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2023 Annual Engineering Inspection Report

City of Little Rock

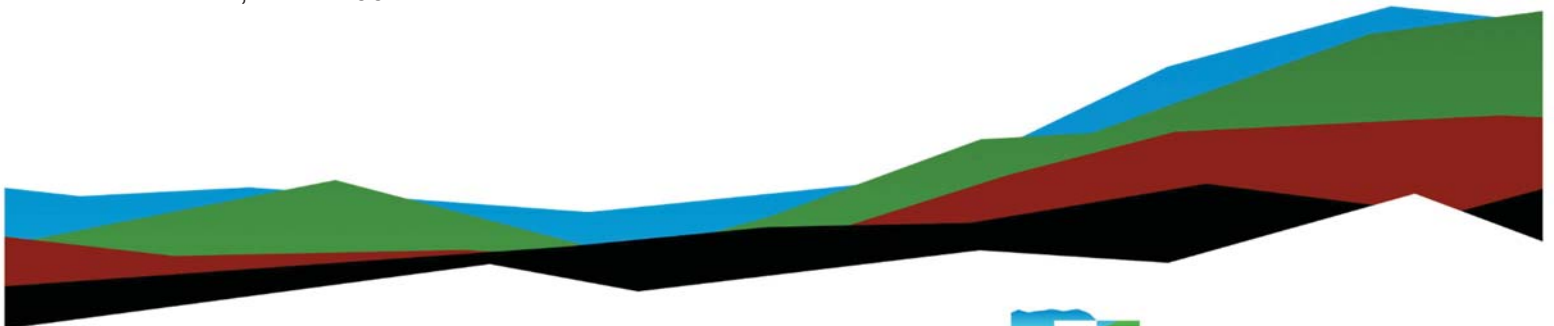
Yard Waste Compost Facility

Project No. 35237302

Prepared for:



City of Little Rock – Dept of Public Works
Division of Solid Waste Services
10803 Ironton Cutoff
Little Rock, AR 72206



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1.0 INTRODUCTION

The City of Little Rock (CLR) owns and operates a municipal solid waste management facility at 10803 Ironton Cutoff Road in Pulaski County, Arkansas. Facilities at this complex include a Class 1 landfill, Class 4 landfill, and yard waste composting site, all permitted on April 27, 1993, by the Arkansas Department of Energy and Environment's Division of Environmental Quality (DEQ) under Permit No. 0266-S. The complex also includes an administration building, shop building, records storage building, scale house, solid waste collection section building, vehicle wash site, fuel station, leachate pretreatment system, and a cart maintenance facility. The solid waste management facility is operated by the Solid Waste Services Division of the CLR Department of Public Works. On October 17, 2008, a separate permit for the yard waste compost facility, Permit No. 0031-SCYW, was issued to CLR. The permit was renewed for an additional 3-year period in May 2023 (Document ID #83315).

DEQ policy requires that all permitted compost facilities prepare an annual report that addresses the quantity of compost produced. This report documents findings of a site inspection by the Engineer on March 1, 2024, and compliance with annual reporting requirements. **APPENDIX A** presents correspondence with DEQ during the year. **APPENDIX B** shows photos from the inspection.

2.0 OPERATIONS SUMMARY

The composting facility is a 20-acre, asphalt-paved site where yard waste is aerobically composted using the windrow composting method. The service area is the city of Little Rock. Incoming yard waste is weighed at the scale house and the source and tonnage recorded in electronic and paper records. The composting process consists of a four-step process as described in the sections below.

2.1 Preliminary Processing

Incoming yard waste is unloaded at a designated receiving area. Unacceptable items or oversized items such as large tree trunks are sorted out and disposed at the landfill. The remaining yard waste is then processed by grinding for size reduction.

2.2 Active Composting

The active compost process begins by constructing windrows of ground yard waste with front-end loaders. As the compost process progresses, windrows are periodically turned using a windrow turning machine or front-end loaders. Water is added as needed and pile temperature is monitored during the process.

2.3 Curing

As the active composting process progresses, windrows are gradually combined until finally, a large curing pile is constructed for final compost curing. The curing process allows time for the compost process to progress to maturity.

2.4 Final Screening

As the curing process is complete the compost is screened to reduce particle size and screen out plastic bag remnants and oversized materials. Final screening produces a uniform, high-quality material suitable for use as a soil amendment. Screen rejects are disposed of in the Class 1 landfill.

3.0 PROCESSED QUANTITIES

In addition to compost, this facility produces mulch (ground hard and soft wood). The scale house tracks the total tons of finished products (compost and mulch) removed from the site, the inert reject material that is sorted out and disposed of in the Class 1 landfill, and the yard and tree waste received at the facility. In addition, CLR tracks the tons of ground yard waste utilized as alternate daily cover (ADC) at the Class 1 landfill. The Facility received 45,410.81 tons of yard waste for the 2023 calendar year. The table in **APPENDIX D** shows the tonnage handled for the 2023 calendar year, including the Class 1 Landfill, Class 4 Landfill, and the Yard Waste Compost Facility. **APPENDIX D** also includes the total processed yard waste removed from the facility for the 2023 calendar year.

4.0 COMPLIANCE WITH OPERATING REQUIREMENTS

Based on quarterly inspections by DEQ, the yard waste compost site is taking corrective measures to maintain compliance with the operating requirements of Regulation No. 22 and permit conditions. Correspondence with DEQ is included in **APPENDIX A**.

4.1 Blowing Litter

Yard waste including leaves, grass, and shrubbery pruning's are typically collected in plastic bags. During the composting process, some blowing litter problems are generated due to the grinding of the above plastic bags. To address blowing litter problems, CLR installed a perimeter fence in January 2002. Removal of ground plastic trapped by the perimeter fence is carried out regularly at the facility.

4.2 Site Inventory

Site inventory is the comparison between the amount of incoming material (yard and tree waste) and the amount of material leaving the composting site, which is composed of finished products (compost and mulch), compost rejects, and ground yard waste utilized as alternate daily cover material at the Class 1 landfill. The facility had several piles of unprocessed waste, ground waste and compost. The materials were well-segregated. Processed material was being hauled to the Class 1 landfill for use as Alternative Daily Cover (ADC) during the inspection.

4.3 Pond Maintenance

City crews perform ongoing maintenance activities on the compost runoff pond such as mowing of the cover vegetation of the pond's banks. The pond and perimeter swales were in good condition at the time of the inspection. Minor amounts of litter were present in the east swale from traffic to the Class 1 and Class 4 landfills. The facility routinely collects and disposes of this litter.

5.0 PROPOSED CHANGES TO THE OPERATING PLAN

No changes in the current method of operations were required.

6.0 STORMWATER CONTROLS

Stormwater controls are in place and functioning. On October 25, 2006, DEQ issued NPDES Industrial Stormwater General Permit (IGP) No. ARR000220, and the most recent permit renewal was issued April 24, 2020. The IGP Stormwater Pollution Prevention Plan (SWPPP), facility inspections, discharge monitoring results and reports, including the Stormwater Annual Report (SWAR), are included in the facility operating record to be made available to DEQ upon request.

The NPDES permit allows the discharge of the CLR composting runoff pond into "waters of the United States." On November 7, 2006, CLR began discharging the compost runoff pond into a ditch located just north of the pond. As a backup system, stormwater from the compost runoff pond can be diverted to the leachate pond or directly to the city's sewer line.

7.0 CORRECTIVE ACTIONS

The yard waste and compost facility have been taking the following corrective measures to ensure compliance with ADEQ. Correspondence can be found in **APPENDIX A**:

1st Quarter Inspection (2/15/2023)

- **Category 1, Regulation 805(b)(2)** – The western half of the asphalt pad is no longer present and operations had to be moved to the eastern portion of the pad.
- **Category 2, Regulation 806(a)(2)** – Ponding was observed on the western side of the compost yard.

1st Quarter Inspection Response (4/11/2023)

- **Category 1, Regulation 805(b)(2)** – The City is working to remove this language from the Operation Plan (OP). The City has also hired a consultant to design a new compost facility.
 - **Category 2, Regulation 806(a)(2)** – The City has hired a consultant to modify the compost facility to prevent ponding.
-

2nd Quarter Inspection (5/10/2023)

- **Category 1, Regulation 805(b)(2)** – The western half of the asphalt pad is no longer present, and operations had to be moved to the eastern portion of the pad.
- **Category 1, Regulation 808(a)(b)(c)** – An annual report has not been submitted for 2022.
- **Category 2, Regulation 806(a)(2)** – Ponding was observed on the eastern side of the compost yard.

