BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

BFI WASTE SYSTEMS OF NORTH AMERICA, LLC,	)	
Petitioner,	)	
v.	)	PCB No. 2025-044
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

CONSENT TO RECEIPT OF EMAIL SERVICE

I, the undersigned, authorize the service of documents on me by e-mail in lieu of receiving paper documents in the above-captioned proceeding. My primary e-mail address to receive service is ssievers@bhslaw.com. My secondary e-mail address is otreece@bhslaw.com.

DATED: January 30, 2025

Respectfully submitted,

Scott B. Sievers
Ill. Atty. Reg. No. 6275924
Brown, Hay & Stephens, LLP
P.O. Box 2459
205 S. Fifth Street
Springfield, Illinois 62705
(217) 544-8491 (telephone)
(217) 544-9609 (facsimile)
ssievers@bhslaw.com

BFI WASTE SYSTEMS
OF NORTH AMERICA, LLC,

Petitioner.

BY: 

Scott B. Sievers
Attorney for Petitioner

BFI Waste Systems of North America, LLC v. Illinois EPA
Pollution Control Board No. 2025-044

CERTIFICATE OF SERVICE

I, the undersigned, certify that I have served on the date of January 30, 2025, the attached **CONSENT TO RECEIPT OF EMAIL SERVICE** upon the following persons by depositing the document in a U.S. Postal Service mailbox, by the time of 5:00 p.m., with proper postage prepaid:

Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

VERIFICATION BY CERTIFICATION

Under penalties as provided by law pursuant to Section 1-109 of the Code of Civil Procedure, the undersigned certifies that the statements set forth in this instrument are true and correct, except as to matters herein stated to be on information and belief and as to such matters the undersigned certifies as aforesaid that he verily believes the same to be true.

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Petitioner,	)	
v.	)	PCB No. 2025-044
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

APPEARANCE

Pursuant to 35 Ill. Adm. Code 101 App. B, I hereby file my appearance in this proceeding on behalf of Petitioner BFI WASTE SYSTEMS OF NORTH AMERICA, LLC.

DATED: January 30, 2025

Respectfully submitted,

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BFI WASTE SYSTEMS
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Attorney for Petitioner

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

BFI WASTE SYSTEMS OF NORTH AMERICA, LLC,	)	
Petitioner,	)	
v.	)	PCB No. _____
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

PETITION FOR REVIEW OF ILLINOIS EPA DECISION

NOW COMES the Petitioner, BFI WASTE SYSTEMS OF NORTH AMERICA, LLC ("BFI"), by and through its attorney, Scott B. Sievers of Brown, Hay & Stephens, LLP, and for its petition for review by this honorable Board of a final decision of Respondent, ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, states the following:

I. PARTIES

1. Petitioner BFI Waste Systems of North America, LLC is a Delaware limited liability company duly authorized to conduct business within the State of Illinois.

2. Petitioner is authorized to bring this petition pursuant to 35 Ill. Adm. Code 105.204.

3. Respondent Illinois Environmental Protection Agency ("Illinois EPA" or "the Agency") is a statutorily created entity. *See* 415 ILCS 5/4(a).

II. JURISDICTION

4. The Pollution Control Board is a statutorily created entity. 415 ILCS 5/5(a).

5. The Pollution Control Board is authorized to conduct various proceedings, including proceedings upon petitions for review of Illinois EPA final determinations, pursuant to the Illinois Environmental Protection Act ("the Act") and Board regulations. *See* 415 ILCS 5/5(d); 35 Ill. Adm. Code 105.204(f).

III. PROCEDURAL HISTORY

6. On July 29, 2024, Illinois EPA issued a letter to Petitioner of its "post-closure care evaluation and determination for a closed hazardous waste management unit, the Phase I Landfill, at the above-referenced BFI – Davis Junction facility." (Ex. A (July 29, 2024, Illinois EPA letter) at Bates No. 000001).

7. In its July 29, 2024, letter, the Agency stated that

> Condition I.C.2 of the facility's current RCRA Post-Closure Permit states, post-closure care of the Phase I Landfill must be provided for at least thirty (30) years, until at least December 5, 2024. The Illinois EPA has evaluated the conditions of the site, as identified in this letter, and determined that it is necessary to continue post-closure care of the Phase I Landfill beyond December 5, 2024, for at least thirty (30) years in accordance with 35 Ill. Adm. Code 703.282. Additionally, the facility must modify the current RCRA Post-Closure Plan in order to address current and future environmental concerns identified in this letter.

(Ex. A (July 29, 2024, Illinois EPA letter) at Bates No. 000001). Illinois EPA further stated that

> In accordance with 35 Ill. Adm. Code 724.218(d)(4), **the Permittee must submit** to the Illinois EPA, within sixty (60) days of the date of this letter, **a Class 2 permit modification request to extend post-closure care** for the Phase 1 Landfill. In addition, the Class 2 permit modification request **must include a revision(s) to the post-closure plan** for the Phase I Landfill **to reflect the extension of post-closure care at the Phase I Landfill for at least 30 years.**

> If a Class 2 permit modification **request** is not timely received by the Illinois EPA, **the Illinois EPA will initiate a Class 2 permit modification of the RCRA Post-Closure Permit** pursuant to 35 Ill. Adm. Code 703.241, 703.270, 703.271, 703.282, and 703, Appendix A, E.2.

(Ex. A (July 29, 2024, Illinois EPA letter) at Bates No. 000002 (emphasis added)). The Agency then misleadingly stated that "[t]he **applicant** may appeal this final decision to the Illinois Pollution Control Board pursuant to Section 40 of the Act by filing a petition for a hearing within thirty-five (35) days after the date **of issuance** of the final decision," when Petitioner had not applied for the subject permit modification and thus was not the applicant and when Section 40 of the Illinois Environmental Protection Act provided for appeal "within 35 days after the date on which the Agency **served** its decision," not within 35 days after the **date of issuance** of the decision, as Illinois EPA falsely asserted. (Ex. A (July 29, 2024, Illinois EPA letter) at Bates No. 000002; *see* 415 ILCS 5/40(a)(1) (emphasis added)).

8. After obtaining an extension of the period to file its appeal, Petitioner appealed Illinois EPA's July 29, 2024, decision by filing its Petition for Review of Illinois EPA Decision on December 4, 2024, which this Board accepted on December 19, 2024. *See* Order of Dec. 19, 2024, in *BFI Waste Systems of North America, LLC v. Illinois EPA* (PCB No. 25-12).

9. On or about September 6, 2024, and in response to Illinois EPA's July 29, 2024, letter, Petitioner submitted to Illinois EPA a Class 2 Permit Modification application prepared on its behalf by Weaver Consultants Group.

10. On or about September 27, 2024, and in further response to Illinois EPA's July 29, 2024, letter, Petitioner submitted to Illinois EPA an updated Class 2 Permit Modification application prepared on its behalf by Environmental Information Logistics, LLC

to supersede the application prepared by Weaver Consultants Group and submitted on behalf of Petitioner on or about September 6, 2024.

11. On or about October 1, 2024, and in further response to Illinois EPA's July 29, 2024, letter, Petitioner submitted to Illinois EPA a Notice of Class 2 Permit Modification and Public Meeting.

12. On December 26, 2024, Illinois EPA issued a decision (hereafter "Final Decision") responding to Petitioner's September 27, 2024, Class 2 Permit Modification application and its October 1, 2024, Notice of Class 2 Permit Modification and Public Meeting. (Exhibit B).

13. A true and accurate copy of Illinois EPA's 62-page Final Decision that is the subject of this petition is Bates-numbered and attached hereto as Exhibit B. *See* 35 Ill. Adm. Code 105.210(a).

14. In its Final Decision, Illinois EPA admitted that its July 29, 2024, letter "required [Petitioner] to submit a request to extend the post-closure care period." (Ex. B (Final Decision) at Bates No. 000001). The Agency then stated it partially approved Petitioner's submittals with conditions and modifications, stating in pertinent part as follows:

> 1. In the subject Class 2 permit modification request, BFI requested to extend the post-closure care period for an additional ten (10) years. However as indicated in the Illinois EPA's July 29, 2024, letter, the Illinois EPA determined that the post-closure care period must be extended for an additional thirty (30) years or until such time as no unacceptable risks to human health and the environment is [*sic*] no longer present in the Phase I Landfill, **as determined by the Illinois EPA**.
> …
> 2. **Historically,** during the post-closure care period, the **Illinois EPA has accepted the facility's proposal to reduce financial assurance liability** based on the number of years of post-closure care that had been completed. **However, this reduction did not take into consideration the established long-term environmental threats at facilities with hazardous waste remaining on site.** The financial risk to the Illinois

> EPA and citizens of Illinois, should the Illinois EPA have to unexpectedly assume operation of the post-closure care of the facility, had not been appropriately accounted for. The Illinois EPA has evaluated the requirements for post-closure care, cost estimates, and financial assurance for the Phase I Landfill under 35 Ill. Adm. Code Part 724 and has determined that **a rolling 30-year post-closure care cost estimate** for the Phase I Landfill must be maintained by the facility, as required by 35 Ill. Adm. Code 724.217(a)(l) and 35 Ill. Adm. Code 703.282.
>
> 3. As previously required by the Illinois EPA's July 29, 2024, letter, and associated modifications, within sixty (60) days of the receipt of this letter, BFI must submit a revised post-closure cost estimate (in 2024 dollars) and financial assurance to reflect thirty (30) years of post-closure care in accordance with 35 III. Adm. Code 724.2 17.

(Ex. B (Final Decision) at Bates Nos. 000001–000004 (emphasis added)). Illinois EPA then again falsely states that its decision may be appealed to this Board "pursuant to Section 40 of the Act by filing a petition for a hearing within thirty-five (35) days after the date of **issuance** of the final decision" when Section 40 of the Illinois Environmental Protection Act actually provides for appeal "within 35 days after the date on which the Agency **served** its decision." (Ex. B (Final Decision) at Bates No. 000004 (emphasis added); 415 ILCS 5/40(a)(1) (emphasis added)).

15. Illinois EPA's Final Decision was served upon Petitioner by Certified Mail on January 3, 2025. *See* 35 Ill. Adm. Code 105.210(b).

16. As it is filed within 35 days of service upon Petitioner of the Final Decision, the instant petition is timely. *See* 5 ILCS 70/1.11; 415 ILCS 5/40(a)(1); 35 Ill. Adm. Code 101.300; 35 Ill. Adm. Code 105.206.

IV. BACKGROUND

17. Petitioner BFI Waste Systems of North America, LLC owns, operates, and is permittee of the Davis Junction Landfill in Ogle County, Illinois.

18. Davis Junction Landfill comprises three units, two of which accepted only municipal solid waste (Phases II and III) and one of which was a combined municipal solid waste and RCRA Subtitle C hazardous waste disposal facility. *In the Matter of: Petition of BFI Waste Systems of North America, Inc. for Waste Delisting*, 2008 WL 5156337, at *7 (PCB No. AS 08-55) (Dec. 4, 2008).

19. Only approximately two (2) percent of the waste disposed in the Phase I unit of the Davis Junction Landfill was hazardous waste. (Ex. B (Final Decision) at Bates No. 000013).

20. The Final Decision at issue concerns only Phase I of the Davis Junction Landfill ("Phase I Landfill"). (Ex. B (Final Decision) at Bates Nos. 000002–000005).

21. The Phase I unit of the Davis Junction Landfill (hereafter "BFI Davis Junction") operated from December 1976 to January 1983. *In the Matter of: Petition of BFI Waste Systems of North America, Inc. for Waste Delisting*, 2008 WL 5156337, at *7 (PCB No. AS 08-55) (Dec. 4, 2008); *see also* Ex. B (Final Decision) at Bates No. 000013).

22. Illinois EPA approved certification of closure of the BFI Davis Junction Phase I Landfill on December 5, 1984. (Ex. B (Final Decision) at Bates No. 000014; *In the Matter of: Petition of BFI Waste Systems of North America, Inc. for Waste Delisting*, 2008 WL 5156337, at *7 (PCB No. AS 08-55) (Dec. 4, 2008)).

23. Post-closure care of the BFI Davis Junction Phase I Landfill began December 5, 1984. (Ex. B (Final Decision) at Bates No. 000015). The applicable Illinois EPA permit for the Phase I Landfill provided for post-closure care of at least 30 years. Thirty (30) years after December 5, 1984, was December 5, 2014.

24. On October 21, 2014, Illinois EPA approved Petitioner's request for a Class 2 modification of the BFI Davis Junction Phase I Landfill permit (hereafter "2014 Modifications").

25. Illinois EPA approved the 2014 Modifications, including Petitioner's voluntary "extension of the post-closure care period for ten (10) years until December 5, 2024," as a Class 2 permit modification.

26. The 2014 Modifications approved by Illinois EPA provided that "[t]he Permittee must continue post-closure care for an additional ten (10) years or until December 5, 2024."

27. The 2014 Modifications approved by Illinois EPA specified that post-closure care included financial assurance for post-closure activities.

V. GROUNDS FOR APPEAL

28. Through its December 26, 2024, Final Decision, Illinois EPA informed Petitioner of its response to two (2) documents submitted by Petitioner:

> Submittal (B-l42R2-M-9) - A document entitled, "Post Closure Plan Update", dated September 27, 2024, and received by the Illinois EPA on September 30, 2024. The subject submittal was reviewed as a Class 2 permit modification request in accordance with 35 Illinois Administrative Code (Ill. Adm. Code) 703.280.
>
> Additional Information - A document entitled, "Notice of Class 2 Permit Modification and Public Meeting", dated October 1, 2024, and received by the Illinois EPA on October 4, 2024.

(Ex. B (Final Decision) at Bates No. 000001).

29. In its Final Decision, Illinois EPA acknowledged the documents were submitted in part to "meet the requirements in … the Illinois EPA's July 29, 2024, letter,

which required BFI to submit a request to extend the post-closure care period." (Ex. B (Final Decision) at Bates No. 000001).

30. In its Final Decision, Illinois EPA stated it had "reviewed the information contained in the subject submittals and hereby partially approves the subject submittals," but with the following conditions and modifications:

> 1. In the subject Class 2 permit modification request, BFI requested to extend the post-closure care period for an additional ten (10) years. However as indicated in the Illinois EPA's July 29, 2024, letter, the Illinois EPA determined that **the post-closure care period must be extended for an additional thirty (30) years or until such time as no unacceptable risks to human health and the environment is no longer present [*sic*] in the Phase I Landfill, as determined by the Illinois EPA.**
> …
>
> 2. … The Illinois EPA has evaluated the requirements for post-closure care, cost estimates, and financial assurance for the Phase I Landfill under 35 Ill. Adm. Code Part 724 and has determined that **a rolling 30-year post-closure care cost estimate for the Phase I Landfill must be maintained by the facility**, as required by 35 Ill. Adm. Code 724.217(a)(l) and 35 Ill. Adm. Code 703.282.
>
> 3. As previously required by the Illinois EPA's July 29, 2024, letter, and associated modifications, within sixty (60) days of the receipt of this letter, BFI must submit a revised post-closure cost estimate (in 2024 dollars) and financial assurance **to reflect thirty (30) years of post-closure care** in accordance with 35 III. Adm. Code 724.217.

(Ex. B (Final Decision) at Bates Nos. 000001–000004) (emphasis added).

31. The Agency attached to its Final Decision a summary of the changes it made to the Petitioner's permit, which repeatedly modify the permit language for post-closure care from "at least December 5, **2024**" to "at least December 5, **2054, or until such time as no unacceptable risks to human health and the environment are present in the Phase I Landfill, as determined by the Illinois EPA**." (Ex. B (Final Decision) at Bates No. 000007 (emphasis added)).

32. BFI appeals the Final Decision and its conditions and/or modifications of the submitted Class 2 Permit Modification request (1) to extend the post-closure care period by at least an additional thirty (30) years "or until such time as no unacceptable risks to human health and the environment are present in the Phase I Landfill, as determined by the Illinois EPA"; (2) to require Petitioner to maintain a "rolling 30-year post-closure care cost estimate for the Phase I Landfill"; and (3) to "submit a revised post-closure cost estimate (in 2024 dollars) and financial assurance to reflect thirty (30) years of post-closure care." (*See* Ex. B (Final Decision) at Bates Nos. 000001–000004).

33. Administrative agencies such as the Illinois EPA may only act pursuant to their statutory authority. *E.g.*, *Walsh v. Champaign Cnty. Sheriff's Merit Comm'n*, 404 Ill. App. 3d 933, 938 (4th Dist. 2010). Any action beyond that authority is void. *Id.*

34. This Board's regulations provide, in pertinent part, that "[p]ost-closure care for each hazardous waste management unit subject to the requirements of Sections 724.217 through 724.220 must begin after completion of closure of the unit and continue **for 30 years** after that date[.]" 35 Ill. Adm. Code 724.217(a)(1) (emphasis added). Notably, this section does not provide for a post-closure care period of "at least 30 years," but for "30 years"—no more and no less. *Id.* Section 724.217(a)(1) is the only provision within this Board's hazardous waste disposal facility regulations specifying the length of the post-closure care period. Consequently, this Board's regulations provide no basis for Illinois EPA to unilaterally extend the post-closure care period for Petitioner's Phase I Landfill beyond an initial 30-year post-closure care period, let alone impose a rolling, 30-year post-closure cost estimate and financial assurance obligation.

35. Subsection (a)(2) of 35 Ill. Adm. Code 724.217 provides a procedure for extending the post-closure care period for a hazardous waste landfill, but Illinois EPA has not followed that procedure with the BFI Davis Junction Phase I Landfill. That subsection provides as follows:

> 2) Any time preceding partial closure of a hazardous waste management unit subject to post-closure care requirements or final closure, or any time during the post-closure care period for a particular unit, the Board may, in accordance with the permit modification procedures of 35 Ill. Adm. Code 702, 703, and 705, do either of the following:
>
> > A) Shorten the post-closure care period applicable to the hazardous waste management unit or facility if all disposal units have been closed and the Board has found by an adjusted standard issue pursuant to Section 28.1 of the Act and 35 Ill. Adm. Code 101 and 104 that the reduced period is sufficient to adequately protect human health and the environment (e.g., leachate or groundwater monitoring results, characteristics of the waste, application of advanced technology or alternative disposal, treatment, or re-use techniques indicate that the hazardous waste management unit or facility is secure); or
> >
> > B) Extend the post-closure care period applicable to the hazardous waste management unit or facility if **the Board** has found by an adjusted standard issue pursuant to Section 28.1 of the Act and 35 Ill. Adm. Code 101 and 104 that the extended period is necessary to adequately protect human health and the environment (e.g., leachate or groundwater monitoring results indicate a potential for migration of hazardous wastes at levels that may be harmful to human health and the environment).

35 Ill. Adm. Code 724.217(a)(2) (emphasis added).

36. While subsection (2)(B) of 35 Ill. Adm. Code 724.217(a) allows for the extension of the post-closure care period, it only does so if the Pollution Control Board has found through an adjusted standard issue that the extended period is necessary to adequately protect human health and the environment; it does not authorize Illinois EPA to unilaterally extend the post-closure care period beyond the 30-year period set forth in 35 Ill. Adm. Code 724.217(a)(1).

37. Based upon logic and common sense, the legal maxim *expressio unius est esclusio alterius* provides that, where a statute or regulation lists things to which it refers, there is an inference that all omissions should be understood as exclusions. *See People v. Commonwealth Edison Company,* 1985 WL 21568, at *3 (PCB 83-218) (Oct. 24, 1985); *Bridgestone/Firestone, Inc. v. Aldridge,* 179 Ill. 2d 141, 151–52 (Ill. 1997); *City of St. Charles v. Illinois Labor Relations Bd.*, 395 Ill. App. 3d 507, 510 (2d Dist. 2009) (rule of construction applies to administrative regulations).

38. Applying this rule of construction to 35 Ill. Adm. Code 724.217, the inclusion of a means in subsection (a)(2)(B) to extend the post-closure care period for hazardous waste management units or facilities after this Board has found, by an adjusted standard issue, that the extended period is necessary to adequately protect human health and the environment without setting forth any other means to extend it gives rise to the inference that other means of so extending the post-closure care period, including Illinois EPA doing so unilaterally, are excluded.

39. Further, the U.S. EPA Guidance documents cited by Illinois EPA in support of its Final Decision are not binding law. *See, e.g., In the Matter of: Petition of Waste Management of Illinois, Inc. for RCRA Waste Delisting under 35 Ill. Adm. Code 720.122 for Solid Treatment Residual For CID Recycling And Disposal Facility Biological Liquid Treatment Center*, 2005 WL 3579143, at *9; *cf.* 5 ILCS 100/1-70 (Illinois EPA guidance documents do not constitute a rule under Illinois Administrative Procedure Act, 5 ILCS 100/1-1 *et seq.*) The fact that U.S. EPA Guidance documents do not constitute law is acknowledged by the federal agency itself in a footnote on the second page of the 2016 U.S. EPA Guidance attached as an exhibit to Illinois EPA's July 29, 2024, Decision:

> This document is solely intended to provide guidance to federal and state regulators on implementing the RCRA Subtitle C regulations and to provide policy advice and recommendations. As such, **this document does not impose any legally binding requirements, and the use of such phrases as "guidance,"** "recommend," "may," "should," and "can," **are not intended to impose or connote any legal obligations.** Accordingly, **this document** does not change or substitute for any law, regulation, or any other legally binding requirement and **is not legally enforceable.**

(Ex. A (July 29, 2024, Decision) at Bates No. 000006 n.2) (emphasis added).

40. Consequently, Petitioner petitions the Board to find that Illinois EPA has exceeded its lawful authority through its Final Decision imposing conditions and/or modifications upon the submitted Class 2 Permit Modification request (1) to extend the post-closure care period by at least an additional thirty (30) years "or until such time as no unacceptable risks to human health and the environment are present in the Phase I Landfill, as determined by the Illinois EPA"; (2) to require Petitioner to maintain a "rolling 30-year post-closure care cost estimate for the Phase I Landfill"; and (3) to "submit a revised post-closure cost estimate (in 2024 dollars) and financial assurance to reflect thirty (30) years of post-closure care." Petitioner further petitions the Board to find that no U.S. EPA Guidance document, provision of the Illinois Environmental Protection Act, or regulation promulgated under the Act and cited by the Agency in its Final Decision provides Illinois EPA with the authority it attempts to assert through its Final Decision and that, therefore, the Agency's Final Decision is void.

WHEREFORE, Petitioner, BFI WASTE SYSTEMS OF NORTH AMERICA, LLC, petitions this honorable Board to (a) order Illinois EPA to file the Agency record of decision with the Clerk in accordance with 35 Ill. Adm. Code 105.1116; (b) stay Illinois EPA's December 26, 2024, Final Decision—including its requirement that Petitioner submit a revised post-closure cost estimate (in 2024 dollars) and financial assurance to reflect thirty

(30) years of post-closure care—pending hearing on the instant petition; (c) hold a hearing to review Illinois EPA's December 26, 2024, Final Decision; (d) find Illinois EPA erred and acted without lawful authority in its December 26, 2024, Final Decision; (e) find Illinois EPA's December 26, 2024, Final Decision to be void as a matter of law; and (f) grant Petitioner such other and further relief as appropriate.

