X. Special Provisions) of the current permit in addition to a brief discussion about if it is to remain the same, be revised, or be removed.

Special Provision #1.

The permit holder is authorized to accept solid waste for disposal in accordance with the approved Bi-State Regional Planning Area Comprehensive Plan. The Comprehensive Plan as approved by the DNR on May 26, 2016; any approved amendments to the plan; and the latest plan update, are hereby incorporated as permit plan documents.

The permitted service area includes all cities and the unincorporated portions of Muscatine County, with the exception of the City of Wilton.

In accordance with subrule 101.13(2), the permit holder shall submit an updated Comprehensive Solid Waste Management Plan, to the DNR by January 1, 2023.

The Bi-State Regional Planning Area Comprehensive Plan was last updated on July 21, 2023. The Muscatine County Solid Waste Management Agency has participated in the Environmental Management System (EMS) as an alternative to comprehensive planning since the approval on March 24, 2023 (DNR #4737). The most recent EMS Third Party Environmental Management System Audit was conducted on November 14, 2024 (DNR #5071).

Special Provision #2.

The permit holder shall develop and operate the site in accordance with the Development and Operations Plan contained in Appendix 5 of the hereby-approved 2020 Permit Renewal (DocDNA #98325), dated August 28, 2020, and supplemental information in Response to 8/31/2020 DNR Comment Letter (DocDNA #98502), dated September 15, 2020, all as submitted by Evora Consulting and the following:

a. *Waste disposal is limited to the Phase 1 through Phase 5 cells. Any further expansion beyond these phases shall require prior DNR approval.*

b. *The first lift of MSW placed in a newly constructed unit or portion of a unit shall be placed in accordance with paragraph 113.8(2)"b" in such a manner to minimize damage to the leachate collection system and liner.*

c. *The Long Term Plan, dated May 30, 2008, and the Erosion Control Plan (with attached Storm Water Inspection and Maintenance Program), dated July 28, 2008, as submitted by the permit holder, are incorporated into the permit. These documents describe the sequencing and development procedures for Cells 3 through 6, and closure of the unlined portions of the landfill. The plans were required in Consent Order 2008-SW-01, dated January 3, 2008, due to recurrent operational and planning violations at the landfill dating back to 1997.*

d. *The permit holder shall collect leachate from the leachate control system and properly dispose of the leachate either by treatment in an on-site facility, discharge with an NPDES permit, or by discharge to the City of Muscatine publicly owned treatment works (POTW). If the discharge is to a POTW with a pretreatment program approved by the Muscatine County Sanitary Landfill Permit Page 4 of 16 November 2, 2020, (Revised June 13, 2004) DNR, the discharge shall 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 me provided to the DNR's Solid Waste Section and the local field office. The treatment agreement shall be on DNR Form 31 (542-3221) and shall 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 Equivalency Review Leachate Storage Requirements, date March 26, 2014, as prepared and the Construction Certification Report – Level Monitors – Underground Leachate Storage Tanks, dated October 31, 2014, both prepared by HLW Engineering Group is incorporated into the permit. Semi-annual engineer inspections and reporting are no longer required and procedures outlined in the Equivalency Review Leachate Storage Requirements now only apply to the east leachate storage tank (January 5, 2018).

e. *The permit holder shall annually submit a Leachate Control System Performance Evaluation (LCSPE) Report pursuant to subparagraph 113.7(5)"b"(14) as a supplement to the facility Annual Water Quality Report, as defined in subrule 113.10(10). The following shall be*

recorded by the permit holder and reported in the LCSPER for each leachate thickness measurement that equals or exceeds 12 inches:

1. *Date of original and any verification requirement.*
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.*

f. *Effective control of leachate in unlined units shall be evaluated on a case-by-case basis to determine how to achieve the lowers possible leachate head and by complying with the environmental monitoring and corrective action requirements.*

g. *The permit holder shall follow the approved Emergency Response and Remedial Action Plan (ERRAP) procedures during all emergencies pursuant to subrule 113.8(5). An updated ERRAP shall be submitted at the time of each permit renewable application. An undated 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.*

Please update the permit renewal application to this application. Please also update Item #2g per the updated ERRAP included in **Appendix B**. There are no other changes required or requested to Special Provision #2.

Special Provision #3

The permit holder shall submit prior to the next cell construction, updated plans and specifications prepared in accordance with rule 113.7, and the following:

a. *The permit holder is approved to proceed with construction of Phase 6 as detailed in the 2016 Master Plan and Request for Approval to Construct Phases 5 and 6, dated November 1, 2016 and supplemental information to Response to November 10, 2016 DNR Comments 2016 Master Plan, dated January 18, 2017, both as submitted by Barker Lemar Engineering Consultants and herby approved.*

b. *The permit holder shall notify the DNR and have the site inspected when the construction of a new Municipal Solid Waste Landfill (MSWLF) unit or significant components thereof has been completed, in accordance with subrule 113.4(6). Prior to the inspection, the Quality Control & Assurance (QC&A) officer shall submit a final report to the DNR that verifies compliance with the requirements of rule 113.7 and the approved plans and specifications. No waste disposal shall commence in any newly constructed unit or portion thereof until it has been inspected and approved by the DNR.*

c. *The construction documentation for replacement leachate piezometers LW 4-1R, LW 4-2R, and LW 4-3R, dated February 3, 2000 and approved on May 31, 2000, are incorporated into the permit.*

d. *The well abandonment form for the former production well located within the Horizontal Expansion Area (also referred to as Area A) and plugged on June 28, 2006, as contained in*

Section 2 of Appendix 2 of the 2005 DOPs from FOX Engineering, is incorporated into the permit.

e. *The Construction Certification Report and Record Drawings, both related to the construction of the Phase 1 Cell and dated August 29, 2006, as submitted by FOX Engineering and approved on March 1, 2007, are incorporated into the permit.*

f. *The Construction Certification Reports for the Phase 1 Abutment and Phase 1 Abutment-Drainage Layer, dated May 31 and June 12, 2007, respectively, as submitted by FOX Engineering and approved on June 7 and 11, 2007, respectively, is incorporated into the permit.*

   The Record Drawings, Phase 1 Abutment, dated August 24, 2007, as submitted by FOX Engineering and approved on September 17, 2007, are incorporated into the permit.

g. *The Construction Certification Report – Final, Phase 2 Expansion and Record Drawings, dated November 21, and December 6, 2007, respectively, as submitted by FOX Engineering and approved on December 7, 2007, is incorporated into the permit.*

h. *The Quality Assurance/Quality Control Report, Phase 3 Expansion, dated June 3, 2009, as submitted by FOX Engineering and approved on June 15, 2009, is incorporated into the permit.*

i. *The Quality Assurance/Quality Control Report, Phase 4 Horizonal Expansion, dated October 12, 2009, as submitted by FOX Engineering and approved on October 15, 2009, is incorporated into the permit.*

j. *The Ravine 4 Gas Vent as-built drawings, dated June 11, 2009, as submitted by FOX Engineering and approved on October 15, 2009, are incorporated into the permit.*

k. *The Construction Certification Report for the groundwater underdrain connection to the leachate conveyance system, dated May 26, 2010, as submitted by HLW Engineering Group, and approved on March 5, 2015, is incorporated in to the permit.*

l. *The Quality Assurance/Quality Control Report, FML Repair/Soil Testing, dated October 29, 2010, as submitted by the HLW Engineering Group, and approved on November 10, 2010, is incorporated into the permit.*

m. *The Quality Control and Assurance Report, Soil Testing – Confirming Liner Properties, dated April 18, 2011, as submitted by HLW Engineering Group, and approved December 8, 2011, is incorporated into the permit. This report included documentation that the compacted clay portion of the liner that went through the winter of 2010-2011 without a frost protection layer retained a maximum constructed permeability of 1 x 10^{-7} cm/sec.*

n. *The construction documentation for the installation of the groundwater collection line upgradient from MW-12 at the Muscatine County Sanitary Landfill, dated November 27, 1012, as submitted by HLW Engineering, and approved June 20, 2013, is incorporated into the permit documents.*

o. *The Construction Certification Report – Level Monitors – Underground Leachate Storage Tanks, dated October 31, 2014, prepared by HLW Engineering Group, and approved March 5, 2015, is incorporated into the permit.*

p. *The Construction Observation Report Phase 5 Cell and Leachate Lagoon Construction, dated December 2017, prepared by Barker Lemar Engineering Consultants, and approved on October 12, 2018, is incorporated into the permit.*

q. *The Construction Observation Report Sand Layer Repair Thickness Certification, dated October 9, 2018, prepared by Barker Lemar Engineering Consultants, and approved on October 12, 2018, is incorporated into the permit.*

There are no changes required or requested to Special Provision #3.

Special Provision #4

Hydrologic monitoring at the site shall be conducted in accordance with the hereby approved Updated Hydrologic Monitoring System Plan (HMSP) dated October 15, 2015, as submitted by Barker Lemar Engineering Consultants and hereby approved, the Administrative Consent Order No. 2015-SW-02, dated February 11, 2015, the Amendment to Administrative Consent Order No. 2015-SW-02, dated April 6, 2017, the Response to March 18, 2020 DNR Comment Letter, February 7, 2020 Meeting Follow-up, Selection of Remedy and the Selection of Remedy and Corrective Action Groundwater Monitoring Program, dated May 9, 2024, and the following:

a. *The HMSP shall include groundwater monitoring points MW-2, MW-4, MW-9, MW-10A, MW-11, MW-12R, MW-13, MW-20, MW-21, MW-22, MW-23, MW-24, MW-25, MW-26, MW-29, MW-30, MW-31, MW-33, MW-34, MW-35, MW-36, MW-37, MW-38, MW-39, MW-46, MW-49BG, MW-50BG, MW-51, MW-56, and MW-57.*

b. *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.*

c. *The permit holder shall conduct background and routine semiannual groundwater sampling and analysis; as well as perform statistical tests for the approved monitoring points for the Appendix I parameters and TSS in accordance with rule 113.10(455B). Groundwater samples shall not be field-filtered prior to laboratory analysis and total suspended solids shall be analyzed using Method 1376585, with a reporting limit goal of <= 2 mg/l). Turbidity measurement may be approved by the DNR in lieu of TSS, provided a correlation between the two is established.*

d. *The permit holder shall include in each AWQR an evaluation of TSS/turbidity data and other pertinent sampling and analytical results, to determine if representative samples of groundwater have been collected. If samples are not representative, the permit holder may be required to utilize low flow or no-purge sampling methods, consider new well construction with an optimized filter pack design, and/or additional well development. If sample quality does not improve with improved well construction, well development, and/or sampling methods, the DNR will consider higher TSS/turbidity levels as representative of site groundwater conditions.*

e. *The frequency for full Appendix II analysis at monitoring points that are in assessment monitoring and have had at least two (2) rounds of analysis using the entire Appendix II list may be decreased to once every (5) five years. If monitoring points exit assessment monitoring and later return to assessment monitoring an additional two (2) rounds of analysis using the entire Appendix II list is required.*

f. *The permit holder shall semiannually measure groundwater elevations within 1/100 of a foot in each well immediately prior to purging, each time groundwater is sampled.*

g. *An Annual Water Quality Report (AWQR) summarizing the effects the facility is having on groundwater quality shall be submitted to the DNR's Solid Waste Section by January 31 each year. This report shall be prepared in accordance with subrule 113.10(10) by a qualified groundwater scientist pursuant to paragraph 113.10(1)"d" and by using the DNR Annual Water Quality Report Format.*

h. *The MW-7 Well Abandonment Record, dated September 13, 2007, is incorporated into the permit.*

i. *The Monitoring Well Plugging Forms for MW-5, MW-6, MW-14, MW-15, MW-16, and MW-17 dated August 29, 2008 and submitted by FOX Engineering, are incorporated as into the permit.*

j. *The Boring Logs and Monitoring Well Construction Forms for monitoring wells MW-20 through MW-29 and gas monitoring points GP-1 through GP-9, dated July 16, 2009, as submitted by FOX Engineering, are incorporated into the permit.*

k. *The boring logs and well construction documentation for monitoring wells MW-30, MW-31, and MW-32, dated August 18, 2011, and the boring logs and well construction documentation for monitoring wells MW-33 and MW-34, dated February 3, 2014, both as submitted by HLW Engineering Group, are incorporated into the permit. The purpose of these wells is to characterize the nature and extent of the contaminant releases identified in the site's routine monitoring well network wells MW-13, MW-23, and MW-27, respectively.*

l. *The Monitoring Well Installation report, dated November 6, 2015, as submitted by Barker Lemar Engineering Consultants, is hereby approved. The report documents the installation of monitoring wells MW-12R, MW-35, MW-36, MW-37, MW-38, and MW39. The report also documents the abandonment of monitoring well MW-12.*

m. *The Monitoring Well Installation, dated December 12, 2016, as submitted by Barker Lemar Engineering Consultants, is hereby approved. The report documents the installation of monitoring wells MW-40, MW-41, MW-42, MW-43, MW-44, MAW-45, and MW-46*

n. *The Monitoring Well Installation, dated June 19, 2018, as submitted by Barker Lemar Engineering Consultants, is approved on June 25, 2018. The report documents the installation of monitoring wells MW-47, MW-48, MW-49BG, MW-50BG, and MW-51.*

o. *The request for Variance for 567 IAC 113.10(2)d(2), dated February 11, 2019, as submitted by Barker Lemar Engineering Services, to abandon monitoring well MW-19, is approved on April 8, 2019, and hereby incorporated into the permit.*

p. *The Monitoring Well Installation and Abandonment, dated May 22, 2019, as submitted by Barker Lemar Engineering Consultants, to install monitoring wells MW-52 and MW53 and abandon MW-19, is approved on June 7, 2019, and hereby incorporated into the permit.*

q. *The Monitoring Well Installation, dated March 30, 2020, as submitted by Barker Lemar Engineering Consultants, is approved on April 15, 2020. The report documents the installation of monitoring wells MW-54, MW-55, MW-56, and MW-57.*

r. *The Monitoring Well Installation, dated July 30, 2020, as submitted by Barker Lemar Engineering Consultants, is approved on August 17, 2020. The report documents the installation of monitoring well MW-58.*

There are no changes required or requested to Special Provision #4.

Special Provision #5

The permit holder is authorized to recirculate leachate in accordance with the Leachate Application request dated September 5, 2008 and approved on October 21, 2008, as submitted by FOX Engineering, and the following:

a. *Leachate application is restricted to only those MSWLF units with a composite liner constructed in accordance with paragraph 113.7(5)"a."*

b. *The leachate recirculation system shall not contaminate waters of the state, contribute to erosion, damage cover material, harm vegetation, or spray persons at the MSWLF facility, pursuant to paragraph 113.8(2)"h".*

c. *Leachate shall not be applied on user vehicle access areas.*

d. *Leachate shall not be applied to vegetated areas or frozen waste cover. A means of frost protection shall be provided for all leachate control elements.*

e. *Leachate shall be applied evenly on the working area.*

f. *Leachate recirculation shall be conducted only during hours of operation and when an operator is on duty.*

g. *Leachate shall be applied in a manned in such that ponding or runoff will not occur.*

h. *Leachate recirculation shall be controlled such that not more than one foot of leachate head will be allowed to accumulate above the MSWLF unit liner.*

i. *Records shall be maintained as to the time and quantities of leachate application and be submitted with a facility LCSPER.*

j. *Leachate recirculation shall be immediately terminated if it causes ponding, runoff, excessive odor, vector control problems, vapor drift, ice formation, or operational problems. The DNR's local Field office shall be immediately notified if any of the above events occur.*

There are no changes required or requested to Special Provision #5.

Special Provision #6

The permit holder shall conduct subsurface gas monitoring in accordance with the Revised Landfill Gas Monitoring Plan in Appendix 8 of the hereby-approved 2020 Permit Renewal (DocDNA #98325), dated August 28, 2020, as submitted by Evora Consulting and incorporated into the permit, and the following:

a. *The permit holder shall quarterly monitor and annually report site methane concentrations in accordance with rule 113.9(455B). Specific actions, as defined in the rules, shall be taken in the event of methane gas level limit exceedances.*

b. *The permit holder shall annually submit a report by January 31 summarizing the methane gas monitoring results and any action taken resulting from gas levels exceeding the specified limits during the previous 12 months as a supplement to the facility Annual Water Quality Report, as defined in subrule 113.10(10).*

There are no changes required or requested to Special Provision #6.