2nd Quarter Inspection Response (7/10/2023)

- **Category 1, Regulation 805(b)(2)** – The City will update the OP and submit it to the Department.
 - **Category 1, Regulation 808(a)(b)(c)** – The City is working to complete the report as soon as possible.
 - **Category 2, Regulation 806(a)(2)** – Water is no longer ponding in the compost yard.
-

3rd Quarter Inspection (7/31/2023)

- **Category 1, Regulation 805(b)(2)** – The western half of the asphalt pad is no longer present and operations had to be moved to the eastern portion of the pad.
- **Category 1, Regulation 808(a)(2)(4)** – An annual report has not been submitted for 2022.

- **Category 2, Regulation 806(a)(2)** – Ponding was observed in the depressions across the eastern side of the compost yard.
- **Category 2, Regulation 806(a)(5)** – Litter was observed outside of the litter fence, on the northern side of the compost yard.

3rd Quarter Inspection Response (9/18/2023)

- **Category 1, Regulation 805(b)(2)** – The is updating the OP and will revise the description of the facility. The City has also completed a design to rehabilitate the facility.
 - **Category 1, Regulation 806(a)(2)(4)** – The annual report was submitted on 9/7/2023 and the waste totals have been provided.
 - **Category 2, Regulation 806(a)(2)** – A new hard surface is proposed and will be sloped to drain.
 - **Category 2, Regulation 806(a)(5)** – The City will pick up the litter and readjust the litter fence.
-

4th Quarter Inspection (11/13/2023)

- **Category 1, Regulation 805(b)(1); (c)(5)** – The western half of the asphalt pad is no longer present and operations had to be moved to the eastern portion of the pad.
- **Category 2, Regulation 806(a)(2)** – Ponding was observed in the three different locations on the compost yard.

Appendix A:

Permit Modifications and Department Correspondence/Inspections

Charles Hurt (adpce.ad)

From: Charles Hurt (adpce.ad)
Sent: Wednesday, March 1, 2023 9:46 AM
To: 'ncharles@littlerock.gov'
Cc: Annette Cusher (adpce.ad); Nicholas Jones (adpce.ad); Jarrod Zweifel (adpce.ad)
Subject: Notice of Issuance of Final General Permit Coverage - City of Little Rock Compost
Attachments: 0031-SCYW-83480.pdf

Please see the attached and retain a copy for your records.

Charles Hurt, P.E. | Engineering Operations Manager
Division of Environmental Quality | Office of Land Resources
5301 Northshore Drive | North Little Rock, AR 72118
t: (501) 682-0838 | e: Charles.Hurt@adeq.state.ar.us



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ARKANSAS

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February 28, 2023

Nathan Nathan
City of Little Rock Compost
10803 Ironton Cutoff
Little Rock, Arkansas 72206

Re: Final Permit Decision for the General Permit for a Yard Waste Composting Facility
(Type Y Composting Facility)
City of Little Rock Compost
Current Permit #0031-SCYW; AFIN: 60-01071
Document Identifier: 83480

Dear Mr. Nathan:

The Division of Environmental Quality Office of Land Resources (DEQ) has prepared a new General Permit for Yard Waste Composting Facilities. The thirty (30) calendar day comment period was from January 22, 2023 and ended on February 21, 2023. There were no comments submitted during the comment period for the General Permit for a Yard Waste Composting Facility.

The General Permit for Yard Waste Composting has not significantly changed from the current permit. The only changes are editorial in nature. A copy of the final General Permit for Yard Waste Composting Facilities is attached. The Notice of Intent (NOI) is attached. In order to ensure coverage is maintained under the General Permit for Yard Waste Composting Facilities, a completed NOI must be submitted by April 30, 2023.

If you have any questions, contact Annette Cusher of my staff at 501-682-0841 or cusher@adeq.state.ar.us.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jarrod Zweifel'.

Jarrod Zweifel, P.G.
Office of Land Resources Associate Director
5301 Northshore Drive, North Little Rock, Arkansas 72118

cc: Jones, Hurt, Krou, Cusher



Division of Environmental Quality
GENERAL PERMIT
FOR THE CONSTRUCTION AND OPERATION OF A
YARD WASTE COMPOSTING FACILITY
(TYPE Y COMPOSTING FACILITY)
PERMIT NUMBER: 0000-SCYW

AUTHORITY: In accordance with the provisions of The Arkansas Solid Waste Management Act (Act 237 of 1971 as amended; Arkansas Code of 1987 Annotated §8-6-201 *et seq.*), and the Arkansas Pollution Control and Ecology Commission (APC&EC) Rule No. 22, the Division has the authority to issue general permits for certain categories of solid waste processing facilities. Pursuant to that authority, the Division has chosen to permit Type Y composting facilities through a general permit program.

EFFECTIVE DATE: May 31, 2023

EXPIRATION DATE: May 31, 2028

LIMITATIONS: Owners or operators of Type Y composting facilities within the State of Arkansas who fail to make a written request to the Director to be covered by this general permit or those who fail to submit all required documentation are not authorized to operate under the permit.

Signed this 28th day of February, 2023

A handwritten signature in black ink, appearing to read "Jarrod Zweifel", is written over a horizontal line.

Jarrod Zweifel, P.G.
Associate Director
Office of Land Resources
Division of Environmental Quality

PART I

COVERAGE UNDER THIS PERMIT

SECTION A. PERMIT AREA

The area covered by this general permit includes all areas within the State of Arkansas.

SECTION B. ELIGIBILITY AND AUTHORIZATION

1. Owners or operators of Type Y composting facilities which accept yard waste and other Type Y compost material for composting as described herein and APC&EC Rule No. 22 may be covered by this general permit.
2. The Director reserves the right to require at any time that the owner or operator of a Type Y composting facility seek coverage under an individual permit. Notice of the decision to require coverage under an individual permit and the rationale for the decision will be provided to the owner or operator. In considering whether to require individual permitting, the Director may consider:
 - a. The compliance history of the owners and operators of the facility or compliance history of the site;
 - b. The size or capacity of the facility;
 - c. Whether the facility was in existence prior to the effective date of amendments to APC&EC Rule No. 22 (May 7, 1995);
 - d. The nature of any incoming solid wastes or materials, the method of processing materials, or the method of storage, handling, or other means of treatment; or
 - e. Other overriding environmental or public participation issues.
3. Existing or planned facilities that do not qualify as a Type Y composting facility as described by Section 22.103(c) or 22.802(a)(1) of APC&EC Rule No. 22 may not be covered by this permit. Facilities which propose to accept wastes other than yard waste or Type Y compost materials as defined by APC&EC Rule No. 22.102, or other wastes outside the scope of the Type Y (CY) permit category listed in APC&EC Rule No. 22.103(c) may not be covered by this general permit.
4. Small capacity compost areas which process less than fifty (50) tons or five hundred (500) cubic yards per year of incoming yard waste, silvacultural activities such as tree prunings and land clearing debris, and agricultural waste or other approved wastes are exempt from permitting provided the facility meets all provisions of Section 22.801(e)(1) of APC&EC Rule No. 22. Written notice of the facility is required by APC&EC Rule No. 22.801(e)(1). See Attachment A of this permit for the *Exempt Small Composting Site Notification Form*.
5. Additional exemptions from permitting are outlined in APC&EC Rule No. 22.801(e)(2), (3), and (4). Exemptions include individual residential composting of yard waste or organic waste generated at the residence, composting in conjunction with confined animal facilities, and composting in conjunction with nursery operations. Division notification is not required for sites which qualify for this exemption.
6. Non-composting Material Recycling Facilities which accept yard waste, wood waste, or other wood or natural vegetative debris solely for processing and redistribution as a recovered material are not considered solid waste processors and are not required to obtain a permit. Material Recycling Facilities which plan to accept this material are considered a Type Y Material Recycling Facility (Type Y MRF). Type Y MRFs which accept

yard waste are encouraged to register with DEQ – Recycling Branch. Forms will be made available on the DEQ website. Chapter 10 of APC&EC Rule No. 22 discusses the MRF exemption and includes a discussion of a limitation of time which material may exist at a MRF before redistribution for recycling purposes.