DATED: January 30, 2025

Respectfully submitted,

Scott B. Sievers
Ill. Atty. Reg. No. 6275924
Brown, Hay & Stephens, LLP
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BY: 

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Attorney for Petitioner

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 · (217) 782-3397
JB PRITZKER, GOVERNOR JAMES JENNINGS, INTERIM DIRECTOR

217/524-3301

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

9589 0710 5270 0389 7098 43

JUL 29 2024

BFI Waste Systems of North America, LLC
Attn: Matthew Healy
26 West 580 Schick Road
Hanover Park, IL. 60103

PLAINTIFF'S EXHIBIT
A

Re: 1418210001 – Ogle County
BFI – Davis Junction Landfill – Phase I
ILD980700751
Log No. B-142R2
RCRA Permit File - 24A
Permit Correspondence

Dear Mr. Healy,

The purpose of this letter is to inform BFI Waste Systems of North America, LLC (BFI) of the Illinois EPA's post-closure care evaluation and determination for a closed hazardous waste management unit, the Phase I Landfill, at the above-referenced BFI - Davis Junction facility. BFI has been conducting post-closure care activities at the Phase I Landfill since December 5, 1984, the date Illinois EPA accepted certification of closure, under the requirements of the facility's RCRA Post-Closure Permit (Log Nos. B-142, B-142R, and B-142R2).

The Illinois EPA has conducted a review and evaluation of the post-closure status for the Phase I Landfill to determine whether the environmental conditions and associated regulatory requirements identified at this site meet the standards of the Illinois Environmental Protection Act (Act), Title 35 Illinois Administrative Code (35 Ill. Adm. Code) Subtitle G, Subtitle C of the Resource Conservation and Recovery Act (RCRA), and the USEPA's "Guidelines for Evaluating the Post-Closure Care Period for Hazardous Waste Disposal Facilities under Subtitle C of RCRA", dated December 15, 2016 (2016 USEPA Guidance). In addition, USEPA's guidance "Implementing Climate Resilience in Hazardous Waste Permitting Under the Resource Conservation and Recovery Act (RCRA)", dated June 5, 2024 (June 5, 2024, USEPA Guidance) is also referenced in this letter. A copy of the USEPA 2016 Guidance and 2024 Guidance are attached to this letter.

Condition I.C.2 of the facility's current RCRA Post-Closure Permit states, post-closure care of the Phase I Landfill must be provided for at least thirty (30) years, until at least December 5, 2024. The Illinois EPA has evaluated the conditions of the site, as identified in this letter, and determined that it is necessary to continue post-closure care of the Phase I Landfill beyond December 5, 2024, for at least thirty (30) years in accordance with 35 Ill. Adm. Code 703.282. Additionally, the facility must modify the current RCRA Post-Closure Plan in order to address current and future environmental concerns identified in this letter.

The Illinois EPA's determination to require BFI to extend post-closure care for the Phase I Landfill is based on the following:

1. Leachate: The ongoing generation of leachate from the Phase 1 Landfill requires continued leachate collection and management under post-closure care in accordance with 35 Ill. Adm. Code 724.410(b)(2). According to BFI's annual hazardous waste reports from Year 2019 through Year 2023 (the most current available 5-year data), reported volumes of leachate generated from the Phase I Landfill ranged between 79,400 to 112,146 gallons per year (average of 97,229 gallons per year). The leachate generated was 100,000 gallons in 2023 and 290,000 gallons in 2003. A large decline occurred between 2010 and 2013, but levels remain steady for the last 10 years.

   According to the 2016 USEPA Guidance, monitoring for leachate generation serves as the most effective way of examining the integrity of the waste management unit (e.g., it can suggest a cover or liner failure when leachate is detected late in the post-closure care period).

2. Nature of waste in the landfill: The wastes contained in the Phase I Landfill are considered RCRA hazardous wastes due to 2% of the disposed wastes being hazardous materials. The hazardous materials include 96% heavy metal sludges; 4% spent solvent still bottoms, spent solvent sludges, petroleum refining residues, rodenticides glycol, polystyrene, and pthalic anhydride.

   Since hazardous wastes remain at the Phase I Landfill, and leachate and gas generation persist, the Phase I Landfill is susceptible to long-term risks and requires continued maintenance and management under post-closure care.

3. Unit Type/Design: The existing cover system design for the Phase I Landfill, from top to bottom is: 1) a 36-inch thick final cover protective layer to support vegetation (the top 6 inches (minimum) of which is topsoil), 2) a geotextile filter fabric, 3) a geonet drainage layer, 4) a 40-mil polyethylene geomembrane, and 5) a 24-inch compacted clay layer composed of materials for the old cover materials used for the historical landfill beneath the Phase I Landfill. The existing leachate collection system consists of 15 leachate extraction points on 250-to-300-foot centers. As noted in the 2016 USEPA Guidance, a viable cover is the most important mechanisms in preventing leachate generation and, ultimately, a release of contaminants to the environment. Maintenance and monitoring of the cover system must continue to preserve its integrity.

4. Landfill Gas: After nearly forty (40) years of post-closure care, landfill gas continues to be generated, and therefore, a landfill gas monitoring/management program must continue at Phase I Landfill. The gas collection system must remain operational and be maintained.

5. Long-Term Care (also known as Long-Term Stewardship): The establishment and maintenance of physical and legal controls at the Phase I Landfill are necessary to

prevent exposure to the hazardous waste and hazardous constituents abandoned within the landfill. The Illinois EPA has determined that long-term monitoring, including maintenance of the cover system and groundwater monitoring system, control of any liquids (leachate) and landfill gas, and restrictions of future land uses must be established at the site. These measures must continue to minimize future exposure and potential hazardous waste release to the environment in accordance with 35 Ill. Adm. Code 724.410(b)(1), Section 12(a), 21(n) and 39(g) of the Act and the 2016 USEPA Guidance.

6. Climate Change Consideration: Long-term care of the hazardous waste management unit mentioned above must also consider impacts from climate change. The USEPA June 5. 2024 Guidance requires the authorized states to incorporate climate change considerations into RCRA permitting program. The June 5, 2024, guidance requires that, "RCRA permits will include the conditions that the permitting Authority determines are necessary to ensure that the facility operation will be compliant and protective in the face of such impacts." Hazardous wastes remain at the Phase I Landfill, therefore, vulnerability screening and assessment for the any potential climate change impacts must be incorporated into the long-term care for the Phase I Landfill.

In accordance with 35 Ill. Adm. Code 724.218(d)(4), the Permittee must submit to the Illinois EPA, within sixty (60) days of the date of this letter, a Class 2 permit modification request to extend post-closure care for the Phase 1 Landfill. In addition, the Class 2 permit modification request must include a revision(s) to the post-closure plan for the Phase I Landfill to reflect the extension of post-closure care at the Phase I Landfill for at least 30 years.

If a Class 2 permit modification request is not timely received by the Illinois EPA, the Illinois EPA will initiate a Class 2 permit modification of the RCRA Post-Closure Permit pursuant to 35 Ill. Adm. Code 703.241, 703.270, 703.271, 703.282, and 703, Appendix A, E.2.

This action shall constitute the Illinois EPA's final action for the requirements described above. The applicant may appeal this final decision to the Illinois Pollution Control Board pursuant to Section 40 of the Act by filing a petition for a hearing within thirty-five (35) days after the date of issuance of the final decision. However, the 35-day period may be extended for a period of time not to exceed ninety (90) days by written notice from the applicant and the Illinois EPA within the initial 35-day appeal period. If the owner or operator wishes to receive a 90-day extension, a written request that includes a statement of the date the final decision was received, along with a copy of this decision, must be sent to the Illinois EPA as soon as possible.

For information regarding the request for an extension, please contact:

Illinois Environmental Protection Agency
Division of Legal Counsel
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276
217/782 5544

For information regarding the filing of an appeal, please contact:

Illinois Pollution Control Board, Clerk
State of Illinois Center
100 West Randolph Street, Suite 11 500
Chicago, IL 60601
312/814 3620

Work required by this letter or the regulations may also be subject to other laws governing professional services, such as the Illinois Professional Land Surveyor Act of 1989, the Professional Engineering Practice Act of 1989, the Professional Geologist Licensing Act, and the Structural Engineering Licensing Act of 1989. This letter does not relieve anyone from compliance with these laws and the regulations adopted pursuant to these laws. All work that falls within the scope and definitions of these laws must be performed in compliance with them. The Illinois EPA may refer any discovered violation of these laws to the appropriate regulating authority.

Any questions regarding this letter, please contact Jacob Nutt at 217/524-7048.

Sincerely,

Jacqueline M Cooperider

Jacqueline M. Cooperider, P.E.
Permit Section Manager
Bureau of Land

JMC:JDN:1418210001-B142R2-Corr

Attachments: USEPA Guidelines for Evaluating the Post-Closure Care Period for Hazardous Waste Disposal facilities under Subtitle C of RCRA

USEPA June 5, 2024, Guidance: Implementing Climate Resilience in Hazardous Waste Permitting Under the Resource Conservation and Recovery Act (RCRA)

cc: Norberto Gonzalez, Emily Keener, U.S. EPA – Region V
James Hitzeroth, BFI Waste Systems of North America, LLC

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 15 2016

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

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EMERGENCY MANAGEMENT

MEMORANDUM

SUBJECT: Guidelines for Evaluating the Post-Closure Care Period for Hazardous Waste Disposal Facilities under Subtitle C of RCRA

FROM: Barnes Johnson, Director
Office of Resource Conservation and Recovery

TO: RCRA Division Directors, Regions 1-10
RCRA Enforcement Managers, Regions 1-10
Regional Counsels, Regions 1-10

Purpose

The purpose of this memorandum is to provide guidance to assist regulators in evaluating conditions at hazardous waste disposal facilities subject to Subtitle C of the Resource Conservation and Recovery Act (RCRA) that are approaching the end of the original 30-year post-closure care period, and in determining whether the post-closure care period should be adjusted or allowed to end. Any such determinations must ensure ongoing protection of human health and the environment. This guidance also provides information to assist facility owners and operators in preparing documentation to inform the regulators' evaluations.

This guidance has the additional benefit of helping regulated entities understand what may be necessary to ensure protection of human health and the environment at units subject to post-closure care requirements. This enables waste generators and handlers to have a better understanding of the costs associated with land disposal so they can better evaluate long-term waste management strategies, including waste minimization.

Introduction and Need for Guidance

The RCRA Subtitle C hazardous waste management regulations establish a post-closure care[1] period for certain hazardous waste treatment, storage and disposal facilities, and specify post-closure care activities. The post-closure care requirements apply to land disposal units (landfills, land treatment units,

[1] Post-closure care can be generally described as the period of time after closure during which owners and operators conduct specified monitoring and maintenance activities to preserve the integrity of the containment system and to continue to prevent or control releases of contaminants.

and surface impoundments) that leave hazardous waste in place after closure. Post-closure care also applies to some non-land-based units (*e.g.*, certain tanks or containment buildings) that cannot fully decontaminate or "clean close" [1] all equipment, structures, and soils. Post-closure care activities consist of two primary responsibilities: monitoring and reporting, and maintaining the integrity of the waste containment systems (see 40 CFR 264/265.117). Post-closure care for each hazardous waste management unit must begin after completion of closure of the unit and normally continue for 30 years after that date; the regulations also provide discretion to the permitting authority to adjust the length of the post-closure care period.

Many facilities around the country are approaching the end of the initial post-closure care period established in their RCRA permits or post-closure plans. Accordingly, questions have arisen about how to evaluate conditions at these facilities to determine whether the post-closure care period needs to be adjusted – that is, extended, or whether a 30-year post-closure care period is protective for a specific unit. In response, the Office of Resource Conservation and Recovery has developed this guidance recommending criteria to consider when evaluating facilities nearing the end of the post-closure care period [2] and thus ensure that human health and the environment will continue to be protected by the resulting determination. It also sets forth a recommended process for evaluating the post-closure care period in a timely fashion. Finally, this guidance discusses additional considerations that may be important for decision-makers when evaluating the adequacy of the post-closure care period.

This guidance supplements existing guidance on the post-closure care period, including the Technical Evaluation Criteria and Site-Specific Factors to Consider in Determining the Length of the Post-Closure Care Period, presented in the Appendix B of the *RCRA Guidance Manual for Subpart G Closure and Post-Closure Care Standards and Subpart H Cost Estimating Requirements* of January 1987.[3]

Regulatory Overview of the Post-Closure Care Period

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[1] The RCRA Subtitle C regulations generally provide for two types of closure: closure by removal or decontamination (referred to as "clean closure") and closure with waste in place. The premise of clean closure is that all hazardous wastes have been removed from a given RCRA unit and any releases at or from the unit have been remediated. More information on clean closure is available in *Memorandum: Risk-Based Clean Closure* from Elizabeth Cotsworth, Acting Director Office of Solid Waste, March 16, 1998.

[2] This document is solely intended to provide guidance to federal and state regulators on implementing the RCRA Subtitle C regulations and to provide policy advice and recommendations. As such, this document does not impose any legally binding requirements, and the use of such phrases as "guidance," "recommend," "may," "should," and "can," are not intended to impose or connote any legal obligations. Accordingly, this document does not change or substitute for any law, regulation, or any other legally binding requirement and is not legally enforceable. The policies described in this document may not apply to a particular situation based upon the circumstances, and EPA may deviate from or revise any of the policies described in this document without prior notice to the public. While EPA has made every effort to ensure the accuracy of the discussion in this document, the obligations of the regulated community are determined by statutes, regulations or other legally binding requirements. In the event of a conflict between the discussion in this document and any statute or regulation, this document would not be controlling.

[3] OSWER Policy Directive #9476.00-5, EPA/530-SW-87-10.

EPA regulations[4] require that the post-closure care period for each hazardous waste management unit subject to the requirements of 40 CFR 264/265.117 through 264/265.120 must begin after completion of closure of the unit and continue for 30 years after that date. Still, the regulations' identification of a default 30-year post-closure care period does **not** reflect a determination by EPA that 30 years of post-closure care is necessarily sufficient to eliminate potential threats to human health and the environment in all cases. Nor is the full 30-year period always necessary. In fact, the regulations provide for a permit authority to conduct a case-by-case review of the post-closure care period and establish arrangements to adjust the length of the post-closure care period on a facility or unit-specific basis, where the record supports a determination that the revised post-closure care period will remain protective of human health and the environment.[5]

The regulations provide that the decision to alter the length of the post-closure care period can be made at any time preceding *partial closure*[6] of a hazardous waste management unit subject to post-closure care; at any time preceding *final closure*[7] of a facility; or at any time during the post-closure care period for a particular unit. For permitted facilities, such a decision must be made through the permit renewal or modification procedures in parts 124 and 270 of the regulations. For interim status facilities, adjustment to the post-closure care period must be made in accordance with § 265.118(g).

According to § 264.117 the post-closure care period may be modified under certain circumstances provided the modifications are protective of human health and the environment:

- The post-closure care period may be shortened where "the reduced period is sufficient to protect human health and the environment (*e.g.*, leachate or ground-water monitoring results, characteristics of the hazardous wastes, application of advanced technology, or alternative disposal, treatment, or re-use techniques indicate that the hazardous waste management unit or facility is secure)."

- The post-closure care period may be extended where "the extended period is necessary to protect human health and the environment (*e.g.*, leachate or ground-water monitoring results indicate a potential for migration of hazardous wastes at levels which may be harmful to human health or the environment)."

The provisions for interim status facilities are similar [§§ 265.117 and 265.118(g)].

For more details on particularly relevant portions of the federal RCRA hazardous waste regulations, see Appendix A.

Criteria to Consider for Evaluating the Post-Closure Care Period

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[4] 40 CFR 264.117 (for permitted facilities) and 265.117 (for interim status facilities)

[5] EPA explained this approach early in the RCRA program. *See* 45 Fed. Reg. 33197 (May 19, 1980); *see also* 47 Fed. Reg. 32287-88 (July 26, 1982); 46 Fed. Reg. 2819 (Jan. 12, 1981).

[6] *Partial closure* is defined in 40 CFR 260.10 as "the closure of a hazardous waste management unit in accordance with the applicable closure requirements of parts 264 and 265 of this chapter at a facility that contains other active hazardous waste management units. For example, partial closure may include the closure of a tank (including its associated piping and underlying containment systems), landfill cell, surface impoundment, waste pile or other hazardous waste management unit, while other units of the same facility continue to operate."

[7] *Final closure* is defined in 40 CFR 260.10 as "the closure of all hazardous waste management units at the facility in accordance with all applicable closure requirements so that hazardous waste management activities under parts 264 and 265 of this chapter are no longer conducted at the facility unless subject to the provisions in § 262.34."

An overarching consideration in determining whether to extend the post-closure care period, or allow it to end, is the inherent uncertainty associated with the long-term presence of hazardous waste in the unit. Because many hazardous wastes degrade slowly or do not degrade under containment in these units, the continued presence of hazardous waste in the unit (*i.e.*, any case other than clean closure) indicates the potential for unacceptable impacts on human health and the environment in the future if post-closure care is not maintained. For instance, there are often uncertainties in whether controls will continue to function as planned and whether future activities will lead to unplanned exposures to human and environmental receptors. Even if there is no current evidence of actual releases from the facility, significant factors can change over time. For example, groundwater flow can change direction due to the sequencing of dry and wet years, pumping at municipal water supply or other well fields, or shifting gradients resulting from seasonal variations or tidal influences. Landfill components, such as caps and liners (which have a finite design life), can degrade over time, especially if maintenance is discontinued. Exposure pathways that have been eliminated by means of an engineered control may be reopened (*e.g.*, if animals burrow through the cap). Thus, continued monitoring and maintenance activities may be appropriate unless or until it can be demonstrated that site-specific conditions adequately minimize the risk that contaminants will migrate from the unit (*e.g.*, site geology/hydrogeology) or that, in the event the engineering controls fail, a release would not pose an unacceptable risk to human health and the environment. This section provides recommended criteria that can be used to evaluate site-specific conditions and associated risks or remaining uncertainties in determining whether to adjust the post-closure care period.

These criteria can also be periodically used to evaluate whether activities in the post-closure plan should be amended. For instance, if the regulator determines it is necessary to extend the post-closure care period, these criteria can be used to determine if the frequency of one or more post-closure care monitoring requirements could be reduced during that extended timeframe. Each criterion is not necessarily applicable for every unit in post-closure care, for example, the "Gas Collection System Integrity" criterion would not apply to units without a gas collection system. The questions provided under each criterion are intended to help identify potential threats to human health and the environment. However, they do not all need to be answered in order to make a decision concerning the appropriate post-closure care period and the monitoring/maintenance activities.

Waste Treatment: Knowing whether the hazardous waste was disposed prior to the effective date of the Land Disposal Restrictions (LDR) program is an important piece of information when evaluating site-specific conditions. Hazardous waste treatment that destroys harmful contaminants or reduces toxicity of the waste before placement in a land disposal unit provides a more lasting form of groundwater protection than waste containment alone. Similarly, through a process called stabilization or immobilization, metal contaminants – that cannot be treated – can be chemically and physically solidified or bound into the wastes that contain them (*e.g.*, through chemical fixation). Thus, reducing the mobility or leachability of hazardous constituents in a waste is another means of achieving LDR's groundwater protection goal. Relevant questions for this criterion include:

- Were all the wastes pre-treated in accordance with the treatment standards of the LDR program or does the unit contain wastes that were placed on the land prior to the effective dates of the LDR rules?

EPA recommends reviewing the waste analysis data for treated wastes in the land disposal unit.

Nature of Hazardous Wastes Remaining in the Unit: The current properties of the hazardous waste (*e.g.*, degradation, solubility, liquid-to-solid ratio) provide an important indication of the waste's ability to migrate or disperse in the environment.

- What is the degree of risk (*e.g.*, exposure pathways, probability of exposure) presently associated with the wastes in the unit?
  - Are the wastes highly toxic?
  - Do they degrade into substances that are more or less toxic, or non-toxic?
  - Are there indications that the waste might become incompatible with the liner?
- What is the potential for adverse impacts from releases based on the current understanding of contaminant fate and transport considerations (*e.g.*, presence of persistent, bioaccumulative contaminants, as compared to biodegradable contaminants; constituent speciation(s); and leaching profiles)?
- Is the waste in a stable state? Are there indications that the waste may become unstable?

EPA recommends that current data from regulatory standards be used for comparison to facility-specific performance goals articulated in the post-closure plan, and that, as necessary, the plan be updated to account for any new information on toxicity and carcinogenicity. EPA also recommends reviewing and possibly updating the list of constituents to analyze, since scientific understanding of constituents of concern may change over time. In addition, the data gathered should include an analysis of potential degradation products as well as of the types of wastes known to have been placed in the unit(s).

Unit Type/Design: The main objective of the disposal units is the containment of the hazardous waste. Thus, emphasis should be placed on the unit's ability to contain hazardous wastes over the long term.

- Is the unit, for example, a landfill, a surface impoundment, or a closed tank with residual contamination?
- Does the unit meet the minimum technology requirements (*e.g.*, double liners, leachate collection system)? Or was the unit already in existence at the time these requirements were promulgated and closed before retrofitting?
- To what extent does the overall design and construction of the unit minimize the need for long-term maintenance, resist the generation of leachate and emissions, and contain any remaining waste in perpetuity?

It is recommended that the permitting authority consider any unit-specific design, in concert with applicable closure and post-closure care requirements, when evaluating whether adjustment of the post-closure care period is warranted to protect against any potential impact on human health and the environment. There can be circumstances in which continuing to maintain unit-specific controls may be necessary to protect human health and the environment, particularly if the unit pre-dated the minimum technology requirements; this could support a decision to extend the post-closure care period. Conversely, there might be circumstances where the overall design and construction of the unit minimize the need for long-term maintenance and could support a decision to shorten or end the post-closure care period.

Leachate: The leachate collection and removal system controls leachate build-up on the liner, working in conjunction with the liner's barrier system to minimize the potential for groundwater contamination.

Monitoring for leachate generation serves as the most effective way of examining the integrity of the waste management unit (*e.g.*, it can suggest a cover or liner failure when leachate is detected late in the post-closure care period). [8]

- Will the integrity and functionality of the leachate collection system, leachate generation rate, and leachate quality remain adequate to prevent harm to human health or the environment in the absence of post-closure care?
- Can the facility owner or operator show through monitoring/modeling and/or statistical analysis that the leachate would not pose a threat to human health and the environment because it would not exceed applicable standards at compliance or exposure points?
- Is it likely those standards will be exceeded in the future, for example, through formation and release of degradation products? Do the data demonstrate that there are no increasing trends in the concentration of leachate constituents?
- Can the facility owner or operator demonstrate that maintenance and operation of the leachate collection system can be ceased without posing a threat to human health and the environment?