Special Provision #7

The permit holder is authorized to accept CCR from the CIPCO Generating Plant in Fairport, Iowa. The permit holder is authorized to use a CCR/soil combination as an alternative cover material, subject to the following:

a. *The ratio of CCR to soil shall not exceed 50% CCR by volume. Quantities exceeding 1-week usage shall be disposed in the workface area. Only CCR placed at a ratio of 6:1 (6 tons of waste to 1 ton of approved CCR) will be considered alternative daily cover. Any material used in excess of that ration shall be reported as waste.*

b. *The CCR/soil may be used in lieu of the 6-inch daily cover requirement. CCR/soil shall not be used as a substitute for intermediate or final soil cover.*

c. *The waste shall be compacted, before the CCR/soil is applied, to provide an even surface to minimize ponding, prevent pockets, and to maximize uniform surface damage.*

d. *CCR/soil shall be applied to the active waste face at the end of each day of operations and more frequently if necessary to control fire or fire hazards, blowing litter, scavenging, odors, insects, and rodents.*

e. *The soil ratio shall be increased, if necessary, to optimize cover performance relative to the criteria stated in items "c" and "d" above.*

f. *The permit holder shall scarify the CCR/soil cover material over the working face area on which it is applied prior to each day's use of that area as a working face.*

g. *The permit holder shall maintain in the landfill files appropriate laboratory analytical documentation that demonstrates that the CCR is not hazardous by TCLP testing. Documentation reporting of such testing shall be submitted to both the DNR's Main and local Field office.*

h. *The use of CCR/soil for daily cover by any other generator than the one approved above shall be subject to specifications approval by the DNR.*

There are no changes required or requested to Special Provision #7.

Special Provision #8

The permit holder is authorized to accept wood chords from the City of Muscatine Compost facility. The permit holder is authorized to use a wood chips/soil combination as an alternative cover material, subject to the following:

a. *The ratio of wood chips to soil shall not exceed 50% wood chips by volume. Only wood chips placed at a ratio of 6:1 (6 tons of waste to 1 ton of approved wood chips) will be considered alternative daily cover. Any material used in excess of that ratio shall be reported as waste.*

b. *The wood chips/soil combination may be used in lieu of the 6-inch daily cover requirement. Wood chips/soil combination shall not be used as a substitute for intermediate or final soil cover.*

c. *The waste must be compacted, before the wood chips/soil combination is applied, to provide an even surface to minimize ponding, prevent pockets, and to maximize uniform surface drainage.*

d. *The wood chips/soil combination shall be applied to the active waste face at the end of each day of operations and more frequently if necessary to control fire or fire hazards, blowing litter, scavenging, odors, insects, and rodents.*

e. *The soil ratio shall be increased, if necessary, to optimize cover performance relative to the criteria stated in items "c" and "d" above.*

f. *The permit holder shall scarify the wood chips/soil combination cover material over the working face area on which it is applied prior to each day's use of that area as a working face.*

g. *The use of wood chips/soil combination for daily cover usage by any other generator than the one approved above shall be subject to specifications approval by the DNR.*

h. *If the wood chips/soil combination is found by the DNR not to be performing satisfactorily, its use shall be discontinued and the remaining materials shall be disposed in the working face.*

There are no changes required or requested to Special Provision #8.

Special Provision #9

The permit holder is authorized to accept foundry sand from the Linwood facility. The permit holder is authorized to use a foundry sand/soil combination as an alternative cover material, subject to the following:

a. *The ratio of foundry sand to soil shall not exceed 50% foundry by volume. Only foundry sand placed at a ratio of 6:1 (6 tons of waste to 1 ton of approved foundry sand) will be considered alternative daily cover. Any material used in excess of that ratio shall be reported as waste.*

b. *The foundry sand/soil combination may be used in lieu of the 6-inch daily cover requirement. Foundry sand/soil combination shall not be used as a substitute for intermediate or final soil cover.*

c. *The waste must be compacted, before the foundry sand /soil combination is applied, to provide an even surface to minimize ponding, prevent pockets, and to maximize uniform surface drainage.*

d. *The foundry sand /soil combination shall be applied to the active waste face at the end of each day of operations and more frequently if necessary to control fire or fire hazards, blowing litter, scavenging, odors, insects, and rodents.*

e. *The soil ratio shall be increased, if necessary, to optimize cover performance relative to the criteria stated in items "c" and "d" above.*

f. *The permit holder shall scarify the foundry sand/soil combination cover material over the working face area on which it is applied prior to each day's use of that area as a working face.*

g. *The use of foundry sand/soil combination for daily cover usage by any other generator than the one approved above shall be subject to specifications approval by the DNR.*

h. *If the foundry sand/soil combination is found by the DNR not to be performing satisfactorily, its use shall be discontinued and the remaining materials shall be disposed in the working face.*

There are no changes required or requested to Special Provision #9.

Special Provision #10

The permit holder is authorized to use a 6.5 oz. coated polypropylene tarp, called TarpArmorTM manufactured by Southwestern Sales Co., located in Rogers, Alabama, as an alternative daily cover. Conditions for use of this material are as follows:

a. *The use and installation of the 6.5 oz. coated polypropylene tarp shall be in conformance with the manufacturer's recommendations.*

b. *This product shall only be used as a daily soil cover alternative and shall not be utilized as a replacement for soil cover if application performance in terms of litter, vector, odor, and precipitation entry control is not provided.*

c. *This product shall not be used as a substitute for intermediate or final soil cover.*

d. *This product shall be applied so as not to promote water ponding or drainage run-on from adjacent upper and side waste cell areas beneath the installed geotextile.*

e. *This product shall be applied so as not to promote water ponding, or drainage run-on from adjacent upper and side MSWLF unit areas beneath the installed geotextile.*

f. *The product shall be weighted at the close of each working day to prevent displacement by wind through the use of soil or tires.*

g. *This product shall not be exposed for longer than seven (7) consecutive days. For any waste covered with this product beyond the stipulated timeframe, the product shall be removed and the underlying waste shall be immediately covered with soil in accordance with the applicable IAC rules.*

h. *This product shall not be used if it becomes damaged or worn, or if the intended performance is breached. In such instances, this product shall be disposed of as a part of the waste fill.*

i. *The operator shall inspect each application of this product for thorough coverage and cover integrity. If operational problems arise from the use of this product or its application method, the use of this product shall be suspended until proper corrections are made by the operator, with six inches of compacted daily cover being utilized during this interim period.*

j. *If, at any time, the DNR or permit holder deems this product to be ineffective or otherwise unsatisfactory, the permit holder shall immediately revert to soil or another previously approved alternative daily cover. The permit holder shall immediately notify the DNR's Main and local Field office through both written and verbal notification of this action. This notification is not necessary if use of this product ceases only on a temporary basis, such as during adverse operational or weather conditions.*

There are no changes required or requested to Special Provision #10.

Special Provision #11

The permit holder is authorized to use degradable plastic sheeting by the trade name EPI Enviro™ Cover Systems, as an alternative to daily soil cover at the landfill site, subject to the following:

a. *The use and deployment of EPI EnviroTM Cover Systems degradable plastic sheeting shall be in conformance with the manufacturer's recommendations.*

b. *The product shall only be used as a daily soil cover alternative and shall not be utilized as a replacement of soil cover if application performance in terms of litter, vector, odor, and precipitation entry control is not provided.*

c. *This product shall not be used as a substitute for intermediate or final soil cover. All areas covered with the degradable plastic sheeting over 7 days shall be covered with the appropriate thickness of soil cover.*

d. *This product shall be applied so as not to promote water ponding or drainage run-on from adjacent upper and side waste cell areas beneath the deployed sheeting.*

e. *The product shall be weighted during and after deployment in accordance with the manufacturer's recommendations to prevent displacement by wind through the use of manufacturer-recommended ballast material.*

f. *If, at any time, the DNR or permit holder deems the EPI EnviroTM Cover Systems degradable plastic sheeting ADC to be ineffective or otherwise unsatisfactory, the permit holder shall immediately revert to the requirements of paragraph 113.8(2)"f" or any other approved ADC. The permit holder shall immediately notify this DNR's Main Office and Field Office #6 through both written and verbal notification of this action. This notification is not necessary if use of the ADC ceases only on a temporary basis.*

Please remove Special Provision #11 from the permit as this ADC material is not being utilized.

Special Provision #12

The permit holder shall close the landfill site in accordance with the 2016 Master Plan and Request for Approval to Construct Phases 5 and 6, dated November 1, 2016 and supplemental information in Response to November 10, 2016 DNR Comments 2016 Master Plan, dated January 18, 2017, both as submitted by Barker Lemar Engineering Consultants and hereby approved, and the following:

a. *The Closure/Post-Closure Plan dated November 8, 1994, states that compliant final cover consisting of 2 feet of soil had been placed over Ravines 2, 3, 5, 6, and 7 prior to October 25, 1989. The report entitled Final Cover Thickness Verification, dated July 26, 2016, prepared by Barker Lemar Engineering Consultants, is approved and incorporated into the permit.*

b. *The Construction Certification Report, Ravine 4 Closure and Drainage Improvements, and the associated Record Drawing submittal, dated February 11, 2000, and April 4, 2001, respectively, as submitted by FOX Engineering and approved on May 31, 2000 and July 18, 2001, respectively, are incorporated into the permit.*

c. *The Quality Control/Quality Assurance Report for the Ravine 5 and 6 Closure, dated January 6, 2010, as submitted by FOX Engineering, is hereby approved and incorporated into the permit. This report documents that final cover has been constructed over Ravines 5 and 6.*

d. *The QA/QC Testing Details – Existing Closed Areas, dated July 6, 2009, as submitted by FOX Engineering and approved on October 15, 2009, is incorporated into the permit. This submittal describes proposed final cover verification activities for the vertical expansion over portions of Ravines 2, 3, 4, and 7.*

   The Quality Control and Assurance Report, dated December 23, 2010, as submitted by HLW Engineering Group; is incorporated as part of the permit documents. This submittal

describes final cover verification activities for the vertical expansion over portions of Ravines 2, 3, 4, and 7.

e. *The request to allow rock piles in closed locations specified in correspondence dated June 4, 2015, as submitted by the City of Muscatine, is incorporated into the permit with the following requirements:*
    i. *The annual closure cost estimate for financial assurance planning shall include costs for final cover restoration that shall include estimated costs to restore all final cover areas used for storage including:*
        1. *Repairs to cap liner and erosion layer to original specifications,*
        2. *Cost to prepare a and implement a quality control and assurance program that is in conformance with Iowa Administrative Code 567 113.7(6),*
        3. *Grading to maintain a minimum 5% grade,*
        4. *Restoration of any storm water controls,*
        5. *Establishment of vegetation,*
        6. *Design and construction administration, and*
        7. *A construction observation report prepared by a professional engineer licensed in the State of Iowa*
    ii. *Upon disuse of an area for stockpiling the permit holder shall complete cap restoration including submittal of a construction observation report within 180 days.*

f. *The Wind and Visual Barrier proposal, dated October 6, 2006, as submitted by Harvey G. Allbee, Jr., Muscatine City Attorney, relative to defining a location for the construction of a wind and visual barrier on portions of the capped landfill, as shown on Exhibit 4, Page 2; and Exhibit 2, Page 5, is incorporated as part of the permit documents. The integrity and effectiveness of the final cover shall be maintained at all times by making repairs as necessary to correct any areas of noncompliance resulting from the installation of the wind and visual barrier media. If damage to the final cover compacted soil layer occurs, repairs shall be made to correct the damage and return it to original specifications*.

There are no changes required or requested to Special Provision #12.

2.4 NEW PERMIT AMENDMENTS REQUESTS

The Muscatine County Solid Waste Management Agency does not have any current new permit amendment requests.

2.5 EQUIVALENCY REVIEW REQUESTS

The Muscatine County Solid Waste Management Agency does not have any current equivalency review requests.

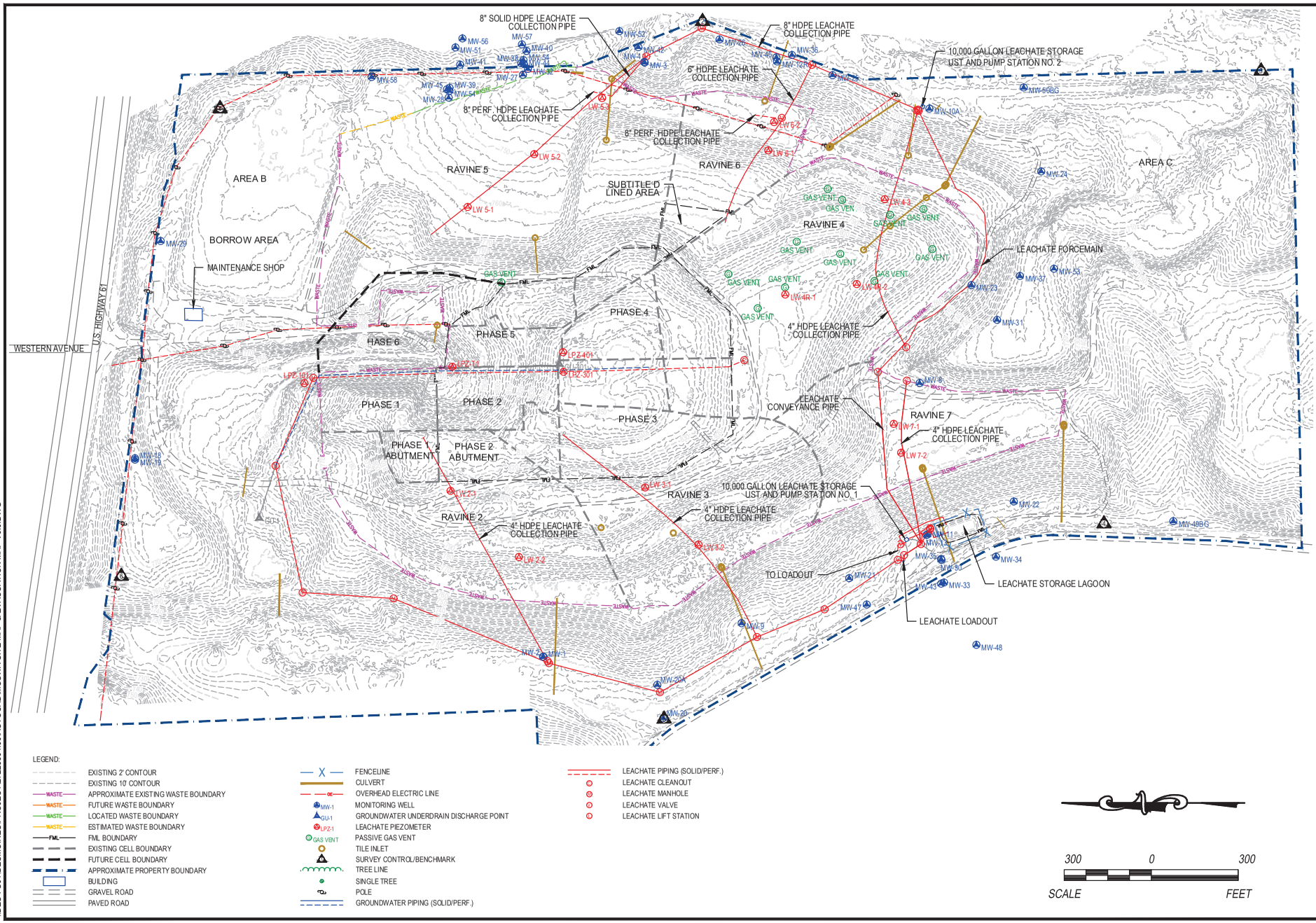
2.6 NEW VARIANCE REQUESTS

The Muscatine County Solid Waste Management Agency does not have any new variance requests from Iowa Administrative Code requirements.