SECTION C. NOTICE OF INTENT (NOI)

1. Owners or operators of Type Y composting facilities located within the State of Arkansas who desire coverage under this general permit shall submit a notification to the Division indicating their intent to be covered under the terms of this general permit. Unless otherwise notified in writing by the Division, owners or operators are authorized to operate under this general permit thirty (30) days after DEQ receipt of the notification. Facilities covered by the previous composting general permit are required to submit a new Notice of Intent (NOI) to obtain coverage under this permit or apply for an individual permit.
2. Written notification for intent to be covered under the General Permit shall be made upon the latest version of NOI forms provided by the Division and available on the DEQ website. All information required by the NOI form shall be provided.
3. The NOI shall be signed by an authorized individual as defined in APC&EC Rule No. 22.301(h) and signed and stamped by a registered professional engineer retained by the facility as required by APC&EC Rule No. 22.301(i).
4. The approved NOI and required attachments shall be considered an integral and enforceable part of this permit. Any modification to facility design or operation shall be updated through a revised NOI including attachments and submitted to the Division for approval. It shall be the sole decision of the Director whether the changes are eligible for continued coverage under this permit in accordance with Part I Section B.2.
5. This general permit or site-specific coverage under this permit may be administratively changed; modified; revoked; reissued; or terminated for cause in accordance with the requirements of APC&EC Rule No. 8 and APC&EC Rule No. 22. The filing of a request by a covered permittee for a facility modification does not stay any permit condition. Approval of any NOI which is in conflict with any permit condition or applicable regulation shall not be considered valid; covered permittees are bound to comply with this permit, APC&EC Rule No. 22, and other applicable regulations.
6. Any change in ownership or control of the operation of the facility will require submittal of a disclosure statement in accordance with APC&EC Rule No. 8. Transfer of this permit will require submittal of a new NOI for coverage in accordance with this section. Transfer information also shall include the requirements of APC&EC Rule No. 22.307. Failure to notify the Division of a change in ownership or control or of changes in responsibility for the operation of the facility will be cause for termination of coverage under this general permit.

SECTION D. DEADLINE FOR SUBMITTAL

1. An NOI for coverage under this general permit shall be submitted:
 - a. For existing facilities, not later than April 30, 2023. Existing facilities which submit an NOI to be covered under this general permit by April 30, 2023, will be allowed to continue operating until a decision has been reached by the Division to allow or deny coverage under this general permit.
 - b. For new or planned facilities, a minimum of thirty (30) days prior to commencement of construction.
2. Any Division Notification of Deficiency (NOD) or other information request shall be adequately fulfilled within thirty (30) days following the date of the NOD request or as specified in the request for information.

Failure to submit adequate information in a timely manner shall be cause for Division termination of any coverage under this permit.

3. Within sixty (60) days following submittal of the NOI for coverage under this general permit, the facility shall apply for coverage or be able to demonstrate coverage under the NPDES Industrial Stormwater General Permit (IGP) or another acceptable permit to cover stormwater discharges.

SECTION E. TERMINATION OF COVERAGE

1. An owner or operator shall notify the Director if the facility ceases operation and/or if coverage under the general permit is no longer necessary. The Division shall be notified in writing sixty (60) days prior to the proposed termination date of the general permit.
2. Within ten (10) days of ceasing operations, all residuals and wastes shall be removed from the site and disposed at a properly permitted facility, and the facility and equipment shall be brought to a sanitary condition. The operator shall then arrange for a final cleaning of any containers, equipment, machines, floors, and facility surfaces having come in contact with solid waste. All closure activities shall be completed no later than forty-five (45) days after the termination date of facility operations unless otherwise approved by the Division.
3. Coverage under this general permit may be terminated at the discretion and upon notification by the Division if construction of the facility has not commenced within one hundred eighty (180) days and completed within three hundred sixty-five (365) days from the date of coverage provided under the general permit. Coverage under this general permit may be terminated at the discretion and notification by the Division if the facility fails to operate for sixty (60) consecutive calendar days. If the facility does not operate for sixty (60) consecutive calendar days, the facility shall implement the procedures in this section and APC&EC Rule No. 22.

PART II PERMIT CONDITIONS

1. The Type Y composting facility shall be maintained and operated in accordance with the conditions of this permit and in compliance with all applicable provisions of the Ark. Code Ann. §8-6-201 *et seq.* as amended, APC&EC Rule No. 22, and all other applicable rules and regulations.
2. The permit holder shall pay an annual permit fee as specified in APC&EC Rule No. 9.
3. The Division has no responsibility for the adequacy or proper operation of the yard waste composting facility. Nothing herein shall be construed as releasing the permittee from any liability for damage to persons or property by reason of the installation, maintenance, or operation of the yard waste composting facility. The facility shall be operated by qualified personnel and maintained in good condition at all times.
4. Any duly authorized officer, employee, or representative of the Division may enter without interference or unreasonable delay to inspect any facility covered by this permit or proposed for coverage by this permit. The agent may also enter any other satellite location, ancillary facility, location of compost application sites, or generally any other facility as necessary to determine compliance with APC&EC Rule No. 22.
5. The facility shall be in compliance with the following location restrictions:
 - a. The facility shall be designed and operated in a manner that will not restrict the flow of the base flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste and/or finished compost so as to pose a hazard to human health, wildlife, land, or water resources.
 - b. The facility or any facility expansion shall not be located in wetlands, or if it is, the owner of the facility shall demonstrate that the facility is in compliance with the provisions of the Clean Water Act and implementing Rules. To demonstrate compliance, the facility must provide wetlands delineation and any permit that may be required by the appropriate agency with jurisdiction for the proposed site.
 - c. The facility shall not be located within a municipality or county that has adopted restrictions on sites in conjunction with a comprehensive county-wide land use plan as provided in APC&EC Rule No. 22.203 unless specific geographic site approval has been received from the government(s) of jurisdiction.
 - d. Composting areas or areas used for storing incoming materials or finished compost shall not be located within the following setback distances:
 - (i) Fifty feet (50') of the property boundary;
 - (ii) One hundred feet (100') from a naturally occurring surface water body, stream, or streambed; and
 - (iii) Two hundred feet (200') feet to an existing residence, place of business, or drinking water supply not owned or leased by the applicant.
 - e. All components of siting location, design, construction, operation, maintenance, and closure shall be in accordance with any rules of the Regional Solid Waste Management District or rules of local zoning which may apply.
6. The compost operation shall be conducted in a manner which prevents pollution, public health hazards, nuisances, odors, and the harborage of vectors.

7. Operation of the facility shall follow acceptable methods of composting as described in the approved operating plan, which results in the aerobic biochemical degradation of the organic material received. Operating methods employ active management of incoming materials according to the approved plans. Materials are routed to designated stockpiles with specified volumes and processed into compost according to timeframes specified in the plans. Operating methods include procedures or equipment for material sizing, methods of manipulating materials into or onto the specified processing area, and consideration of material types and mixture ratios. Operating methods include mixing or turning techniques or other methods to encourage aerobic conditions. Operating methods address proper moisture control, methods for monitoring product quality during and after processing, and methods for screening or selection procedures for processed materials to ensure a marketable or otherwise desirable finished product. Designated storage volumes and locations are specified for finished materials and should not be exceeded.
8. Facilities shall develop and implement procedures in the approved operating plan for recording the amount of waste received and composted and this information shall be available for inspection by the Division.
9. Facilities shall develop and implement contingency plans in the approved operating plan for the following items:
 - a. The plan shall provide methods for controlling the type of waste received at the facility and for removing and recovering non-compostable materials for recycling or disposal including the removal, storage, and disposal of any hazardous or other unauthorized wastes;
 - b. The plan shall provide that firefighting equipment is available at the site and ensure that personnel have been trained in firefighting procedures. Where possible, the facility shall assure that fire protection services are available to the site through notification to local fire protection officials;
 - c. The plan shall provide remedial and contingency measures in the case that unapproved wastes are delivered to the facility or in the event of odors, equipment breakdown, and other emergency or undesirable conditions such as fire, dust, and vectors.
 - d. The plan shall provide any safety equipment that may be necessary due to site operations.
10. All operations shall be supervised by a licensed on-site operator who is certified in accordance with APC&EC Rule No. 27 during all hours of operation, and access to the facility shall be prohibited during non-operating hours.
11. A written operating record shall be maintained. Records shall include at a minimum:
 - a. Monitoring results of stormwater runoff and/or site discharges as required by facility NPDES permit(s);
 - b. This permit, all approved NOI submittal documents for this permit, permit design drawings, operating plan, and native including closure plan, modifications, annual reports, and Division correspondence;
 - c. Facility operating records as required by APC&EC Rule No. 22.808(a);
 - d. Quantity, type, and source of incoming waste on a monthly basis;
 - e. Quantity of compost sold or distributed on a monthly basis;
 - f. Quantity of residue removed for disposal and the date and location of disposal;
 - g. Any testing data including sampling information, chain of custody, and sample results that may be taken of compost products generated at the site; and