EPA recommends that potential impacts from changes in leachate characteristics and generation rate that could result from discontinued maintenance be considered.

Groundwater: Groundwater monitoring serves as the primary means of detecting leachate releases and groundwater contamination. It is important that groundwater analytical results, adequacy and reliability of the groundwater-monitoring network, and groundwater-monitoring well integrity be evaluated before the post-closure care period nears its end.

Groundwater should not exceed risk-based concentrations for a reasonable exposure scenario (or point of exposure) using currently acceptable risk assessment methods and up-to-date risk-based levels and scenarios. If the evaluation determines that unacceptable risk exists, these risks should be addressed. The risk evaluation should consider reasonable current or future groundwater use in the general area of the site (*e.g.*, if a drinking water source is located nearby).

Review of the groundwater monitoring system should have been done as part of operation and maintenance inspections over time. Evaluation of the groundwater monitoring network should refer to the most recent operation and maintenance inspection. The well network evaluation should look at groundwater flow direction, well construction, and placement relative to groundwater flow direction.

[8] "If leachate is generated late in the post-closure care period, this could suggest a cover or liner failure warranting an extension of the post-closure care period." See page B-13 of the RCRA Guidance Manual for Subpart G Closure & Post-Closure Care Standards and Subpart H Cost Estimating Requirements, EPA/530-SW-87-010 (January, 1987).

- Is groundwater quality in compliance with current standards?
- Have there been changes or are changes anticipated in land use/groundwater use that could change the applicable standards (*e.g.*, introduction of agricultural irrigation to an area) or the directional flow (*e.g.*, sequencing of dry and wet years, pumping at municipal water supply or other well fields, or shifting gradients resulting from seasonal variations or tidal influences)?
- Do the data indicate any trend in the concentration of analytes in groundwater?
- Has an expanded list of analytes (*e.g.*, selected from Appendix VIII of 40 CFR part 261) been considered for analysis within a reasonable time frame?
- Have the monitoring wells been maintained to provide valid data, for example, no well screen occlusion?

Siting and Site Geology/Hydrogeology: Relevant facility location characteristics (which might have changed since the post-closure plan was approved) may include proximity to vulnerable areas such as residential areas and surface and drinking water sources. The current and reasonably anticipated future land use of the facility and surrounding properties may also be relevant. Location in potentially vulnerable areas increases the likelihood and potential severity of releases. For example, if units are located in areas prone to flooding or with a high water table, it may be appropriate for reviewers to consider the potential for continuing risks to surface water in evaluating whether to modify the post-closure care period. Conversely, units located in areas not prone to flooding, or at great distance from the water table, might have less need for long-term maintenance. Additional hydrologic and geologic conditions such as wetlands and earthquake zones, unstable soils, and areas at risk for subsurface movement could have changed since a unit first entered post-closure care and might also need to be taken into account. Proximity to residential areas can also present unique considerations. It is also appropriate to consider whether facility conditions minimize the potential for adverse impacts on local populations if there is a release from the unit. [9]

[9] If a unit managing vapor-forming chemicals has releases to the environment, it creates the potential for vapor intrusion issues to neighboring communities due to migrating plumes of contaminated groundwater or migrating soil gases, even when the community is some distance away. Consider evaluating risks from subsurface intrusion of toxic constituents (*e.g.*, vinyl chloride from aerobic degradation of perchloroethylene/trichloroethylene), or landfill gases such as methane and hydrogen sulfide, into buildings or structures located near the unit in post-closure care. See the *Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air*, June 2015.

- Does the site geology include subsurface strata that might contain or retard migration?
- What is the distance to the groundwater table, bearing in mind seasonal fluctuations, and the proximity of any useable aquifers?
- Is the unit located in a dry climate that provides minimal precipitation?
- Is the pattern of land use changing or likely to change in the future in a way that would bring people closer to or farther away from the facility?
- Have zoning laws changed?
- Is there a sizable buffer zone around the facility that could limit human activity near the site into the future?
- What is the distance to sensitive receptors for groundwater flow and emissions?
- Could the distance to sensitive receptors change under reasonably foreseeable future conditions, as reflected, for example, in land use development plans for the area?
- Is there the potential for impact on surface water quality?
- Have new potential exposure pathways been identified and evaluated? For example, vapor intrusion had not been identified as a potential exposure pathway at the time many permits were issued.[11]

In addition, EPA recommends that the potential effects of climate change be taken into account in making these assessments.[10] For example, flooding from more intense and frequent storms and sea-level rise may lead to contaminant releases from units subject to post-closure care requirements by transport of contaminants through surface soils, groundwater, surface waters and/or coastal waters. Saltwater intrusion and increased groundwater salinity in coastal aquifers may increase the permeability of clay liners installed at waste sites, such as landfills. Changes in precipitation patterns and temperature may also adversely affect the performance and efficacy of engineering controls.

Facility History: All waste management units (during active life or in post-closure care) must be adequately managed to prevent releases of contaminants to the environment. A well-managed facility is more likely to maintain its structural integrity. Good compliance records, routine maintenance and inspections, emergency procedures to handle natural disasters, and prompt and efficient response to spills and other incidents, are some of the management practices that help demonstrate whether the unit has been adequately managed.

[10] For more information on climate change adaptation consult the "Climate Change Adaptation Technical Fact Sheet: Landfills and Containment as an Element of Site Remediation," EPA 542-F-14-001 (May 2014).

- From the facility records (including frequency of all maintenance activities), to what extent did the unit closure design and activities described in the closure plan and closure certification minimize the need for ongoing monitoring and maintenance?
- Has past noncompliance with regulatory requirements contributed to present environmental conditions that warrant an extension of the post-closure care period (*e.g.*, non-compliance with current LDR standards)?
- Is there a history of any releases and what are current contaminant levels?
- If a release did occur, have corrective measures been successfully implemented and has subsequent monitoring shown no evidence of a recurrence?
- Are analyses being conducted for the correct parameters?
- How complete and accurate is the facility operating record?
- Is there confidence that the record accurately reflects spills, releases, lapses in maintenance or other events that may have a bearing on potential facility impacts?
- To what extent have closure activities minimized or eliminated escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, surface waters or the atmosphere during the post-closure care period?

In order to fully understand the facility history, EPA recommends that the permit authority also review the closure plan and certification of closure. [11]

Gas Collection System Integrity: For units that have a landfill gas collection system, it is important to analyze the extent to which it is capable of being modified or shut down at the end of the post-closure care period without exceeding emission levels that are consistent with applicable regulatory standards and with public safety at the facility. In addition, because gas emissions can increase or decrease over time, it is recommended that statistical or graphical analysis of the data be used to identify any significant changes in gas emissions.

- To what extent is the gas collection system capable of being modified or shut down at the end of the post-closure care period without exceeding emission levels that are consistent with applicable regulatory standards and with public safety at the facility?

Integrity of Cover System: A viable cover is the most important mechanism in preventing leachate generation and, ultimately, releases of contaminants. Cracks, burrows from animals, and other problems are likely to occur after termination of post-closure care. If testing and inspection end, problems can go undetected and releases could occur. Thus, it is vital to evaluate the performance of the cover system during the post-closure care period.

[11] For further information on closure performance standards, see 40 CFR 264.111 and 265.111.

- Has the cover system been designed and maintained to minimize migration of water into the management unit and to prevent contaminants from escaping into the environment?
- Has periodic testing or inspection been conducted to identify and assure any necessary repairs? Potential concerns include differential settlement, problems with cover integrity (cracks, burrows, etc.), cover drainage, and the adequacy of the diversion or drainage system. Even where such problems have not occurred, are they likely to arise without long-term care, *e.g.*, will the cover system remain intact without mowing to prevent growth of trees?
- Is the remaining waste likely to be so benign that even with a compromised cover system release of hazardous constituents is unlikely?
- To what extent will the integrity of the cover system be preserved in the absence of long-term care or with reduced maintenance requirements?

For alternative covers, it is recommended that the potential effects of climate change (*e.g.*, increasing frequency and intensity of weather events) be taken into account to the extent practical. For example, will the vegetation remain viable under altered precipitation patterns?

Long-Term Care: The concept of long-term care (also known as long-term stewardship) generally includes the establishment and maintenance of physical and legal controls that are necessary to prevent unacceptable exposure to hazardous waste or contaminated environmental media left in place at a site or closed facility. As a general matter, the RCRA post-closure care requirements (for example, monitoring and cap maintenance) fall under the umbrella of long-term care. When considering whether to adjust the post-closure care period, permitting authorities should evaluate any continuing need to maintain engineering controls (ECs),[12] particularly those specified in the RCRA post-closure care regulations.

- How will the potential for human exposure to contamination be minimized in the absence of RCRA post-closure care?
- How is the integrity of the entire containment system going to be preserved over time?
- Can maintenance and monitoring activities cease or be reduced without causing an adverse impact to human health and the environment?

A further need to maintain ECs could justify an extension of the post-closure care period. This may be the case even if the frequency of some activities could be adjusted (*e.g.*, some activities may be needed more frequently in the early years of the post-closure care period and less frequently later).

The RCRA post-closure care regulations provide for the imposition of institutional controls (ICs)[13] as well. For example, §§ 264/265.117(c) provides that post-closure uses of a property where hazardous wastes remain after final or partial closure must never be allowed to disturb the integrity of the containment system or the functioning of the monitoring system, with limited exceptions. In addition, §§ 264/265.119(b)(1)(ii) provide that the owner or operator must record a notation, in accordance with state law, on the deed to the facility property – or on some other instrument which is normally examined during title search – that will in perpetuity notify any potential purchaser of the property that, among other things, the property's use is restricted under the RCRA closure/post-closure regulations. States can

[12] Engineering controls are the engineered physical barriers or structures (*e.g.*, caps, impermeable liners, mitigation barriers, or fencing) designed to monitor and prevent exposure to the contamination.
[13] Institutional controls are administrative or legal instruments (*e.g.*, deed restrictions/notices, easements, restrictive covenants, zoning) intended to minimize the potential for human exposure to contamination by limiting land or resource use.

choose to supplement or support such deed restrictions under state law, *e.g.*, by setting up a deed restriction tracking system, ensuring that deed restrictions remain in place, or ensuring that information on existing ICs is available to interested parties.

Even in cases where the post-closure care period need not be extended to protect human health and the environment, the permitting authority may want to ensure that some long-term ICs, such as an easement that provides access to the property, are continued. EPA recommends that any ICs (under state or local authority) needed beyond the post-closure care period be in place before the post-closure care period ends. EPA expects that the permit authority would typically need to assess the availability and adequacy of other potential mechanisms for overseeing ICs as part of evaluating whether any modification to the post-closure care period was warranted.

EPA also recommends that consideration be given as to whether a funding source is available to support any necessary ECs and ICs in the future (see Appendix B for a list of ICs resources.) This could be done, for example, as part of an anticipated future use (or end-use strategy) that generates revenue, so that protective controls at the unit can be continued while supporting beneficial reuse of the land into the future.

Recommended Approach for Reviewing Hazardous Waste Management Units Approaching the End of the Post-Closure Care Period

EPA believes that, at a minimum, it is important to make a decision about the length of the post-closure care period, and to document such decision, well before that period nears its end. Therefore, EPA recommends that regulators assess the overall status of all the units under post-closure care, and plan to evaluate the adequacy of their post-closure care periods well in advance of their anticipated conclusions. EPA also recommends that the results from the evaluation of the post-closure care period be included in the regulator's administrative record for the facility.

As stated before, the federal RCRA hazardous waste regulations provide discretionary authority to the permitting authority to extend or shorten the length of the post-closure care period. However, the facility owner or operator is responsible for providing the information necessary to support this decision (see, for example, 40 CFR 270.30(h), Duty to provide information). A lack of relevant and complete information may justify a conclusion by the regulatory authority that extension of the post-closure care period is necessary to protect human health and the environment until such information is provided.

EPA's recommendations for evaluating units approaching the end of the post-closure care period are discussed in more detail below.

Timing: Regulators should track permit terms and dates of all post-closure permits and have a strategy for when they will begin looking at whether to adjust the post-closure care period, allowing enough time for the necessary steps to take place prior to the 30-year expiration:

- Identify and gather necessary information
- Evaluate information
- Decide whether to adjust the post-closure care period
- Incorporate tentative decision into permit renewal (or modification) process.

For units with operating permits, EPA recommends starting the process at least 18 months before the expiration of the post-closure permit or post-closure care period, whichever comes first. It is important to keep in mind that in accordance with § 270.1(c) units subject to post-closure care must have post-closure permits or an enforceable document in lieu of a post-closure permit and, under § 270.50, permits can be issued for no longer than ten years. Consequently, over the course of a 30-year post-closure care period, the permit would normally need to be renewed at least twice (unless the post-closure care period has been modified). In addition, for a permitted land disposal facility, the length of the post-closure care period is an important component of the five-year review required under § 270.50(d). The facility owner or operator may also initiate the post-closure care evaluation and/or modification process by submitting a permit modification. Similarly, regulators should evaluate petitions to end or shorten the post-closure care period in a timely manner.

For facilities conducting post-closure care under interim status, regulators might want to adopt time frames for review similar to those of permits (*e.g.*, every ten years) to initiate the process of identifying and gathering relevant information. At a minimum, they should evaluate the adequacy of the post-closure care period well in advance of its end date. The facility owner or operator may also initiate the process by submitting a revision to their post-closure plan, including a petition in accordance with § 265.118(g)(1).

Post-Closure Plan: When considering adjusting or ending the post-closure care period, regulators should request a copy of the most current version of the approved post-closure plan, along with any proposed revisions provided by the owner or operator. Under §§ 264.118(b) and 265.118(c), the post-closure plan identifies certain activities (and their frequency) that must be conducted during the post-closure care period (*e.g.*, monitoring and maintenance). The post-closure plan may also identify performance standards or performance goals, which should be updated to account for any new information on toxicity and carcinogenicity. The post-closure plan thus provides an important starting point for the review. The project file should have a history of permit modifications including those made to the post-closure plan. It is also important that the results of the post-closure period assessment be incorporated into a revised post-closure plan (and the permit), as appropriate.

Relevant Information: As part of the review of the post-closure plan and any relevant historical information, regulators should determine whether they possess the information necessary to adequately evaluate the conditions at the unit so that a decision about the post-closure care period can be made. Relevant information may include monitoring reports, results from testing or inspections of the cover system, information concerning land use and institutional controls, and any other information that would be helpful in determining whether post-closure care continues to be needed for the unit. The absence of adequate information (*e.g.*, to address unresolved risk issues), including failure of the permittee to provide necessary information, will make it difficult for the permitting authority to conclude that allowing the post-closure period to end or shortening the post-closure care period meets the regulatory standard. The permitting authority can conclude that an extension of the post-closure care period is necessary to protect human health and the environment until the information necessary to make a final determination is available. Any proposal to adjust the post-closure care period should be supported by adequate data and analysis to demonstrate the anticipated long-term performance of the unit. To account for cyclical fluctuations in weather and hydrology, EPA recommends that multiple-year performance data be considered (*e.g.*, ten years).

The recommended criteria outlined in the previous section are also relevant to inform deliberations on whether and what additional information about the facility is necessary.

If information becomes available indicating changing circumstances that might necessitate the need to revisit the post-closure care (*e.g.*, monitoring results show leaching) it is recommended that the regulator immediately request any additional information needed from the facility owner or operator to inform a decision about adjusting the post-closure care period. This can be accomplished through various means, including under the facility's permit terms (*e.g.*, under § 270.30(h), the permit holder has a duty to provide relevant information and records; under § 270.30(k)(4), monitoring results must be reported at intervals specified in the permit); through enforcement of the relevant interim status regulations; or through inspections or studies required pursuant to RCRA sections 3007 or 3013.

Expiration/Renewal of Post-Closure Permits: Permits are issued for a fixed term not to exceed ten years, which means post-closure permits will need to be renewed periodically throughout the post-closure care period (*e.g.*, a 30 year period could span three permit terms). Renewal applications must be submitted 180 days before the expiration date of an effective permit (see § 270.10(h)). Frequently, facility owners or operators do not submit a renewal application as they approach the permit's expiration date because they believe they will submit an acceptable certification that they have completed post-closure care for the unit(s). If, towards the end of the permit term, the permitting authority has not received a permit renewal application from the facility or if the permitting authority anticipates that there may be any issues regarding the acceptability of the certification of completion of post-closure care, EPA recommends that the regulatory authority remind the owner or operator that the regulations require the facility to provide the required certification or reapply for a permit, and request submission of the permit renewal application (see §§ 270.10(h) and 270.30(b)). Timely submission of an application for permit renewal will ensure that a valid permit is in effect (pursuant to § 270.51) pending a resolution. If a facility owner or operator does not submit a timely renewal application, and the permit is not administratively continued, the regulator may consider initiating an enforcement action or issuing a new permit (see § 270.51(c)).

Public Participation: Any potential adjustments to the length of the post-closure care period are subject to requirements for involving the public. For permitted facilities, extensions to the post-closure care period would be processed as a Class 2 modification, and reductions would be Class 3. In both cases, the regulator must provide public notice, hold a public meeting, and allow an opportunity for written comments to be submitted. Similarly, for adjustments in the length of the post-closure care period at interim status facilities, the regulator must provide public notice and an opportunity for written comments. Although there is no specific provision in the regulations to notify the public when a post-closure care period ends, we recommend that the regulatory authority consider providing notice to the local community when they release a facility owner or operatory from their post-closure care obligation.

Financial Assurance Requirements: Finally, permitting authorities should keep in mind that an adjusted post-closure care period may also necessitate revisions to the associated post-closure cost estimate and financial assurance.

Additional Considerations

Benefits of Post-Closure Permits: Permits are site-specific legal documents that establish the technical and administrative conditions to which a facility must adhere, in order to ensure that monitoring and maintenance activities are performed to prevent and address releases that could potentially threaten

public health and the environment and lead to cleanup obligations.[14] Thus, it is critical that any modifications to the permit are made, as necessary, to ensure they are complete and current. Permits are issued in, at most, ten-year increments to ensure they are periodically reviewed and requirements are updated as necessary. Additionally, facility owners and operators may request modifications to a permit. Although there are resources associated with permit maintenance, permits provide numerous benefits and protections such as:

- Basic Permitting Requirements – Permits are subject to the regulations governing facility permitting as set forth in 40 CFR part 270, which covers basic EPA permitting requirements, such as application requirements, standard permit conditions (*e.g.*, duty to comply, duty to reapply, duty to provide information), and monitoring and reporting requirements (*e.g.*, annual monitoring reports, compliance schedules).
- Unit-Specific Informational Requirements – Where applicable, owners or operators of a permit must submit information including detailed plans and engineering reports under § 270.14(b)(13).
- Financial Assurance – The owner or operator of a permitted unit must establish and maintain financial assurance. At facilities with units in post-closure, requirements include financial assurance for post-closure care in accordance with the approved post-closure plan for the facility, for as long as the unit remains subject to RCRA post-closure care requirements, including the post-closure permit requirement (§ 264.145).
- Corrective Action – Section 264.101 requires that all permits include requirements for facility-wide corrective action as necessary to protect human health and the environment.
- Enforceability – The permitting authority can enforce RCRA permit requirements including through facility inspections, record reviews, and other means. Section 270.28 provides that the permittee shall allow the regulatory authority to perform inspections at the facility.
- Public Participation – The permitting process of 40 CFR parts 270 and 124, and the permit modifications procedures in § 270.42 provide for public involvement. The public has the opportunity to comment on a facility's closure and post-closure plans as part of the initial permitting process and any amendments made to the plans as part of the permit modification procedures.
- Additional Conditions – Section 3005(c)(3) of RCRA (codified at 40 CFR 270.32(b)(2) and commonly referred to as the "omnibus authority"), allows for additional site-specific permit conditions to be incorporated into RCRA permits, should such conditions be necessary to protect human health and the environment.
- When permits incorporate the technical requirements contained in parts 264, 266, and 267 of the regulations, those permit conditions are not subject to challenge (*i.e.*, a number of permit conditions are required by the regulations themselves).
- Permit requirements cannot be terminated merely by sale of the property or bankruptcy of the owner or operator.

Relationship of Subpart F Corrective Action and Post-Closure Care: Corrective action and post-closure care requirements for a regulated unit may be linked, for example, in the case of groundwater

[14] Owners and operators of units subject to post-closure care, must have post-closure permits, "unless they demonstrate closure by removal or decontamination as provided under § 270.1(c)(5) and (6), or obtain an enforceable document in lieu of a post-closure permit, as provided under paragraph (c)(7) of this section" (see §270.1(c)).

monitoring and/or corrective action for releases from closed regulated units being handled pursuant to 40 CFR 264.90–264.100. In many cases, it may be desirable (either by the facility owner/operator, the regulatory agency, or both) to coordinate the post-closure care and monitoring/corrective action requirements. EPA recommends that the regulatory agency consider extending the post-closure care period (and associated permits or other enforceable documents) when corrective action continues beyond the original post-closure care period (see §§ 264.90(c)(3) and 264.96(c)).

Post-Closure Rule:[15] This rule amended the regulations applicable to facilities with land disposal units in two areas. First, it modified the requirement for a post-closure permit to provide EPA and the authorized states discretion to use a variety of authorities to address the post-closure period at non-permitted facilities. In addition, it amended the regulations governing closure of land-based units to allow EPA and the authorized states to address those units through the corrective action program in certain situations where regulated units and other solid waste management units have contributed to a release.

Scope of Guidance and Relationship to Existing Guidance: This document is not intended to provide guidance on decisions to extend or shorten the post-closure care period for *non-hazardous* waste units (*i.e.,* units regulated under RCRA Subtitle D), nor is it intended to replace existing guidance concerning establishment and attainment of remedial goals at contaminated facilities addressed under RCRA Subtitle C authority. This guidance is meant to supplement any existing guidance on the post-closure care period, and should be used in concert with the Technical Evaluation Criteria and Site-Specific Factors to Consider in Determining the Length of the Post-Closure Care Period, presented in the Appendix B of the *RCRA Guidance Manual for Subpart G Closure and Post-Closure Care Standards and Subpart H Cost Estimating Requirements* of January 1987.[16] This document provides additional considerations and factors that are not included in the 1987 guidance, such as vapor intrusion, updated toxicity values, and climate change considerations – although the updates presented in this guidance are not intended to be comprehensive.

Relationship to State Authorities: Under RCRA, states may apply to, and receive from EPA, authorization of a state program to operate in lieu of the federal RCRA hazardous waste program. *These state programs may be broader in scope or more stringent than EPA's RCRA hazardous waste regulations, and requirements can vary from state to state.* Members of the regulated community are encouraged to contact their state agencies for the particular post-closure care requirements that apply to them in any particular state.

For additional information, feel free to contact me, or your staff may contact Lilybeth Colon (colon.lilybeth@epa.gov, 703-308-2392) or Tricia Buzzell (buzzell.tricia@epa.gov, 703-308-8622).