2.7 REQUIRED PLANS AND SPECIFICATIONS

Appendices are included to address the updates as noted in Section 2 of Form 50 (included in Section 1 of this document). Updated plans, documentation, and information are found as follows:

- Appendix A Organizational Chart
- Appendix B Emergency Response and Remedial Action Plan
- Appendix C Operator Certifications
- Appendix D Environmental Monitoring Plan – HMSP Update
- Appendix E Proof of Financial Assurance
- Appendix F Comprehensive Plan Approval and Third-Party Environmental Management System Audit



LEGEND:

- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- APPROXIMATE EXISTING WASTE BOUNDARY
- FUTURE WASTE BOUNDARY
- LOCATED WASTE BOUNDARY
- ESTIMATED WASTE BOUNDARY
- FML BOUNDARY
- EXISTING CELL BOUNDARY
- FUTURE CELL BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- BUILDING
- GRAVEL ROAD
- PAVED ROAD
- FENCELINE
- CULVERT
- OVERHEAD ELECTRIC LINE
- MONITORING WELL
- GROUNDWATER UNDERDRAIN DISCHARGE POINT
- LEACHATE PIEZOMETER
- PASSIVE GAS VENT
- TILE INLET
- SURVEY CONTROL/BENCHMARK
- TREE LINE
- SINGLE TREE
- POLE
- GROUNDWATER PIPING (SOLID/PERF.)
- LEACHATE PIPING (SOLID/PERF.)
- LEACHATE CLEANOUT
- LEACHATE MANHOLE
- LEACHATE VALVE
- LEACHATE LIFT STATION

REV.	DATE	BY

SHEET TITLE: SITE MAP

PROJECT TITLE: MUSCATINE COUNTY SANITARY LANDFILL 2025 PERMIT RENEWAL

CLIENT: MUSCATINE COUNTY SOLID WASTE MANAGEMENT AGENCY
3700 HIGHWAY 61 NORTH
BLUE GRASS, IOWA 52726

SCS ENGINEERS
1690 ALL STATE COURT, SUITE 100
WEST DES MOINES, IA 50265
PH: (515) 631-4160

PROJ NO. 27225394.00 | DSN BY: CTC | CHK BY: CLC | PROJ MGR: CLC | CDR BY: CTC

CADD FILE: MCSWSITEMAP &EVACUATIONMAP V0.0.DWG

DATE: 7/25/25

FIGURE: 1

\\DES-FS01\DESMOINES\PROJECT\27225394.00\AUTOCAD\MCSWA SITE MAP & EVACUATION MAP V0.0.DWG

Appendix A

Organizational Chart

Muscatine County Landfill

Organization Chart

August 2025

Muscatine County Solid Waste Management Agency

City of Muscatine
(Contract with Agency to Operate Muscatine County Landfill)

Public Works Director
Brian Stineman

Solid Waste Manager
David Popp

Solid Waste Supervisor
Matt Fulton

Landfill Operations Contractor
Brauns Excavating, LLC.

Owner
Jon Brauns

Operators

Appendix B

Emergency Response and Remedial Action Plan

Emergency Response and Remedial Action Plan (ERRAP)

Muscatine County Sanitary Landfill
Permit No. 70-SDP-02-75P

Prepared for:
Muscatine County Solid Waste Management Agency

SCS ENGINEERS

Project No. 27225394.00 | August 2025

1690 All State Court, Suite 100
West Des Moines, IA 50265
(515) 631-6160

Table of Contents

Attachments

1.0 EMERGENCY RESPONSE AND REMEDIAL ACTION PLANS [567 IAC – 113.8(5)(455B)]

113.8(5)b(1) Facility Information

The Muscatine County Solid Waste Management Agency (Client) owns and operates the Muscatine County Sanitary Landfill (Landfill). This facility is located south of Highway 61 and east of Ward Avenue.

The transfer station facility receives municipal solid waste (MSW) from the service area. The MSW is loaded into transfer trailers and delivered to the Landfill for final processing.

113.8(5)"b"(1)1 Permitted Agency

Muscatine County Solid Waste Management Agency

113.8(5)"b"(1)2 DNR Permit Number

70-SDP-02-75P

113.8(5)"b"(1)3 Responsible Official and Contact Information

Mr. Dave Popp, Solid Waste Manager
Muscatine County Sanitary Landfill
1000 Houser Street
Muscatine, Iowa 52761
Phone: (563) 263-9689

113.8(5)"b"(1)4 Certified Operator and Contact Information

Dave Popp, Solid Waste/Collections and Drainage Manager (Solid Waste Manager)
Muscatine County Sanitary Landfill
1000 Houser Street
Muscatine, Iowa 52761
Phone: (563) 263-9689

113.8(5)"b"(1)5 Facility Description

Municipal solid waste landfill.

113.8(5)"b"(1)6 Site and Environs Map

See **Attachment 1** for Site Plan Map.

113.8(5)b(2) Regulatory Requirements

113.8(5)"b"(2)1 Iowa Code Section 455B.306(6)"d" Criteria Citation

This Emergency Response and Remedial Action Plan (ERRAP) is designed to meet the requirements of Iowa Administrative Code (IAC) 567 Chapter 113.8(5) that requires the submission of an ERRAP by all sanitary disposal projects.

This ERRAP is intended to:

- Identify possible occurrences that may endanger human health and the environment;
- Establish provisions to minimize the possibility of fire or explosion; and
- Establish provisions to minimize any releases to air, land, or water of pollutants that could threaten human health and the environment.

113.8(5)"b"(2)2 Reference to Provisions of the Permit

An updated ERRAP will be submitted at the time of each permit renewal application if a review indicates that revisions are required. The ERRAP is intended to be flexible and to meet contingencies arising at the facility. Requests for changes to the ERRAP may be submitted to the Solid Waste Manager.

113.8(5)b(3) Emergency Conditions, Response Activities and Remedial Action

113.8(5)"b"(3)1 Failure of Utilities

Utilities include propane for heating the equipment building.

Propane Gas

Propane Gas Supply Failure – Short-Term and Long-Term

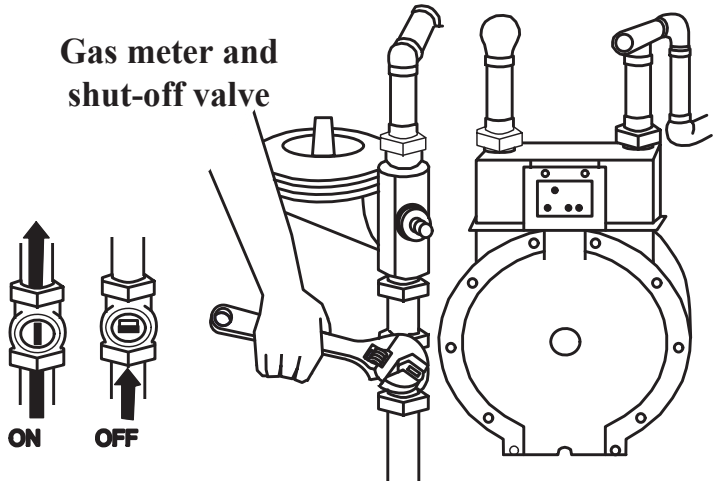
In the event Landfill facilities are without propane gas supply and propane gas odor is not present, contact the following:

- Solid Waste Manager– See **Attachment 2** for telephone and mobile numbers.
- Natural Gas or Propane Company – See **Attachment 2** for telephone numbers.

Propane Gas Leak

If a gas odor is present and it is strong, take immediate action:

- Propane gas is an asphyxiate. In proper concentrations, it can suffocate a person – use caution if a gas odor is present.
- Try to shut off the propane gas by turning the shut-off valve to the horizontal position.
- Leave the building where odor is identified. Go to the Emergency Assembly Point. Account for Landfill personnel, guests, contractors, etc.
- Do not attempt to locate gas leaks.
- Open doors and windows.
- Do not turn on or off or unplug electrical appliances.
- Do not use telephones in or around the building or office.
- Do not position or operate vehicles or powered equipment.
- Do not attempt any other repairs to the propane gas systems.
- If you turn off the gas for any reason, it must be turned back on by a professional.



Have wrench stored in a specific location where it will be immediately available

Electricity

Electricity Failure – Short-Term and Long-Term

In case of electrical failure, the following individuals must be contacted:

- Solid Waste Manager – See **Attachment 2** for telephone and mobile numbers.
- Electricity Supply Company – See **Attachment 2** for telephone number.

Scale Failure Due to Electricity Supply Failure

Scale weights may be estimated based on vehicle size (volume of waste) and converted to tons, or historical scale weights may be used for representative loads from particular vehicles or companies. Note each load for which the weight was estimated.

Buildings

Although the facility is primarily open during daylight hours, twilight and dusk operations may require supplemental light and heat if the electricity fails. Non-electrical space heaters may be used for supplemental heat; however, manufacturer's recommendations for ventilation must be observed.

- Keep portable and space heaters at least 3 feet from combustible materials.
- Electric flashlights and electric lanterns should be used for supplemental light.
- Use extreme caution if candles must be used, candles should only be used temporarily, on a limited basis until a safer form of light can be located such as flashlights, electric lanterns, etc. Candles within glass containers are preferred over those with open/exposed flame.
- Never leave a burning candle unattended. Extinguish all candles when leaving a room.
- Never use a candle for light when fueling equipment.

Water

Water Failure – Short-Term and Long-Term

In case of water failure, the following individuals must be contacted:

- Solid Waste Manager – See **Attachment 2** for telephone and mobile numbers.
- Water Supply Company – See **Attachment 2** for telephone number.

113.8(5)"b"(3)2 Evacuation Procedures During Emergency Conditions

- See the Site Plan Map (**Attachment 1**) for evacuation meeting locations and evacuation routes.

113.8(5)"b"(3)3 Weather-Related Events

Use battery operated radios/televisions to receive the most updated information on local conditions.

Tornado and Wind Events

Tornado Terminology

- Tornado Watch – The weather conditions are possible for a tornado.
- Tornado Warning – A tornado has been sighted or indicated by weather radar.

Tornado Watch Procedures

- Listen to the radio or television for more information.
- Locate emergency supplies such as battery-powered radio, mobile telephone, and spare batteries.
- Be prepared to take shelter in the designated tornado shelter (see **Attachment 1**).
- If you see any revolving funnel-shaped clouds, report them immediately by telephone to your local law enforcement agency.
- If you are in a trailer or similar structure, move to a more secure structure.

Tornado Warning Procedures

- Take shelter with a battery-operated radio. Take shelter in area(s) designated as a tornado shelter or an interior room or hallway.
- The facility's Tornado Shelter Location is shown on the Site Plan Map (See **Attachment 1**).
- If you cannot reach the Tornado Shelter, go to a crawlspace under the scales or to an inside hallway on the lowest level. Avoid places with wide-span roofs. Stay away from windows and open spaces. Get under a piece of sturdy furniture such as a workbench, heavy table, or desk and hold on to it.
- Turn on a battery-operated radio or television and wait for the "all clear" announcement by the authorities.

Tornado Safety – Outdoors

- During tornado warning, Landfill staff and supervisors proceeding to a shelter by vehicle should keep an eye out for any other employees or customers along the way and pick them up for transport.
- If possible, get inside a substantial building.
- If shelter is not available or there is no time to get indoors, lie in a ditch, culvert, or low-lying area or crouch near a strong building. Use your arms to protect your head and neck. Be alert for potential flash flooding.

Tornado Safety – In a Vehicle

- Never try to outrun a tornado in a vehicle. Heavy rain, hail, and traffic may impede your movement. Tornadoes can change directions quickly and can easily lift up a vehicle and toss it through the air.
- Pull to the side of the road avoiding trees, power lines, and other objects that could fall or be hazardous.
- Get out of the vehicle immediately and try to take shelter in a nearby building.
- If there is not time to get indoors, get out of the vehicle and lie in a ditch, culvert, or low-lying area away from the vehicle. Use your arms to protect your head and neck.

After a Tornado

- Account for Muscatine County Sanitary Landfill personnel and known guests/customers/contractors; check on neighbors who may require special assistance.
- Try to get out of damaged buildings. Once out, do not re-enter the damaged building unless necessary and use great caution.
- Extinguish all smoking and small fires.
- Monitor the radio or television for emergency information or instructions.
- Check for injured victims. Render first aid if necessary. Call the necessary emergency responders such as ambulance services or fire/rescue services.
- Do not attempt to move severely injured victims unless necessary. Wait for emergency medical assistance to arrive.
- Watch out for broken glass and downed power lines.
- Report any downed power lines.
- Use the telephone only for emergency calls. Telephone lines may be down. Mobile telephone services may be used for emergency calls.
- Take photos or videotape of the damage to the property.
- If driving, be alert for hazards in the roadway.
- If unaffected by the tornado, stay out of the damaged area until allowed in by officials. Your presence may hamper emergency operations.

After a Tornado – Gas Leaks

- Check for gas leaks. If you smell gas or hear a blowing or hissing noise, open a window and quickly leave the area.
- Call the Propane Gas Company from a mobile telephone or a telephone away from the affected property (See **Attachment 2**).

After a Tornado – Electrical System Damage

- Look for electrical system damage.
- If you see sparks, broken or frayed wires, or if you smell hot insulation, turn off the electricity at the main fuse box or circuit breaker.
- If you have to step in water to get to the fuse box or circuit breaker, call an electrician first for advice.
- See **Attachment 2** for emergency contacts.

After a Tornado – Sewage and Water Line Damage

- Check for sewage and water line damage.
- If you suspect sewage lines are damaged, avoid using the toilets and call a plumber.
- If water pipes are damaged, contact Water Company and avoid using water from tap.

After a Tornado – Methane Collection and Venting Systems

- Check methane collection/venting systems.
- If the collection/venting system lines are malfunctioning, contact a professional engineer for repair assistance.
- Monitor methane gas soon after the incident to check for hazardous methane levels. Remember that methane (by itself) is an odorless gas.

After a Tornado – Leachate Transportation and Leachate Storage Systems

- Check leachate transportation and storage systems including tanks, lagoons, and lines.
- If leachate is leaking into the environment, attempt to shut the leachate line valve, stopping the flow.
- If leachate is leaking into the environment from a lagoon, take immediate steps to limit flow into drainage ways by constructing an earthen berm.
- Report leachate spills to the Iowa Department of Natural Resources (See **Attachment 2** for emergency contacts).

After a Tornado – Bulk Fuel/Solvent Storage Systems

- Extinguish all smoking and small flames.
- If a spill/leak exists, attempt to stop the leak/spill or absorb fuel with inert materials.
- If bulk fuel is leaking into the environment from a storage system, take immediate steps to limit flow into drainage ways by constructing an earthen berm.
- Report spills or leaks to the Iowa Department of Natural Resources (See **Attachment 2** for emergency contacts).

Wind Storm Terminology

- Derecho – A line of intense, widespread, and fast-moving windstorms and sometimes thunderstorms that moves across a great distance and is characterized by damaging winds.

- Down Burst – A strong out rush of wind formed by rain cooled air. Strong down bursts, which produce extensive damage, are often mistaken for tornadoes. A downburst can easily overturn a mobile home, tear roofs off houses, and topple trees.

Winter Storm Terminology

- Winter Storm Watch – Indicates that severe winter weather may affect your area.
- Winter Storm Warning – Indicates that severe winter weather conditions are definitely on the way.
- Blizzard Warning – Indicates that large amounts of falling or blowing snow and sustained winds of at least 35 miles per hour are expected for several hours.

Winter Storm Procedures

- Listen to the radio or television for more information.
- Locate emergency supplies such as battery-powered radio, mobile telephone, and spare batteries.
- Be prepared to take shelter in the designated tornado shelter (see **Attachment 1**).
- If you are in a trailer or similar structure, move to a more secure structure.
- Proceed with caution as snow can hinder vision and ice can cause vehicles and people to slide.

Intense Rainstorms, Mud, and Erosion

Thunderstorm Terminology

- Severe Thunderstorm Watch – A severe thunderstorm (damaging winds 58 miles per hour or more, or hail three-fourths of an inch in diameter or greater) is likely to develop.
- Severe Thunderstorm Warning – A severe thunderstorm has been sighted or indicated by weather radar.

Thunderstorm Watch Procedures

- Locate a safe place, such as the designated tornado shelter.
- Assign someone to listen to a battery-powered radio or television for more information.

Thunderstorm Warning Procedures

- Go to a safe place, such as the designated tornado shelter.
- Turn on a battery-operated radio or television and wait for the “all clear” by the authorities.
- Tornadoes are spawned by thunderstorms and flash flooding can occur with thunderstorms. When a “severe thunderstorm warning” is issued, review what actions to take under a “tornado warning” or a “flash flood warning.”

Procedures After a Thunderstorm

- Check personnel, guests, clients, and contractors for injuries.
- Report downed utility wires.
- Check scale for proper operation. If the electricity is out, see Section113.8(5)“b”(3)1.

- Continue to listen to the radio for flash flood and/or tornado watches and warnings and other instructions and advice.

Check Leachate Transportation and Leachate Storage Systems

- Check leachate transportation and storage systems including tank and lines.
- If leachate is leaking into the environment, attempt to shut the leachate line valve, stopping the flow of leachate.
- Report leachate spills to the Iowa Department of Natural Resources (DNR). See **Attachment 2** for Emergency Contacts.

Check Bulk Fuel Storage Systems

- Extinguish all smoking and small flames.
- If a spill/leak exists, attend to stop the spill/leak or absorb fuel with inert materials.
- See **Attachment 2** for DNR Emergency Contacts.
- See **Attachment 3** for DNR guidelines for reporting hazardous conditions and a copy of Iowa Administrative Code Chapter 131 (Section 457).

Lightning Strikes

There are relatively safe places from lightning strikes, however no location is free of risk. Large, enclosed structures are generally safer than small or open structures. The risk for lightning injury depends on whether the structure incorporates appropriate lightning protection.