- h. Any other records required by APC&EC Rule No.22.
12. The facility shall be operated in accordance with the provisions of the site-specific Operating Plan as approved by the Division and which meets all requirements of APC&EC Rule No. 22, Chapter 8. Non-composting activities or areas used for processing or storage of source-separated recovered materials shall also be depicted in facility plans and described in the operating plan. All changes to the site-specific Operating Plan must be approved in writing by the Division.
13. The facility shall be constructed in accordance with Design Narrative and Permit Plans and Specifications as approved by the Division and which meets all requirements of APC&EC Rule No. 22, Chapter 8. Any changes to the approved design for the facility must be approved in writing by the Division prior to implementation.
14. The composting area shall have a surface that can withstand heavy equipment loads and shall be sloped to prevent ponding of water.
15. The facility shall be designed with stormwater management controls to meet State and Federal regulations and to prevent stormwater run-on from entering the receiving, processing, curing, and storage areas.
16. Restricted access to the site shall be maintained through the use of fences, gates, warning signs, natural barriers, or other means described in the approved NOI documents.
17. The facility design shall include all-weather access roads for vehicle movement within the site and clearly illustrate operational receiving, processing, production, curing, and storage areas.
18. The facility shall post a sign with the name of the facility, permit number, emergency phone number, opening and closing hours, and days of operation at the entrance of the facility.
19. The facility shall implement methods for controlling odor, noise, dust, vectors, litter, or other nuisance or safety conditions including fire hazards.
20. The facility shall have sufficient capacity to handle incoming materials and the storage of six (6) months production of finished compost. Methods to handle and remove unacceptable wastes delivered to the facility shall be included in facility design.
21. All areas of the permitted facility shall have positive run-off drainage, shall be free of standing water, and shall route water in accordance with the approved NPDES stormwater permit and according to the NOI filed for coverage under this permit. Facilities shall follow the current Stormwater Pollution Prevention Plan (SWPPP); facilities shall implement necessary Best Management Practices (BMPs) for stormwater, and perform the discharge monitoring and reporting requirements according to all NPDES stormwater or other discharge permits.
22. New facilities shall not commence construction or operation without required stormwater or discharge permit coverage or documentation that a permit or permits is not required. Existing facilities are required to obtain necessary stormwater or discharge permit within sixty (60) days according to Part I Section E.2 of this permit.
23. The owner or operator shall prepare and file an annual report with the Division by March 31 of each year. The report shall cover the previous January through December and shall include at a minimum the following items:
 - a. Monitoring results of stormwater runoff or site discharges as required by facility NPDES permits;
 - b. A summary narrative of any changes to site design, changes in operations, or necessary maintenance or remedial measures taken at the facility during the past reporting period;

- c. Quantity, type, and source of incoming waste on a monthly basis;
 - d. Quantity of compost sold or distributed on a monthly basis;
 - e. Quantity of residue removed for disposal, and the date and location of disposal; and
 - f. Any other information which may affect compliance with APC&EC Rule No. 22.
24. The owner or operator of the facility shall notify the Division in writing within sixty (60) days prior to the proposed termination date of the facility. Within ten (10) days of ceasing operations, all residuals, waste, etc. shall be removed from the site and disposed and all requirements of Part I Sections E.2 of this permit shall be met.
25. The facility shall conform to the requirements in the approved Closure Plan which is on file with or referenced by the approved NOI documents. The approved closure plan shall meet the provisions of APC&EC Rule No. 22.804(b)(9) and 2.810.
26. Owners and operators of permitted compost facilities shall post financial assurance in accordance with APC&EC Rule No. 22. The method for furnishing the required amount of financial assurance shall be in accordance with APC&EC Rule No. 22.1405.
27. Cost estimates for financial assurance shall be calculated and certified by the professional engineer registered in the state of Arkansas which has been retained to provide design services for the purpose of this permit. The engineer, on behalf of the applicant, shall complete the Cost Estimate Summary Form included within the NOI form or attach a detailed cost estimate to the NOI form. The engineer shall include the maximum proposed amounts of all wastes and recovered materials anticipated to exist on-site during the life of this permit. The engineer shall provide the cost estimate for third-party removal and/or disposal of each item which is reflective of the cost the Division would incur in the event of site abandonment. The estimate shall be multiplied by the factor of one hundred fifty percent (150%) as indicated by APC&EC Rule No. 22.810(c)(2). The form shall be certified by a professional engineer. The specific materials and amounts listed on the approved form or separate detailed estimate shall be considered limiting conditions for the site and are an integral part of this permit.
28. Financial assurance funds may be used by the Division, as determined by the Director, for any reasonable purpose to remediate and mitigate any environmental, health, or safety hazard at the site should the owner or operator be unable or unwilling to fulfill the permit obligations of this general permit.

**ATTACHMENT A
EXEMPT SMALL COMPOSTING SITE NOTIFICATION FORM
PERMIT NO. 0000-SCYW**

Exempt Small Composting Site Notification Form	
Name of Owner/Operator:	
Owner/Operator Mailing Address:	
Contact Name and Phone Number:	
REQUIREMENTS	
Per APC&EC Rule No. 22.801(e)(1) – Facilities are limited to less than 50 tons or 500 yards per year of incoming material for composting.	
Per APC&EC Rule No. 22.801(e)(1)(i) – The process must follow acceptable methods of composting and is developed, operated and maintained in a safe, nuisance free manner.	
Per APC&EC Rule No.22.801(e)(1)(ii) – The facility shall provide a written notice to the Division describing the facility location, description of the operation and intended end use for the compost prior to commencement of construction.	
OPERATION DESCRIPTION	
Describe facility location, address, county, latitude and longitude, maps may be included:	
List incoming composting materials:	
Provide amount of incoming wastes to be composted per year:	Select: yards or tons
Describe the method(s) for	

composting:	
List equipment and typical personnel necessary in the composting operation.	
Estimated time to compost incoming wastes into finished product:	
Maximum wastes and finished material on site at any time:	Select: yards or tons
List the proposed end use:	
Owner/Operator Signature and Title:	
Submit To: DEQ – Office of Land Resources 5301 Northshore Drive North Little Rock, AR 72118	

Arkansas Pollution Control and Ecology Commission Rule 22.801(a) and 22.802(a)(1) require that the Director of DEQ establish a general permit program for construction and operation of yard waste composting facilities. This rationale document discusses authority, permit procedures and requirements as authorized primarily by APC&EC Rule 22 but also the Solid Waste Management Act, Ark. Code Ann. §8-6-202 *et seq.*, and other APC&EC rules and regulations. Certain permit conditions discussed below are either directly referenced or mandated by rule or regulation, or they are design or operational limits or permitting choices made by the Director to best fit the general permit program. Explanation for the choices and limitations made in this permitting decision are provided by this rationale document. Facilities are not required to obtain coverage under this particular general permit and may apply for a site-specific individual permit.

Part I – Coverage Under this Permit	
Condition No.	
A	This permit is for coverage of all yard waste composting facilities (Type Y composting facility) within the boundaries of the state of Arkansas. Certain location restrictions will limit individual site locations. This will be reviewed on a case-by-case basis. [22.801(a) and 22.803]
B-1, 3	Facilities which accept <i>yard waste</i> or other <i>Type Y compost material</i> and which propose to process the material through <i>composting</i> as defined in 22.102 are required to be covered by a permit. This permit is eligible to those facilities which limit their operations to eligible materials described by 22.801(b)(1) and meet classification restrictions of 22.802(a)(1). Facilities which do not meet these requirements are not eligible for coverage.
B-2	Under the terms of this permit and the general permit procedures established herein, the Director has the discretion to determine if a site is ineligible for this permit based on the list in the permit section B-2 or any other unforeseen environmental or public health consideration. [22.103(g), 22.801(a)]
B-4	A small facility exemption exists according to 22.801(e)(1); notification requirements apply. Small facilities shall not exceed either 50 tons or 500 cubic yards of incoming compost material per calendar year to maintain the exemption.
B-5	22.801(e)(2), (3), (4)
B-6	Management alternatives to composting yard waste and other green wastes have emerged in recent years which focus on beneficial reuse of materials or energy recovery. Example markets include boiler fuel, mulch, soil stabilization, or other soil amendments. Potential may exist for other uses such as landfill liquid bulking, landfill daily cover, or agricultural uses such animal bedding. Rule 22, Chapter 10 discusses exemptions from permitting for facilities engaged solely in the business of storage, processing, redistribution of source separated materials. Since yard waste and other Type Y compost material is commonly generated and collected separately from the regular Class 1 waste stream, potential exists for management of the materials at non-composting recovery sites which may be considered an exempt Material Recycling Facility (MRF). MRFs are required to be in conformance with Solid Waste District Rules, must not cause nuisance conditions, and must not threaten human health or the environment. MRFs must be able to demonstrate that materials are sold, used, or reused within one (1) year. [22.1001(b)(1), 22.1002]
C-1, 2 D-1, 2	<p>All information and attachments required by NOI forms are required or facilities will not be considered covered under this permit. Adequate information for certain NOI items may exist in the Solid Waste Division on-line facility files. Proper reference to the correct on-line document ID must be made on the NOI or information may be resubmitted and attached to the NOI in order to properly reference the files to this permit coverage.</p> <p>This permit covers operating facilities after they timely submit a completed NOI on the most recent forms including all necessary attachments. Upon notification by DEQ for additional information, facilities shall provide the requested information within 60 days or as specified by the notification of deficiency (NOD).</p> <p>New facilities are not covered by this permit until 30-days following submittal of the complete NOI. Nothing shall prevent Division requests and applicant provision of additional information at any time. Failure to provide information on any Division request within 60 days or as specified by the NOD shall be grounds for Division termination of any coverage (whether granted or implied) and this may cause facilities to exist without coverage under permit. Operating without a permit is a violation of A.C.A. §8-6-205. [22.103(g), 22.303(d), 22.801(a)]</p>
C-3	Signatures are required by the facility representative and the representative engineer or the NOI will be