[15] See *Standards Applicable to Owners and Operators of Closed and Closing Hazardous Waste Management Facilities: Post-Closure Permit Requirement and Closure Process*; Final Rule, October 22, 1998 (63 FR 56710).

[16] OSWER Policy Directive #9476.00-5, EPA/530-SW-87-10. Appendix B of this guidance presents technical factors to consider in determining the length of the post-closure care period as well as a number of hypothetical scenarios illustrating how site-specific information might be used to support an extension or reduction in the length of the period.

Appendix A: Overview of Federal Regulatory Provisions

Regulations governing RCRA post-closure care are set forth in 40 CFR part 264 subpart G for permitted facilities and part 265 subpart G for interim status facilities. Additional requirements for post-closure care of specific types of units are included in the regulations for those units. See §§ 264/265.197 (Tank Systems); §§ 264/265.228 (Surface Impoundments); §§ 264/265.258 (Waste Piles); §§ 264/265.280 (Land Treatment Units); §§ 264/265.310 (Landfills); § 264.603 (Miscellaneous Units); §§ 264/265.1102 (Containment Buildings); and §§ 264/265.1202 (Hazardous Waste Munitions and Explosives Storage).

Regulations governing financial assurance for post-closure care are set forth in 40 CFR part 264 subpart H for permitted facilities and part 265 subpart H for interim status facilities.

Regulations governing facility permitting are set forth in 40 CFR part 270.

Post-Closure Care – Sections 264.117(a) and 265.117(a) establish general requirements for post-closure care and a 30-year post-closure care period. However, the regulations also allow the permitting authority to shorten the 30-year post-closure care period if the reduced period is sufficient to protect human health and the environment, or to extend it, if necessary (see the *Post-Closure Plan Amendment* section for more details). Sections 264.117(a)(2)(i) and 265.117(a)(2)(i) provide the following examples for shortening the post-closure care period: "...(*e.g.*, leachate or groundwater monitoring results, characteristics of the hazardous wastes, application of advanced technology, or alternative disposal, treatment, or re-use techniques indicate that the hazardous waste management unit or facility is secure)."

Sections 264.117(a)(2)(ii) and 265.117(a)(2)(ii) provide the following example for extending the post-closure care period: "...(*e.g.*, leachate or groundwater monitoring results indicate a potential for migration of hazardous wastes at levels which may be harmful to human health and the environment)."

Post-Closure Plan – Under §§ 264.118 and 265.118, the owner or operator of specified units must have a written post-closure plan. The plan must identify monitoring and maintenance activities that will be carried out after closure, and their frequency, to assure compliance with the requirements of specific subparts, including subparts F, K, L, M, N and X, where applicable. For permitted facilities (§ 264.118(a)), the post-closure plan must be submitted with the permit application and approved by the permitting authority as part of permit issuance procedures. The approved post-closure plan becomes a condition of any RCRA permit issued (see the *Post-Closure Plan Amendment* section for more details). For interim status facilities (§ 265.118), the owner or operator must submit the post-closure plan to the permitting authority within specified time frames, and the regulations provide for making the post-closure plan available to the regulatory authority.

Procedures for Post-Closure Plan Amendment – For permitted facilities, the process for making changes to the post-closure plan is through permit modification (permit modification procedures are set forth in § 270.42). Under § 264.118(d)(1), the owner or operator may submit a written notification or request for a permit modification to amend the post-closure plan. Under § 264.118(d)(2), the owner or operator must submit a written notification of the permit modification or request for a permit modification to authorize a change in the approved post-closure plan under certain circumstances. Specific reasons set forth in the regulations include changes in operating plans or facility design that affect the approved post-closure plan, and

events occurring during the active life of the facility that affect the approved post-closure plan. For interim status facilities, § 265.118(d) prescribes procedures for amending the post-closure plan. The permitting authority may also request modifications to the post-closure plan under §§ 264.118(d)(4) and 265.118(d)(4).

Procedures for Post-Closure Care Period Adjustment – Adjustments to the post-closure care period may be initiated at any time preceding partial or final closure or at any time during the post-closure care period of a particular unit. For interim status facilities, § 265.118(g) prescribes a process for extending or shortening the post-closure care period that includes provisions for public involvement. For permitted facilities, § 264.117(a)(2) provides for shortening or extending the post-closure care period in accordance with the permit modification provisions in parts 124 and 270.

Section 270.41 provides for Agency-initiated permit modifications. EPA may modify a permit for the following reasons: if there have been material and substantial alterations or additions to the facility; there is new information that was not available at the time of permit issuance; new statutory or regulatory requirements were promulgated; EPA has cause to initiate a compliance schedule under § 270.33; or as necessary to assure that the facility continues to comply with the currently applicable requirements in parts 124, 260 through 266, and 270, when a permit for a land disposal facility is reviewed by the Director under § 270.50(d).

Section 270.42 contains the regulations that apply to the modification of a permit at the request of the permittee. For all modifications, the permittee submits information to EPA that describes the exact change to be made to the permit conditions, identifies whether the modification is Class 1, 2, or 3, and provides the applicable permit application information.

The process for extending the post-closure care period is a Class 2 modification, while the process for shortening the post-closure care period is a Class 3 modification (§ 270.42, Appendix I, E2 and E3). These procedures include provisions for public involvement. The post-closure care period can also be modified through permit renewal under § 270.32(d).

Financial Assurance for Post-Closure Care – EPA's regulations under parts 264/265 subpart H establish requirements for financial assurance, including financial assurance requirements for post-closure care (see §§ 264.140 and 265.140). Under §§ 264.144 and 265.144, the owner or operator is required to have detailed written cost estimates for post-closure monitoring and maintenance in accordance with the applicable post-closure care requirements. Under §§ 264.145 and 265.145 generally, the owner or operator is required to establish financial assurance for post-closure care in an amount equal to the current post-closure cost estimate.

Certification of Completion of Post-Closure Care and Release of Owner and Operator from Financial Assurance Requirements – Under §§ 264.120 and 265.120, the owner or operator must submit certification that the post-closure care for the unit(s) was performed in accordance with the approved post-closure plan; the certification must be sent by registered mail to the permitting authority. This certification must be submitted no later than 60 days after the completion of the post-closure care period for each hazardous waste disposal unit. The certification must be signed by the owner or operator and a qualified professional engineer. Documentation supporting the professional engineer's certification must be furnished to the permitting authority upon request until the permitting authority releases the owner or operator from the financial assurance requirements for post-closure care under §§ 264.145(i) and 265.145(h).

Under §§ 264.145(i) and 265.145(h), within 60 days of receipt of certification from the owner or operator and a qualified professional engineer that the post-closure care has been completed for a hazardous waste disposal unit in accordance with the approved plan, the permitting authority will notify the owner or operator that it is no longer required to maintain financial assurance for post-closure care for that unit. If the permitting authority has reason to believe that post-closure care has not been in accordance with the approved post-closure plan, the permitting authority must provide the owner or operator a detailed written statement of any such reason.

Scope of the Post-Closure Permit Requirements – Under § 270.1(c), owners and operators of surface impoundments, landfills, land treatment units, and waste pile units that received waste after July 26, 1982, or that certified closure (according to § 265.115) must have post-closure permits, unless they demonstrate closure by removal or decontamination, or obtain an enforceable document in lieu of a post-closure permit as provided under § 270.1(c)(7). Under § 270.10(h), if a permittee has an effective permit and they want to renew it, they must submit a new application at least 180 days before the expiration date of the effective permit.

Monitoring and Records – Under § 270.30(j)(2), the permittee must retain records of all monitoring information for a period of at least three years from the date of sample, measurement, report, or certification, unless extended by request of the permitting authority at any time. Records from all groundwater monitoring wells and associated groundwater surface elevations must be maintained for the active life of the facility, and for disposal facilities for the entire post-closure care period.

Compliance with an Expiring Permit – Under § 270.51(c), if the permittee is not in compliance with the conditions of the expiring or expired permit, the permitting authority may issue a new permit under part 124, initiate enforcement action, or take other actions authorized by the RCRA regulations.

Appendix B: Institutional Controls (ICs) Resources

The following resources may be helpful in implementing and maintaining ICs throughout the post-closure care period and beyond.

- EPA guidance on *Ensuring Effective and Reliable Institutional Controls at RCRA Facilities* (Matt Hale, Director, Office of Solid Waste, and Susan Bromm, Director Office of Site Remediation and Enforcement, June 14, 2007) sets forth guiding principles and recommendations that can help EPA and state decision makers on the use of ICs at RCRA facilities, and EPA resources for additional information and assistance.

- *Institutional Controls: A Site Manager's Guide to Identifying, Evaluating, and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups* guidance provides some discussion about how ICs can be used at post-closure care facilities. (p.3 text box) EPA 540-F-00-005, OSWER 9355.0-74FS-P, September 2000, https://www.epa.gov/fedfac/institutional-controls-site-managers-guide-identifying-evaluating-and-selecting-institutional

- *Institutional Controls: A Guide to Preparing Institutional Control Implementation and Assurance Plans at Contaminated Sites* provides information and recommendations that should be useful for planning, implementing, maintaining and enforcing ICs, and offers an overview of EPA's policy regarding the roles and responsibilities of the parties involved in the various life-cycle stages of ICs. Final, December 2012. OSWER 9200.0-77, EPA-540-R-09-002, https://www.epa.gov/fedfac/institutional-controls-guide-preparing-institutional-control-implementation-and-assurance

- *Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites* guidance also discusses how ICs could be used at RCRA post-closure care facilities. (Section 2.3) Final, December 2012. OSWER 9355.0-89, EPA-540-R-09-001, https://www.epa.gov/fedfac/institutional-controls-guide-planning-implementing-maintaining-and-enforcing-institutional

- *Long-Term Stewardship: Ensuring Environmental Site Cleanups Remain Protective over Time* report identifies long-term stewardship challenges and opportunities for improvement, and makes recommendations for how EPA and its state, tribal, and local partners should proceed in addressing them. This report also includes a definition of long-term stewardship, why long-term stewardship is important, and what EPA and others are currently doing to address long-term stewardship issues. Final, September 2005, EPA 500-R-05-001, https://nepis.epa.gov/Exe/ZyNET.exe/P100119V.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2000+Thru+2005&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C00thru05%5CTxt%5C00000015%5CP100119V.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL

OFFICE OF RESOURCE CONSERVATION AND RECOVERY
WASHINGTON, D.C. 20460

June 5, 2024

MEMORANDUM

SUBJECT: Implementing Climate Resilience in Hazardous Waste Permitting Under the Resource Conservation and Recovery Act (RCRA)

FROM: Carolyn Hoskinson, Director

Digitally signed by CAROLYN HOSKINSON
Date: 2024.06.05 20:15:53 -04'00'

TO: Land, Chemicals, and Redevelopment Division Directors, Regions 1-10

PURPOSE

The purpose of this memorandum is to provide guidance to EPA Regions, states, and territories on when and how to consider potential adverse climate change impacts in the hazardous waste permitting process under RCRA. This includes recommendations for conducting climate change vulnerability screenings and assessments for treatment, storage, and disposal facilities (TSDFs) to determine whether there are climate vulnerabilities that hazardous waste permits should address.

Adverse impacts of climate change can include the frequency and intensity of extreme weather events, changing wind patterns, temperature fluctuations, increased precipitation, sea level rise, storm surges, inland and coastal flooding, bank and shoreline erosion, changes in groundwater levels and direction of flow, drought, increased risk of wildfires, and permafrost thaw. These potential impacts can threaten the resilience of engineering and other controls at TSDFs for which applicants seek permits from EPA Regions or states and territories authorized to implement the RCRA program. This memorandum identifies authorities, provides interpretations of relevant RCRA provisions, and recommends approaches to ensure that controls will provide long-term effectiveness through resilience to adverse climate change impacts into the future.[1]

Definitions of key terms pertaining to climate adaptation used in this memorandum are included in the attachment.

[1] This document does not substitute for the statute or regulations, nor is it a regulation itself. Thus, it cannot impose legally binding requirements on EPA, states, or the regulated community, and may not apply to a particular situation based upon the circumstances. Any decisions regarding a particular situation will be made based on the statute and the regulations, and EPA and authorized state/territory decision makers retain the discretion to adopt approaches on a site-specific basis that differ from these recommendations where appropriate.

BACKGROUND

EPA released a Climate Adaptation Plan (CAP) in October 2021 which laid out five priority actions for the agency to implement in the coming years, including integrating consideration of climate impacts into EPA's programs, policies, rulemaking processes, and enforcement activities.[2] In October 2022, EPA's Office of Land and Emergency Management (OLEM) released its Climate Adaptation Implementation Plan, which included the commitment to incorporate climate adaptation into OLEM's mission, programs, and management functions.

IMPLEMENTATION

The 40 CFR Part 264 standards for RCRA TSDFs are designed to ensure that hazardous waste treatment, storage and disposal are conducted in a manner that protects human health and the environment (See RCRA 3004(a)). These standards are implemented through RCRA permits at permitted TSDFs. RCRA permits must ensure that facility operations will comply with these standards (RCRA 3005(c)(1)) and must contain any additional terms or conditions that EPA or the authorized state determines are necessary to protect human health and the environment (RCRA 3005(c)(3)).

The climate change impacts described above may affect what a facility needs to do to comply with the RCRA standards applicable to TSDFs. EPA expects that EPA Regional offices and authorized states and territories will consider the potential for adverse climate change impacts to affect TSDF operations in the permitting process, and that RCRA permits will include the conditions that the permitting authority determines are necessary to ensure that facility operations will be compliant and protective in the face of such impacts. Climate change adaptation considerations should be incorporated as appropriate during initial permit issuance, permit renewal, and/or permit maintenance (e.g., permit modification). The potential for climate impacts should be considered and addressed throughout the expected active life of the facility, as well as during post-closure, as appropriate, not just for the term of the permit or permit modification under consideration.

Conducting climate vulnerability screenings and analyses at TSDFs can help determine whether changes to facility permits are necessary to ensure that TSDFs are resilient to climate events and remain so into the future. For example, prior to receiving a renewal permit application, or during the process of reviewing an application for an initial permit or modification, EPA Regions, states, and territories should perform an initial climate vulnerability screening as appropriate to determine which adverse climate change impacts might apply to the facility. The vulnerability screening is a high-level screening step to determine if a site or facility is located in a geographic area at risk to adverse climate change impacts. If the results of the screening indicate that climate change impacts might plausibly impact the protectiveness of facility operations, EPA, states, and territories should conduct, or should request or require an owner or operator to conduct, a more detailed climate vulnerability assessment to determine whether adaptive measures are necessary. If an initial climate vulnerability screening indicates that adaptative measures are necessary, and no further information or analysis is needed, then the more detailed climate vulnerability assessment is not necessary. However, if the initial climate vulnerability screening indicates a plausible basis for concern and there is uncertainty as to the level of

[2] For additional information, see https://www.epa.gov/climate-adaptation/climate-adaptation-plan.

climate risk or the adaptive measures that may be needed, then the regulator may require a climate vulnerability assessment.

KEY RCRA REGULATORY AUTHORITIES RELEVANT TO CLIMATE CHANGE CONSIDERATIONS IN PERMITTING

Several regulatory authorities support consideration of potential adverse climate change impacts on permitted activities and the development of permit conditions, as needed, to ensure that such activities will be protective of human health and the environment in the face of such impacts. Below is a list of regulatory provisions, although this is not an exhaustive list of the potentially relevant regulatory provisions.

Facility Design and Operation [§ 264.31]
Facilities must be designed, constructed, maintained, and operated to minimize the possibility of a release of hazardous waste or hazardous waste constituents that could threaten human health and the environment. EPA Regions and authorized states/territories should consider the potential adverse climate change impacts in ensuring that this standard is satisfied. For example, more frequent storm events as well as temperature fluctuations can influence how a facility's units (e.g., containers, tanks, landfills) should be designed and operated to protect human health and the environment. Facility design and operation may need to change in the face of future climate conditions.

Facility Location Standards [§ 264.18(b)]
The RCRA regulations generally require facilities located within a 100-year floodplain to be designed, constructed, operated and maintained to prevent washout, should there be a flood. The number of facilities within a 100-year floodplain will likely increase as a result of potential adverse climate change impacts causing floodplains to expand. TSDFs located in a 100-year floodplain will need to ensure their operations comply with this requirement, and permit writers should take care to ensure that permits adequately address this requirement. These requirements should be considered during permit renewal as well as initial permit issuance. In view of changing climate conditions, it will be important to employ an approach for identifying the 100-year floodplain that considers predicted future conditions, and recent flooding events and their impact on the facility, rather than simply long-term historical data.

Contingency Plans [§ 264.50 – 264.56]
The RCRA regulations require that TSDFs have contingency plans designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water. Development and review of contingency plans should consider potential adverse climate change impacts.

Omnibus Authority under Section 3005(c)(3) [§ 270.32(b)(2)]
The omnibus permit authority provides that "Each permit issued under section 3005 of this act shall contain terms and conditions as the Administrator or State Director determines necessary to protect human health and the environment." EPA expects that climate change impacts can generally be addressed using more specific regulatory authorities such as those identified above. However, where permitting authorities determine that permit conditions beyond those required under these specific authorities are necessary to protect human health or the environment from potential adverse climate change impacts, the EPA Region or the state/territory has the responsibility to impose such terms and conditions by exercising their omnibus authority.

Review of State Permits [§ 271.19]
EPA has the authority to oversee state program implementation to ensure it is consistent with the state's own authorized requirements. This includes the authority for EPA to comment on a draft permit. EPA can enforce the terms of the comment, even if those terms are not incorporated into the permit, if the comment indicates that the terms are necessary to implement the approved program, as provided in § 271.19(b). EPA Regions should consider potential adverse climate change impacts in evaluating the use of its comment authority.

Agency Initiated Permit Modifications [§ 270.41(a)(2)]
This provision authorizes the permitting authority to modify a permit based on "information [that] was not available at the time of permit issuance ... and would have justified the application of different permit conditions at the time of issuance." Such a basis for permit modifications could include changes due to climate change-related factors (e.g., updated floodplain maps or precipitation data from federal or state sources) that may impact facility operations.

Part B Permit Application [§ 270.14-270.28]
The RCRA Part B permit application regulations specify information that must be submitted in permit applications. Particularly relevant are the provisions of § 270.14(11)(iii) and (iv), which relate to floodplains, and also § 270.14(19) relating to mapping and location. EPA Regions and authorized states/territories should work with facility owners and operators to ensure that Part B permit applications are prepared using up-to-date climatological data and data projections for the anticipated life of the facility. This ensures that unit-specific designs and permit conditions remain protective in the face of potential adverse climate change impacts. While not part of the specific Part B Application requirements, a general permit application requirement under § 270.10(k) provides broader authority to require additional information necessary to develop permit conditions that can be used to address climate adaptation concerns.

CLIMATE ADAPTATION TOOLS

RCRA climate vulnerability screening tools and assessment methodologies are currently under development. One screening tool has been released in RCRAInfo for sea level rise projections at RCRA facilities (https://rcrapublic.epa.gov/rcra-public-web/action/posts/5). EPA also anticipates releasing further policy and guidance regarding how permits can incorporate climate change adaptation considerations through its effort to update the RCRA Model Permit and through development of the

Updates to the RCRA Hazardous Waste Permitting Regulations and Other Technical Corrections rulemaking.

In the interim, for further information, please see the Superfund Climate Resilience website which provides an overview of climate-related initiatives within the Superfund program, with information about strategies that can be used to evaluate and strengthen climate resilience at Superfund sites. While this website offers guidance on Superfund sites, it can also help inform decisions at RCRA facilities. EPA intends to develop a climate vulnerability assessment methodology for the RCRA program, based on Superfund's methodology.

CONCLUSION

RCRA permits must be protective of human health and the environment. Climate change has the potential to impact TSDF compliance with RCRA regulatory provisions, and more broadly, the protectiveness of TSDF operations. Thus, throughout the RCRA permitting process, including issuance of initial permits, permit renewals, and permit modifications, EPA Regions and authorized states and territories should work with facilities to consider potential adverse climate change impacts in assuring that RCRA requirements are met and that RCRA permits are protective of human health and the environment in the face of those impacts.

If you have questions about this document or would like assistance with evaluating climate vulnerabilities and adaptation measures as they relate to RCRA permitting, please contact Jeff Gaines, Office of Resource Conservation and Recovery (ORCR), at (202) 566-0332 or gaines.jeff@epa.gov.

KEY TERMS PERTAINING TO CLIMATE ADAPTATION

For purposes of this memo, key terminology[3] includes:

Adaptation: Taking action to prepare for and adjust to both the current and projected impacts of climate change.

Adaptive Capacity: The ability of a human or natural system to adjust to climate change (including climate variability and extremes) by moderating potential damages, taking advantage of opportunities, or coping with the consequences.

Climate Change: Climate change refers to changes in global or regional climate patterns attributed largely to human-caused increased levels of atmospheric greenhouse gases.

Extreme Weather Event: An extreme weather event is an event that is rare at a particular place and time of year. Definitions of rare vary, but an extreme weather event would normally be as rare as or rarer than the 10th or 90th percentile of a probability density function estimated from observations. By definition, the characteristics of what is called extreme weather may vary from place to place in an absolute sense.

Resilience: Climate resilience can be generally defined as the capacity of a system to maintain function in the face of stresses imposed by climate change and to adapt the system to be better prepared for future climate impacts.

Vulnerability: The degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes; it is a function of the character, magnitude, and rate of climate variation to which a system is exposed; its sensitivity; and its adaptive capacity.

[3] https://www.epa.gov/system/files/documents/2022-03/fy-2022-2026-epa-strategic-plan.pdf

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
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JB PRITZKER, GOVERNOR JAMES JENNINGS, ACTING DIRECTOR

217/524-3301

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

DEC 26 2024

9589 0710 5270 0389 7049 78

Matthew Healy
BFI Waste Systems of North America, LLC
26 West 580 Schick Road
Hanover Park, IL. 60103

PLAINTIFF'S EXHIBIT
B

RE: 1418210001 - Ogle County
BFI - Davis Junction Landfill - Phase I
ILD980700751
Log No. B-142R2-M-9
RCRA Permit - 24A
Permit Approval

Dear Mr. Healy:

This letter is in response to the submittals described below, which were submitted by Weaver Consultants Group on behalf of BFI Waste Systems of America, LLC (BFI) for the above referenced RCRA permitted facility.

Submittal (B-142R2-M-9) - A document entitled, "Post Closure Plan Update", dated September 27, 2024, and received by the Illinois EPA on September 30, 2024. The subject submittal was reviewed as a Class 2 permit modification request in accordance with 35 Illinois Administrative Code (Ill. Adm. Code) 703.280.

Additional Information - A document entitled, "Notice of Class 2 Permit Modification and Public Meeting", dated October 1, 2024, and received by the Illinois EPA on October 4, 2024.