Enclosed vehicles, fully enclosed farm vehicles, etc. with the windows rolled up generally provide good shelter from lightning. Avoid contact with metal or conducting surfaces outside or inside the vehicle.

Avoid being in or near:

- High places and open fields, isolated trees, unprotected sheds, communication towers, flagpoles, light poles, metal fences, and water.
- When inside, avoid the use of the telephone, contact with water or conductive surfaces with exposure to the outside such as metal door or window frames, electrical wiring, telephone wiring, cable TV wiring, and plumbing, etc.

Lightning Strike Victim

- A person who has been struck by lightning does not carry an electrical charge that can shock other people.
- A nearby strike may also cause medical problems, check personnel and call emergency medical assistance (911) if necessary.
- Provide first aid and call emergency medical assistance (911) immediately. Look for burns where lightning entered and exited the body.

Flooding

Flood Terminology

- Flash Flood Watch – A flood is possible, be alert to signs of flash flooding, and be ready to evacuate. Know the local terrain; flash floods can happen more quickly in hilly terrain or low-lying areas.
- Flash Flood warning – A flood is already occurring and will occur soon in your area. Listen to local radio and television for local information and advice.

Flood Damage Prevention Procedures

- Move key documents, electronic files, computers, etc. to higher ground or take them with you if you must evacuate.
- Review evacuation procedures with employees.
- If necessary, attempt to build earthen dams to protect buildings and property.
- Turn on battery-operated radio or television to get the latest emergency information.
- If told to leave, do so immediately.

Procedures During a Flood

- Evacuation may be necessary. If advised to evacuate, do so immediately.
- Never drive into a flooded area.
- Never drive around road barricades.
- In case employees are separated from one another during floods or flash floods, each employee shall contact the Solid Waste Manager so all employees can be accounted for.
- Evacuation is much simpler and safer before floodwaters become too deep for ordinary vehicles to drive through.
- Listen to a battery-operated radio or television for evacuation instructions.
- Follow recommended evacuation routes – shortcuts may be blocked.
- Leave early enough to avoid being marooned by flooded roads.

Procedures During a Flood – If Outdoors

- Climb to high ground and stay there.
- Avoid walking through any floodwaters. If it is moving swiftly, even water 6 inches deep can sweep you off your feet.

Procedures During a Flood – If in a Car

- Never drive into a flooded area.
- Never drive around road barricades.
- If you come to a flooded area, turn around and go another way.
- If your car stalls, abandon it immediately and climb to higher ground. Many deaths have resulted from attempts to move stalled vehicles.

Procedures After a Flood

- Return to the area only after it has been declared safe by local emergency management officials. Follow all emergency rules, laws, and regulations.
- Report and stay clear from loose power lines or damaged utilities.
- Report downed power lines to your utility company or local emergency manager.
- Some appliances, such as television sets, can shock you even after they have been unplugged. Do not use appliances or motors that have gotten wet unless they have been taken apart, cleaned, and dried.
- Be alert for gas leaks. Use a flashlight to inspect for damages. Do not smoke or use candles, lanterns, or open flames unless you are sure that the gas has been turned off and the area has been aired out.
- Look for fire hazards - broken or leaking gas lines, flooded electrical circuits, submerged furnaces, or electrical appliances, or flammable or explosive materials coming from upstream.
- Service damaged septic tanks, cesspools, pits, and leachate systems as soon as possible. Damaged sewage systems are health hazards.
- Document the damage for insurance purposes by taking notes and photographs.

Structural Stabilization: Temporary Measures

- Identify potential deficiencies and provide temporary shoring to protect life and property while the water levels are receding. All shoring measures should be planned with the assistance of qualified structural engineers or contractors.
- Support unstable or leaning structures or features with temporary bracing and reinforcement.
- Strengthen exposed foundations or brace areas of undermining by following engineer's recommendations.
- Brace and strengthen decayed or damaged floor and ceiling structure. Check bearing locations for movement or settlement.

Check Methane Collection and Venting Systems

- Check methane collection/venting systems..
- Monitor methane gas soon after the incident to check for hazardous methane levels.

Check Leachate Transportation and Storage Systems

- Check leachate transportation and storage systems including tanks, lagoons, and lines.
- If leachate is leaking into the environment, attempt to shut the leachate line valve, stopping the flow.
- If leachate is leaking into the environment from a lagoon, take immediate steps to limit flow into drainage ways by constructing an earthen berm.
- Report leachate spills to the Iowa Department of Natural Resources (See **Attachment 2** for emergency contacts).

Check Bulk Fuel Systems

- Extinguish all smoking and small flames.
- If a spill/leak exists, attend to stop the spill/leak or absorb fuel with inert materials.
- See **Attachment 2** for DNR Emergency Contacts.
- See **Attachment 3** for DNR guidelines for reporting hazardous conditions and a copy of Iowa Administrative Code Chapter 131 (Section 457).

Check for Large Scale Erosion

- Immediately cover any eroded areas exposing waste.
- Identify and repair access roads, approach ramps, and internal roads that were affected by erosion.
- Identify and repair let-down structures, berms, and terraces affected by erosion.

Acceptance of Flood Related Wastes

- Do not accept hazardous material for landfilling, even if it is flood related debris.
- Do not accept free flowing liquids, even if the container is thought to contain only flood-related liquid.
- Do not accept containers that contain unknown materials, especially drums and similar containers that "floated" to the current owner.
- Document all flood-related debris for possible credit/reimbursement from city, county or state government.
- Prepare a request to DNR to exempt exceptional event debris from goal progress and tonnage fee with the next Quarterly Solid Waste Fee Schedule & Retained Fees Report.

Event and Post Event Conditions

See Sections under Section 113.8(5)"b"(3)3 Weather Related Events.

113.8(5)"b"(3)4 Fire and Explosions

In case of any size fire, the following individual must be contacted:

- Solid Waste Manager – See **Attachment 2** for telephone number.

If a fire cannot be controlled by site personnel, report to the fire department by dialing 911 using cellular phones or the phone in the site office.

Basic Fire Safety

- Stockpile soil near the working face to assist with hot loads.
- Site will comply with local and state fire codes, including the placement and maintenance of fire extinguishers, smoke detectors, etc.
- See the Site Map (**Attachment 1**), identify Evacuation Routes, Fire Escape Routes, and Emergency Assembly Locations.
- Keep exit routes clear and well-marked.

- Cigarette, cigar, and/or pipe smoking are not allowed indoors in public places in Iowa. Make sure smoking materials are completely extinguished before entering the building. Never leave hot ashes or burning tobacco products unattended.
- Avoid using extension cords wherever possible, especially small-wired cords used with high-wattage appliances.
- Extension cords should not be run under rugs or hooked over nails.
- If a fuse blows (or a breaker "trips"), find the cause. Remove excess appliances (lamps, stereo components, space heaters, etc.) from a breaker circuit that frequently "trips."
- Discard food that has been exposed to heat, smoke, or soot.
- Do not discard damaged goods until after an inventory has been taken.
- Give first aid where appropriate.
- Stay out of damaged buildings.
- Return to the facility only when local fire authorities say it is safe.

Waste Materials

For materials that may become ignited:

- Call the Solid Waste Manager. See **Attachment 2** for telephone number.
- If materials are in the working face and can be safely removed, remove and place near but not on, the working face, and extinguish. Use extreme caution if any attempt is made to control the fire.
- For small fires located outside of the working face, a fire extinguisher may be used.
- If a fire cannot be controlled by site personnel, report to the local Fire Department. See **Attachment 2** for telephone number.

Buildings and Site

Small Localized Fire – Building or Office

- Caution: A small-localized fire can engulf a room in less than 60 seconds.
- Act quickly. Smoke can be dangerous.
- Use a fire extinguisher to extinguish the flame; aim at the base of the flame.
- Remove nearby flammable materials such as paper, drapes, rags, etc.
- Evacuate all unnecessary personnel – go to the Emergency Assembly Location. In the event the Emergency Assembly Location is dangerous or inaccessible, proceed to the Secondary Emergency Assembly Location (See **Attachment 1**).
- If a fire cannot be controlled by site personnel, report to the local Fire Department. See **Attachment 2** for telephone number.

Out of Control Fire – Building or Office

- Get out of the building. Familiarize yourself with at least two exits from each room; for example, one window and one door.
- Go to the Emergency Assembly Location. In the event the Emergency Assembly Location is dangerous or inaccessible, proceed to the Secondary Emergency Assembly Location (See **Attachment 1**).
- Contact the local Fire Department from a mobile phone. See **Attachment 2** for telephone number.

- Never go back inside a building for any reason.

Equipment

Engine Fires

- Immediately turn off the ignition to shut down the fuel pump and the flow of fuel.
- Putting out an engine fire safely and efficiently takes two people. One holds the fire extinguisher and the other opens the hood. The fire will flare up as the fresh air hits it. Immediately spray the fire extinguisher across the base of the flames until the fire is out.
- It is important to get the hood open fast. If the fire burns through the hood release cable before you can get it open, there will be no way to get at the fire.
- Do not try to put out an engine fire by spraying the extinguisher through the radiator or through the wheel wells, this method will not work and will waste time and the fire extinguisher contents. Get at the base of the flames.
- If a fire cannot be controlled by site personnel, report to the local Fire Department. See **Attachment 2** for telephone number.
- The equipment will be thoroughly inspected and repaired, if necessary, prior to reuse.

Fuels

General Safety

- Vapors from fuels can be more flammable than liquid, always use caution when filling vehicles or containers.
- Equipment shall be refueled only at designated locations.
- In case of spillage, filler caps shall be replaced, and spillage disposed of before engines are started.
- Engines shall be stopped and operators shall not be on the equipment during refueling operations.
- Only designated persons shall conduct fueling operations.
- Smoking and open flames shall be prohibited in areas used for fueling, fuel storage, or enclosed storage of equipment containing fuel.
- Liquid fuels not handled by pump shall be handled and transported only in portable containers or equivalent means designed for that purpose. Portable containers shall be plastic, have tight closures with screw or spring covers and shall be equipped with spouts or other means to allow pouring without spilling. Leaking containers shall not be used.

Fire Event

- If possible, turn off the pump or the nozzle distributing flammable liquid.
- Evacuate the area. Stay well clear of the above ground storage tank in case of explosion. Go to the Emergency Assembly Location (See **Attachment 1**).
- Call the Fire Department. See **Attachment 2** for telephone number.
- Call the Solid Waste Manager. See **Attachment 2** for telephone number.

Utilities

Propane Gas

- Call the Fire Department. See **Attachment 2** for telephone number.
- If the Emergency Assembly Point is a safe distance away, go to that site or go to the Secondary Emergency Assembly Point.
- Caution: Exploding tanks may eject pieces of the tank several hundred feet. These pieces can be lethal.
- The Fire Department may allow the tank to burn itself out.
- Call the Solid Waste Manager (See **Attachment 2** for telephone and mobile phone numbers).

Electrical – Small Localized Fires

- Use a fire extinguisher rated Class C: Energized Electrical Equipment including Wiring, Fuse Boxes, Circuit Breakers, Machinery, and Appliances.
- Caution: A small-localized fire can engulf a room in less than 60 seconds.
- Act quickly.
- Remove nearby flammable materials such as paper, drapes, rags, etc.
- Evacuate all unnecessary personnel – go to the Emergency Assembly Location. In the event the Emergency Assembly Location is dangerous or inaccessible, proceed to the Secondary Emergency Assembly Location (See **Attachment 1**).

Electrical – Larger Uncontrolled Fires

- Get out of the building. Familiarize yourself with at least two exits from each room; for example, one window and one door.
- Go to the Emergency Assembly Location (See **Attachment 1**).
- Contact the Fire Department from a mobile phone. See **Attachment 2** for telephone number.
- Never go back inside a building for any reason.

Facilities

See Section 113.8(5)“b”(3)4 Buildings and Site. There are no additional facilities that have not been previously covered.

Working Area

Landfill fires can be started from several causes: spontaneous combustion, careless smoking, methane flash, and arson.

- Understand and be aware of warning signs.
- Always report any visible smoke to the Solid Waste Manager .
- If in doubt about a possible fire or signs of fire call the Fire Department. See **Attachment 2** for telephone number.

Once a Fire is Identified

- Control access and site security.
- All persons must be required to sign in and out.
- Establish radio communications with firefighting, public safety, and Landfill personnel.
- First aid should be available on-site.
- Warning fences should be placed around any trenches dug as fire breaks.
- Safety meetings should be held daily.
- Spotters should be used to assist equipment operators.

Controlling a landfill fire may be accomplished through local firefighting equipment, or landfill firefighting experts may need to be contacted. Follow the instructions of the firefighting professionals on site.

- Excavated waste may require a hot pad where it can be spread and soaked with water or other fire extinguishing media.
- Soaked materials may require a cool pad storage area.
- Earthmoving equipment may be required to dig firebreaks down to bare earth or to build earthen dams.

Landfill stockpile fires can be started from several causes: spontaneous combustion, careless smoking, methane flash, lightning, and arson.

- Understand and be aware of warning signs.
- Always report any visible smoke to the Solid Waste Manager. Some steam from composting piles and some other stockpiles may be normal due to the natural decomposition process. Report unusual levels of steam to the Solid Waste Manager.
- If in doubt about a possible fire, call the Fire Department (See Attachment 2 for emergency telephone numbers).
- Use caution while excavating "hot" materials, exposure to the air may create flames.
- Before attempting to excavate the "hot spot" within a stockpile, a spotter should watch equipment operators.
- Move "hot" materials to a hot pad so the materials can be sprayed with water or fire extinguishing media.

Unaffected stockpile materials and soaked stockpile materials should be moved to a cool pad while the remaining materials are excavated.

Hot Loads

Smoldering or ignited fires in a vehicle.

- "Hot loads" are loads of waste or vehicles that are smoking, smoldering, or are on fire. Hot loads may arrive at the facility without the driver aware of the risk.
- Do not dump hot loads on top of exposed waste of any kind.
- Do not stop a truck on fire or containing a hot load near a building.
- Quickly alert the driver and direct the truck toward a safe area.
- Call the Fire Department. See Attachment 2 for telephone numbers.

- If the load can be dumped without harming the driver or others, dump the load in a safe area. Caution: A fire may spread quickly or “flash” as air is introduced.
- Use soil to place over smoldering or burning loads.
- Stay out of the "zone of danger," which is the cone-shaped area directly behind a vehicle with the gas tank located in the usual position at the back. If a gas tank explodes, it sends a tremendous blast out from the rear of the vehicle. This can be lethal for 50 to 100 feet behind the vehicle.

Waste Gases

- If you witness a flash fire potentially caused by methane, leave the area immediately. If the Emergency Assembly Location is a safe distance away, go to that site or go to the Secondary Emergency Assembly Location.
- See the Site Map (**Attachment 1**) with Evacuation Routes, Fire Escape Routes, and Emergency Assembly Locations.
- Call the Fire Department. See **Attachment 2** for telephone numbers.
- Contact the Solid Waste Manager. See **Attachment 2** for telephone numbers.

Explosive Devices

- Use the alarm system and leave the area immediately. If the Emergency Assembly Point is a safe distance away, go to that site or go to the Secondary Emergency Assembly Point.
- See the Site Map (**Attachment 1**) with Evacuation Routes, Fire Escape Routes, and Emergency Assembly Locations.
- Call the Fire Department. See **Attachment 2** for telephone numbers.
- Contact the Solid Waste Manager. See **Attachment 2** for telephone numbers.

113.8(5)“b”(3)5 Regulated Waste Spills and Releases

Waste Spills and Releases Terminology

- Regulated Waste – Generally includes non-hazardous material such as leachate, municipal solid waste, and petroleum contaminated soils.
- Spill – A spill primarily involves liquids or solids that are deposited accidentally on the facility’s property in an incorrect location but remain within the facility’s property boundary. Spills include quantities of 100 gallons or less, or two tons or less.
- Release – A release may involve spills of solids or liquids greater than 100 gallons or greater than two tons that enter lagoons, sedimentation ponds, drainage ways, etc., but stay on-site.
- Off-site Release – An off-site release is a release or spill that leaves the facility’s property boundary. This section includes groundwater releases.

Waste Materials

Waste Materials Terminology

- Waste Materials – Waste materials are materials normally accepted at a landfill. Waste materials are also regulated wastes.
- On-Site Spill or Release – Use caution and remove the waste, placing it in an acceptable location, such as the working face, for proper disposal.

- Off-Site Spill or Release – If waste materials are identified beyond the property and/or waste materials are observed to be in a waterway, see Section 113.9(5)“b”(3)5.

Leachate

Lagoons

Leachate should not overflow the rim of the lined leachate collection lagoon or leak from a puncture or tear. If leachate should be observed overflowing or leaking from the leachate lagoon, actions should be taken to pump leachate into a tanker truck or other vehicle for transport to a Publicly Owned Treatment Works (POTW).