Part I – Coverage Under this Permit	
	considered incomplete and the facility will not be covered under the permit. [22.301]
C-4	[22.301(f)]
C-5	[22.308, 22.309]
C-6	A.C.A 8-1-106
D-3	Office of Water Quality permitting is required. This permit in no way authorizes any surface or groundwater discharges until facilities obtain proper coverage under required discharge permits or certifications. Facilities are required to submit necessary applications to DEQ – Office of Water Quality and obtain coverage under required permits. Failure to obtain coverage will be grounds for cancellation of coverage under this permit. [22.807(a)]
D-3	<p>Outdoor composting has operational aspects and liquid management practices which in many cases result in discharges of process water mixed with stormwater. Stormwater permit coverage has been the historic requirement for Type Y compost facility discharges consistent with Rule 22.806 and rationalized by the limited waste stream and narrowed scope of the potential impacts to receiving streams. Potential does exist for contaminated stormwater impacts to receiving streams, but this is highly dependent on many site-specific factors such as waste stream, site design, operational practices, compliance with applicable permits, or adherence to accepted best management practices for site operations or stormwater control.</p> <p>Industry, university, and EPA publications indicate certain effluent characteristics which may be contaminants of potential concern including Nitrates + Nitrite Nitrogen, Ammonia, and Phenols. The current DEQ Stormwater Industrial General Permit (ARR000000) contains benchmark standards for these parameters and it is recommended that DEQ and larger facilities investigate potential for impact. In the future, data may show some or other contaminants should be added to the monitoring protocol currently designated for Type Y facilities.</p>
E-1, 2	[22.804(b)(9), 22.810]
E-3	[22.103(g), 22.303(d), 22.801(a)]

Part II – Permit Conditions	
Condition No.	Conditions
1	This condition references the general applicability of Rule 22 and the Solid Waste Management Act. Any updates to Rule 22 or and other regulations or statutes affecting this permit shall cause the facility to update the NOI forms and attachments to properly address new requirements.
2	Annual fees are required per Rule 9. The annual fee for this general permit is \$450 per year at the time of issuance of this permit. Failure to pay fees in a timely manner will be cause for permit revocation. [Rule 9, Chapter 6: Solid Waste Permit Fees, 22.309(e)]
3	See Regulation 8, Administrative Procedures, Water and Air Pollution Control Act A.C.A. §8-4-101 et seq., and Solid Waste Management Act A.C.A. §8-6-201 et seq. for the Division duties, authority and obligations as the permitting authority.
4	[22.1501]
5	[22.803]
6	[22.805(a)(1)]
7	[22.805(a)(2)]
8	[22.804(b), 22.805(b), 22.808(a)] These sections of Rule 22 require facilities to maintain a record of incoming materials, therefore a method for determining the material volume is necessary. This was a requirement contained in the previous general permit.
9	[22.805(b)] This section of Rule 22 requires operating plans to consider necessary contingencies for site specific methods of operations. The condition and subsections of the condition are requirements contained in the previous general permit.
10	[22.805(a)(3)]
11	[22.804(b), 22.805(b), 22.808(a)]
12	[22.301(f), 22.303(d), 22.804(b)(8 sic.), 22.805(b), 22.806]
13	[22.301(f), 22.303(d), 22.804(b), 22.806(a)]
14	[22.806(a)(2)]
15	[22.806(a)(3)]
16	[22.805(a)(3), 22.806(a)(4)]

Part II – Permit Conditions	
17	Facilities are required to maintain a composting pad surface to accommodate heavy equipment and likewise rationale exists to require adequate roads into the compost areas to facilitate expected truck traffic. This will prevent operational problems such as dumping in unauthorized locations during inclement weather or safety hazards onsite. This was a requirement of the previous permit revisions. [22.806(a)(1 &2)]
18	[22.806(a)(4)]
19	[22.806(a)(5)]
20	[22.806(a)(6)]
21	[22.804(b)(8 sic.), 22.806(a)(3), 22.807(a)]
22	[22.807(a)]
23	[22.808(a)]
24	[22.804(b)(9), 22.810]
25	[22.804(b)(9), 22.810]
26	[22.810, 22.1401, 22.1402, 22.1405]
27	[22.301(f), 22.810]
28	[22.810(d)]

Part III – Exempt Small Compost Site Notification Form
22.801(e)(1)

This document was prepared by OLR - Engineering Branch Staff. On December 12, 2022, a stakeholder meeting was held for discussion of the permit and conditions and for solicitation of informal preliminary comments from facility representatives, local consultants, and other stakeholders who may be affected. One individual from the public attended the stakeholder meeting, but there were no comments made on the record. Formal 30-day public notice and draft permit comment period was advertised in the *Arkansas Democrat-Gazette* on January 22, 2023. Copies preliminary drafts, drafts, meeting notes or other information related to development of this permit are available by calling the OLR - Engineering Branch Staff at the phone number above or the following addresses:

jonesn@adeq.state.ar.us

or

Nick Jones, P.E.
Senior Operations Manager
Division of Environmental Quality Office of Land Resources
5301 Northshore Drive
North Little Rock, AR 72118

FACT SHEET

YARD WASTE COMPOSTING FACILITY (TYPE Y COMPOSTING FACILITY) GENERAL PERMIT

In accordance with provisions of the Arkansas Pollution Control and Ecology Commission (APC&EC) Rule No. 8.207, public notice was given that the Division of Environmental Quality (DEQ) has made a decision to issue a general permit for the operation of yard waste composting facilities.

General Permit 0000-SCYW is hereby issued for eligible yard waste composting facilities. This permit would apply to facilities as described below and as further defined in APC&EC Rule No. 22.

The Yard Waste Composting Facility General Permit will be available to cover facilities located in the State of Arkansas which choose to be covered by the General Permit, meet the terms of the Permit, and comply with the restrictions of APC&EC Rule No. 22. APC&EC Rule No. 22 defines composting as the deliberate aerobic decomposition of waste into a stable humus-like material. Yard waste and other Type Y compost material are the only acceptable materials eligible for processing under this permit. Yard waste is defined as grass clippings, leaves, and shrubbery trimmings. Type Y compost material is defined as yard waste or other vegetative materials such as tree prunings or chipped brush.

Coverage under General Permit 0000-SCYW may be obtained by submitting a Notice of Intent (NOI) for coverage under the General Permit for the construction and operation of a Yard Waste Composting Facility. The NOI form must be completed for all current permittees in order to maintain coverage under the General Permit 0000-SCYW.

The Proposed General Permit was placed into public notice on January 22, 2023. The end of the public comment period will be February 21, 2023. All comments received during the public comment period will be addressed in the final permit decision.

ECONOMIC IMPACT - ENVIRONMENTAL BENEFIT
YARD WASTE COMPOSTING FACILITY
(TYPE Y COMPOSTING FACILITY)
Permit No. 0000-SCYW

The requirement of Act 731 of the 88th General Assembly, 2011, requires the Division to consider economic impact and environmental benefit. The new requirements are codified in Ark. Code Ann. §8-4-203(m) as follows:

8-6-203(m)	Requirement
(3)(A)(i)	Before the submittal to public comment of a general permit that has not been previously issued, the Division shall consider the economic impact and environmental benefit of the general permit and its terms and conditions upon the people of the State of Arkansas, including those entities that may apply for coverage under the general permit.
(3)(A)(ii)	This requirement does not apply to general permits or terms or conditions that adopt the language of state or federal statutes or Rules without substantive change.
(3)(B)	If the terms and conditions of a previously issued general permit are revised upon renewal, the economic impact and environmental benefit of only the proposed changes shall be considered.
(3)(C)	A general permit for which costs are specifically prohibited from being considered by state or federal law or Rule is exempt from the requirements of this subsection.
(3)(D)	The Division may rely upon readily available information for its consideration of the economic impact and environmental benefit of the general permit and its terms and conditions.