The subject permit modification request was submitted to meet the requirements in 35 Ill. Adm. Code 724.218(d)(2) and the Illinois EPA's July 29, 2024, letter, which required BFI to submit a request to extend the post-closure care period. The Illinois EPA has reviewed the information contained in the subject submittals and hereby partially approves the subject submittals with the following conditions and modifications:

1. In the subject Class 2 permit modification request, BFI requested to extend the post-closure care period for an additional ten (10) years. However as indicated in the Illinois EPA's July 29, 2024, letter, the Illinois EPA determined that the post-closure care period

must be extended for an additional thirty (30) years or until such time as no unacceptable risks to human health and the environment is no longer present in the Phase I Landfill, as determined by the Illinois EPA.

The Illinois EPA's determination that it is necessary to extend the post-closure care period for 30 years, instead of 10 years as requested by BFI, for the Phase I Landfill at the above-referenced facility is based on the following, which were also included in the Illinois EPA's July 29, 2024, letter:

a. Leachate: The ongoing generation of leachate from the Phase 1 Landfill requires continued leachate collection and management under post-closure care in accordance with 35 Ill. Adm. Code 724.410(b)(2). According to BFI's annual hazardous waste reports from Year 2019 through Year 2023 (the most current available 5-year data), reported volumes of leachate generated from the Phase I Landfill ranged between 79,400 to 112,146 gallons per year (average of 97,229 gallons per year). The leachate generated was 100,000 gallons in 2023 and 290,000 gallons in 2003. A large decline occurred between 2010 and 2013, but levels remain steady for the last 10 years.

   According to the USEPA's Guideline for Evaluating Post-Closure Care Period, dated December 15, 2016 (2016 USEPA Guidance), monitoring for leachate generation serves as the most effective way of examining the integrity of the waste management unit (e.g., it can suggest a cover or liner failure when leachate is detected late in the post-closure care period).

b. Nature of waste in the landfill: The wastes contained in the Phase I Landfill are considered RCRA hazardous wastes due to 2% of the disposed wastes being hazardous materials. The hazardous materials include 96% heavy metal sludges; 4% spent solvent still bottoms, spent solvent sludges, petroleum refining residues, rodenticides glycol, polystyrene, and pthalic anhydride.

   Since hazardous wastes remain at the Phase I Landfill, and leachate and gas generation persist, the Phase I Landfill is susceptible to long-term risks and requires continued maintenance and management under post-closure care.

c. Unit Type/Design: The existing cover system design for the Phase I Landfill, from top to bottom is: 1) a 36-inch thick final cover protective layer to support vegetation (the top 6 inches (minimum) of which is topsoil); 2) a geotextile filter fabric; 3) a geonet drainage layer; 4) a 40-mil polyethylene geomembrane; and 5) a 24-inch compacted clay layer composed of materials for the old cover materials used for the historical landfill beneath the Phase I Landfill. The existing leachate collection system consists of 15 leachate extraction points on 250-to-300-foot centers. As noted in the 2016 USEPA Guidance, a viable cover is the most important mechanisms in preventing leachate generation and, ultimately, a release

of contaminants to the environment. Maintenance and monitoring of the cover system must continue to preserve its integrity.

d. Landfill Gas: After nearly forty (40) years of post-closure care, landfill gas continues to be generated, and therefore, a landfill gas monitoring/management program must continue at Phase I Landfill. The gas collection system must remain operational and be maintained.

e. Long-Term Care (also known as Long-Term Stewardship): The establishment and maintenance of physical and legal controls at the Phase I Landfill are necessary to prevent exposure to the hazardous waste and hazardous constituents abandoned within the Phase I Landfill.

The Illinois EPA has determined that long-term monitoring, including maintenance of the cover system and groundwater monitoring system, control of any liquids (leachate) and landfill gas, and restrictions of future land uses must be established at the site. These measures must continue to minimize future exposure and potential hazardous waste release to the environment in accordance with 35 Ill. Adm. Code 724.410(b)(1), Section 12(a), 21(n) and 39(g) of the Environmental Protection Act (Act) and the 2016 USEPA Guidance.

f. Climate Change Consideration: Long-term care of the Phase I Landfill mentioned above must also consider impacts from climate change. The USEPA June 5, 2024 Guidance requires the authorized states to incorporate climate change considerations into the RCRA permitting program. The June 5, 2024, guidance requires that, "RCRA permits will include the conditions that the permitting Authority determines are necessary to ensure that the facility operation will be compliant and protective in the face of such impacts." Hazardous wastes remain at the Phase I Landfill, therefore, vulnerability screening and assessment for the potential climate change impacts must be incorporated into the long-term care for the Phase I Landfill.

2. Historically, during the post-closure care period, the Illinois EPA has accepted the facility's proposal to reduce financial assurance liability based on the number of years of post-closure care that had been completed. However, this reduction did not take into consideration the established long-term environmental threats at facilities with hazardous waste remaining on site. The financial risk to the Illinois EPA and citizens of Illinois, should the Illinois EPA have to unexpectedly assume operation of the post-closure care of the facility, had not been appropriately accounted for. The Illinois EPA has evaluated the requirements for post-closure care, cost estimates, and financial assurance for the Phase I Landfill under 35 Ill. Adm. Code Part 724 and has determined that a rolling 30-year post-closure care cost estimate for the Phase I Landfill must be maintained by the facility, as required by 35 Ill. Adm. Code 724.217(a)(1) and 35 Ill. Adm. Code 703.282.

3. As previously required by the Illinois EPA's July 29, 2024, letter, and associated modifications, within sixty (60) days of the receipt of this letter, BFI must submit a revised post-closure cost estimate (in 2024 dollars) and financial assurance to reflect thirty (30) years of post-closure care in accordance with 35 Ill. Adm. Code 724.217.

Attachment A to this letter contains a summary of the changes made to the RCRA post-closure permit. A revised RCRA post-closure permit reflecting the approval of the subject submittals is enclosed with this letter. Post-closure care and corrective action activities at the above-referenced facility must be in accordance with the RCRA post-closure permit issued to the facility and all subsequent approved modifications to the permit.

Pursuant to 35 Ill. Adm. Code 703.281(a)(2), a notice of this modification shall be sent to all persons on the facility mailing list, maintained by the Illinois EPA in accordance with 35 Ill. Adm. Code 705.163(a)(4), and the appropriate units of state and local government as specified in 35 Ill. Adm. Code 705.163(a)(5).

Work required by this letter, this submittal or the regulations may also be subject to other laws governing professional services, such as the Illinois Professional Engineering Practice Act of 1989, the Professional Land Surveyor Act of 1989, the Professional Geologist Licensing Act and the Structural Engineering Licensing Act of 1989. This letter does not relieve anyone from compliance with these laws and the regulations adopted pursuant to these laws. All work that falls within the scope and definitions of these laws must be performed in compliance with them. The Illinois EPA may refer any discovered violation of these laws to the appropriate regulating authority.

The physical address of Illinois EPA is scheduled to change in the coming months, but the Post Office Box will remain the same. All written reports or other written information required to be submitted by the terms of this letter and applicable regulations shall include the Illinois EPA Post Office Box and be sent to:

Illinois Environmental Protection Agency
Bureau of Land -- #33
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois, 62794-9276

The applicant may appeal this final decision to the Illinois Pollution Control Board pursuant to Section 40 of the Act by filing a petition for a hearing within 35 days after the date of issuance of the final decision. However, the 35-day period may be extended for a period of time not to exceed 90 days by written notice from the applicant and the Illinois EPA within the initial 35-day appeal period. If the owner or operator wishes to receive a 90-day extension, a written request that includes a statement of the date the final decision was received, along with a copy of this decision, must be sent to the Illinois EPA as soon as possible.

For information regarding the request for an extension, please contact:

Illinois Environmental Protection Agency
Division of Legal Counsel
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276
217/782-5544

For information regarding the filing of an appeal, please contact:

Illinois Pollution Control Board
60 East Van Buren St., Suite 630
Chicago, IL 60605-1241
312/814-3620

For questions regarding groundwater issues, please call Aidan Fullriede at 217/557-8770 or aidan.fullriede@illinois.gov. For all other questions, contact Jacob Nutt at 217/524-7048 or Jacob.nutt@illinois.gov.

Sincerely,

Joshua L. Rhoades, P.G.
Permit Section Manager
Bureau of Land

JLR:JDN:1418210001-RCRA-B142R2M9.docx
JDN TNH AMB
Attachment: Attachment A – CHANGES TO THE RCRA POST-CLOSURE PERMIT
Revised RCRA Hazardous Waste Permit

cc: Norberto Gonzalez, Emily Keener, U.S. EPA – Region V
James Hitzeroth, BFI Waste Systems of North America, LLC
Mike Maxwell, LPG, CHMM, Weaver Consultants Group

ATTACHMENT A
CHANGES TO THE RCRA POST-CLOSURE PERMIT
BFI – Davis Junction Landfill – Phase I

STATE ID No. 1418210001
USEPA No. ILD980700751
Log No. B-142R2-M-9

The following changes have been made to BFI's RCRA Post-Closure Permit in response to permit modification requests B-142R2-M-9 reflecting approval of updated annual post-closure cost estimates, minor permit language revisions, and correction of grammatical and formatting issues.

1. The hazardous waste landfill undergoing RCRA post-closure care subject to this permit has been modified to be referred to as "Phase I Landfill" throughout the permit.

2. Permit Condition I.A - Phase I Landfill where waste is left in place must receive post closure care for a minimum of 30 years. The Permittee must continue post-closure care for the Phase I Landfill at this facility which received hazardous waste from November 1980 to January 1983 until at least December 5, ~~2024~~ 2054 or until such time as no unacceptable risks to human health and the environment are present in the Phase I Landfill, as determined by the Illinois EPA. Activities required during post closure care include, but are not limited to: (1) maintenance of final cover~~,~~; (2) monitoring of the groundwater~~,~~; and (3) providing financial assurance for post closure activities pursuant to 35 Ill. Adm. Code Part 724.

3. Permit Condition I.B.2 - The Illinois EPA approved certification of closure of the subject landfill on December 5, 1984. Post-closure care for this unit must then be provided for at least thirty (30) years after that date. The Illinois EPA has extended post-closure care until at least December 5, ~~2024~~ 2054 or until such time as no unacceptable risks to human health and the environment are present in the Phase I Landfill, as determined by the Illinois EPA.

4. Permit Condition I.C.2 - The Permittee shall continue to conduct post-closure care for each Phase I Landfill in Permit Section I.B.1. Post-closure care of the unit began on December 5, 1984 and must continue for at least thirty (30) years after that date. The Illinois EPA has extended post-closure care until at least December 5, ~~2024~~ 2054, or until such time as no unacceptable risks to human health and the environment are present in the Phase I Landfill, as determined by the Illinois EPA.

5. Permit Condition I.G.1 - The Permittee shall maintain financial assurance for post-closure care of the Phase I Landfill of at least ~~$2,589,796 in 2022 dollars~~ the amount that is shown in Attachment C to this permit. ~~The cost estimate for post-closure care of this facility is shown in Attachment C to this permit.~~ The financial assurance maintained by

the facility shall be sufficient to meet the requirements at 35 Ill. Adm. Code 724 Subpart H.

6. Permit Condition II.10 - The subject permit modification (Log No. B-142R2-M-9) was added.

7. Attachment C – Post-Closure Cost Estimate - The currently approved post-closure cost estimate in the current RCRA Post-Closure Permit is ~~$2,589,796~~ $2,898,453 (in ~~2022~~ 2024 dollars). This estimate must be updated when establishing financial assurance in accordance with 35 Ill. Adm. Code 724, Subpart G. Based on the most recent post-closure cost estimate submitted ~~December 1, 2022~~ September 27, 2024, and received by the Illinois EPA on ~~December 5, 2022~~ September 30, 2024, the updated breakdown of the estimate should be updated as follows:

   1. Estimate of post-closure care costs on an annual basis in ~~2022~~2024 dollars:

Post-closure inspections	~~$8,143~~ 9,028
Groundwater monitoring	~~$10,636~~ 11,794
Leachate Management	~~$59,248~~ 65,883
Total	~~$78,027~~ 86,704
10% Contingency	~~$7,803~~ 8,670
Total Annual Cost (w/Contingency):	~~$85,830~~ 95,374
Resurvey Monitoring Wells Every 5 Years	$15,540
One Time Costs:	
Well Abandonment:	~~$13,542~~ 15,012
10% Contingency, One-Time Costs:	~~$1,354~~ 1,501
Total One-Time Costs:	~~$14,896~~ $21,693

   2. Total post-closure care cost estimate = (~~$85,830~~95,374 per year) x (30.0 years) + ~~$14,896~~ $15,540+$21,693= ~~$2,589,796~~2,898,453

   3. The Permittee must submit appropriate documentation for financial assurance for the post-closure cost estimate within sixty (60) days of the Illinois EPA's approval of Permit Modification Log No B-142R2-M-9. The approved cost estimates must be used when establishing financial assurance in accordance with 35 Ill. Adm. Code 724, Subpart G.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
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JB PRITZKER, GOVERNOR JAMES JENNINGS, ACTING DIRECTOR

RCRA HAZARDOUS WASTE PERMIT

1418210001 – Ogle County
ILD980700751
BFI – Davis Junction Landfill – Phase 1
Permit Log No. B-142R2-M-9
RCRA Permit File

Issue Date: 09/26/2018
Effective Date: 09/26/2018
Expiration Date: 05/04/2028
Modification Date: DEC 26 2024

PERMITTEE
BFI Waste Systems of North America, LLC
Attn: Matthew Healy
26 West 580 Schick Road
Hanover Park, IL 60103

A modified RCRA post-closure hazardous waste permit is hereby issued to BFI Waste Systems of North America, LLC as Owner, Operator, and the Permittee pursuant to Section 39(d) of the Illinois Environmental Protection Act and Title 35 Illinois Administrative Code Subtitle G (35 Ill. Adm. Code).

PERMITTED HAZARDOUS WASTE ACTIVITY

This permit requires BFI Waste Systems of North America, LLC to conduct the following hazardous waste activities in accordance with the approved permit application and the conditions in this permit:

Post-Closure Care: Closed landfill
Groundwater Monitoring: Detection Monitoring
Corrective Action: Not currently required at this facility

This permit consists of the conditions contained herein and those in the sections and attachments in this permit. The Permittee must comply with all terms and conditions of this permit and the applicable regulations contained in 35 Ill. Adm. Code Parts 702, 703, 705 and 720 through 729 in effect on the effective date of this permit.

This permit is issued based on the information submitted in the approved permit application identified in Section II of this permit and any subsequent amendments. Any inaccuracies found in the information provided in the permit application may be grounds for the termination or modification of this permit (see 35 Ill. Adm. Code 702.187 and 702.186) and potential enforcement action (415 ILCS 5/44(h)).

Joshua L. Rhoades, P.G.
Permit Section Manager
Bureau of Land

JLR:JDN:1418210001-RCRA-B142R2M9.docx
JDN TNH AMB

2125 S. First Street, Champaign, IL 61820 (217) 278-5800
115 S. LaSalle Street, Suite 2203, Chicago, IL 60603
1101 Eastport Plaza Dr., Suite 100, Collinsville, IL 62234 (618) 346-5120
9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000
595 S. State Street, Elgin, IL 60123 (847) 608-3131
2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

RCRA POST-CLOSURE PERMIT

BFI Waste Systems of North America, LLC

Davis Junction, Illinois

LPC No. 1418210001

USEPA ID No. ILD980700751

Log No. B-142R2-M-9

RCRA POST-CLOSURE PERMIT
BFI Waste Systems of North America, LLC
Davis Junction, Illinois
LPC No. 1418210001
USEPA ID No. ILD980700751
Log No. B-142R2-M-9

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LIST OF ATTACHMENTS

SECTION I: POST-CLOSURE CARE

A. SUMMARY

Phase I Landfill where waste is left in place must receive post closure care for a minimum of thirty (30) years. The Permittee must continue post-closure care for the closed Phase I Landfill at this facility which received hazardous waste from November 1980 to January 1983 until at least December 5, 2054, or until such time as no unacceptable risks to human health and the environment are present in the Phase I Landfill, as determined by the Illinois EPA. Activities required during post closure care include, but are not limited to: (1) maintenance of final cover; (2) monitoring of the groundwater; and (3) providing financial assurance for post closure activities pursuant to 35 Ill. Adm. Code Part 724.

B. UNIT IDENTIFICATION

1. The Permittee shall provide post-closure care for the following Phase I Landfill, subject to the terms and conditions of this permit:

The BFI/Davis Junction Landfill is located on 159 acres at the southwest corner of Edson Road and Illinois Route 251 near Davis Junction in Ogle County, Illinois. The Phase I Landfill that occupies approximately 25 acres in the southwest corner of the facility between facility coordinates 0 to 900 East and 0 to 1425 North. The unit is excavated down to an elevation of 712 feet above Mean Sea Level (Ft-MSL) at the north end and 717 feet Ft-MSL at the south end. The floor of the unit is situated in a layer of in-situ clayey soils. Sides of the unit consist of compacted clay walls that were designed to impede migration into an upper sand layer on the north, south and west sides of the unit and into Phase 2 on the east side of the unit. These clay walls were required by permit to be a minimum of ten feet thick.

Wastes received at the facility included municipal refuse, special wastes, and hazardous waste. Only approximately 2% of the waste disposed in the Phase I Landfill was hazardous waste. 35 Ill. Adm. Code 703.121 requires owners and operators of landfill units that received waste after January 26, 1982, or certified closure in accordance with 35 Ill. Adm. Code 725.215 after January 26, 1983, to obtain post-closure permits, unless closure by removal as described in 35 Ill. Adm. Code 703.159 and 160 has been achieved. Since hazardous waste was received in Phase I after January 26, 1982 (the last load of hazardous waste was received on January 25, 1983), a RCRA Post-Closure Permit is required for Phase I Landfill.

The existing cover system for the unit is from top to bottom: 1) a 36-inch thick final cover protective layer to support vegetation (the top 6 inches (minimum) of which is topsoil); 2) a geotextile filter fabric; 3) a geonet drainage layer, 4) a 40-mil polyethylene geomembrane; and 5) a 24-inch compacted clay layer composed of materials contained in the old cover system at the facility. The unit's existing leachate

collection system consists of 15 leachate extraction points on 250 to 300 foot centers throughout the Phase I Landfill. Finally, a landfill gas monitoring/management program is implemented for the unit.

2. Illinois EPA approved certification of closure of the Phase I Landfill on December 5, 1984. Post-closure care for this unit must then be provided for at least thirty (30) years after that date. The Illinois EPA has extended post-closure care until at least December 5, 2054, or until such time as no unacceptable risks to human health and the environment are present in the Phase I Landfill, as determined by the Illinois EPA.

3. A survey plat indicating the location and dimensions of the Phase I Landfill with respect to permanently surveyed benchmarks was prepared and certified by a professional land surveyor. The notes on the plat state the owner's and operator's obligation to restrict disturbance of the Phase 1 Landfill in accordance with the applicable Subpart G regulations. These notes state:

   a. The waste materials contained in the Phase I Landfill are considered RCRA hazardous wastes. They include 96% heavy metal sludges; 4% spent solvent still bottoms, spent solvent sludges, petroleum refining residues, rodenticides glycol, polystyrene, and pthalic anhydride.

   b. Any material removed from the Phase 1 Landfill during future activities must be managed as a hazardous waste in accordance with 35 Ill. Adm. Code Subtitle G: Waste Disposal.

   c. The use of this area is restricted.

4. The Survey Plat (Exhibit A) indicating the location and dimension of the closed Phase I Landfill area was recorded in the Ogle County Recorder's Office on April 5, 2006. The Survey Plat was recorded as Document No. 0603382.

   The Plat of Survey was attached to the deed to the property and serves as an instrument which is normally examined during title search that will in perpetuity notify any potential purchaser of the property that:

   a. The waste material in the Phase 1 Landfill is a RCRA hazardous waste;

   b. Use of the area is restricted; and

   c. A survey plat and record of the type, location and quantity of waste material in the Phase I Landfill was filed with the Illinois EPA and the County Recorder.

C. MONITORING, MAINTENANCE, AND RECORDKEEPING

1. The Permittee shall implement the Post-Closure Care plan contained in the approved permit application. All post-closure care activities must be conducted in accordance with the provisions of the approved Post-Closure Plan and the conditions in this permit.

2. The Permittee shall continue to conduct post-closure care for each Hazardous Waste Management Unit in Permit Section I.B.1. Post-closure care of the unit began on December 5, 1984 and must continue for at least thirty (30) years after that date. The Illinois EPA has extended post-closure care until at least December 5, 2054, or until such time as no unacceptable risks to human health and the environment are present in the Phase I Landfill, as determined by the Illinois EPA.

3. The Illinois EPA may include restrictions upon the future use of the site if necessary to protect public health and the environment, including permanent prohibition of the use of the site for purposes which may create an unreasonable risk of injury to human health or the environment. After administrative and judicial challenges to such restrictions have been exhausted, the Illinois EPA shall file such restrictions of record in the Office of the Recorder of the county in which the Phase I Landfill is located.

4. The Permittee shall not allow any use of the units designated in Condition I.B which will disturb the integrity of the final cover, liners, any components of the containment system, or function of the facility's monitoring systems during the post-closure care period unless such use is necessary to protect public health or the environment.

5. The Illinois EPA may require, at partial and final closure, continuation of any of the security requirements during part or all of the post-closure care period.

6. The Permittee shall maintain and monitor the groundwater monitoring system and comply with the other applicable regulations of 35 Ill. Adm. Code 724 Subpart F (Groundwater Protection) during the post-closure care period.

7. The Permittee shall maintain a record of all inspections, monitoring, and maintenance activities in the facility's operating record. A copy of the operating record must be kept at the physical location specified in the approved permit application (i.e., the Permittee's offices in Hanover Park, IL).

8. The Permittee shall comply with the requirements for landfills described in the approved permit application and the conditions of this permit as follows:

   a. Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, cracking or other events.

Corrective action shall be taken if ponding has been observed, if cracks or erosion channels greater than one inch wide have formed for whatever reason, if gas, odor, vegetative or vector problems arise, if leachate popouts or seeps are present, or if vegetation with tap roots is found to be growing in areas which are not designed to accommodate such vegetation.

b. Continue to operate the leachate collection and removal system throughout the post-closure care period in accordance with Section E of the approved permit application until pumpable quantities of leachate are not present. If operation of the leachate collection and removal system is discontinued under this provision, the Permittee must continue to monitor leachate levels during the Post-Closure Care period. If leachate levels rise to pumpable levels during the Post-Closure Care period, the Permittee must resume operation of the leachate collection and removal system until pumpable levels of leachate are no longer present.

   Existing leachate head levels must be reduced within the unit through active vertical extraction to the lowest pumpable levels. Progress towards lowering the leachate head levels must be monitored by taking quarterly leachate level measurements from the leachate head wells. These measurements must be recorded and maintained with the facility operating record. The actual leachate head maintenance level must be established based on the performance of the extraction system over time. The Permittee must maintain the lowest pumpable leachate levels within all vertical extraction wells.