Generally, the leachate must be sampled and tested before the POTW will accept the material. Sampling and testing may take 24 to 72 hours or more.

- Contact the Solid Waste Manager (See **Attachment 2** for telephone and mobile phone numbers).
- Call the State of Iowa (See **Attachment 2** for telephone numbers).

Drainage Systems

- Leachate should not overflow into a non-leachate designated drainage system from a seep or other event such as overflow from a leachate lagoon.
- If leachate is observed overflowing into a drainage system actions should be taken to stop the flow of leachate.
- Earthen dams could be constructed to divert the leachate.
- Contact the Solid Waste Manager (See **Attachment 2** for telephone and mobile phone numbers).

Tanker Spills/Seeps/Miscellaneous Spills

Leachate from seeps and spills should not be allowed to flow beyond the Landfill property boundary and should not be allowed to enter a creek, river, or stream.

Leachate flows from seeps can often be temporarily diverted if the seep is excavated and recompacted.

Small leachate spills from tankers or other sources should be observed so they do not leave the property boundary. Absorbent materials, such as yard waste or compost, could be placed on the spill to minimize tracking.

Waste Gases

Methane gas is a by-product of waste decomposition and can be explosive in specific concentrations. Methane gas is colorless and odorless; odor emanates from other gases mixed with the methane.

- Methane gas can migrate and accumulate in enclosed buildings, under scales, crawl spaces, and other confined spaces.
- Methane gas concentration levels are often detected using an electronic meter.

If methane gas is detected within explosive limits:

- Extinguish all smoking.
- Attempt to ventilate the area by opening windows/doors.
- If the methane is detected in a scale house or other building regularly occupied, evacuate immediately and go to the Emergency Assembly Point (See **Attachment 1**).
- Contact the Solid Waste Manager (See **Attachment 2** for telephone and mobile phone numbers).
- Contact the Fire Department (See **Attachment 2** for telephone and mobile phone numbers).
- Contact the DNR Field Office (See **Attachment 2** for telephone and mobile phone numbers).
- Do not return to the building until it has been properly ventilated and the concentrations have been checked with an electronic meter.

Waste Stockpiles and Storage Facilities

This site does not have waste stockpiles or storage facilities.

Waste Transport Systems

This site does not have waste transport systems.

Litter and Airborne Particulate

Litter and airborne particulates will be controlled according to the sanitary disposal project permit.

Site Drainage System

If drainage systems are observed to be functioning improperly, contact the Solid Waste Manager. See **Attachment 2** for telephone number.

Flood or Heavy Rain/Wet Situations:

- If regulated wastes enter drainage systems, use great caution removing the wastes – flowing water can have extreme force.
- Wet weather can cause embankments to become weakened and fail.

Non-Flood and Non-Heavy Rain/Wet Situations:

- Prevent the waste from washing away beyond the property boundary.
- Remove the wastes as soon as possible.

Off-Site Releases

Leachate

Leachate must be kept from entering creeks, rivers, streams, or other waterways. Leachate should not be allowed to leave the property boundaries.

If leachate is observed leaving the property boundary and/or entering a creek, river, stream, or other waterway, immediately contact the following:

- Contact the Solid Waste Manager . See **Attachment 2** for telephone number.
- Contact the State of Iowa. See **Attachment 2** for telephone numbers.

Earthen dams, excavation, compaction, and other techniques can be applied to stop the flow of leachate from leaving the property boundary or traveling further from the property boundary.

Permanent drainage systems can be installed after the leachate flow has been diverted or stopped if a lagoon and leachate collection system is available.

Waste Gases

- If waste gases are detected outside of the property boundary, contact the Solid Waste Manager .
- A second check of gas concentration levels with newly calibrated equipment may be required.
- If waste gases are detected a second time outside of the property boundary, then contact the DNR immediately (See **Attachment 2** for telephone numbers).

Regulated Waste

- Prevent the waste from traveling further off site. Earthen dams, excavation, compaction, and other techniques can be applied to stop the flow of regulated waste from traveling further from the property boundary.
- If the regulated waste is in a waterway, attempt to stop the flow of waste and if possible, stop the flow of waste downstream. Use caution working near steep banks or wet embankments.
- Contact the Solid Waste Manager. See **Attachment 2** for telephone number.
- Contact the State of Iowa. See **Attachment 2** for telephone numbers.

Household Hazardous Materials

Household hazardous materials (especially material that has been bulked) must be kept from entering creeks, rivers, streams, or other waterways. Household hazardous materials should not be allowed to improperly leave the property boundaries.

Household hazardous materials that are released beyond the property and/or are observed to be in a waterway must be managed immediately.

- If possible, safely stop the source of the leak.
- Use absorbent material to stop material from entering the waterway or leaving the site.
- If household hazardous material is observed leaving the property boundary and/or entering a creek, river, stream, or other water, immediately contact the Solid Waste Manager – See **Attachment 2** for telephone numbers.
- See **Attachment 3** – IDNR Spill Release as the type of spill will determine if the DNR must be contacted.

113.8(5)"b"(3)6 Hazardous Material Spills and Releases

- See **Attachment 3** for State Guidelines for Reporting Hazardous Conditions.
- Do not smoke. Do not create sparks.
- Be aware of the wind and avoid inhaling hazardous fumes.

- Use caution operating near hazardous materials. The material should be considered hazardous, even if the suspected material has not yet been confirmed hazardous by a professional.
- Do not let people or equipment make contact with liquids, dusts, or fumes of hazardous materials.
- Only trained professionals should attempt to clean up the hazardous materials.
- Do not come into contact with the hazardous material.
- Some hazardous materials can react violently with other chemicals and other materials - use extreme caution.

Load-Check Control Points

Load checking is performed periodically by transfer stations and landfills to identify banned materials, hazardous materials, and wastes that may have been generated from areas outside the solid waste planning boundaries.

If a solid waste load is identified as containing hazardous materials or hazardous markings on containers are identified, contact the following:

- See **Attachment 3** for reporting hazardous conditions to the State of Iowa.
- Solid Waste Manager - See **Attachment 2** for telephone numbers.
- Observe the safety precautions outlined in Section 113.8(5)"b"(3)6 Hazardous Material Spill & Releases.

Mixed Waste Deliveries

See Section 113.8(5)"b"(3)6 Load-Check Control Points, above.

Fuels

Fuels and oils that are spilled can be absorbed with specific material designed for this purpose – they are often called "snakes," "booms," or "pillows." These materials, after use, are moved in drums to a used oil containment area until suitable transport to an off-site disposal location can be arranged.

If a fuel/oil spill occurs:

- Stop the flow of material if possible using valves or switches.
- Do not smoke.
- Do not pass vehicles over the spilled material, as these could be a spark/ignition source hazard.
- If possible, construct an earthen dam or similar structure to contain the spill.

Waste Gases

- If waste gases are detected outside of the property boundary, contact the Solid Waste Manager. See **Attachment 2** for telephone numbers.
- A second check of gas concentration levels with newly calibrated equipment may be required.

- If waste gases are detected a second time outside of the property boundary, then contact the DNR immediately. See **Attachment 2** for telephone numbers.
- If waste gases are detected indoors, ventilate and evacuate the area.

Site Drainage Systems

This generally occurs during flood or heavy rain/flash flood situations.

If hazardous wastes enter drainage systems during flood/heavy rain/wet conditions:

- Contact 911.
- Contact the Solid Waste Manager – See **Attachment 2** for telephone numbers.
- Contact the State of Iowa – See **Attachment 2** for telephone numbers.
- Emergency/Hazardous Material professionals will aid minimize the risk downstream.

If hazardous wastes enter drainage systems during non-flood/heavy rain/wet conditions:

- Prevent the waste from washing beyond the property boundary.
- Get assistance before attempting to remove the wastes.
- Assistance should be obtained from trained professionals.

Off-Site Releases

- Contact 911.
- If possible, construct an earthen dam or similar structure to reduce the spread of contamination. Do not contact the material, contaminated dust, fumes, or gases.
- Should a spill leave the property, staff will notify a hazardous material professional. The trained hazardous material professional will supply needed resources and take charge of the response effort.

In case of an off-site release, the following individuals must be contacted:

- Solid Waste Manager - See **Attachment 2** for telephone and mobile phone numbers.
- Contact the State of Iowa - See **Attachment 2** for telephone numbers.
- See **Attachment 3** for reporting hazardous conditions to the State.

113.8(5)"b"(3)7 Mass Movement of Land and Waste

Earthquakes

During an Earthquake

- Duck, cover, and hold. If you are inside, crawl under a heavy piece of furniture and hold on or get under a doorframe.
- If you are outside, stay in an open area.
- If you are in your car or equipment, stop driving.

After an Earthquake

- Check for injuries.
- Get out of the building if it appears to be structurally unsound – do not re-enter the building. If the building is evacuated, go to the Emergency Assembly Point and account for Landfill personnel, contractors, guests, etc.
- Listen to a battery powered radio for further instructions.
- Be aware of broken glass and other sharp objects on the floor.
- Be aware of material above your head that might fall.
- Check water, gas, and electric lines for damage (natural gas odor) then see **Attachment 2** for information on utilities.
- Check leachate lagoons for leaks.
- Check stability of stockpiles and slopes. See Section 3.8.1.
- Check methane collection/venting systems.
- Do not use matches or smoke.
- Avoid the telephone.
- Do not go sightseeing.
- Expect aftershocks.
- Have the scale checked and re-certified by a qualified technician.

In case of earthquake, the following individuals must be contacted:

- Solid Waste Manager – See **Attachment 2** for telephone and mobile phone numbers.

Check Fuel/Solvent Storage Systems Extinguish all smoking and small flames.

- If a spill/leak exists, attempt to stop the leak/spill or absorb fuel/solvent with inert materials.
- If bulk fuel or solvent is leaking into the environment from a storage system, take immediate steps to limit flow into drainage ways by constructing an earthen dam.
- Report spills or leaks to the DNR. See **Attachment 2** for emergency contacts.

Slope Failure

Several dangers exist with slope failures including: exposing waste, leachate, bacteria, and other materials to the environment, allowing wastes to leave the site property, allowing wastes to enter wetlands or other regulated environments, and allowing wastes to overrun roads and buildings.

- Perform a head count of employees, contractors, and guests.
- Stay away from other nearby areas that may also be at risk.

Contact the following:

- Solid Waste Manager – See **Attachment 2** for telephone numbers.
- Call 911 if there are any injuries or if someone may be buried under the failed slope.

Waste Shifts

- Because of the instability of some stockpiles such as compost, some soils, and yard waste, the stockpile face should never be allowed to get higher than 15-20 feet. Borrow pits should also be constructed to ensure side slope stability.
- A professional engineer should be consulted to control side slope and stability.
- Use caution when excavating the "toe" of stockpile. Removing too much material may destabilize the upper portion of stockpile causing it to "slide" or fall down.
- In case of any stockpile slide, the following individuals/companies must be contacted: Solid Waste Manager – See **Attachment 2** for telephone and mobile phone numbers.
- The DNR should be contacted for large slope failures when waste is exposed or if waste leaves the property boundary.

Waste Subsidence

Settling of large or small areas of the Landfill is a natural occurrence; however, sudden settling may cause changes in slope stability.

Waste subsidence is generally gradual. If a large sinkhole or other large depression is created from subsidence, stay away from the area as additional subsidence may occur.

Large depressions or holes should be reported to the Solid Waste Manager.

113.8(5)"b"(3)8 Emergency and Release Notification and Reporting

Emergency reporting and notifications will be provided as needed by state, federal, and local authorities.

Federal Agencies

- See **Attachment 2** for Emergency Contacts.

State Agencies

- See **Attachment 2** for Emergency Contacts.
- See **Attachment 3** for Reporting Hazardous Conditions.

County and City Agencies Including Emergency Management Services

- See **Attachment 2** for Emergency Contacts.

News Media

- See **Attachment 2** for Emergency Contacts.

Public and Private Facilities with Special Populations within Five Miles

- See **Attachment 2** for a list of facilities and phone numbers.

Reporting Requirements and Forms

Emergency reporting requirements and forms will be provided as needed by the state, federal, and local authorities.

113.8(5)"b"(3)9 Emergency Waste Management Procedures

Communications

Communication between Landfill staff and any emergency personnel will be at the direction of the Solid Waste Manager if possible. The Solid Waste Manager will also advise emergency personnel of factors that may influence the evacuation efforts or response procedures.

The following systems of communication may be used in an emergency.

- A telephone is available at the scale house.
- Cellular/digital telephones are not provided by the facility; however, personal cellular/digital telephones may be available.
- Two-way radios are available at some facilities.
- Honking horns can be used to indicate an emergency.
- Personal communication can also be used to communicate an emergency situation.

Alarm System

- The employer shall establish and educate employees regarding any proposed alarm system.
- An air horn or an automobile horn can be used to alert employees about a dangerous situation.
- Two-way or C.B. radios can be used to alert employees regarding a dangerous situation.
- If possible, person-to-person contact can be used to alert landfill guests, contractors, employees, etc. regarding the dangerous situation.

Temporary Discontinuation of Services – Short-Term and Long-Term

- If telephone service is discontinued, cellular or digital telephones can be used.
- The Solid Waste Manager can dispatch messengers to deliver emergency messages in case of a discontinuation of normal communication systems.
- If the facility's transportation, processing, or landfilling services must be discontinued, the Solid Waste Manager will contact member municipalities, county governments, and hauling companies as soon as possible to communicate rerouting instructions.

Facilities Access and Rerouting

- The Solid Waste Manager will facilitate emergency rerouting.
- If access to the facility is blocked, telephone, radio, and person to person contact at the Landfill will be used to communicate new directions and rerouting.
- The Solid Waste Manager will contact alternate disposal sites and arrange for disposal. After the emergency, normal disposal or transportation systems should resume as soon as possible.

Waste Acceptance

- The Solid Waste Manager will contact alternate disposal sites and arrange for disposal if needed.
- After the emergency, normal disposal or transportation systems should resume as soon as possible.
- If wastes must be diverted for more than one day, contact the DNR; see **Attachment 2** for telephone numbers.

Waste in Process

- During an emergency, safety to human life is a priority.
- Wastes being tipped, processed, or handled must be left in place until the threat to human life is greatly reduced.
- If an emergency does not threaten human life, the Solid Waste Manager will decide how best to manage wastes in process depending on the emergency circumstances.
- When the threat to human life is reduced, the waste should be processed according to the facility's permit.

113.8(5)"b"(3)10 Primary Emergency Equipment Inventory

Major Equipment

Heavy equipment and private vehicles are available on site for use in emergencies.

Fire Hydrants and Water Sources

Fire hydrants and water sources, if available, are located on the Site Plan Map (See **Attachment 1**).

Off-Site Equipment Resources

The facility may contact other municipal and county governments to borrow machinery until replacements can be acquired.

113.8(5)"b"(3)11 Emergency Aid

A commercial first-aid kit will be maintained at the Landfill office. The site supervisor or the staff will administer minor first-aid treatment when required. Serious injuries will be handled through 911 Emergency Services (See **Attachment 2**).

- In case of accidents occurring outside normal operating hours, it will be the responsibility of the senior staff person to provide first-aid treatment and to arrange for professional assistance if required.
- Call 911, professional emergency aid workers should be notified for injuries needing immediate first aid care.
- See **Attachment 2** for Emergency Contacts.
- Solid Waste Manager should be notified of any injury (See Attachment 2 for Emergency Contacts).

Responder Contacts

- Contact local 911 Emergency Services – See **Attachment 2** for telephone numbers.
- Contact the Solid Waste Manager if any injury occurs – see **Attachment 2** for telephone numbers.

Medical Services

- Contact 911 before transporting sick or injured individuals in a personal vehicle or non-emergency vehicle.
- Directions to the Hospital are located in **Attachment 4.**

Contracts and Agreements

- The facility does not have any contracts or agreements for emergency aid.
- 911 service is provided to county businesses and businesses of incorporated cities.

113.8(5)"b"(3)12 ERRAP Training Requirements

During the first year, after the plan is approved by the DNR, existing and new employees will review the contents of the approved ERRAP with the training provider.

The Solid Waste Manager should identify hazardous waste contractors that can service the facility in case hazardous materials are accidentally received.

Training Providers

The Solid Waste Manager will serve as the training provider, will review the ERRAP with existing and new employees, and will provide any additional training required fulfilling the roles outlined in the ERRAP.

Employee Orientation

New employees are required to review the ERRAP and become familiar with the contents of ERRAP. **Attachment 2** (Emergency Contacts) will be provided to each employee.