Following is a discussion of applicability of the general permitting requirement to this permit decision:

8-4-203(m)	Applicability
(3)(A)(i)	The Yard Waste Composting Facility General Permit has been previously issued and has been in existence since 1995.
(3)(A)(ii)	The language contained in the specific conditions is derived directly from Rule 22 or is a specific requirement of Rule 22.
(3)(B)	The terms and intent of the general permit have not changed materially from past revisions. Areas of the permit have been revised, re-written, or re-organized for clarification. The references to Arkansas Division of Environmental Quality have been updated to reflect the new name of the Division.
(3)(C)	N/A
(3)(D)	N/A

Arkansas Department of Energy & Environment
 Division of Environmental Quality
 Office of Land Resources
 5301 Northshore Drive
 North Little Rock, AR 72118
 (501) 682-0587

**NOTICE OF INTENT (NOI)
 FOR COVERAGE UNDER THE GENERAL PERMIT
 FOR THE CONSTRUCTION AND OPERATION OF
 YARD WASTE COMPOSTING FACILITY (TYPE Y)
 0000-SCYW**

1. Legal Name of Applicant:	2. Name of Facility:
3. Applicant Mailing Address:	4. Facility Physical Address:
5. Applicant City, State, Zip:	6. Facility City, State, Zip, County
7. Applicant Telephone Number:	8. Facility Telephone Number:
9. Responsible Official:	10. Facility Contact Person:
11. Responsible Official Email:	12. Facility Contact Email:
12. Title of Responsible Official:	13. Facility Latitude and Longitude:
14. Responsible Official Telephone:	15. Facility Section/Township/Range:
16. Classification – Check box if applicable [See APC&EC Rule No. 22.804(b)(1)] 0000-SCYW > 50 tons or 500 cubic Yards annually <input type="checkbox"/> Small facilities < 50 tons or 500 cubic yards annually <input type="checkbox"/> Stop. Small facilities fill out the “Small Composting Site Notification Form” located in Attachment A. of 0000-SCYW.	
17. Has the facility notified the appropriate Regional Solid Waste Management District? [see APC&EC Rule No. 22.803 (c)] <input type="checkbox"/> Yes – Attach <input type="checkbox"/> No – Explain _____	
17. Is the site currently permitted by the Division as a Solid Waste Yard Waste Compost Facility? <input type="checkbox"/> Yes – Permit Number: _____ <input type="checkbox"/> No Other DEQ Permits? Stormwater permitting is required. <input type="checkbox"/> Yes – Permit Number(s): _____ <input type="checkbox"/> No – Explain: _____ _____	

18.	Location Restrictions and Siting Requirements Demonstration [See APC&EC Rule No. 22.803]		
	Does the applicant own or control the site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Is the applicant responsible for facility operation and maintenance?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Is the site located in the 100 – year flood plain?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Is the site designed and operated to not restrict the flow of the base flood, reduce water storage capacity of the flood plain or result in washout of solid waste.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Is the site located in a jurisdictional wetland?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Has the site obtained all the necessary geographic site approval from government(s) of jurisdiction?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Was the facility in existence prior to May 7, 1995?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Are the site active areas located within 50 feet of a property boundary?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Are the site active areas located within 100 feet of a naturally occurring water body?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Are the site active areas located within 200 feet of an existing residence, place of business, or drinking water supply not owned or leased by the applicant?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
19.	Additional Requirements		
	Site and ½ mile surrounding land use zoning and existing features map [see APC&EC Rule No. 22.804(b)(3)]	<input type="checkbox"/> Attached or SWMD Document ID _____	
	Map depicting wetlands and floodplains [see APC&EC Rule No. 22.804(b)(4)]	<input type="checkbox"/> Attached or SWMD Document ID _____	
	Site Plan [see APC&EC Rule No. 22.804(b)(5)]	<input type="checkbox"/> Attached or SWMD Document ID _____	
	Operating Narrative [see APC&EC Rule No. 22.804(b)(8)(i) and conform to APC&EC Rule No. 22.805]	<input type="checkbox"/> Attached or SWMD Document ID _____	
	Closure Plan [see Rule No. 22.804(b)(9)]	<input type="checkbox"/> Attached or SWMD Document ID _____	
	Does the facility have design plans and operating specifications? [see APC&EC Rule No. 22.806]	<input type="checkbox"/> Yes	<input type="checkbox"/> No
20.	Describe all waste or recovered material or otherwise all material accepted at the site? Include all material whether processed by composting or simply processed and stored for re-distribution or re-use.		

	Are any industrial wastes or special materials proposed for acceptance? [see APC&EC Rule No. 22.102 – Definitions]		
	<input type="checkbox"/> Yes – Explain		
	<input type="checkbox"/> No industrial or special material.		
21.	Permit Fees – for existing facilities the current annual billing cycle will remain unchanged and there are no additional fees. Simply continue paying the \$450 annual fee when it is billed by DEQ.		
	New Facility - <input type="checkbox"/> \$900 initial fee is attached	<input type="checkbox"/> Existing	
	All facilities – Are all DEQ invoices paid to date (for all permits or licenses)?		
	<input type="checkbox"/> Yes		
	<input type="checkbox"/> No, explain _____		
22.	Financial Assurance (FA) Requirement [see APC&EC Rule No. 22.810(b)]		

Has a detailed closure cost estimate been completed? [see APC&EC Rule No. 22.810(b)] Yes No

Does the closure cost estimate include the maximum permitted amount of waste and compost ever stored on site at one time? Yes No

Discuss the basis for cost estimates, loading, hauling, disposal, other clean-up or other removal of items or materials:

Cost Estimate Summary Form

[Alternate to a detailed closure cost estimate – complete line items below or attached a detailed cost estimate certified by the Professional Engineer retained for this submittal]:

Description	Quantity (maximum permitted in tons)	Third-Party Closure Cost (transportation and disposal at a Class 1 landfill or alternate means of disposal or outlet for re-use available to a third-party)
Yard waste stored on site	= _____	\$ _____
Yard waste in composting process (include production and curing amounts)	= _____	\$ _____
Stored finished compost on site	= _____	\$ _____
Unprocessed wood waste stored on site	= _____	\$ _____
Processed wood waste stored on site	= _____	\$ _____
Non-compostable material for recycling	= _____	\$ _____
Non-compostable waste residual materials for disposal	= _____	\$ _____
Other – Explain _____	= _____	\$ _____
(attach supplemental documentation, if needed)		
Other – Explain _____	= _____	\$ _____
(attach supplemental documentation, if needed)		
Other – Explain _____	= _____	\$ _____
(attach supplemental documentation, if needed)		
Total		\$ _____

Note: FA must be in a mechanism allowed by APC&EC Rule No. 22.1405. Financial Assurance is waived for State and Federal facilities only. Generally, no other waivers will be allowed without extensive and acceptable rationale which demonstrates an alternative means for coverage should the owner or operator become financially incapacitated. Previous waivers are not valid under this permit revision.



ARKANSAS

ENERGY & ENVIRONMENT

3/13/2023

Mr. Nathan Charles
Solid Waste Service Manager
10803 Ironton Cutoff Road
City of Little Rock Disposal Facility
Little Rock, AR 72206

RE: Inspection conducted on February 15, 2023
AFIN 60-01071
Permit Number 0031-SCYW

Dear Mr. Charles,

The Arkansas Division of Environmental Quality Office of Land Resources (DEQ) conducted a routine inspection of your facility pursuant to the Arkansas Solid Waste Management Act (Arkansas Code, Annotated, § 8-6-201 *et seq.*), of 1971, as amended, the Arkansas Pollution Control & Ecology Commission Regulation 22 (Solid Waste Management), and the above-referenced permit. The inspection identified conditions at your facility which the DEQ alleges are violations. A copy of the inspection report is attached.

You should immediately initiate actions to correct the alleged violations cited. A written response of the corrective actions taken, or to be taken, must be submitted within thirty (30) calendar days from the date on this letter to the attention of Kim Davenport. The response may include, but is not limited to, photographs, copies of disposal receipts, records, or analytical results, as applicable. If you have any questions regarding the alleged violations, please do not hesitate to contact me at (501) 682-0586 or Kimberly.Davenport@adeq.state.ar.us.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Kim Davenport'.