   The Permittee must perform leachate sampling in accordance with the Delisting Petition approved by the Illinois Pollution Control Board (AS 08-5) dated December 5, 2008. Leachate samples must be taken semi-annually from the leachate holding tank and analyzed for the constituents identified in the approved Delisting Petition mentioned above as well as the following parameters: Chemical Oxygen Demand (COD); 5-Day Biochemical Oxygen Demand (BOD5), total solids, total suspended solids, iron and pH. Data from the annual leachate analysis must be recorded and maintained with the facility operating record.

c. Continue to implement the landfill gas monitoring/management program set forth in Section E of the approved permit application.

d. Continue to operate the leachate collection and removal system, and leak detection systems until leachate is no longer detected.

e. Prevent run-on and run-off from eroding or otherwise damaging the final cover.

f. Protect and maintain surveyed benchmarks used in complying with surveying and recordkeeping requirements.

D. INSPECTIONS

The Permittee shall inspect the components, structures, and equipment at the site in accordance with the inspection schedule in the approved permit application and the conditions in this permit.

E. NOTICES AND CERTIFICATION

1. The person or office specified in the approved Post-Closure Plan must keep the plan during the remainder of the post-closure period.

2. If the Permittee or any subsequent owner or operator of the land upon which the Phase I Landfill is located wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, then they must request a modification to this Post-Closure Permit in accordance with the applicable requirements in 35 Ill. Adm. Code Parts 703, 705 and 724. The owner or operator must at a minimum demonstrate that the removal of hazardous wastes will satisfy the criteria of 35 Ill. Adm. Code 724.217(c).

3. No later than sixty (60) days after completion of the established post-closure care period for the Phase I Landfill, the Permittee shall submit to the Illinois EPA, by registered mail, a certification that the post-closure care for the Phase I Landfill was performed in accordance with the specifications in the approved Post-Closure Plan and the conditions of this permit. The certification must be signed by the owner or operator and a qualified Professional Engineer registered in the State of Illinois. Documentation supporting the qualified Professional Engineer's certification must be furnished to the Illinois EPA upon request until the Illinois EPA releases the Permittee from the financial assurance requirements for post-closure care.

4. Within 60 days after receiving certifications from the owner or operator and a qualified Professional Engineer that the post-closure care period has been completed for the Phase I Landfill listed in Condition I.B.1 of this permit in accordance with the approved Post-Closure Plan, the Agency shall notify the owner or operator that it is no longer required to maintain financial assurance for post-closure care of that unit unless the Illinois EPA determines that post-closure care has not been in accordance with the approved Post-Closure Plan. The Illinois EPA shall provide the owner or operator with a detailed written statement of any such determination that post-closure care has not been in accordance with the approved Post-Closure Plan.

5. Within 90 days of the modification date of this permit, the Permittee shall notify persons on the facility mailing list of the changes to the permit identified in the permit modification. Within 120 days of the modification date, the Permittee shall provide documentation to the Illinois EPA Bureau of Land Permit Section that the required notification was made as specified above. At a minimum, this documentation shall

include a copy of the letter sent and a copy of the facility mailing list of all people who received the notification.

F. 39(i) CERTIFICATION

1. The Permittee shall submit current 39(i) certifications and supporting documentation with all permit applications.

G. FINANCIAL ASSURANCE

1. The Permittee shall maintain financial assurance for post-closure care of the Phase I Landfill of at least the amount that is shown in Attachment C to this permit. The financial assurance maintained by the facility shall be sufficient to meet the requirements at 35 Ill. Adm. Code 724 Subpart H.

SECTION II: IDENTIFICATION OF APPROVED PERMIT APPLICATION

1. RCRA Part B Renewal Application dated June 21, 2017
2. Addendum to Permit Application dated October 12, 2017
3. Addendum to Permit Application dated May 9, 2018
4. Addendum to Permit Application July 18, 2018
5. Class 1* Permit Modification dated November 16, 2018 (B-142R2-M-1) (Partial Approval)
6. Class 1* Permit Modification dated August 27, 2019 (B-142R2-M-2) (Partial Approval)
7. Class 1* Permit Modification dated May 10, 2023 (B-142R2-M-4) (Partial Approval)
8. Class 1* Permit Modification dated January 27, 2022 (B-142R2-M-6) (Partial Approval)
9. Class 1* Permit Modification dated December 1, 2022 (B-142R2-M-7) (Partial Approval)
10. Class 2 Permit Modification dated September 27, 2024, and additional information dated October 1, 2024 (B-142R2-M-9)(Partial Approval)

SECTION III: GROUNDWATER DETECTION MONITORING PROGRAM

A. SUMMARY

Groundwater parameters monitored in the Uppermost Aquifer below the BFI Davis Junction Landfill facility indicate that at the present time no groundwater impacts have occurred. Therefore, a Groundwater Detection Monitoring Program meeting the requirements of 35 Ill. Adm. Code 724.198 shall be implemented at the facility.

B. DEFINITION

As used herein, the words or phrases set forth below shall have the following definitions:

1. "BFI Davis Junction" shall refer to BFI Waste Systems of America, LLC Davis Junction Landfill (Phase I).

2. "Site" or "Facility" refers to the location at the southwest corner of the intersection of Edson Road and U.S. Route 251 in Ogle County, Illinois.

3. "Permittee" refers to the Facility.

4. "Illinois EPA" refers to the Illinois Environmental Protection Agency.

5. "RCRA" shall mean the Resource Conservation and Recovery Act as defined by Section 3.425 of the Environmental Protection Act, 415 ILCS 5/1 (2006).

7. "Point of Compliance" refers to the vertical surface located at the hydraulically downgradient limits of the landfill extending down into the Uppermost Aquifer underlying the regulated unit.

8. "Ft-bgs" refers to the number of feet below the ground surface.

9. "Ft-MSL" refers to the number of feel below the ground surface referenced to mean sea level.

10. "Detected" shall mean a concentration equal to or above the PQL listed in the latest version of USEPA's "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846) for the applicable analytical methods specified in the approved Sampling and Analysis Plan, which are incorporated by reference in Condition II.H of the Permit.

11. "Uppermost Aquifer" refers to the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically connected with this aquifer in the vicinity of the facility. The Uppermost Aquifer in the vicinity of the BFI Davis Junction facility consists of alluvial and outwash deposits and

include fine to medium sands with some silts underlain by fine to coarse sand, which is then underlain by a basal fine sand.

12. "Stick-up" refers to the height of the referenced survey datum. This point is determined within ± 0.01 foot in relation to mean sea level, which in turn is established by referenced to an established National Geodetic Vertical Datum.

C. IMPLEMENTATION

1. The Permittee shall implement the Groundwater Detection Monitoring Program upon the effective date of this Permit. On that date, the groundwater monitoring requirements set forth in this Permit shall supersede those previously established.

2. The Permittee shall carry out the detection monitoring specified in this Permit on the groundwater beneath the BFI Davis Junction Landfill in Davis Junction, Illinois. The Uppermost Aquifer beneath this site is defined as the interconnecting sands and sands and gravels within the Rock Bedrock Valley as well as the underlying and adjacent Galena-Platteville, lower St. Peter Sandstone, and the entire thickness of the Cambrian Ordovician Aquifer. The Rock Bedrock Valley contains approximately 250 feet of sand and gravel. For the purpose of this Permit and in accordance with the 35 Ill. Adm. Code Part 620 regulations, the Uppermost Aquifer has been designated Class I: Potable Resource Groundwater.

NOTE: At this time and pursuant to the information presented in the permit application, only the uppermost portion of the Uppermost Aquifer shall be monitored since little if any impact has occurred. If an impact to the upper portion of the Uppermost Aquifer is confirmed, investigation of the lower portions shall be required. Wells designated with an "M" shall be screened in the upper fine sand which occurs between approximately 686 Ft-MSL to 700 Ft-MSL. Where the fine sand is absent, "M" wells shall be screened in coarser materials within the same approximate interval. Wells with a "D" shall be screened in the most efficient sand and gravel portion at approximately 615 Ft-MSL to 686 Ft-MSL. Piezometer designations with a "S" are screened in intermittently saturated zones above the intermediate ("M") and deep ("D") wells.

3. The Point of Compliance is delineated by the wells identified as the point of compliance wells in Condition III.D.1.

D. WELL LOCATIONS AND CONSTRUCTION

1. The Permittee shall maintain the groundwater monitoring wells and piezometers identified in the table below to allow for the collection of groundwater samples and elevations from the Uppermost Aquifer. The location of these wells and piezometers are specified in Figure 2 of the approved permit application.

IEPA Well No.	Facility Well No.	Well Depth (Ft-bgs)	Well Depth Elevation (Ft-MSL)	Well Screen Interval (Ft-MSL)
Upgradient Wells				
G66M	G166I	70.1	691.1	691.1-696.1
G75M	G175I	73.9	686.6	686.6-691.6
Point of Compliance Wells				
G55M	G155I	29.0	694.3	694.3-699.3
G67M	G167I	30.3	691.1	691.1-696.1
G69M	G169I	29.0	696.8	693.8-698.8
G76M	G176I	28.9	694.0	694.0-699.0
G77M	G177I	33.0	691.5	691.5-696.5
Piezometers				
G55S	G155S	9.40	714.3	714.3-716.8
G63S	G163S	19.89	701.9	701.9-706.9
G63M	G163I	50.7	670.9	670.9-675.9
G67S	G167S	8.3	713.0	713.0-715.5
G68S	G168S	12.1	707.6	707.6-712.6

IEPA Well No.	Facility Well No.	Well Depth (Ft-bgs)	Well Depth Elevation (Ft-MSL)	Well Screen Interval (Ft-MSL)
Upgradient Wells				
G62D	G162D	83.0	654.4	654.4-659.4
G66D	G166D	80.9	681.1	681.1-686.1
Compliance Point Wells				
G55D	G155D	52.7	670.3	670.3-675.3
G67D	G167D	55.2	666.4	666.4-671.4
G69D	G169D	55.0	667.7	667.7-672.7
G77D	G177D	56.5	667.3	667.3-672.3
Piezometers				
G63D	G163D	164.9	557.5	557.5-562.5

2. Construction of each new monitoring well/piezometer must be in accordance with the diagram contained in Attachment A to this Permit unless otherwise approved in writing by the Illinois EPA. Any new monitoring wells/piezometers to be installed must be continuously sampled and logged, except in the case of a shallower well located within ten (10) feet of a deeper well which has been continuously sampled and logged and must be logged on Illinois EPA boring logs as included as Attachment A, and which can be found on the Illinois EPA website.

3. The Permittee shall notify the Illinois EPA within thirty (30) days in writing if any of the wells identified in Condition III.D.1 are damaged or the structural integrity has been compromised. A proposal for the replacement of the subject well shall accompany this notification. The well shall not be plugged until the new well is on-line and monitoring data has been obtained and verified, unless the well is extremely damaged and would create a potential route for groundwater contamination. Prior to replacing the subject well, the Permittee shall obtain written approval from the Illinois EPA regarding the proposed installation procedures and construction.

4. Should any well become consistently dry or unserviceable, a replacement well shall be provided within ten (10) feet of the existing well. This well shall monitor the same zone as the existing well and be constructed in accordance with the current Illinois EPA groundwater monitoring well construction standards at the time the wells are replaced. A well which is more than ten (10) feet from the existing well or does not monitor the same geologic zone must be approved by the Illinois EPA and designated as a new well.

5. The Permittee shall submit boring logs, construction diagrams and data sheets from installation and development of a new or replacement well to the Illinois EPA at the address below within sixty (60) days of the date that installation of the well is completed. In addition, the Permittee shall submit certification that plugging and abandonment of a well was carried out in accordance with the approved procedures to the Illinois EPA at the address below within sixty (60) days of the date that the well is plugged and abandoned. All information should be submitted to the appropriate State Agencies.

   Illinois Environmental Protection Agency
   Bureau of Land - #33
   Permit Section
   1021 North Grand Avenue East
   Post Office Box 19276
   Springfield, Illinois 62794-9276

6. All wells/piezometers shall be equipped with protective caps and locks. Monitoring wells or piezometers located in high traffic areas must be protected with bumper guards or other alternate barriers.

7. All wells/piezometers not utilized in the approved groundwater monitoring system, but retained by the facility, must be constructed and maintained in accordance with 77 Ill. Adm. Code Part 920 regulations. Monitoring wells that are improperly constructed must be abandoned in accordance with Condition III.D.3.

E. MONITORING PARAMETERS

1. The Permittee shall determine groundwater quality at groundwater monitoring wells identified in Condition III.D.1 at both upgradient and point of compliance locations, or other wells annually during the active life (including closure and post-closure care period) of the Phase I Landfill. Samples collected during the annual sampling events of each year shall be analyzed for the constituents below.

List G1 Annual Groundwater Sampling

Field Parameters	STORET Numbers	Background Levels Shallow/Intermediate	Deep
pH (standard)	00400	6.71-8.13	6.62-8.13
Specific Conductance @25° (µmhos/com)	00094	1608	1608
Temperature of Water Sample (°F)	00011		
Turbidity (Ntus)	45626		
Depth to Water (Ft. below land surface)	72019		
Depth to Water (Ft. below measuring point)	72109		
Elevation of Bottom of Well (Ft-MSL)#	72020		
Elevation of Groundwater Surface (Ft-MSL)	71993		
Elevation of Measuring Point (Top of casing Ft-MSL)##	72110		

Shall be surveyed once every five (5) years, or whenever pumps are removed from the well for maintenance, or at the request of the Illinois EPA, or whenever the elevation changes as required by Condition III.J.6.

Shall be surveyed once every five (5) years; or at the request of the Illinois EPA; or whenever the elevation changes in accordance with Condition III.J.5.a.

Indicator Parameters	STORET Numbers	Background Levels Shallow/Intermediate	Deep
Arsenic (Dissolved) mg/l	01000	.023	.011
Arsenic (Total) mg/l	01002	.002	.013

List G1 Annual Groundwater Sampling (cont.)

Parameters (cont.)	STORET Numbers	Background Levels Shallow/Intermediate	Deep
Barium (Dissolved) ug/l	01005	100	100
Barium (Total) ug/l	01007	<100	110
Cadmium (Dissolved) ug/l	01025	8	<5
Cadmium (Total) ug/l	01027	5	5
Chromium (Dissolved) ug/l	01030	14	<10
Chromium (Total) ug/l	01034	760	760
Cyanide (Total) mg/l	00720	.02	.005
Lead (Dissolved) ug/l	01049	40	6
Lead (Total) ug/l	01051	22	11
Selenium (Dissolved) mg/l	01145	<.005	<.002
Selenium (Total) mg/l	01147	2	2
Zinc (Dissolved) mg/l	01090	.074	.04
Zinc (Total) ug/l	01092	26	30
Acetone	81552	100	100
Benzene	34030	5	5
Cobalt (mg/L)	01037	.1	.1
Copper (mg/L)	01042	.01	.025
Dichloromethane (Methylene Chloride)	34423	5	5
Endrin	39390	2	2
Ethylbenzene	78113	5	5
Ethyl Ether (Diethyl Ether)	81576	5	5
Heptachlor	39410	.4	.4
Nickel	01067	510	510
Styrene	77128	10	10
Tetrachloroethylene	34475	5	5
Toluene	34010	5	5
Trichloroethylene	39180	5	5
Vinyl Chloride	39175	2	2
Xylenes	81551	5	5
1,1-Dichloroethane	34496	5	5
cis-1,2-Dichloroethylene	77093	5	5
1,4-Dioxane	82388	5	5
2,4,5 TP (Silvex)	39760	2	2
2,4-Dichlorophenoxyacetic Acid (2,4-D)	39730	10	10
2-Butanone (Methyl Ethyl Ketone)	81595	10	10
1,4(para) Dichlorobenzene	34571	5	5
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	78133	10	10
bis (2-ethyl hexyl) phthalate	39100	20	20

List G1 Annual Groundwater Sampling (cont.)

Parameters (cont.)	STORET Numbers	Background Levels Shallow/Intermediate	Deep
2-Methylphenol (o-cresol)	77152	10	10
3-Methylphenol (m-cresol)	77151	10	10
4-Methylphenol (p-cresol)	77146	10	10
Acetophenone	81553	10	10
2,4-Dimethylphenol	34606	10	10

NOTE:

i. Background concentrations are given in ug/L except as otherwise noted. Also, the monitoring results should be reported in ug/L units unless otherwise indicated.

ii. All parameters with the "(Dissolved)" label to the right shall be determined using groundwater samples which have been filtered through a 0.45 micron filter.

iii. In cases where log-transformed values better describe a normal distribution and are used to determine groundwater parameters, all future well comparisons within that parameter must be made with log-transformed data for significance or compliance.

iv. Included in the annual sampling report shall be the calculated rate of migration and direction including the supporting calculations and assumptions using site specific data. Hydraulic conductivity shall be determined utilizing results from field testing rather than estimating the hydraulic conductivity using grain size analysis.

F. DETECTION MONITORING PROGRAM

1. The Permittee shall determine groundwater quality at each monitoring well identified in Condition III.D.1 annually during the active life of the regulated unit (including the closure and post-closure care periods). The Permittee shall express the groundwater quality at each monitoring well in a form necessary for the determination of statistically significant changes (i.e. means, variances, etc.).

2. The Permittee shall determine the groundwater flow rate and direction in the Uppermost Aquifer annually, and report to the Illinois EPA at least annually from monitoring wells identified in Condition III.D.1

3. The Permittee shall determine whether there is a statistically significant increase, (or decrease in the case of pH) over the background values established for each parameter identified in Condition III.E.1 or the 35 Ill. Adm. Code 620, Class I Groundwater

Quality Standards, whichever is greater, each time groundwater quality is determined at the Point of Compliance.

G. GROUNDWATER ELEVATION

1. The Permittee shall determine the groundwater surface elevation referenced to Ft-MSL at each well each time groundwater is sampled in accordance with Condition III.J.3.

2. The Permittee shall determine the surveyed elevation of "stick-up" referenced to Ft-MSL when the well is installed (with as-built diagrams) and every five (5) years; or at the request of the Illinois EPA; or whenever the elevation changes in accordance with Condition III.J.5.

3. Elevation, as referenced to Ft-MSL, of the bottom of each monitoring well (STORET 72020) is to be reported once every five (5) years, or whenever the pumps are removed from the well for maintenance; or at the request of the Illinois EPA; or whenever the elevation changes in accordance with Condition III.J.6. The mandatory measurement shall be taken during the annual sampling event.

H. SAMPLING AND ANALYSIS PROCEDURES

1. The Permittee shall use the techniques and procedures described in Appendix C-3 of the approved permit application except as modified below, when obtaining and analyzing samples from the groundwater monitoring wells described in Condition III.D.1 above:

   a. Samples shall be collected by the techniques described in Appendix C-3 of the approved permit application.

   b. Samples shall be preserved and shipped (when shipped off-site for analysis) in accordance with the procedures specified in Appendix C-3 of the approved permit application.

   c. Samples shall be analyzed in accordance with the procedures specified in Appendix C-3 of the approved permit application.

   d. Samples shall be tracked and controlled using the chain of custody procedures specified in Appendix C-3 of the approved permit application.

2. Sampling will be collected first from upgradient wells, proceed to non-contaminated downgradient wells, and then proceeding to the downgradient wells which are known to be contaminated.

3. Purging of groundwater must continue until measurements of field parameters (pH, specific conductance, temperature, and turbidity) have stabilized within approximately 10% over at least two measurements collected over three to five minute intervals. If a well is purged to dryness or is purged such that the full recovery exceeds two hours, the well should be sampled as soon as sufficient volume of groundwater has entered the well to enable the collection of the necessary groundwater samples.

4. Analytical methods to be utilized by the facility must be in accordance with the latest version of USEPA's "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846) Third Edition, Final Update III, Revision 4.

5. Quality assurance/quality control procedures which meet the requirements of SW-846 must be implemented during all sampling and analysis efforts. In addition, sample collection, handling, preservation, preparation, and analysis must be conducted in accordance with the procedures set forth in SW-846.

I. STATISTICAL PROCEDURES

When evaluating the monitoring results in accordance with Condition III.F, the Permittee shall use the following procedures:

1. The statistical method used to obtain background concentrations shall be as specified in the approved permit application.

2. Non-detects and censored data shall be treated as specified in Appendix Q of the approved permit application first submitted in February 2005. Within ninety (90) days of the effective date of this permit, the permittee shall provide a copy of Appendix Q from the 2005 permit application as a Class 1* permit modification to Section C of the approved permit application.

3. A statistically significant increase above background of the parameters identified in Condition III.E.1 is when an observed concentration of such a constituent in a downgradient well exceeds the background concentration (95% tolerance interval) listed in Condition III.E.1.

4. For constituents which have not been detected in the groundwater, the practical quantitation limit (PQL) shall be used as the background concentration.

5. If a given constituent is found above background in the sample, the Permittee may resample within thirty (30) days. This sample shall be analyzed for the constituent(s) detected above background in the initial samples.

J. REPORTING AND RECORDKEEPING

1. The Permittee shall enter all monitoring, testing, and analytical data obtained in accordance with Conditions III.E, III.F, III.G, III.H and III.I in the operating record. The data must include all computations, calculated means, variances, t-statistic values and t-statistic results or results of statistical test that the Illinois EPA has determined to be equivalent.

2. Samples collected to meet the requirements of the groundwater monitoring program described in Conditions III.E, III.F, III.G, and III.I shall be collected and reported, as identified in the table below. All additional information required by the groundwater monitoring program (as specified in Conditions III.E, III.F, III.G and III.I) shall also be submitted to the Illinois EPA at the address listed in Condition III.D.5 in accordance with this schedule.

Samples to be Collected During The Months of	Results Submitted to the Illinois EPA by the Following	Parameters
April - June	July 15	Lists G1

3. Groundwater surface elevation data, measured pursuant to Condition III.G.1 shall be collected annually and submitted to the Illinois EPA as identified in the table above.

4. The Permittee shall report the groundwater flow rate and direction in the Uppermost Aquifer as required by Condition III.F.2 during the annual sampling event of the year.

5. The Permittee shall report the surveyed elevation, as required by Condition III.G.2, of the top of the well casing "stick-up", referenced to Ft-MSL in accordance with the following schedule:

   a. For wells identified in Condition III.D.1, every five (5) years (during the annual sampling event); or at the request of the Illinois EPA; or whenever the elevation changes.

   b. For any new wells, at the time of installation and reported in the as-built diagrams, subsequent measurements shall be made every five (5) years (during the annual sampling event), or at the request of the Illinois EPA, or whenever the elevation changes.

6. Elevation of the bottom of each monitoring well identified in Condition III.D.1, as referenced to Ft-MSL, is to be reported every five (5) years. This measurement shall be taken during the annual sampling event (STORET 72020) in accordance with Condition III.G.3.