Annual Training Updates

The Solid Waste Manager will provide an annual review of the ERRAP with new and existing employees once per year. New information will be reviewed at that time.

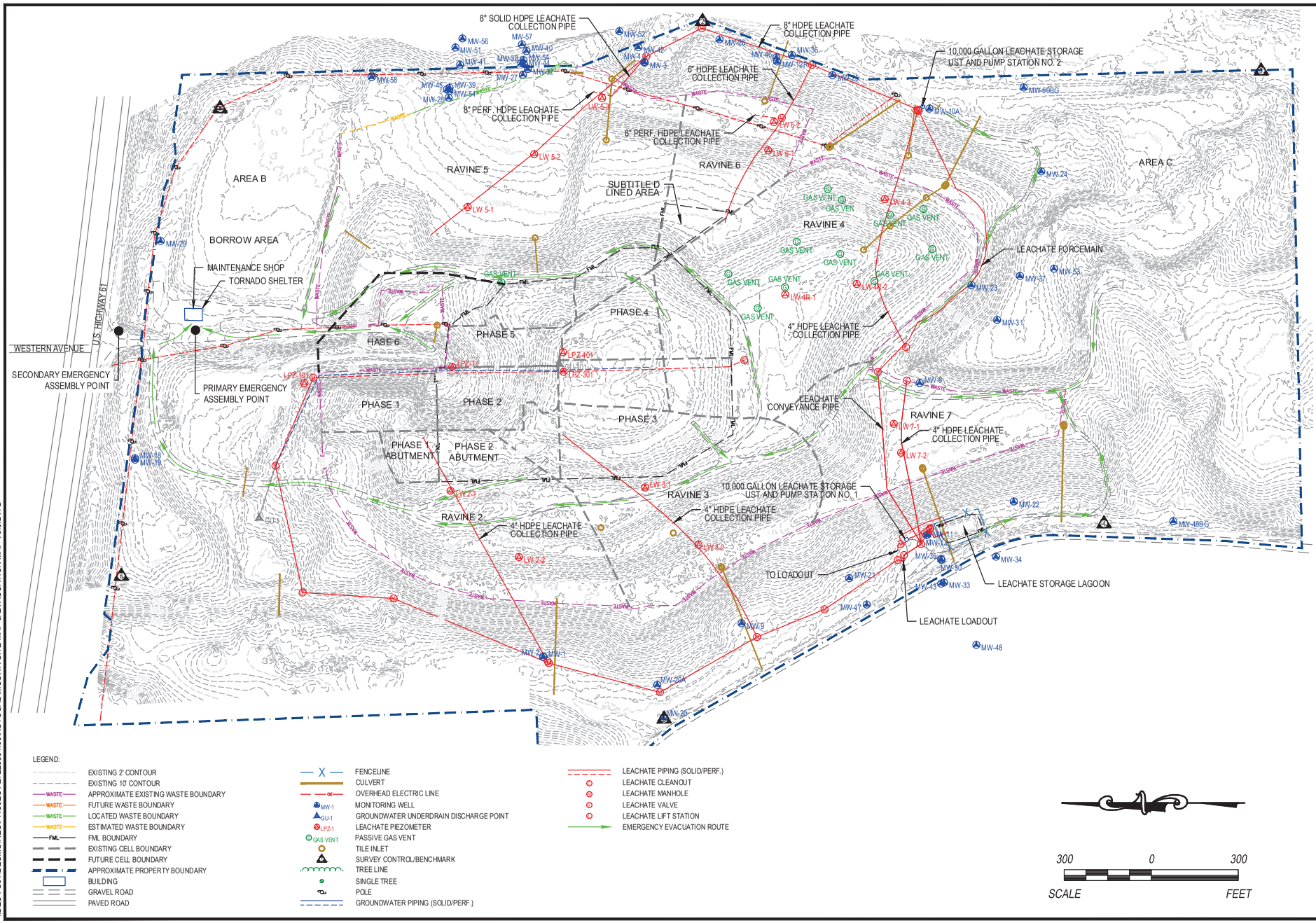
Training Completion and Record Keeping

Records of annual employee ERRAP training will be kept on file at the facility's offices.

Attachment 1

Site Plan Map

Emergency Evacuation Routes
Fire Escape Routes
Tornado Shelter
Emergency Assembly Point
Secondary Emergency Assembly Point



LEGEND:

- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- APPROXIMATE EXISTING WASTE BOUNDARY
- FUTURE WASTE BOUNDARY
- LOCATED WASTE BOUNDARY
- ESTIMATED WASTE BOUNDARY
- FML BOUNDARY
- EXISTING CELL BOUNDARY
- FUTURE CELL BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- BUILDING
- GRAVEL ROAD
- PAVED ROAD
- FENCELINE
- CULVERT
- OVERHEAD ELECTRIC LINE
- MONITORING WELL
- GROUNDWATER UNDERDRAIN DISCHARGE POINT
- LEACHATE PIEZOMETER
- PASSIVE GAS VENT
- TILE INLET
- SURVEY CONTROL/BENCHMARK
- TREE LINE
- SINGLE TREE
- POLE
- GROUNDWATER PIPING (SOLID/PERF.)
- LEACHATE PIPING (SOLID/PERF.)
- LEACHATE CLEANOUT
- LEACHATE MANHOLE
- LEACHATE VALVE
- LEACHATE LIFT STATION
- EMERGENCY EVACUATION ROUTE

300 0 300

SCALE FEET

REV.	DATE	BY

SHEET TITLE: EMERGENCY EVACUATION PLAN MAP

PROJECT TITLE: MUSCATINE COUNTY SANITARY LANDFILL 2025 PERMIT RENEWAL

CLIENT: MUSCATINE COUNTY SOLID WASTE MANAGEMENT AGENCY
3700 HIGHWAY 61 NORTH
BLUE GRASS, IOWA 52726

SCS ENGINEERS
1690 ALL STATE COURT, SUITE 100
WEST DES MOINES, IA 50265
PH: (515) 631-4160

PROJ NO. 27225394.00 | DSN BY: CTC | CHK BY: CLC | PROJ MGR: CLC | CTC

CADD FILE: MCSWA SITE MAP & EVACUATION MAP V0.0.DWG

DATE: 7/25/25

ATTACHMENT 1

\\DES-FS01\DESMOINES\PROJECT\27225394.00\AUTOCAD\MCSWA SITE MAP & EVACUATION MAP V0.0.DWG

Attachment 2

Emergency Phone Numbers

Telephone Locations
Fire
Medical
Landfill Management Notification
Media
State of Iowa
EPA
Utilities

EMERGENCY PHONE NUMBERS
Muscatine County Sanitary Landfill

TELEPHONE LOCATIONS:

Location of Nearest Telephones .....Office

.....Site Manager mobile telephone

POLICE/FIRE:

Police/Fire Services/Regional Hazard Response Team 911

MEDICAL/DOCTOR:

Ambulance..... 911

Hospital: Unity Point Health-Trinity Muscatine ..... (563) 264-9100

Estimated Drive time: .....20 minutes (13.8 miles)

Directions to Hospital/Clinic: ..... See Attachment 4

LANDFILL MANAGEMENT – NOTIFICATION LIST:

Solid Waste Manager

Dave Popp .....(563) 263-9689

COUNTY EMERGENCY MANAGER:

Muscatine County Emergency Management Agency

Brian K. Wright, Solid Waste Manager .....(563) 288-3909

MEDIA:

Television

WQAD – Moline, IL .....(309) 764-8888

WHBF – Rock Island, IL .....(309) 786-5441

Radio

KGYM .....(319) 363-2061

KCRG.....(319) 399-5900

STATE OF IOWA:

Water Quality Bureau .....(515) 725-8200

Environmental Protection Division.....(515) 725-8694

DNR Field Office 6 in Washington, Iowa.....(319) 653-2135

DNR: Amie Davidson, Land Quality Bureau Chief.....(515) 330-8581

DNR Spill Response (24 hours) ..... (515) 725-8694

Iowa Emergency Management Division .....(515) 725-3231

Iowa Poison Control Center Hotline.....(800) 222-1222

ENVIRONMENTAL PROTECTION AGENCY (EPA):

Region 7.....1 (800) 223-0425, (913) 551-7003

EPA Spill Response 913-281-0991

UTILITIES:

Telephone

Muscatine Power and Water .....(563) 263-2631

Water

Hauled in when needed.....N/A

Electricity

REC.....(319) 629-4221

Natural Gas

No tanks .....N/A

ENGINEER OF RECORD:

SCS Engineers.....(515) 631-6160

Attachment 3

Iowa Department of Natural Resources

Guidelines for Reporting Hazardous Conditions

Including Iowa Administrative Code Chapter 131

"Notification of Hazardous Conditions"

IOWA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL SERVICES DIVISION
FIELD SERVICES & COMPLIANCE BUREAU

Iowa Administrative Code Chapter 131
Notification of Hazardous Conditions

24 hour number for release reporting
515/725-8694

Summary of Key Points and Definitions

Definitions

"Hazardous Condition" means any situation involving the actual, imminent or probable spillage, leakage, or release of a hazardous substance onto the land, into a water of the state or into the atmosphere which, because of quantity, strength and toxicity of the hazardous substance, its mobility in the environment and its persistence, creates an immediate or potential danger to the public health or safety or to the environment.

"Hazardous Substance" means any substance or mixture of substance that presents a danger to the public health or safety and includes, but is not limited to, a substance that is toxic, corrosive, or flammable, or that is an irritant or that, in confinement, generates pressure through decomposition, heat, or other means. The following are examples of substances which, in sufficient quantity, may be hazardous: acids; alkalis; explosives; fertilizers; heavy metals such as chromium, arsenic, mercury, lead, and cadmium; industrial chemicals; paint thinners; paints; pesticides; petroleum products; poisons; radioactive materials; sludges; and organic solvents. "Hazardous substances" may include any hazardous waste identified or listed by the administrator of the United States Environmental Protection Agency under the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976, or any toxic pollutant listed under Section 307 of the federal Water Pollution Control Act as amended to January 1, 1977, or any hazardous substance designated under Section 311 of the federal Water Pollution Control Act as amended to January 1, 1977, or any hazardous material designated by the secretary of transportation under the Hazardous Materials Transportation Act (49 CFR 172.101)

Key Points

Who is Required to Report Hazardous Conditions. Any person manufacturing, storing, handling, transporting, or disposing of a hazardous substance shall notify the department at (515) 725-8694 and the local police department or the office of the sheriff of the affected county of the occurrence of a hazardous condition as soon as possible but not later than six hours after the onset of the hazardous condition or the discovery of the hazardous condition. A sheriff or police chief who has been notified of a hazardous condition shall immediately notify the department. Reports made pursuant to this rule shall be confirmed in writing as provided in 131.2(2).

Reporting Subsequent Findings. All subsequent finding and laboratory results should be reported and submitted in writing to the department as soon as they become available.

Reminder ~ VERBAL REPORTS ARE REQUIRED WITHIN 6 HOURS OF INCIDENCE OCCURRENCE OR DISCOVERY.

REV. 5/2024

IOWA DNR EMERGENCY RESPONSE UNIT
6200 Park Avenue, Ste 200 / DES MOINES, IOWA 50321
515-725-8694 TDD 515-242-5967 www.iowadnr.gov

IOWA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL SERVICES DIVISION
FIELD SERVICES & COMPLIANCE BUREAU

Guidelines for Reporting Hazardous Conditions
Verbal Reporting

24 hour number for release reporting
515/725-8694

Report the Condition if:

- ☐ The hazardous substance has the potential to leave the property by run-off, sewers, tile lines, culverts, drains, utility lines, or some other conduit, or,
- ☐ The hazardous substance has the potential to reach a water of the state – either surface water or groundwater or,
- ☐ The hazardous substance can be detected in the air at the boundaries of the facility property by the senses (sight and smell) or by monitoring equipment or,
- ☐ There is a potential threat to the public health and safety or,
- ☐ Local officials (Fire department, law enforcement, Hazmat, public health, and emergency management) respond to the incident or,
- ☐ The release exceeds a Federal Reportable Quantity (RQ).

~ If in Doubt, Report It ~

IDNR REQUIRES VERBAL REPORTS WITHIN 6 HOURS OF INCIDENCE OCCURRENCE OR DISCOVERY

- It is recommended that all spills be cleaned up although a particular spill may not be reportable. A series of small spills over time can result in one big cleanup.
- Department rules stress the immediate or <u>potential</u> danger that a spill may cause.
- A written report of the Hazardous Condition is required within 30 days of the verbal notification.

*In general, Iowa reporting requirements are more stringent than Federal reporting requirements. However, the **time limit** for reporting at the Federal level is more immediate.*

IOWA DNR EMERGENCY RESPONSE UNIT
6200 Park Avenue, Ste 200 / Des Moines, IOWA 50321
515-725-8694 TDD 515-242-5967 www.iowadnr.gov

IOWA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL SERVICES DIVISION
FIELD SERVICES & COMPLIANCE BUREAU

Guidelines for Reporting Hazardous Conditions Written Report Requirements

24 hour number for release reporting 515/725-8694

The Iowa Department of Natural Resources
Requires a written report of any Hazardous Condition.
(VERBAL REPORT REQUIRED WITHIN 6 HOURS)

Written Report. The written report of such a hazardous condition shall be submitted to the department within 30 days and contain the following information:

a. The exact location of the hazardous condition.
b. The time and date of onset or discovery of the hazardous condition.
c. The name of the material, the manufacturer's name, and the volume of each material involved in the hazardous condition in addition to contaminants within the material if they by themselves could cause a hazardous condition.
d. The medium (land, water, or air) in which the hazardous condition occurred or exists.
e. The name, address, and telephone number of the party responsible for the hazardous condition.
f. The time and date of the verbal report to the department of the hazardous condition.
g. The weather conditions at the time of the hazardous condition onset of discovery.
h. The name, mailing address, and telephone number of the person reporting the hazardous condition.
i. The name and telephone of the person closest to the scene of the hazardous condition who can be contacted for further information and action.
j. Any other information, such as the circumstances leading to the hazardous condition, visible effects, and containment measures taken that may assist in the proper evaluation by the department.

The written report should include the IDNR Spill Number (assigned at the time of the verbal report) and be addressed to the duty officer responding to the spill. Reports can be sent via mail, fax, or electronic mail to the addresses listed below.

Mail	Fax	E-Mail
Iowa DNR Field Services Emergency Response 6200 Park Ave. Ste 200 Des Moines, IA 50321	515/725-8201	Emergency_Response@dnr.iowa.gov

CHAPTER 131
NOTIFICATION OF HAZARDOUS CONDITIONS

[Prior to 7/1/83, DEQ Ch 41]
[Prior to 12/3/86, Water, Air and Waste Management[900]]

Chapter rescission date pursuant to Iowa Code section 17A.7: 1/1/28

567—131.1(455B) Definitions. For purposes of this chapter:

"Corrosive" means causing or producing visible destruction or irreversible alterations in human skin tissue at the site of contact, or in the case of leakage of a hazardous substance from its packaging, causing or producing a severe destruction or erosion of other materials through chemical processes.

"Department" means the department of natural resources.

"Hazardous condition" means any situation involving the actual, imminent or probable spillage, leakage, or release of a hazardous substance onto the land, into a water of the state or into the atmosphere which, because of the quantity, strength and toxicity of the hazardous substance, its mobility in the environment and its persistence, creates an immediate or potential danger to the public health or safety or to the environment.

"Hazardous substance" means any substance or mixture of substances that presents a danger to the public health or safety and includes, but is not limited to, a substance that is toxic, corrosive, or flammable, or that is an irritant or that, in confinement, generates pressure through decomposition, heat, or other means. The following are examples of substances which, in sufficient quantity, may be hazardous: acids; alkalis; explosives; fertilizers; heavy metals such as chromium, arsenic, mercury, lead and cadmium; industrial chemicals; paint thinners; paints; pesticides; petroleum products; poisons; radioactive materials; sludges; and organic solvents. "Hazardous substances" may include any hazardous waste identified or listed by the administrator of the United States Environmental Protection Agency under the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976, or any toxic pollutant listed under Section 307 of the federal Water Pollution Control Act as amended to January 1, 1977, or any hazardous substance designated under Section 311 of the federal Water Pollution Control Act as amended to January 1, 1977, or any hazardous material designated by the secretary of transportation under the Hazardous Materials Transportation Act (49 CFR §172.101).

"Irritant" means a substance causing or producing dangerous or intensely irritating fumes upon contact with fire or when exposed to air.

"Toxic" means causing or producing a dangerous physiological, anatomic or biochemical change in a biological system.