Kim Davenport
Solid Waste Inspector
5301 Northshore Drive, North Little Rock, AR 72118-5317

Enclosure

cc: Scott McWilliams, Senior Compliance Manager, Regulated Waste Operations



ARKANSAS
ENERGY & ENVIRONMENT

**Office of Land Resources
Regulated Waste Operations
Compost Inspection Form**

Site Name	City of Little Rock Compost Yard	County	Pulaski	AFIN	60-01071
Facility Address	10803 Ironton Cutoff, Little Rock, AR	Phone #	501-888-4493	Permit #	0031-SCYW
Permittee Address	10803 Ironton Cutoff, Little Rock, AR	Email Address	ncharles@littlerock.gov	PDS #	124932
Date	2/15/2023	Entry Time	1240	Exit Time	1520
Classification	X	Y – Yard Waste		O – Source Separated Organic Waste	
				S – Mixed Solid Waste	

Operational Standards

Category 1

	Regulation	Item Description	Comments
	804	Application Requirements	
	805(b)(1); (c)(5)	Operating Records Maintained	
X	805(b)(2)	Conforms to Operating Plan	Document #81838 describes the compost yard as a 20-acre asphalt paved site where aerobic compost occurs. This document also states, in part, no changes in the current method of operations were required. Comment: The western half of the asphalt pad is no longer present and operations have had to be moved eastern portion of the pad. (Refer to Photo # 1.)
	806(a)(4); (b)(9)	Site Access & Security Measures	
	808(a)(b)(c)	Record Keeping & Reporting	


Category 2

	Regulation	Item Description	Comments
	805(a)(2)	Operations Follow Acceptable Methods	
	805(a)(3)	Operations Performed by Licensed Operator	
	805(a)(4); (b)(2)	Monitoring Types of Waste Received	
	805(c)(2) Type O&S	Daily Temperature Readings Recorded	
	805(c)(4) Type O&S	Finished Compost not Sold Within 6 Months	
	805(c)(3) Type O&S	Processing of Incoming Waste Within 3 Days	
X	806(a)(2)	Adequate Composting Area Surface	Ponding was observed on the western side of the compost yard. (Refer to Photos #1 - #3.)
	806(a)(5); (b)(10)	Odor, Noise, Dust, Vector & Litter Control	
	806(a)(6); (b)(11)	Handle and Remove Unacceptable Waste	
	807(a)(b)(c); 808(b)(9) Type O&S	Testing of Run-off and Compost	


Category 3

	Regulation	Item Description	Comments
	805(a)(1)	Operations Preclude Pollution	
	805(c)(1) Type O&S	Compost Process Meets PFRP	
	805(c)(3) Type O&S	Adequate Leachate and NPDES Control Measures	
	805(a)(3); (b)(7)	Control for Stormwater, Run-off & NPDES	
	806(b)(8) Type O&S	Leachate Collection and Removal System	
	809(a)(b)(c)	Compost Utilization	



Records

Date of Last Annual Report	4/18/2022	Previous Month's Waste Received	1,655.25 Tons				
Operator Name & Number	Nathan Charles- 004315	Signature of Inspector					
Exit Interview Conducted with	Nathan Charles	Method	Via phone	Date	2/16/2023	Time	0900

Division of Environmental Quality Official Photograph Sheet

Location	City of Little Rock Compost Yard			Permit	0031-SCYW	AFIN	60-01071
Photographer	Kim Davenport, Inspector		<i>KD</i>	Witness	N/A		
Photo #	1	Of	3	Date	2/15/2023	Time	1304
Description	Operational change: The western half of the compost yard is vegetated and no longer in use.						
							
Location	City of Little Rock Compost Yard			Permit	0031-SCYW	AFIN	60-01071
Photographer	Kim Davenport, Inspector		<i>KD</i>	Witness	N/A		
Photo #	2	Of	3	Date	2/15/2023	Time	1324
Description	The unused western compost yard was observed with ponding water.						
							

Division of Environmental Quality Official Photograph Sheet

Location	City of Little Rock Compost Yard			Permit	0031-SCYW	AFIN	60-01071
Photographer	Kim Davenport, Inspector			Witness	N/A		
Photo #	3	Of	3	Date	2/15/2023	Time	1312
Description	The western compost pad was observed with depressions holding water.						
							



April 11, 2023

AFIN: 60-01071
PMT#: 0031-SCYW
Received
By Kacy Murillo at 4:25 pm, Apr 17, 2023
DOC ID#: 83880
TO: RH>FILE <KM

Kim Davenport, Inspector
Arkansas Department of Environmental Quality
Solid Waste Management Division
5301 Northshore Drive
North Little Rock, AR 72118-5317

Re: Quarterly Inspection, AFIN 60-01071, Permit Number 0031-SCYW

Dear Ms. Davenport:

In response to your inspection of February 15, 2023, the following is a list of comments and corrective actions to be undertaken on the City of Little Rock's Compost Facility:

Compost Facility, Permit Number 0031-SCYW

- **Category 1, Regulation 805(b)(2): Conforms to Operating Plan.** Document #81838 describes the compost yard as a 20-acre asphalt paved site where aerobic compost occurs. This document also states, in part, no changes in the current method of operations were required. Comment: The western half of the asphalt pad is no longer present and operations have had to be moved eastern portion of pad.

The City is working to remove this language from our operating plan. The City has also hired a consultant to design a new compost facility.

- **Category 2, Regulation 806(a)(2): Adequate Composting Area Surface.** Ponding was observed on the western side of the compost yard.

The City has hired a consultant to help us modify the compost facility to prevent ponding. The City is also working to secure money to complete this project.

Thank you for your cooperation in this matter. If I can be of any further assistance please contact me at your convenience.

Sincerely,

A handwritten signature in blue ink that reads "Nathan Charles". The signature is written in a cursive style with a horizontal line extending to the right across the page.

Nathan Charles, PE
Solid Waste Manager



ARKANSAS

ENERGY & ENVIRONMENT

5/25/2023

Mr. Nathan Charles
Solid Waste Service Manager
10803 Ironton Cutoff Road
City of Little Rock Disposal Facility
Little Rock, AR 72206

RE: Inspection conducted on May 10, 2023
AFIN 60-01071
Permit Number 0031-SCYW

Dear Mr. Charles,

The Arkansas Division of Environmental Quality Office of Land Resources (DEQ) conducted a routine inspection of your facility pursuant to the Arkansas Solid Waste Management Act (Arkansas Code, Annotated, § 8-6-201 *et seq.*), of 1971, as amended, the Arkansas Pollution Control & Ecology Commission Regulation 22 (Solid Waste Management), and the above-referenced permit. The inspection identified conditions at your facility which the DEQ alleges are violations. A copy of the inspection report is attached.

You should immediately initiate actions to correct the alleged violations cited. A written response of the corrective actions taken, or to be taken, must be submitted within thirty (30) calendar days from the date on this letter to the attention of Kim Davenport. The response may include, but is not limited to, photographs, copies of disposal receipts, records, or analytical results, as applicable. If you have any questions regarding the alleged violations, please do not hesitate to contact me at (501) 682-0586 or Kimberly.Davenport@adeq.state.ar.us.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Kim Davenport'.

Kim Davenport
Solid Waste Inspector
5301 Northshore Drive, North Little Rock, AR 72118-5317

cc: Nicholas Jones P.E., Senior Operations Manager, Office of Land Resources



ARKANSAS
ENERGY & ENVIRONMENT

**Office of Land Resources
Regulated Waste Operations
Compost Inspection Form**

Site Name	City of Little Rock Compost Yard	County	Pulaski	AFIN	60-01071
Facility Address	10803 Ironton Cutoff, Little Rock, AR	Phone #	501-888-4493	Permit #	0031-SCYW
Permittee Address	10803 Ironton Cutoff, Little Rock, AR	Email Address	ncharles@littlerock.gov	PDS #	125971
Date	5/10/2023	Entry Time	1152	Exit Time	1455
Classification	X	Y – Yard Waste		O – Source Separated Organic Waste	
				S – Mixed Solid Waste	

Operational Standards

Category 1


	Regulation	Item Description	Comments
	804	Application Requirements	
	805(b)(1); (c)(5)	Operating Records Maintained	
X	805(b)(2)	Conforms to Operating Plan	Document #81838 describes the compost yard as a 20-acre asphalt paved site where aerobic compost occurs. This document also states, in part, no changes in the current method of operations were required. Comment: The western half of the asphalt pad is no longer present and operations have had to be moved eastern portion of the pad. (Refer to Photo # 1.)
	806(a)(4); (b)(9)	Site Access & Security Measures	
X	808(a)(b)(c)	Record Keeping & Reporting	An annual report has not been submitted for 2022 and was due by March 31.

Category 2

	Regulation	Item Description	Comments
	805(a)(2)	Operations Follow Acceptable Methods	
	805(a)(3)	Operations Performed by Licensed Operator	
	805(a)(4); (b)(2)	Monitoring Types of Waste Received	
	805(c)(2) Type O&S	Daily Temperature Readings Recorded	
	805(c)(4) Type O&S	Finished Compost not Sold Within 6 Months	
	805(c)(3) Type O&S	Processing of Incoming Waste Within 3 Days	
X	806(a)(2)	Adequate Composting Area Surface	Ponding water was observed across the eastern side of the compost yard. (Refer to Photos #2 - #4.)
	806(a)(5); (b)(10)	Odor, Noise, Dust, Vector & Litter Control	
	806(a)(6); (b)(11)	Handle and Remove Unacceptable Waste	
	807(a)(b)(c); 808(b)(9) Type O&S	Testing of Run-off and Compost	

Category 3

	Regulation	Item Description	Comments
	805(a)(1)	Operations Preclude Pollution	
	805(c)(1) Type O&S	Compost Process Meets PFRP	
	805(c)(3) Type O&S	Adequate Leachate and NPDES Control Measures	
	805(a)(3); (b)(7)	Control for Stormwater, Run-off & NPDES	
	806(b)(8) Type O&S	Leachate Collection and Removal System	
	809(a)(b)(c)	Compost Utilization	

Records								
Date of Last Annual Report	4/18/2022	Previous Month's Waste Received	5,547.51 Tons					
Operator Name & Number	Nathan Charles- 004315	Signature of Inspector						
Exit Interview Conducted with	Nathan Charles	Method	Via phone	Date	5/10/2023	Time	1430	

Division of Environmental Quality Official Photograph Sheet

Location	City of Little Rock Compost Yard			Permit	0031-SCYW	AFIN	60-01071
Photographer	Kim Davenport, Inspector		<i>KD</i>	Witness	N/A		
Photo #	1	Of	4	Date	5/10/2023	Time	1232
Description	Operational change: The western half of the compost yard is vegetated and no longer in use.						