7. Information required by Conditions III.J.2, III.J.3, III.J.5 and III.J.6 must be submitted in an electronic format. The information is to be submitted, as fixed-width text files formatted as found in Attachment A, in accordance with the schedule found in Condition III.J.2 above. Additional guidance regarding the submittal of the information in an electronic format can be found on the Illinois EPA website.

8. The Permittee shall submit a completed "RCRA Facility Groundwater, Leachate and Gas Reporting Form" (LPC-592) as a cover sheet for any notices or reports required by the permit for identification purposes. Only one copy of the LPC-592 must accompany your submittal. However, the Permittee must submit one (1) original and (excluding the groundwater and leachate monitoring results submitted in an electronic format) a minimum of two (2) copies of each notice or report you submit to the Illinois EPA. The form is not to be used for permit modification requests.

9. The Permittee shall report all information to the Illinois EPA in a form which can be easily reviewed. All submittals contain tables of data drawings and text (as necessary) to accurately describe the information contained in the submittal.

10. If the Permittee determines, pursuant to Condition III.F.3 that there is a statistically significant increase for any of the parameters specified in Condition III.E.1 at any monitoring well at the Point of Compliance, the Permittee shall:

    a. Notify the Illinois EPA in writing indicating what parameters and wells have shown statistically significant increases and provide all statistical calculations. This notification shall be submitted to the Illinois EPA within seven (7) days of the date that the increases are discovered.

    b. Sample the groundwater in all wells listed in Condition III.D.1 and determine the concentration of all constituents identified in Appendix I of 35 Ill. Adm. Code Part 724 such that the results will accompany the permit modification required by Condition III.J.10.d below.

    c. For any Appendix I compounds found in the analysis pursuant to this condition, the Permittee may resample within one month and repeat the analysis for those compounds detected. If results of the second analysis confirm the initial results, then these constituents will form the basis for compliance monitoring. If the Permittee does not resample for the compounds pursuant to this condition, the hazardous constituents found during the initial Appendix I analysis will form the basis for compliance monitoring.

    d. Submit to the Illinois EPA an application for a permit modification to establish a compliance monitoring program meeting the requirements of 35 Ill. Adm. Code 724.199. The application shall be submitted to the Illinois EPA within ninety (90)

days of the date that the increase is discovered. Furthermore, the application must include the following information:

i. An identification of the concentration of any 35 Ill. Adm. Code Part 724, Appendix I constituents found in the groundwater at each monitoring well at the Point of Compliance;

ii. Any proposed changes to the groundwater monitoring system at the facility necessary to meet the requirements 35 Ill. Adm. Code 724.199;

iii. Any proposed changes to the monitoring frequency, sampling and analysis procedures, or methods or statistical procedures used at the facility necessary to meet the requirements of 35 Ill. Adm. Code 724.199; and

iv. For each hazardous constituent found at the compliance point, a proposed concentration limit under 35 Ill. Adm. Code 724.194(a)(1) or 724.194(a)(2), or a notice of intent to seek an alternate concentration limit for a hazardous constituent under 35 Ill. Adm. Code 724.194(b).

e. Submit to the Illinois EPA a corrective action feasibility plan to meet the requirements of 35 Ill. Adm. Code 724.200 unless the concentrations of all hazardous constituents identified under Condition III.J.10.b above are listed in 35 Ill. Adm. Code 620.410 and their concentrations do not exceed the respective Groundwater Quality Standards or the Permittee has sought alternate concentration limits under Condition III.J.10.d.iv above for every hazardous constituent identified under Condition III.J.10.b above. This plan must be submitted to the Illinois EPA within 180 days of the date the increase is discovered.

f. Submit to the Illinois EPA all data necessary to justify any alternate concentration limit for a hazardous constituent sought under Condition III.J.10.d.iv above. This plan must be submitted to the Illinois EPA within 180 days of the date the increases is discovered.

11. If the Permittee determines, pursuant to Condition III.F.3, that there is a statistically significant increase above the background values for the parameters specified in Condition III.E.1, the Permittee may demonstrate that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis, or evaluation. The Permittee shall submit a permit modification application in accordance with Condition III.J.10.d unless the demonstration successfully shows that a source other than the regulated unit caused the increase or that the increase resulted from errors in sampling, analysis or evaluation and the Illinois EPA concurs.

To make this demonstration, the Permittee shall:

a. Notify the Illinois EPA in writing that they intend to make this demonstration. This notification must be submitted to the Illinois EPA within seven (7) days of the date that the increase is discovered.

b. Submit a report to the Illinois EPA which demonstrates that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation. This report must be submitted within ninety (90) days of the date that the increase is discovered.

c. Submit to the Illinois EPA an application to make any appropriate changes to the Groundwater Detection Monitoring Program. This application must be submitted within ninety (90) days of the date that the increase is discovered.

d. Continue to monitor in accordance with the detection monitoring program at the facility.

K. REQUEST FOR PERMIT MODIFICATION

1. If the Permittee determines that the detection monitoring program no longer satisfies the requirements of 35 Ill. Adm. Code 724.198, the Permittee must, within ninety (90) days, submit an application for a permit modification to the Illinois EPA to make any appropriate changes to the program which will satisfy the regulations.

2. Conditions in this section of the Permit may be modified in accordance with 35 Ill. Adm. Code 705.128 if there is cause for such modification, as defined in 35 Ill. Adm. Code 702.184. Causes for modification identified in this section include, but are not limited to, alterations to the permitted facility, additional information which would have justified the application of different permit conditions at the time of issuance, and new regulations.

SECTION IV: STANDARD CONDITIONS

GENERAL REQUIREMENTS

1. EFFECT OF PERMIT. The existence of a RCRA permit shall not constitute a defense to a violation of the Environmental Protection Act or Subtitle G, except for development, modification or operation without a permit. Issuance of this permit does not convey property rights or any exclusive privilege. Issuance of this permit does not authorize any injury to persons or property or invasion of other private rights, or infringement of state or local law or regulations. (35 Ill. Adm. Code 702.181)

2. PERMIT ACTIONS. This permit may be modified, reissued or revoked for cause as specified in 35 Ill. Adm. Code 703.270 through 703.273 and Section 702.186. The filing of a request by the Permittee for a permit modification or revocation, or a notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition. (35 Ill. Adm. Code 702.146)

3. SEVERABILITY. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby. (35 Ill. Adm. Code 700.107)

4. PERMIT CONDITION CONFLICT. In case of conflict between a special permit condition and a standard condition, the special condition will prevail. (35 Ill. Adm. Code 702.160)

5. DUTY TO COMPLY. The Permittee shall comply with all conditions of this permit except for the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance constitutes a violation of the Environmental Protection Act and is grounds for enforcement action; permit revocation or modification; or for denial of a permit application. (35 Ill. Adm. Code 702.141 and 703.242)

6. DUTY TO REAPPLY. If the Permittee wishes to continue an activity allowed by this permit after the expiration date of this permit, the Permittee must apply for a new permit at least 180 days before this permit expires, unless permission for a later date has been granted by the Illinois EPA. (35 Ill. Adm. Code 702.142 and 703.125)

7. PERMIT EXPIRATION. This permit and all conditions herein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application (see 35 Ill. Adm. Code 703.181-703.209) and through no fault of the Permittee the Illinois EPA has not issued a new permit as set forth in 35 Ill. Adm. Code 702.125.

8. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (35 Ill. Adm. Code 702.143)

9. DUTY TO MITIGATE. In the event of noncompliance with the permit, the Permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment. (35 Ill. Adm. Code 702.144)

10. PROPER OPERATION AND MAINTENANCE. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory, and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit. (35 Ill. Adm. Code 702.145)

11. DUTY TO PROVIDE INFORMATION. The Permittee shall furnish to the Illinois EPA, within a reasonable time, any relevant information which the Illinois EPA may request to determine whether cause exists for modifying, revoking and reissuing or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Illinois EPA, upon request, copies of records required to be kept by this permit. (35 Ill. Adm. Code 702.148)

12. INSPECTION AND ENTRY. The Permittee shall allow an authorized representative of the Illinois EPA, upon the presentation of credentials and other documents as may be required by law, to:

    a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

    d. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the appropriate Act, any substances or parameters at any location. (35 Ill. Adm. Code 702.149)

13. MONITORING AND RECORDS. (35 Ill. Adm. Code 702.150)

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste must be the appropriate method from Appendix A of 35 Ill. Adm. Code Part 721. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, latest versions; Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, latest versions; or an equivalent method as specified in the approved Waste Analysis Plan.

b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, and records of all data used to complete the application for this permit for a period of at least 3 years from the date of the sample, measurement, report or application. These periods may be extended by request of the Illinois EPA at any time. The permittee shall maintain records from all groundwater monitoring wells and associated groundwater surface elevations, for the active life of the facility, and for disposal facilities for the post-closure care period as well.

c. Records of monitoring information shall include:

i. The date(s), exact place, and time of sampling or measurements;

ii. The individual(s) who performed the sampling or measurements;

iii. The date(s) analyses were performed;

iv. The individual(s) who performed the analyses;

v. The analytical technique(s) or method(s) used; and

vi. The result(s) of such analyses. (35 Ill. Adm. Code 702.150)

14. REPORTING PLANNED CHANGES. The Permittee shall give written notice to the Illinois EPA as soon as possible of any planned physical alterations or additions to the permitted facility. In general, proposed changes to the facility will need to be submitted to the Illinois EPA as permit modification request that complies with the requirements of 35 Ill. Adm. Code 703.280. (35 Ill. Adm. Codes 702.152(a))

15. ANTICIPATED NONCOMPLIANCE. The Permittee shall give advanced written notice to the Illinois EPA of any planned changes in the permitted facility or activity which may

result in noncompliance with permit requirements, regulations, or the Act. (35 Ill. Adm. Code 702.152(b))

16. TRANSFER OF PERMITS. This permit may not be transferred by the Permittee to a new owner or operator unless the permit has been modified or reissued pursuant to 35 Ill. Adm. Code 703.260(b) or 703.272. Changes in the ownership or operational control of a facility must be made as a Class 1 modification with the prior written approval of the Illinois EPA. The new owner or operator shall submit a revised permit application no later than 90 days prior to the scheduled change. (35 Ill. Adm. Code 703.260)

17. MONITORING REPORTS. Monitoring results shall be reported at the intervals specified in the permit. (35 Ill. Adm. Code 702.152(d))

18. COMPLIANCE SCHEDULES. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than specified in Section VI of this permit. (35 Ill. Adm. Code 702.152(e))

19. TWENTY-FOUR HOUR REPORTING.

    a. The Permittee shall report to the Illinois EPA any noncompliance with the permit which may endanger health or the environment. Any such information shall be reported orally within 24 hours from the time the Permittee becomes aware of the following circumstances. This report shall include the following:

        i. Information concerning the release of any hazardous waste that may cause an endangerment to public drinking water supplies.

        ii. Information concerning the release or discharge of any hazardous waste or of a fire or explosion at the Hazardous Waste Management (HWM) facility, which could threaten the environment or human health outside the facility.

    b. The description of the occurrence and its cause shall include:

        i. Name, address, and telephone number of the owner or operator;

        ii. Name, address, and telephone number of the facility;

        iii. Date, time, and type of incident;

        iv. Name and quantity of material(s) involved;

        v. The extent of injuries, if any;

vi. An assessment of actual or potential hazards to the environment and human health outside the facility, where applicable; and

vii. Estimated quantity and disposition of recovered material that resulted from the incident.

c. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Illinois EPA may waive the five-day written notice requirement in favor of a written report within fifteen days. (35 Ill. Adm. Code 702.152(f) and 703.245(b))

20. OTHER NONCOMPLIANCE. The Permittee shall report all instances of noncompliance not otherwise required to be reported under Standard Conditions 14, 15, and 16, at the time monitoring reports, as required by this permit, are submitted. The reports shall contain the information listed in Standard Condition 21. (35 Ill. Adm. Code 702.152(g))

21. OTHER INFORMATION. Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Illinois EPA, the Permittee shall promptly submit such facts or information. (35 Ill. Adm. Code 702.152(h))

22. SUBMITTAL OF REPORTS OR OTHER INFORMATION. All written reports or other written information required to be submitted by the terms of this permit shall be sent to:

Illinois Environmental Protection Agency
Bureau of Land #33
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

23. SIGNATORY REQUIREMENT. All permit applications, reports or information submitted to the Illinois EPA shall be signed and certified as required by 35 Ill. Adm. Code 702.126. (35 Ill. Adm. Code 702.151)

24. CONFIDENTIAL INFORMATION. Any claim of confidentiality must be asserted in accordance with 35 Ill. Adm. Code 702.103 and 35 Ill. Adm. Code Part 161.

25. DOCUMENTS TO BE MAINTAINED IN FACILITY FILES. The Permittee shall maintain in the facility files, until post-closure care is complete, the following documents and amendments, revisions and modifications to these documents:

    a. Post-Closure Plan as required by 35 Ill. Adm. Code 724.218(a) and this permit.

    b. Cost estimate for post-closure care as required by 35 Ill. Adm. Code 724.244(d) and this permit.

    c. Operating record as required by 35 Ill. Adm. Code 724.173 and this permit.

    d. Inspection schedules as required by 35 Ill. Adm. Code 724.115(b) and this permit.

GENERAL FACILITY STANDARDS

26. GENERATOR REQUIREMENTS. Any hazardous waste generated at this facility shall be managed in accordance with the generator requirements at 35 Ill. Adm. Code Part 722.

27. SECURITY. The Permittee shall comply with the security provisions of 35 Ill. Adm. Code 724.114(b) and (c).

28. GENERAL INSPECTION REQUIREMENTS. The Permittee shall follow the approved inspection schedule. The Permittee shall remedy any deterioration or malfunction discovered by an inspection as required by 35 Ill. Adm. Code 724.115(c). Records of inspections shall be kept as required by 35 Ill. Adm. Code 724.115(d).

PREPAREDNESS AND PREVENTION

29. DESIGN AND OPERATION OF FACILITY. The Permittee shall maintain and operate the facility to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment. (35 Ill. Adm. Code 724.131)

RECORD KEEPING

31. OPERATING RECORD. The Permittee shall maintain a written operating record at the facility in accordance with 35 Ill. Adm. Code 724.173.

POST-CLOSURE

32. CARE AND USE OF PROPERTY. The Permittee shall provide post-closure care for the facility as required by 35 Ill. Adm. Code 724.217 and in accordance with the approved Post-Closure Plan.

33. AMENDMENT TO POST-CLOSURE PLAN. The Permittee must amend the Post-Closure Plan whenever a change in the facility operation plans or facility design affects the Post-Closure Plan or when an unexpected event has occurred which has affected the Post-Closure Plan pursuant to 35 Ill. Adm. Code 724.218(d).

34. COST ESTIMATE FOR POST-CLOSURE. The Permittee's original post-closure cost estimate, prepared in accordance with 35 Ill. Adm. Code 724.244, must be:

    a. Adjusted for inflation either 60 days prior to each anniversary of the date on which the first closure cost estimate was prepared or if using the financial test or corporate guarantee, within 30 days after close of the firm's fiscal year.

    b. Revised whenever there is a change in the facility's Post-Closure Plan increasing the cost of closure.

    c. Kept on record at the facility and updated. (35 Ill. Adm. Code 724.244)

35. FINANCIAL ASSURANCE FOR POST-CLOSURE CARE. The Permittee shall demonstrate compliance with 35 Ill. Adm. Code 724.245 by providing documentation of financial assurance, as required by 35 Ill. Adm. Code 724.251, in at least the amount of the cost estimates required by the previous Permit Condition. Changes in financial assurance mechanisms must be approved by the Illinois EPA pursuant to 35 Ill. Adm. Code 724.245.

    Financial assurance documents submitted to Illinois EPA should be directed to the following address:

    Illinois Environmental Protection Agency
    Bureau of Land #33
    Permit Section
    1021 North Grand Avenue East
    P.O. Box 19276
    Springfield, IL 62794-9276

36. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS. The Permittee shall comply with 35 Ill. Adm. Code 724.248 whenever necessary.

SECTION V
CORRECTIVE ACTION

A. INTRODUCTION

1. In accordance with Section 3004 of RCRA and 35 Ill. Adm. Code 724.201, the Permittee shall institute such corrective action as necessary to protect human health and the environment from all releases of hazardous wastes or hazardous constituents from any solid waste management unit (SWMU) at its facility in Davis Junction, Illinois. This section contains the conditions which must be followed to ensure these requirements are met.

2. The original RCRA permit was issued by Illinois EPA for this facility on July 21, 1995; Section IV of this permit contained corrective action requirements. As required by this permit, the facility conducted a Phase I RCRA Facility Investigation for two SWMUs. On September 17, 1996, Illinois EPA determined that no further action was necessary, based on the results of this investigation.

3. The Permittee must provide corrective action, as appropriate, for: (1) any newly discovered SWMUs; or (2) future releases for existing SWMUs.

4. The requirements of 35 Ill. Adm. Code Part 742 must be met, when applicable, for establishing remediation objectives for corrective action efforts.

5. A former non-hazardous waste landfill is located adjacent to the former hazardous waste landfill addressed in this permit. The former non-hazardous waste landfill (typically referred to as Phases II and III) has been closed in accordance with a plan approved by Illinois EPA; its 30-year post-closure care period began on March 30, 2000. Development, operation, closure and post-closure care of the non-hazardous waste landfill has been carried out in accordance with permits issued by Illinois EPA. Post-closure care of the non-hazardous waste landfill will be carried out in accordance with Permit No. 1994-160-LF and associated modifications.

B. OVERVIEW OF CORRECTIVE ACTION EFFORTS COMPLETED TO DATE

The Permittee has completed all corrective action requirements set forth in the original RCRA permit issued on July 21, 1995.

a. Condition IV.B.1 of the permit issued July 21, 1995 required that a RCRA Facility Investigation be conducted at the following two SWMUs:

   (1) Spill Control Area

   (2) Runoff Water Disposal Area

b. A workplan to conduct a Phase I RCRA Facility Investigation at the two SWMUs identified above was approved by Illinois on May 17, 1996 (Log No. B-142-CA-1).

c. A report documenting the results of the approved Phase I RCRA Facility Investigation was approved by Illinois EPA on September 17, 1996 (Log No. B-142-CA-6). Based upon a review of the information in the report, Illinois EPA determined that no further action was necessary at the two SWMUs of concern at the facility.

C. FINANCIAL ASSURANCE FOR CORRECTIVE ACTION

1. The Permittee shall prepare a cost estimate for the completion of any corrective action required under this permit, in order to provide financial assurance for completion of corrective action, as required under 35 Ill. Adm. Code 724.201(b). Such a cost estimate will be based upon the cost of contamination investigations and assessments for the SWMU(s), and design, construction, operation, inspection, monitoring, and maintenance of the corrective measure(s) to meet the requirements of 35 Ill. Adm. Code 724.201 and this permit. This cost estimate must be included in each workplan or report submitted to Illinois EPA, including those required by Conditions V.D or V.E below.

2. The Permittee shall demonstrate continuous compliance with 35 Ill. Adm. Code 724.201 by providing documentation of financial assurance using a mechanism specified in 35 Ill. Adm. Code 724.243, in at least the amount of the cost estimate required under Condition V.D.1. The words "completion of corrective action" shall be substituted for "closure and/or post-closure", as appropriate in the financial instrument specified in 35 Ill. Adm. Code 724.251. This documentation shall be submitted to the Illinois EPA within 60 days after the Illinois EPA's approval of the initial or revised cost estimates required under Condition V.D.1. The Illinois EPA may accept financial assurance for completion of corrective action in combination with another financial mechanism that is acceptable under 35 Ill. Adm. Code 724.246 at its discretion.

3. The Permittee has completed all corrective action efforts to date. Thus, the Permittee is not required, at this time, to provide financial assurance for corrective action efforts. However, it will be necessary to submit cost estimates and establish financial assurance for any corrective action efforts carried out in accordance with Conditions V.D or V.E below.

D. REQUIREMENTS FOR ADDRESSING NEWLY- IDENTIFIED SWMU(s)

1. The Permittee shall notify the Illinois EPA in writing of any newly-identified SWMU(s) discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, no later than thirty (30)

calendar days after discovery. The notification shall provide the following information, as available:

a. The location of the newly-identified SWMU in relation to other SWMUs on a scaled map or drawing;

b. The type and past and present function of the unit;

c. The general dimensions, capacities, and structural description of the unit (available drawings and specifications provided);

d. The period during which the unit was operated;

e. The specifics on all materials, including but not limited to, wastes and hazardous constituents, that have been or are being managed at the SWMU, to the extent available; and

f. The results of any relevant available sampling and analysis which may aid in determining whether releases of hazardous wastes or hazardous constituents have occurred or are occurring from the unit.

2. If the submitted information demonstrates a potential for a release of hazardous waste or hazardous waste constituents from the newly identified SWMU, the Illinois EPA may request in writing, that the Permittee prepare a SWMU Assessment Plan and a proposed schedule of implementation and completion of the Plan for any additional SWMU(s) discovered subsequent to the issuance of this Permit. This SWMU Assessment Plan must also propose investigations, including field investigations if necessary, to determine the release potential to specific environmental media for the newly-identified SWMU. The SWMU Assessment Plan must demonstrate that the sampling and analysis program, if applicable, is capable of yielding representative samples and must include parameters sufficient to identify migration of hazardous waste and hazardous constituents from the newly-discovered SWMU(s) to the environment.

3. Within 60 calendar days after receipt of the Illinois EPA request for a SWMU Assessment Plan, the Permittee shall submit a SWMU Assessment Plan.

4. After the Permittee submits the SWMU Assessment Plan, the Illinois EPA shall either approve, approve with conditions or disapprove the Plan in writing. If the plan is approved, the Permittee shall begin to implement the Plan within forty-five (45) calendar days of receiving such written notification. If the Plan is disapproved, the Illinois EPA shall notify the Permittee in writing of the Plan's deficiencies and specify a due date for submittal of a revised plan.

5. The Permittee shall submit a report documenting the results of the approved SWMU Assessment Plan to the Illinois EPA in accordance with the schedule in the approved SWMU Assessment Plan. The SWMU Assessment Report shall describe all results obtained from the implementation of the approved SWMU Assessment Plan.

6. Supplemental SWMU Assessment Plans and Reports may be needed, as necessary, to fully characterize any contamination present at the SWMU.

7. The Permittee must implement a Corrective Measures Program, as necessary, to properly address any contamination encountered during the SWMU assessment. Guidance regarding the implementation of this program will be provided at the time Illinois EPA notifies the Permittee of the need for such a program.

8. All plans and report submitted in accordance with this subsection must contain a detailed estimate of the cost to complete the proposed corrective action activity.

9. Illinois EPA decisions on all plans and reports submitted under this subsection shall be subject to the appeal provisions of Sections 39(a) and 40(a) of the Illinois Environmental Protection Act.