567—131.2(455B) Report of hazardous conditions. Any person manufacturing, storing, handling, transporting, or disposing of a hazardous substance shall notify the department at (515)281-8694 and the local police department or the office of the sheriff of the affected county of the occurrence of a hazardous condition as soon as possible but not later than six hours after the onset of the hazardous condition or discovery of the hazardous condition. A sheriff or police chief who has been notified of a hazardous condition shall immediately notify the department. Reports made pursuant to this rule shall be confirmed in writing as provided in 131.2(2).

131.2(1) *Verbal report.* The verbal report of such a hazardous condition should provide information on as many items listed in 131.2(2) as available data will allow.

131.2(2) *Written report.* The written report of such a hazardous condition shall be submitted to the department within 30 days and contain the following information:

a. The exact location of the hazardous condition.

b. The time and date of onset or discovery of the hazardous condition.

c. The name of the material, the manufacturer's name and the volume of each material involved in the hazardous condition in addition to contaminants within the material if they by themselves could cause a hazardous condition.

d. The medium (land, water or air) in which the hazardous condition occurred or exists.

e. The name, address and telephone number of the party responsible for the hazardous condition.

f. The time and date of the verbal report to the department of the hazardous condition.

g. The weather conditions at the time of the hazardous condition onset or discovery.

h. The name, mailing address and telephone number of the person reporting the hazardous condition.

i. The name and telephone number of the person closest to the scene of the hazardous condition who can be contacted for further information and action.

j. Any other information, such as the circumstances leading to the hazardous condition, visible effects and containment measures taken that may assist in proper evaluation by the department.

131.2(3) *Reporting of subsequent findings.* All subsequent finding and laboratory results should be reported and submitted in writing to the department as soon as they become available.

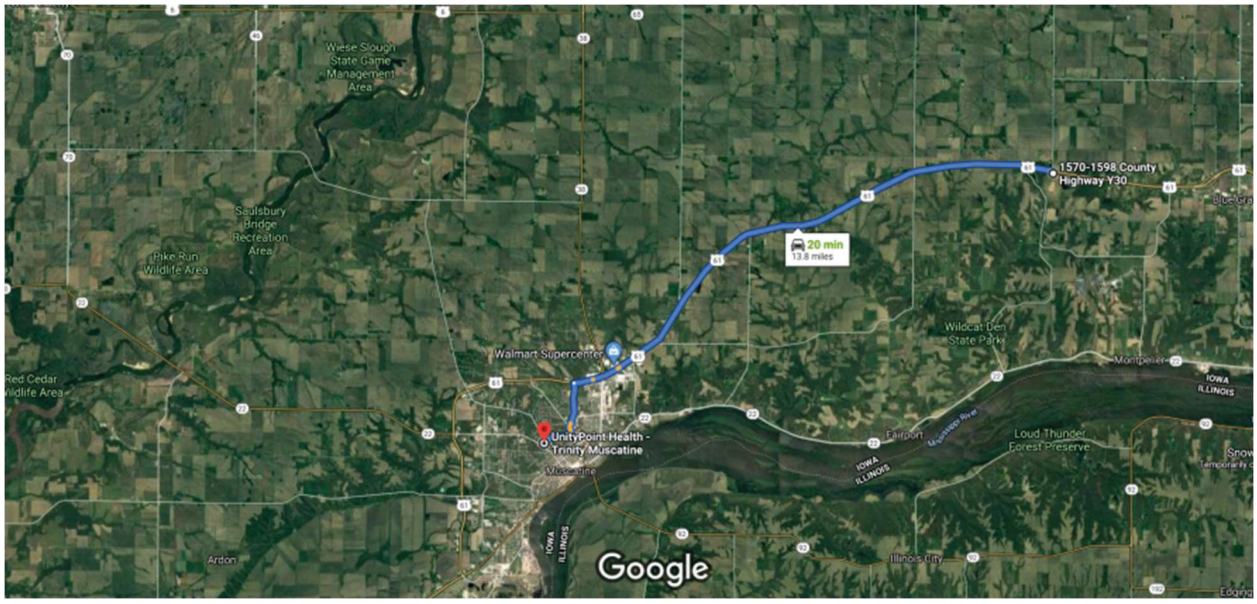
These rules are intended to implement Iowa Code section 455B.115.

[Filed 2/3/78, Notice 10/5/77—published 2/22/78, effective 3/29/78]
[Filed emergency 10/31/80—published 11/26/80, effective 10/31/80]
[Filed emergency 6/3/83—published 6/22/83, effective 7/1/83]
[Filed emergency 11/14/86—published 12/3/86, effective 12/3/86]
[Filed 12/30/93, Notice 10/13/93—published 1/19/94, effective 2/23/94]

Attachment 4

Directions to Hospital/Clinic

Directions to Hospital/Clinic



3700 US-61
Blue Grass, IA 52726

↑ Head north on Western Ave toward US-61 N

13 sec (335 ft)

↰ Turn left at the 1st cross street onto US-61 S

14 min (12.0 mi)

› Continue on Isett Ave to your destination

6 min (1.9 mi)

UnityPoint Health - Trinity Muscatine - Emergency Department
1518 Mulberry Ave, Muscatine, IA 52761

Attachment 5

Special Populations Within Five Mile Radius

SPECIAL POPULATIONS WITHIN A 5-MILE RADIUS

HOSPITALS AND CLINICS:

None

NURSING HOMES/ASSISTED LIVING:

None

SCHOOLS:

Blue Grass Elementary, 226 West Sycamore St., Blue Grass, IA .....(563) 723-6200

Noah's Ark Pre-School, 331 West Lotte St., Blue Grass, IA .....(563)-381-1701

DAYCARE AND PRESCHOOLS:

None

Appendix C

Operators Certificates

The Agency certified operators at the Muscatine County Sanitary Landfill as of the date of this permit renewal application are listed below. Certificates are included for two of the newly certified operators from the new contract operator for the facility. Additional operators have been certified; however, paperwork has not been received at this point.

Operator	Certification Number
David Popp	#31099
Matt Fulton	#30744

STATE OF IOWA

IOWA DNR

OPERATOR CERTIFICATION

CERTIFICATE EXPIRES JUNE 30, 2026.

WHEN THIS CERTIFICATE EXPIRES A CURRENT RENEWAL CERTIFICATE MUST BE ATTACHED.

ATTACH RENEWAL CERTIFICATE HERE AFTER EACH RENEWAL OF YOUR CERTIFICATE

JON BRAUNS
IS QUALIFIED IN ACCORDANCE WITH STATE LAW AS A LANDFILL OPERATOR.

CERTIFICATE # 31334

GIVEN UNDER THE HANDS OF THE IOWA DEPARTMENT OF NATURAL RESOURCES ON JUNE 30, 2025.

FOR THE DIRECTOR,

ED TORMEY, DIVISION ADMINISTRATOR

THIS CERTIFICATE REMAINS THE PROPERTY OF THE DEPARTMENT

ATE OF IOWA

IOWA DNR

OPERATOR CERTIFICATION

30, 2026.

PIRES A CURRENT
ST BE ATTACHED.

E HERE AFTER

RTIFICATE

JONATHAN BRAUNS

IS QUALIFIED IN ACCORDANCE WITH STATE LAW
A LANDFILL OPERATOR.

CERTIFICATE # **31327**

GIVEN UNDER THE HANDS OF THE
IOWA DEPARTMENT OF NATURAL RESOURCES
ON APRIL 21, 2025.

FOR THE DIRECTOR:

ED TORMEY, DIVISION ADMINISTRATOR

THIS CERTIFICATE REMAINS THE PROPERTY OF THE DEPARTMENT

Appendix E

Proof of Financial Assurance

IOWA DEPARTMENT OF NATURAL RESOURCES

GOVERNOR, KIM REYNOLDS
LT. GOVERNOR, CHRIS COURNOYER
DIRECTOR, KAYLA LYON

May 23, 2025

NANCY LUECK
FINANCE DIRECTOR
CITY OF MUSCATINE
215 SYCAMORE STREET
MUSCATINE IA 52761

Re: Muscatine County Solid Waste Management Agency
Permit Number 70-SDP-02-75P
Approval of Financial Assurance

Dear Ms. Lueck:

This is notification by the Iowa Department of Natural Resources (DNR) that the Muscatine County Solid Waste Management Agency (Agency) has adequately complied with the financial assurance requirements of 567 IAC 113.14(455B) for the Muscatine County Sanitary Landfill. The Agency's financial assurance documentation (Doc #112581), received March 19, 2025, has been placed in the DNR's record files.

The projected deposit of **$234,200** to the Agency's closure and postclosure Local Government Dedicated Fund (LGDF) needs to be made by July 30, 2025. The deposit amounts are as stated in the "Formula for Projected Deposits" component of Section 7 of the Agency's Financial Assurance Report Form.

Please note that the Agency may withdraw money from the closure and postclosure LGDF without DNR approval for the purpose of funding closure, including partial closure, or postclosure activities in accordance with 567 IAC 113.14(8)"d." As a reminder, compliance with 567 IAC 113.14(455B) is to be submitted annually, by April 1st, confirming that all applicable financial assurance documents are updated as required.

Please feel free to contact me with any questions. I can be reached at (515) 802-8835 or mary.klemesrud@dnr.iowa.gov.

Sincerely,

Mary Klemesrud
Program Planner
Land Quality Bureau

Cc: Iowa DNR Field Office #6, Washington

Appendix F

Comprehensive Plan Approval and 2024 Third-Party Environmental Management System Audit

iowa.gov

Rasmus, Laurie <laurie.rasmus@dnr.iowa.gov>

Rnd8 Comp Plan Update approved_Bi-State

1 message

Rasmus, Laurie <laurie.rasmus@dnr.iowa.gov> Fri, Jul 21, 2023 at 10:36 AM
To: Gena McCullough <gmccullough@bistateonline.org>, Gary Crock <ccswc@netins.net>, Brad Seward <ccaswa@ccaswa.com>, Frank Frieberg <frankf@wasteauth.org>, David Popp <dpopp@muscatineiowa.gov>, Kathy Morris <kathy.morris@wastecom.com>
Cc: Jennifer Wright <jennifer.wright@dnr.iowa.gov>, Michael Sullivan <michael.sullivan@dnr.iowa.gov>, "Jolly, Becky" <becky.jolly@dnr.iowa.gov>, Kurt Levetzow <kurt.levetzow@dnr.iowa.gov>, Shane Dodge <shane.dodge@dnr.iowa.gov>, Julie Plummer <Julie.plummer@wastecom.com>

DNR IOWA DEPARTMENT OF NATURAL RESOURCES

GOVERNOR KIM REYNOLDS
LT. GOVERNOR ADAM GREGG
DIRECTOR KAYLA LYON

Ms. Gena McCullough
Bi-State Regional Commission

Dear Ms. Gena McCullough:

BI-STATE REGIONAL COMMISSION
8th Round Solid Waste Comprehensive Plan Update
NOTICE OF APPROVAL

The above-referenced agency submitted their plan update regarding integrated solid waste programs and activities. Information was included regarding proposed activities that represent an action plan for the next five years.

As noted in a previous letter on May 10, 2023 and according to the 8th Round Schedule, DNR determined the official planning area Goal Progress as 16.83% for Fiscal Year 2022. This figure was determined using the Base-Year Adjustment Method. Goal Progress may be recalculated annually, once new data is available and upon request by the planning area. Beginning July 1, 2023, the tonnage fees for service areas that are not within a designated Iowa Solid Waste Environmental Management System (EMS). Questions regarding tonnage fee submission may be directed to Becky Jolly at 515-249-1482 or becky.jolly@dnr.iowa.gov.

Should you have any questions or concerns, please do not hesitate to contact me at Laurie.Rasmus@dnr.iowa.gov or 515-474-4921.

Sincerely,

Laurie Rasmus

Laurie Rasmus
Land Quality Bureau, Financial and Business Assistance

5 attachments

- **CkIst_Rnd8 BiState_Final_07-21-2023.pdf** 339K
- **Bi-State GP FY22_Rnd 8 FINAL.pdf** 184K
- **Tonnage Fee Distribution_Fact Sheet(3)_rev June 2020.pdf** 433K
- **Rnd8Update&Addendum_Bi-State.pdf** 6213K
- **Rnd8 TonFeeChange&Extension_Bi-State_5-10-2023.pdf** 127K

BASE-YEAR ADJUSTMENT METHOD REPORT TABLE

NAME OF PLANNING AREA: Bi-State Regional Commission

CURRENT YEAR (CY): FY2022_Complete 09-29-2022
BASE YEAR: FY1988

FACTORS	Cedar	Clinton	Jackson	Muscatine	Scott	Region	NOTES
STEP 1: Basic Information							
1 Base Year Residential Waste Disposal	5,176	32,375	4,185	12,592	47,752	102,080	A
2 Base Year Commercial/Industrial Waste Disposal	6,976	52,823	7,774	50,448	111,369	229,390	B
3 Base Year Total Waste Disposal	12,152	85,198	11,959	63,040	159,121	331,470	
4 CY Waste Disposal	10,374	53,201	11,713	42,169	190,511	307,972	G
5 Base Year Population	17,632	52,256	20,461	40,013	152,788	283,150	C
6 CY Population	18,505	46,460	19,485	43,235	174,669	302,354	H
7 Base Year Employment	4,206	18,747	5,168	18,585	66,542	113,248	D
8 CY Employment	5,036	19,388	5,961	21,611	88,298	140,295	I
9 Base Year Taxable Sales	54,182,138	262,808,687	72,735,695	207,764,780	1,105,183,664	1,702,674,964	E
10 CY Taxable Sales	$121,710,171	$502,414,027	$145,539,720	$481,622,068	$2,949,767,848	4,201,053,834	J
11 Base Year Consumer Price Index	115.8417	115.8417	115.8417	115.8417	115.8417	115.8417	F
12 CY Consumer Price Index	282.0250	282.0250	282.0250	282.0250	282.0250	282.0250	K, FY2022
STEP 2: CY Taxable Sales Corrected for Inflation							
13 Inflation Correction Factor	0.4107498	0.4107498	0.4107498	0.4107498	0.4107498	0.4107498	F/K
14 CY Corrected Taxable Sales	$49,992,423	$206,366,439	$59,780,405	$197,826,147	$1,211,616,424	$1,725,581,838	J*(F/K)
STEP 3: Base Year and Current Year Ratios							
15 Population Ratio (PR)	1.0495123	0.8890845	0.9522995	1.0805238	1.1432115	1.0678227	H/C
16 Employment Ratio (ER)	1.1974164	1.0341966	1.1534926	1.1628329	1.3269527	1.2388298	I/D
17 Taxable Sales Ratio (TR)	0.9226735	0.7852345	0.8218854	0.9521640	1.0963032	1.0134535	(J*F/K)/E
STEP 4: Adjustment Factors							
18 Base Year Commercial/Industrial Adjustment Factor	1.0600449	0.9097155	0.9876890	1.0574985	1.2116279	1.1261416	Average of Lines 16 & 17
19 Base Year Residential Adjustment Factor	1.0547786	0.8994000	0.9699943	1.0690112	1.1774197	1.0969822	Average of Lines 15 & 18
STEP 5: Adjusted Base Year Disposal Tonnages							
20 Base Year Adjusted Residential Waste Disposal	5,460	29,118	4,059	13,461	56,224	111,980	A * Line 19
21 Base Year Adjusted Commercial/Industrial Waste Disposal	7,395	48,054	7,678	53,349	134,938	258,326	B * Line 18
22 Base Year Adjusted Total Waste Disposal	12,854	77,172	11,738	66,810	191,162	370,306	
STEP 6: Goal Progress and Reduction Percentage Results							
23 CY Waste Disposal (from line #4)	10,374	53,201	11,713	42,169	190,511	307,972	G
24 Maximum Allowable Disposal to Attain 25 Percent Goal	9,641	57,879	8,803	50,107	143,371	277,729	Line 22*0.75
25 Actual Tonnage Over (or Under) 25 Percent Goal	733	-4,678	2,910	-7,938	47,139	30,242	Line 23 minus Line 24
26 Maximum Allowable Disposal to Attain 50 Percent Goal	6,427	38,586	5,869	33,405	95,581	185,153	Line 22*0.5
27 Actual Tonnage Over (or Under) 50 Percent Goal	3,947	14,615	5,844	8,764	94,930	122,819	Line 23 minus Line 26
28 CURRENT DISPOSAL REDUCTION (PERCENTAGE)	**19.30%**	**31.06%**	**0.21%**	**36.88%**	**0.34%**	**16.83%**	**(Line 22 minus Line 23)/Line 22**