E. FUTURE RELEASES FROM SWMUs

There exists a potential that a release may occur in the future from SWMUs identified in the RFA which did not require any corrective action at the time that the RFA or RFI was completed. If the Permittee discovers that a release has occurred from such a SWMU in the future, then the Illinois EPA must be notified of this release within thirty (30) days after its discovery following the procedures set forth in Condition V.D.1 above. Additional investigation and, as necessary, corrective measures efforts at this SWMU must be carried out in accordance with the procedure set forth in Condition V.D above. The results of all corrective action efforts required by this condition must meet the requirements of 35 Ill. Adm. Code 724.201 and Part 742.

F. INTERIM MEASURES/STABILIZATION

At any time during the corrective action process, the Permittee may initiate interim measures for the purpose of preventing continuing releases and/or mitigating the results of releases and/or mitigating the migration of hazardous wastes or hazardous constituents. It shall not be necessary to conduct all phases of the corrective action process prior to implementing an interim measure if the Illinois EPA and the Permittee agree that a problem can be corrected, or a release cleaned up, without additional study.

a. Prior to implementing any interim measures beyond those specified above, the Permittee must submit detailed information regarding the proposed

interim measure to the Illinois EPA's Division of Land Pollution Control (DLPC) for approval. This information shall include, at a minimum:

(1) Objectives of the interim measures: how the measure is mitigating a potential threat to human health and the environment and/or is consistent with and integrated into any long-term solution at the facility;

(2) Design, construction, and maintenance requirements;

(3) Schedules for design and construction; and

(4) Schedules for progress reports.

b. If the Illinois EPA's DLPC determines that a release cannot be addressed without additional study, then the Illinois EPA's DLPC will notify the Permittee that the additional study must be performed. Any proposal made under this provision or any other activity resulting from such proposal, including the invocation of dispute resolution, shall not affect the schedule for implementation of the corrective action effort or of any other portion of the permit.

c. If the Illinois EPA determines that interim measures are necessary to protect human health or the environment, the Permittee will be notified by way of a permit modification.

SECTION VI
REPORTING AND NOTIFICATION REQUIREMENTS

The reporting and notification requirements of each section of the RCRA permit are summarized below. This summary is provided to highlight the various reporting and notification requirements of this permit.

Condition	Submittal		Due Date
SECTION I: POST-CLOSURE			
E.2	Request permit modification to remove the liner or hazardous wastes.		Prior to removing the liner or wastes.
E.3	Certify to the Illinois EPA that post-closure care was performed in accordance with the specifications.		Within 60 days after completion of the post-closure care period.
E.5	Notify the Illinois EPA of changes to the permit identified in the permit modification.		Within 90 days of the modification date of this permit.
SECTION III: GROUNDWATER DETECTION MONITORING PROGRAM			
J.2	Groundwater monitoring data and statistical calculations required annually.	During the Months of April-June	Samples Collected Results Due to the EPA by July 15 (List G1)
J.3	Groundwater Surface Elevation.		Annually
J.4	Groundwater flow rate and direction.		Annually with the groundwater data due July 15
J.5	Surveyed Elevation.		Every 5 years or at the request of Illinois EPA or whenever the elevation changes. In addition, for new wells, at the time of installation.
J.6	Elevation of the bottom of each well.		Every 5 years due July 15.

Condition	Submittal	Due Date
J.10.a	Notify the Illinois EPA in writing of statistically significant increase.	Within 7 days after the increase was discovered.
J.10.b	Sample groundwater in all wells for Appendix I constituents.	Immediately after increase is discovered.
J.10.d	Apply for permit modification establishing compliance monitoring program.	Within 90 days after the increase was discovered.
J.10.e	Provide the Illinois EPA with corrective action feasibility plan.	Within 180 days after the increase was discovered.
J.11.a	Notify the Illinois EPA in writing of intent to make demonstration.	Within 7 days after the increase was discovered.
J.11.b	Submit a report to the Illinois EPA which demonstrates that a source other than a regulated unit caused the increase, or resulted from error.	Within 90 days after the increase was discovered.
J.11.c	Submit to the Illinois EPA application to change detection monitoring program.	Within 90 days after the increase was discovered.
K.1	Submit an application for a permit Modification to the Illinois EPA.	Within 90 days of the Permittee determining that the detection monitoring system no longer satisfies the requirements of 35 Ill. Adm. Code 724.198.
SECTION IV: STANDARD CONDITIONS		
6	Complete application for new permit.	At least 180 days prior to permit expiration.
11	Information requested by Illinois EPA and copies of records required to be kept by this permit.	Submittal date to be determined by the Illinois EPA.
14	Notify Illinois EPA of planned physical alterations or additions.	At least 15 days prior to planned change.

15	Notify Illinois EPA of changes which may result in permit noncompliance.	Within 15 days of change.
Condition	Submittal	Due Date
16	Application for permit modification indicating permit is to be transferred.	At least 90 days prior to transfer date.
18	Submission of any information required in a compliance schedule.	Within 14 days after each schedule date.
19	Report to Illinois EPA any non-compliance which may endanger health or environment.	
	telephone	Within 24 hours after discovery.
	in writing	Within 5 days after discovery.
20	Report all other instances of noncompliance.	March 1 of each year along with Annual Report.

Attachment A

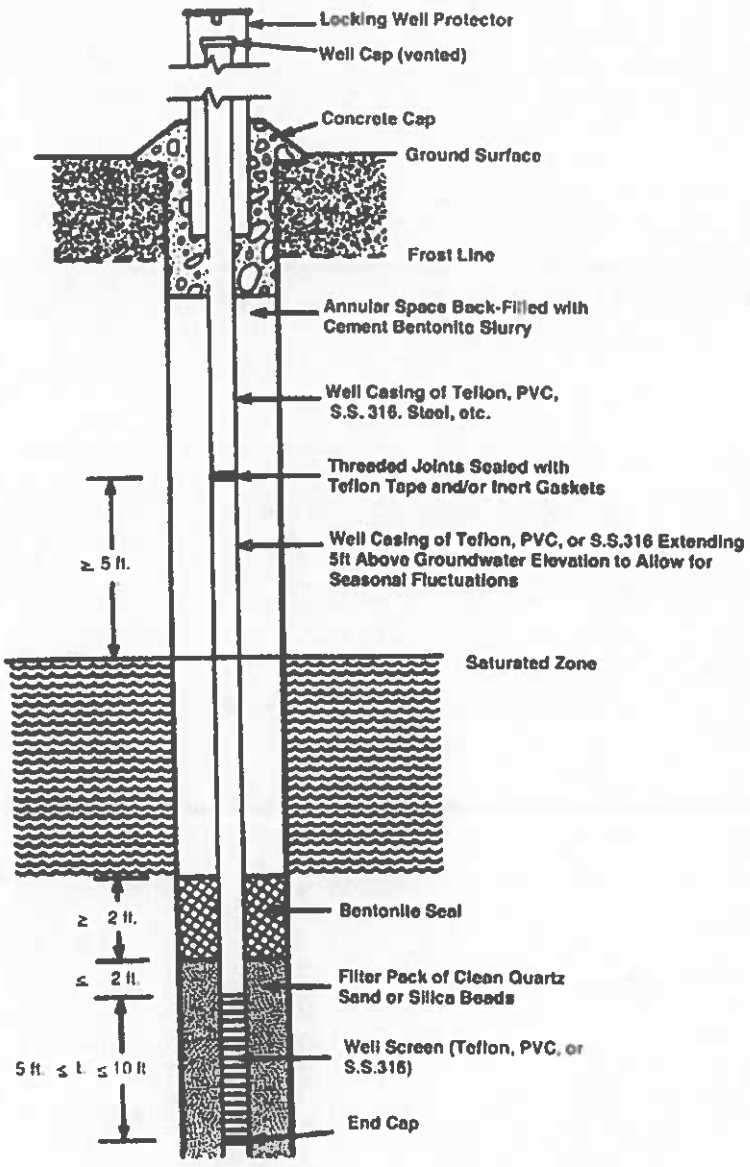
Groundwater Monitoring Attachments and Figures

LPC #1418210001

ILD980799751

Permit Log No. B-142R2-M-9

Monitoring Well Diagram



Illinois Environmental Protection Agency **Well Completion Report**

Site Number: _____ County: _____

Site Name: _____ Well #: _____

State Plane Coordinate: X ____ Y ____ (or) Latitude: ___ ___ ___ Longitude: ___ ___ ___ Borehole #: _____

Surveyed by: _____ IL Registration #: _____

Drilling Contractor: _____ Driller: _____

Consulting Firm: _____ Geologist: _____

Drilling Method: _____ Drilling Fluid (Type): _____

Logged By: _____ Date Started: _____ Date Finished: _____

Report Form Completed By: _____ Date: _____

ANNULAR SPACE DETAILS

Type of Surface Seal: _____

Type of Annular Sealant: _____

Installation Method: _____

Setting Time: _____

Type of Bentonite Seal - - Granular, Pellet, Slurry (Choose One)

Installation Method: _____

Setting Time: _____

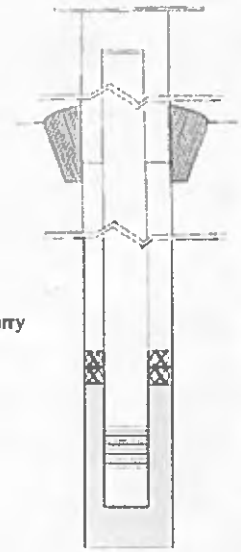
Type of Sand Pack: _____

Grain Size: _____ (Sieve Size)

Installation Method: _____

Type of Backfill Material: _____ (if applicable)

Installation Method: _____



	Elevations (MSL)*	Depths (BGS)	(.01ft.)
Top of Protective Casing	_____	_____	
Top of Riser Pipe	_____	_____	
Ground Surface	_____	_____	
Top of Annular Sealant	_____	_____	
Static Water Level (After Completion)	_____	_____	
Top of Seal	_____	_____	
Top of Sand Pack	_____	_____	
Top of Screen	_____	_____	
Bottom of Screen	_____	_____	
Bottom of Well	_____	_____	
Bottom of Borehole	_____	_____	

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIAL
(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, PVC, or Other
Riser Pipe Above W.T.	SS304, SS316, PTFE, PVC, or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, PVC, or Other
Screen	SS304, SS316, PTFE, PVC, or Other

CASING MEASURMENTS

Diameter of Borehole (inches)	
ID of Riser Pipe (inches)	
Protective Casing Length (feet)	
Riser Pipe Length (feet)	
Bottom of Screen to End Cap (feet)	
Screen Length (1st slot to last slot) (feet)	
Total Length of Casing (feet)	
Screen Slot Size **	

**Hand-Slotted Well Screens are Unacceptable

Well Completion Form (revised 02/06/02)

Illinois Environmental Protection Agency

Field Boring Log Page ___ of ___

Site ID No: _____ Federal ID No: _____

Site Name: _____

Quadrangle: _____ Sec: _____ T: _____ R: _____

UTM (or State Plane) Coord. N (X) _____ E (Y) _____

Latitude: ____ ____ ____ Longitude: ____ ____ ____

Boring Location: _____

Drilling Equipment: _____

County: _____

Boring No: _____ Monitoring Well No: _____

Surface Elevation: _____ Completion Depth: _____

Auger Depth: _____ Rotary Depth: _____

Date: Start: _____ Finish: _____

Elev.	Description of Material	Graphic Log	Depth in Feet	SAMPLES: Sample No.	Sample Type	Sample Recovery (N)	Penetrometer	N Values (Blow Counts)	OVA or HNU Readings	Personnel: G - D - H - H - / REMARKS

Field Boring Log (revised 02/02/04

Illinois
Environmental
Protection Agency

Bureau of Land
1021 North Grand Avenue East
Box 19276
Springfield, IL 62794-9276

RCRA FACILITY GROUNDWATER, LEACHATE AND GAS REPORTING FORM

This form must be used as a cover sheet for the notices and reports, identified below as required by: (1) a facility's RCRA interim status closure plan; (2) the RCRA interim status regulations; or (3) a facility's RCRA permit. All reports must be submitted to the Illinois EPA's Bureau of Land Permit Section. This form is for use by Hazardous Waste facilities only. Reporting for Solid Waste facilities should be submitted on a separate form. All reports submitted to the Illinois EPA's Bureau of Land Permit Section must contain an original, plus a minimum of two copies.

Note: This form is not to be used with permit or closure plan modification requests. The facility's approved permit or closure plan will state whether the document you are submitting is required as a report or a modification request.

Facility Name: _____ **Site ID #:** _____
Facility Address: _____ **Fed ID #:** _____

Check the appropriate heading. Only one heading may be checked for each corresponding submittal. Check the appropriate sub-heading, where applicable. Attach the original and all copies behind this form.

___ LPC-160 Forms

Groundwater

___ Quarterly – Indicate one: 1 2 3 4
___ Semi-Annual
___ Annual
___ Biennial

Leachate

___ Quarterly – Indicate one: 1 2 3 4
___ Semi-Annual
___ Annual
___ Biennial

___ Groundwater Data (without LPC-160 Forms)
___ Quarterly – Indicate one: 1 2 3 4
___ Annual ___ Semi-Annual ___ Biennial

___ Well Construction Information
___ Well Construction Forms, Boring Logs and/or Abandonment Forms
___ Well Survey Data (e.g., Stick-up Elevation Data)

___ Notice of Statistically Significant Evidence of Groundwater Contamination (35 Ill. Adm. Code 724.198)

___ Notice of Exceedence of Groundwater Concentration Limit (35 Ill. Adm. Code 724.199(h))

___ Notice of Alternate Source or Error in Sampling Analysis or Evaluation of Groundwater (35 Ill. Adm. Code 724.199(i))

___ Gas Monitoring Reports

___ Other (identify) _____

IL 532-2675
LPC 592 5/2000 jab\041021i.doc

Formatting Requirements for the 01 Record of the Electronically Submitted Groundwater and Leachate Data (the 01 Record portion of the LPC-160 is included for example purposes)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Page 1 of ______

RECORD CODE | L | P | C | S | M | 0 | 1 | (1–7)
TRANS CODE | A | (8)

REPORT DUE DATE __ __/__ __/__ __ __ __ (36 M D Y 41)

FEDERAL ID NUMBER __ __ __ __ __ __ __ __ __ __ __ __

SITE INVENTORY NUMBER __ __ __ __ __ __ __ __ __ __ (9–18)

MONITOR POINT NUMBER __ __ __ __ (19–22)
(see Instructions)

REGION ________ CO. ______________________

DATE COLLECTED __ __/__ __/__ __ __ __ (23 M D Y 28)

FACILITY NAME ____

FOR IEPA USE ONLY

LAB ____ (29)

DATE RECEIVED __ __/__ __/__ __ __ __ (42 M D Y 47)

BACKGROUND SAMPLE (X) ____ (54)

TIME COLLECTED __ __:__ __ (24 Hr. Clock) (55 H M 58)

UNABLE TO COLLECT SAMPLE ____ (59)
(see Instructions)

MONITOR POINT SAMPLED BY ____ (60) ____________ OTHER (SPECIFY)
(see Instructions)

SAMPLE FIELD FILTERED — INORGANICS (X) ____ (61) ORGANICS (X) ____ (62)

SAMPLE APPEARANCE __ (63–102)

COLLECTOR COMMENTS __ (103–142)

LAB COMMENTS __ (150–199)

IL 532 1213
LPC 160 01 90

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 ½, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

All analytical procedures must be performed in accordance with the methods contained in "Test Methods for Evaluating Solid Wastes, Physical Chemical Methods," SW-846, 3rd Edition, September 1986 or equivalent methods approved by the Agency. Proper sample chain of custody control and quality assurance quality control procedures must be maintained in accordance with the facility sampling and analysis plan

*Only Keypunch with Data in Column 35 or Columns 38-47

KEY:

Spaces Numbered	Description	Format
Spaces 1-7	Record Code	LPCSM01
Space 8	Trans Code	A
Spaces 9-18	Site ID	0000000000
Spaces 19-22	Mon Pt ID	G000
Spaces 23-28	Date Collected	000000
Space 29	Lab	
Spaces 30-35	Filler	
Spaces 36-41	Report Due Date	000000
Spaces 42-47	Date Received	000000
Spaces 48-53	Filler 2	
Space 54	Background Sample	
Spaces 55-58	Time Collected	0000
Space 59	Unable to Collect Sample	
Space 60	Monitoring Point Sampled By	
Space 61	Field Filtered – Inorganic	
Space 62	Field Filtered – Organic	
Spaces 63-102	Sample Appearance	
Spaces 103-142	Collector Comments	
Spaces 143-149	Filler 3	
Spaces 150-199	Lab Comments	

Formatting Requirements for the 02 Record of the Electronically Submitted Groundwater and Leachate Data (the 02 Record portion of the LPC-160 is included for example purposes)

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	Remarks See Inst.	Replicate	< or >	VALUE
Q	TEMP OF WATER (unfiltered °F)	00011 (30–34)	(35)	(36)	(37)	(38–47)
Q	SPEC COND (unfiltered umhos)	00094				
Q	pH (unfilted units)	00400				
Q	ELEV OF GW SURF (ft ref MSL)	71993				
Q	DEPTH OF WATER (ft below LS)	72019				
A	BTM WELL ELEV (ft ref MSL)	72020				
Q	DEPTH TO WATER FR MEA PT (ft)	72109				

IL 532 1213
LPC 160 01/90

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 ½, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center

All analytical procedures must be performed in accordance with the methods contained in "Test Methods for Evaluating Solid Wastes, Physical Chemical Methods," SW-846, 3rd Edition, September 1986 or equivalent methods approved by the Agency. Proper sample chain of custody control and quality assurance/quality control procedures must be maintained in accordance with the facility sampling and analysis plan.

*Only Keypunch with Data in Column 35 or Columns 38-47

KEY:

Spaces Numbered	Description	Format
Spaces 1-7	Record Code	LPCSM02
Space 8	Trans Code	A
Spaces 9-18	Site ID	0000000000
Spaces 19-22	Mon Pt ID	
Spaces 23-28	Date Collected	
Space 29	Lab	
Spaces 30-34	STORET Number	
Space 35	Remarks	
Space 36	Replicate	
Space 37	< or >	
Space 38-47	Value	

ILLINOIS EPA MONITOR WELL PLUGGING AND ABANDONMENT PROCEDURES

	Well Construction		Plugging Procedure
I. Unconsolidated Sediment Wells	I-A	...if backfilled with cement grout above bentonite seal and/or sandpack:	1. Cut casing off at desired depth. 2. Mix neat cement slurry (5 gal. water per 94 lb. bag cement). 3. Insert tremie pipe (1" i.d. pvc) into well and extend to bottom. 4. Slowly pump slurry under low pressure through tremie pipe. 5. Slowly withdraw tremie pipe - making sure bottom of pipe remains below pure slurry. 6. Continue slow pumping until all formation water and the watery slurry mix is displaced from top of casing.
	I-B	...if backfilled with soft sediments (cuttings) above bentonite seal and/or sandpack:	1. Knock out and remove thin surface concrete plug, if present. 2. Re-auger entire length of well. 3. Remove well casing from re-augured borehole. 4. Mix neat cement slurry (5 gal. water per 94 lb. bag cement). 5. Insert tremie pipe (1" i.d. pvc) into augers and extend to bottom. 6. Slowly pump slurry under low pressure through tremie pipe. 7. Continue slow pumping until all formation water and the water slurry mix is displaced from top of casing. 8. Slowly withdraw tremie pipe - making sure bottom of pipe remains below pure slurry. 9. Pull a flight of augers (5" if in unstable materials and hole collapse is likely or 10" if in competent material and collapse is unlikely). 10. Top off cement slurry after each flight is removed.
	I-C	...if monitor well construction is unknown:	1. Follow procedures in I-A.
II. Bedrock Wells	II-A	...All bedrock monitor wells:	1. Cut casing off at desired depth. 2. Mix neat cement slurry (5 gal. water per 94 lb. bag cement). 3. Insert tremie pipe (1" i.d. pvc) into well and extend to bottom. 4. Slowly pump slurry under low pressure through tremie pipe. 5. Slowly withdraw pipe making sure bottom of pipe remains below pure slurry. 6. Continue slow pumping until all formation water and the watery slurry mix is displaced from top of casing.

Attachment B

Construction Certification Form

LPC #1418210001

ILD980799751

Permit Log No. B-142R2-M-9

CERTIFICATION

This statement is to be completed by both the responsible officer and the registered professional engineer upon completion of any construction required by this permit in accordance with 35 Ill. Adm. Code 702.126. Submit one copy of the certification with original signatures and two additional copies. Forward these certification statements and any information required by the permit to the following address:

Illinois Environmental Protection Agency
Bureau of Land -- #33
Permit Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

FACILITY NAME: Browning Ferris Industries - Davis Junction Landfill
IEPA SITE CODE: 1418210001
USEPA ID NO.: ILD 980700751
PERMIT LOG NO. B-142R2-M-9
PERMIT (OR MODIFICATION) ISSUANCE DATE:
PERMIT CONDITION NO. REQUIRING CERTIFICATION:

The has been constructed in accordance with the specifications in the post-closure permit application. Documentation that the construction was in accordance with the permit is contained in the enclosed report. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____
Signature of Owner/Operator

Name and Title

_____
Signature of Registered P.E.

Name of Registered P.E. and
Illinois Registration Number

_____
(P.E license expiration date)

(P.E. Seal)

_____
DATE

JLR:JDN:1418210001-RCRA-B142R2M9.docx

Attachment C

Post-Closure Cost Estimate

LPC #1418210001

ILD980799751

Permit Log No. B-142R2-M-9

Post-Closure Cost Estimate

The currently approved post-closure cost estimate in the current RCRA Post-Closure Permit is $975,433 (in 2024 dollars). This estimate must be updated when establishing financial assurance in accordance with 35 Ill. Adm. Code 724, Subpart G. Based on the most recent post-closure cost estimate submitted September 27, 2024, and received by the Illinois EPA on September 30, 2024, the updated breakdown of the estimate should be updated as follows:

1. Estimate of post-closure care costs on an annual basis in 2024 dollars:

Post-closure inspections	$9,028
Groundwater monitoring	$11,794
Leachate Management	$65,883
Total	$86,704
10% Contingency	$8,670
Total Annual Cost (w/Contingency):	$95,374
Resurvey Monitoring Wells Every 5 Years	$15,540
One Time Costs:	
Well Abandonment:	$15,012
10% Contingency, One-Time Costs:	$1,501
Total One-Time Costs:	$$21,693

2. Total post-closure care cost estimate = ($95,374 per year) x (30.0 years) + $15,540+$21,693= $2,898,453

3. The Permittee must submit appropriate documentation for financial assurance for the post-closure cost estimate within sixty (60) days of the Illinois EPA's approval of Permit Modification Log No B-142R2-M-9. The approved cost estimates must be used when establishing financial assurance in accordance with 35 Ill. Adm. Code 724, Subpart G.