Planning Area (PA)	County	City	2020 Census	PA Pop. (H)	Pop. % in PA	FY2022 Non-Farm Jobs	Non-Farm Jobs in PA (I)	FY2021 Taxable Sales (J)
Bi-State	Cedar	Bennett	347	347				$2,066,715
Bi-State	Cedar	Clarence	1,039	1,039				$5,393,839
Bi-State	Cedar	Durant	1,871	1,871				$19,202,442
Bi-State	Cedar	Lowden	807	807				$9,020,401
Bi-State	Cedar	Mechanicsville	1,020	1,020				$3,995,054
Bi-State	Cedar	Stanwood	637	637				$2,827,238
Bi-State	Cedar	Tipton	3,149	3,149				$54,314,996
Bi-State	Cedar	West Branch	2,509	2,509				$20,707,363
Bi-State	Cedar	zz.Uninc area	7,126	7,126				$4,182,123
			18,505	**18,505**	**100%**	**5,036**	**5,036**	**$121,710,171**
Bi-State	Clinton	Andover	109	109				$0
Bi-State	Clinton	Calamus	356	356				$2,328,357
Bi-State	Clinton	Camanche	4,570	4,570				$13,493,380
Bi-State	Clinton	Charlotte	389	389				$3,237,034
Bi-State	Clinton	Clinton	24,469	24,469				$380,445,866
Bi-State	Clinton	Delmar	542	542				$3,631,092
Bi-State	Clinton	DeWitt	5,514	5,514				$76,807,247
Bi-State	Clinton	Goose Lake	239	239				$1,285,711
Bi-State	Clinton	Grand Mound	615	615				$3,678,702
Bi-State	Clinton	Lost Nation	434	434				$1,589,635
Bi-State	Clinton	Low Moor	250	250				$2,597,931
Bi-State	Clinton	Toronto	102	102				$0
Bi-State	Clinton	Welton	121	121				$1,180,843
Bi-State	Clinton	Wheatland	775	775				$8,350,663
Bi-State	Clinton	zz.Uninc area	7,975	7,975				$3,787,566
			46,460	**46,460**	**100%**	**19,388**	**19,388**	**$502,414,027**
Bi-State	Jackson	Andrew	380	380				$850,260
Bi-State	Jackson	Baldwin	99	99				$0
Bi-State	Jackson	Bellevue	2,363	2,363				$24,212,208
Bi-State	Jackson	La Motte	237	237				$2,534,409
Bi-State	Jackson	Maquoketa	6,128	6,128				$92,394,514
Bi-State	Jackson	Miles	408	408				$2,200,097
Bi-State	Jackson	Monmouth	129	129				$0
Bi-State	Jackson	Preston	949	949				$12,964,042
Bi-State	Jackson	Sabula	506	506				$3,877,936
Bi-State	Jackson	Spragueville	92	92				$147,291
Bi-State	Jackson	Springbrook	143	143				$743,949
Bi-State	Jackson	St. Donatus	120	120				$0
Bi-State	Jackson	zz.Uninc area	7,931	7,931				$5,615,014
			19,485	**19,485**	**100%**	**5,961**	**5,961**	**$145,539,720**
Bi-State	Muscatine	Atalissa	296	296				$382,477
Bi-State	Muscatine	Conesville	352	352				$465,872
Bi-State	Muscatine	Fruitland	963	963				$355,248
Bi-State	Muscatine	Muscatine	23,797	23,797				$405,815,071
Bi-State	Muscatine	Nichols	340	340				$3,961,560
Bi-State	Muscatine	Stockton	176	176				$0
Bi-State	Muscatine	West Liberty	3,858	3,858				$21,467,935
Bi-State	Muscatine	Wilton	2,924	2,924				$44,770,271
Bi-State	Muscatine	zz.Uninc area	10,529	10,529				$4,403,634
			43,235	**43,235**	**100%**	**21,611**	**21,611**	**$481,622,068**
Bi-State	Scott	Bettendorf	39,102	39,102				$383,412,323
Bi-State	Scott	Blue Grass	1,666	1,666				$18,118,842
Bi-State	Scott	Buffalo	1,176	1,176				$7,449,309
Bi-State	Scott	Davenport	101,724	101,724				$2,302,474,496
Bi-State	Scott	Dixon	202	202				$385,384
Bi-State	Scott	Donahue	335	335				$1,216,904
Bi-State	Scott	Eldridge	6,726	6,726				$71,387,616
Bi-State	Scott	Le Claire	4,710	4,710				$24,303,336
Bi-State	Scott	Long Grove	838	838				$3,463,132
Bi-State	Scott	Maysville	156	156				$0
Bi-State	Scott	McCausland	313	313				$1,319,476
Bi-State	Scott	New Liberty	138	138				$400,460
Bi-State	Scott	Panorama Park	139	139				$0
Bi-State	Scott	Princeton	923	923				$3,528,807
Bi-State	Scott	Riverdale	379	379				$1,617,978
Bi-State	Scott	Walcott	1,551	1,551				$76,788,333
Bi-State	Scott	zz.Uninc area	14,591	14,591				$53,901,452
			174,669	**174,669**	**100%**	**88,298**	**88,298**	**$2,949,767,848**
Bi-State	**All**	**All**		**302,354**			**140,295**	**##############**
				H			**I**	**J**

PA	Permit #	Facility	FY2022 Tons, Non Exempt	Released (non HF399) ton another IA PA (+)	From another IA PA (non HF 399) (-)	Generated Out of Iowa (-)	Diposed out of Iowa (+)	Exceptional Event (-)	FY2022 PA Tons (G)
Bi-State	23-SDP-01-74	Clinton County Sanitary Landfill (East Site)	53,201						53,201
Bi-State	70-SDP-02-75	Muscatine County Sanitary Landfill	42,169						42,169
Bi-State	70-SDP-11-94	City of Muscatine Transfer Station	Included in MCSL tonnage						
Bi-State	82-SDP-09-92	Scott Area Sanitary Landfill	190,511						190,511
Bi-State	16-SDP-02-88	Cedar County Transfer Station					10,374		10,374
Bi-State	49-SDP-03-92	Waste Authority of Jackson County Transfer Station					11,713		11,713
Bi-State	All			4					4
									307,972

Note: Final disposal site for Cedar County Transfer Station is Millennium Waste, Milan IL;
Final disposal site for Waste Authority of Jackson County Transfer Station is the Quad Cities Landfill in Milan, IL;
Final disposal site for City of Muscatine Transfer Station is Muscatine County Sanitary Landfill.

Third Party Environmental Management System Audit

EMS Participant: Muscatine County Solid Waste Management Agency (MCSWMA)

Date of Audit: November 14, 2024 **Scope:** ☒ Full ☐ Partial

Place/Platform: Zoom

Document Sharing: ☒ Dropbox ☐ Other:

Attendance

Role	Name	Representing/Title
Lead Auditor	Paige Alesch	Region XII Council of Governments, IWE Area Resource Specialist
Auditor	Shelly Codner	Region XII Council of Governments, IWE Coordinator/Resource Specialist
EMS Lead	Laurie Rasmus	Iowa DNR, Program Planner
Observer	Jennifer Wright	Iowa DNR, FABA Section Supervisor
EMR/Core Team	Dave Popp	City of Muscatine, Solid Waste Manager
Core Team	Matt Fulton	City of Muscatine, Solid Waste Supervisor

Date of Final Report: 1/13/2025 Audit No.: 2

Results Summary	Commendable	Met Requirements	Opportunity for Improvement	Partially Met Requirements	Did Not Meet Requirements	Not Assessed
1. Environmental Policy Statement	☐	☒	☐	☐	☐	☐
2. Environmental Aspects and Impacts	☐	☒	☐	☐	☐	☐
3. Legal & Other Requirements	☐	☒	☐	☐	☐	☐
4. Objectives & Targets	☐	☐	☐	☒	☐	☐
5. Action Plan	☐	☐	☒	☐	☐	☐
6. Roles & Responsibilities	☐	☒	☐	☐	☐	☐
7. Communication & Training	☐	☐	☒	☐	☐	☐
8. Monitoring & Measurement	☐	☒	☐	☐	☐	☐
9. Audit/Assessment	☐	☒	☐	☐	☐	☐
10. Reevaluation & Modification	☐	☒	☐	☐	☐	☐

Key to Findings

Description of Satisfactory Findings

Commendable = Satisfied Standard fully and demonstrated innovation or exceptional effort.
Met Requirements = Satisfied Standard fully.
Opportunity for Improvement = Satisfied Standard fully. Auditor has suggestions for consideration by EMS.

Description of Non-Conformance Findings

Partially Met Requirements = EMS is to implement root cause analysis and address non-conformance prior to the next audit.
Did Not Meet Requirements = EMS is to implement root cause analysis and address non-conformance in a manner approved by DNR.

Notes

Audit began at 10:00 a.m. and ended at 1:05 p.m.

This External Audit was a full audit.

Auditors reviewed elements 1 through 10.

Muscatine County Solid Waste Management Agency's (MCSWMA) required EMS documentation was received for auditor review via Dropbox prior to the audit and as requested by the audit team, with the exception of the Aspects and Impacts Procedure. EMR indicated that the Aspects and Impacts Procedure had previously been completed and would be uploaded to Dropbox following the audit.

Individual organizations requiring additional technical assistance based on the findings of this audit should contact Laurie Rasmus, Iowa Department of Natural Resources, (515) 474-4921, laurie.rasmus@dnr.iowa.gov.

The COG audit team would like to extend their appreciation to MCSWA's EMR and Core Team for their cooperation before, during and following the audit.

Observations

- Discussed core team composition, core team meeting frequency and roles and responsibilities of core team members.

- Reviewed and discussed Environmental Policy Statement (EPS). EMR reported that It is the intention of MCSWMA's Core Team to review and update EPS - if needed - on an annual basis. Reviewed and discussed process flow for approval of EMS policies and procedures. EMR explained that the City of Muscatine is charged with approval of all EMS procedures. EMR discussed the framework and footprint of MCSWMA's solid waste division. MCSWMA is a division of the City of Muscatine's Public Works Department. MCSWMA's responsibilities within the Public Works Department includes refuge collection and management of MCSWMA's transfer station, compost facility, and landfill. Residential recycling and landfill operations are contracted to a third party.

- Discussed legal and other procedures and reviewed legal and other documentation. EMR reported that he, with the assistance of MCSWMA's contracted engineering firm maintains legal and other documentation.

- Discussed communication, training and awareness and reviewed procedure. Reviewed and discussed external and internal communications and information flow. EMR stated that City of Muscatine employs an in-house communications manager who monitors and posts news flashes and disseminates information, including items related to MCSWMA's operations to local media outlets. EMR reported that it is the intention of the Core Team to expand their web presence to include EMS related information on the City of Muscatine's website. Reviewed established protocols and records retention process for safety, operator and other required trainings.

- Reviewed and discussed Aspects and Impacts. EMR reported that working with EMS Lead and EMS Consultant and based on staff input, Core Team assembled and ranked Aspects and Impacts. EMR provided examples of the rationale and procedure used for scoring Aspects and Impacts. MCSWMA's Aspects and Impacts procedure had not been uploaded Dropbox at the time of audit. EMR advised that the procedure would be uploaded following the audit.

- Reviewed and discussed an Environmental Education objective initiated to increase public awareness of available services. The objective includes the use of magnetic billboards placed on MCSWMA's collection fleet.

Considering residential demand for particular services is cyclical depending on the time of the year, messages will be updated periodically. Messages were developed using anecdotal data of trending topics communicated to MCSWMA's staff members through direct interaction with members of MCSWMA's service area. As documented and reported by EMR, it is the intention of MCSWMA to initiate a public survey to determine information retention. EMR reported billboards have been ordered, but not yet received. Reviewed and discussed potential enhancements to ensure the metric selected accurately aligns with the designated target.

- Reviewed and discussed a Water Quality objective initiated to facilitate roadside litter removal and address illegal dumping. As reported by EMR, this objective includes promoting litter collection events with volunteer groups within MCSWMA's service area to schedule clean-up events in locations of their choosing. EMR reported MCSWMA received EMS grant funding to purchase a litter-event trailer that will be stocked with equipment and supplies needed to facilitate clean-up events. EMR stated that the original quote for trailer from the initial vendor had increased and therefore new bids needed to be obtained, which has delayed receipt of the trailer. Reviewed and discussed action plan. Audit team advised that action plan should be updated to include recent and future activities to ensure movement towards positive outcomes.

- Reviewed and discussed a Greenhouse Gas Objective. EMR explained that they currently selected a vendor – WIS Navigation Technologies – who will provide a GPS system to improve route efficiencies for MCSWMA collection fleet. MCSWMA staff will enter initial location data and each fleet vehicle will be outfitted with an iPad that will convey the most efficient route for drivers to follow during collection runs. Reviewed and discussed metrics of this objective. Audit team advised that current metric should be updated to reflect carbon tons as opposed to straight tons. Reviewed and discussed performance indicators. EMS lead advised that if gallons of fuel are known, MCSWMA can use EPA's WARM calculator to convert gallons of fuel to metric tons. Reviewed and discussed frequency of data collection. EMR reported that MCSWMA will have the ability to track the amount of carbon tons reduced on a monthly basis.

- Reviewed and discussed an HHM objective initially launched to collect rechargeable batteries. EMR reported that through reevaluation and modification, the objective was updated to include collection of all HHMs via hosting remote spring and fall HHM collection events. EMR reported that these collection events will also utilize the trailer purchased for litter cleanup events. EMR stated that MCSWMA staff is currently working with Waste Commission of Scott County to complete Hazwoper training in accordance with DNR requirements. EMR explained that weights of HHM materials being tracked for this objective, will not include materials coming directly into MCSWMA's satellite facility. Audit team advised that documentation of this objective should be enhanced to ensure metric alignment and clarification of target to ensure that it reflects an increase in HHMs collected as opposed to a decrease in HHM being placed in landfill.

- Reviewed and discussed an organics objective that includes the enhancement of MCSWMA's year-round curbside organics collection program. As reported by EMR, MCSWMA currently utilizes a bag and tag yard waste collection program. This objective will offer curbside carts to residents for collection of yard waste. EMR stated that carts are currently on hand and stickers for these carts have been ordered. EMR reported that MCSWMA is currently awaiting approval by City of Muscatine regarding the proposed residential fee structure for program participation. EMR stated that this objective aligns nicely with their GHG objective regarding route efficiency improvements. EMR explained that the target selected is based on target reasoning and staff knowledge regarding yard waste volumes. EMR reported that in addition to yard-waste collection, MCSWMA provides an annual residential Christmas tree pickup program. Audit Team advised that the current metric should be updated to read *cart subscriptions* and the action plan should to be expanded to include current and future activities and to reflect an accurate time period revolving around city approval of proposed fee structure.

- Reviewed and discussed a recycling objective that includes collection of recyclables at City of Muscatine's Sports Complex. EMR explained that this objective was a result of public demand regarding the lack of available recycling options onsite. EMR reported that MCSWMA contracts with a third party for recycling collection within MCSWMA's service area. Contractor will provide carts that will be placed next to the trash cans throughout the complex. Muscatine will measure the number of gallons collected. Audit team advised that action plan needs to be updated to include current and future activities.

- Reviewed and discussed Action Plan, Monitoring and Measurement and discussed expanding and enhancing existing action plan documentation. Reviewed and discussed EMS procedures. Procedures will be reviewed on an annual basis.

- Reviewed and discussed internal audit. The internal audit was reviewed at the MCSWMA's initial external audit in May 2024. EMR explained that the next internal audit will commence prior to end of FY2025.

- Reviewed and discussed Reevaluation and modification – EMR provided examples of when reevaluation and modification was utilized. Audit team advised that while reevaluation and modification was demonstrated during the interview portion of the audit it was not always documented within the EMS documentation.

- Reviewed and discussed facility updates. EMR reported that there have been no facility updates since audit team was last onsite.

Explanation of Results

Partially Met – Objectives and Target
MCSWMA is required to ensure and document results and actions that demonstrate the EMS is making continuous improvement. Additionally, and per Iowa Code 455J.7(2) a, MCSWMA is required to demonstrate planning for the continuous improvement of solid waste management by appropriately and aggressively mitigating and documenting the environmental impacts of solid waste disposal. While continuous improvement was partially demonstrated throughout the interview portion of the audit, documented results and actions did not adequately reflect this requirement.

Opportunity for Improvement – Action Plans
In facilitating progress towards achieving objectives and targets, the EMS program specifies a process for creating and executing action plans. Action Plans must be set, documented, reviewed and kept current. As plans change or additional information becomes available, the Action Plans should be updated. While some gaps were clarified throughout the interview portion of the audit, documentation did not accurately depict current or future actions to lead MCSWMA's EMS towards designated Targets.

Opportunity for Improvement – Communication
As reported by EMR and Core Team at time of audit, the City of Muscatine is charged with approving all EMS procedures, however uploaded procedures did not indicate communication with the City of Muscatine as approved, signed and dated procedures were not found within Dropbox.