Location	City of Little Rock Compost Yard			Permit	0031-SCYW	AFIN	60-01071
Photographer	Kim Davenport, Inspector		<i>KD</i>	Witness	N/A		
Photo #	2	Of	4	Date	5/10/2023	Time	1236
Description	The eastern compost yard was observed with ponding water.						



Division of Environmental Quality Official Photograph Sheet

Location	City of Little Rock Compost Yard			Permit	0031-SCYW	AFIN	60-01071
Photographer	Kim Davenport, Inspector		<i>KD</i>	Witness	N/A		
Photo #	3	Of	4	Date	5/10/2023	Time	1238
Description	Another example of ponding in the eastern compost yard was observed.						
							
Location	City of Little Rock Compost Yard			Permit	0031-SCYW	AFIN	60-01071
Photographer	Kim Davenport, Inspector		<i>KD</i>	Witness	N/A		
Photo #	4	Of	4	Date	5/10/2023	Time	1240
Description	Another example of ponding observed in the eastern compost yard is provided.						
							

Karen Blue (adpce.ad)

From: Charles, Nathan <ncharles@littlerock.gov>
Sent: Monday, July 10, 2023 3:52 PM
To: Kimberly Davenport (adpce.ad)
Subject: CLR inspection response
Attachments: 5-10-23 ADEQ Class 1 inspection response.pdf; 5-10-23 ADEQ Class 4 inspection response.pdf; 5-10-23 ADEQ CY inspection response.pdf

Ms. Davenport,

Please see attached responses to the 5-10-2023 ADEQ inspection. I apologize being late.

Let me know if you need anything else.

Thanks

Nathan Charles, P.E.
City of Little Rock
Solid Waste Services Manager
501-888-4492

AFIN: 60-01071
PMT#: 0031-SCYW
Received
<i>By Karen Blue at 2:07 pm, Jul 24, 2023</i>
DOC ID#: 84376
TO: RH>FILE <KMB



July 10, 2023

Kim Davenport, Inspector
Arkansas Department of Environmental Quality
Solid Waste Management Division
5301 Northshore Drive
North Little Rock, AR 72118-5317

Re: Quarterly Inspection, AFIN 60-01071, Permit Number 031-SCYW

Dear Ms. Davenport:

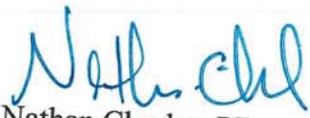
In response to your inspection of May 10, 2023, the following is a list of comments and corrective actions to be undertaken on the City of Little Rock's Compost Yard:

Compost Yard, Permit Number 0031-SCYM

- **Category 1, Regulation 805(b)(2): Conforms to Operating Plan**
Document #81838 describes the compost yard as a 20-acre asphalt paved site where aerobic compost occurs. This document also states, in part, no changes in the current method of operations were required. Comment: The western half of the asphalt pad is no longer present and operations have had to be moved eastern portion of the pad.
The City has updated the OP and will submit to the Department.
- **Category 1, Regulation 808(a)(b)(c): Record Keeping & Reporting.** *An annual report has not been submitted for 2022 and was due by March 31*
This was an oversight and the City is working now to complete the report and have it turned into the Department as soon as possible.
- **Category 2, Adequate Composting Area Surface:** *Ponding water was observed across the eastern side of the compost yard*
Water is currently not ponding in the compost yard.

Thank you for your cooperation in this matter. If I can be of any further assistance please contact me at your convenience.

Sincerely,



Nathan Charles, PE
Solid Waste Manager



DIVISION OF
ENVIRONMENTAL QUALITY

127012

Sarah Huckabee Sanders
GOVERNOR

Shane E. Khoury
SECRETARY

8/14/2023

Mr. Nathan Charles
Solid Waste Service Manager
10803 Ironton Cutoff Road
City of Little Rock Disposal Facility
Little Rock, AR 72206

RE: Inspection conducted on July 31, 2023
AFIN 60-01071
Permit Number 0031-SCYW

Dear Mr. Charles,

The Arkansas Division of Environmental Quality Office of Land Resources (DEQ) conducted a routine inspection of your facility pursuant to the Arkansas Solid Waste Management Act (Arkansas Code, Annotated, § 8-6-201 *et seq.*), of 1971, as amended, the Arkansas Pollution Control & Ecology Commission Regulation 22 (Solid Waste Management), and the above-referenced permit. The inspection identified conditions at your facility which the DEQ alleges are violations. A copy of the inspection report is attached.

You should immediately initiate actions to correct the alleged violations cited. A written response of the corrective actions taken, or to be taken, must be submitted within thirty (30) calendar days from the date on this letter to the attention of Kim Davenport. The response may include, but is not limited to, photographs, copies of disposal receipts, records, or analytical results, as applicable. If you have any questions regarding the alleged violations, please do not hesitate to contact me at (501) 682-0586 or Kimberly.Davenport@adeq.state.ar.us.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Kim Davenport'.

Kim Davenport
Solid Waste Inspector Supervisor

cc: Heath Cobb, Senior Compliance Manager, Regulated Waste Operations

**Office of Land Resources
Regulated Waste Operations
Compost Inspection Form**

Site Name	City of Little Rock Compost Yard	County	Pulaski	AFIN	60-01071
Facility Address	10803 Ironton Cutoff, Little Rock, AR	Phone #	501-888-4493	Permit #	0031-SCYW
Permittee Address	10803 Ironton Cutoff, Little Rock, AR	Email Address	ncharles@littlerock.gov	PDS #	127012
Date	7/31/2023	Entry Time	0938	Exit Time	1225
Classification	X	Y – Yard Waste		O – Source Separated Organic Waste	
				S – Mixed Solid Waste	

Operational Standards

Category 1

	Regulation	Item Description	Comments
	804	Application Requirements	
	805(b)(1); (c)(5)	Operating Records Maintained	
X	805(b)(2)	Conforms to Operating Plan	Document #81838 describes the compost yard as a 20-acre asphalt paved site where aerobic compost occurs. This document also states, in part, no changes in the current method of operations were required. Comment: The western half of the asphalt pad is no longer present and operations have had to be moved eastern portion of the pad. (Refer to Photo # 1.)
	806(a)(4); (b)(9)	Site Access & Security Measures	
X	808(a)(2)(4)	Record Keeping & Reporting	An annual report has not been submitted for 2022 and was due by March 31. Incoming waste totals have not been provided as requested.


Category 2

	Regulation	Item Description	Comments
	805(a)(2)	Operations Follow Acceptable Methods	
	805(a)(3)	Operations Performed by Licensed Operator	
	805(a)(4); (b)(2)	Monitoring Types of Waste Received	
	805(c)(2) Type O&S	Daily Temperature Readings Recorded	
	805(c)(4) Type O&S	Finished Compost not Sold Within 6 Months	
	805(c)(3) Type O&S	Processing of Incoming Waste Within 3 Days	
X	806(a)(2)	Adequate Composting Area Surface	Ponding water was observed in depressions across the eastern side of the compost yard. (Refer to Photo #2.)
X	806(a)(5)	Odor, Noise, Dust, Vector & Litter Control	Litter was observed outside of the litter fence, on the northern side of the compost yard. (Refer to Photo # 3.)
	806(a)(6); (b)(11)	Handle and Remove Unacceptable Waste	
	807(a)(b)(c); 808(b)(9) Type O&S	Testing of Run-off and Compost	

Category 3

	Regulation	Item Description	Comments
	805(a)(1)	Operations Preclude Pollution	
	805(c)(1) Type O&S	Compost Process Meets PFRP	
	805(c)(3) Type O&S	Adequate Leachate and NPDES Control Measures	
	805(a)(3); (b)(7)	Control for Stormwater, Run-off & NPDES	
	806(b)(8) Type O&S	Leachate Collection and Removal System	
	809(a)(b)(c)	Compost Utilization	

Records

Date of Last Annual Report	4/18/2022	Previous Month's Waste Received	Not provided		
Operator Name & Number	Raymond Bell- 000561	Signature of Inspector			
Exit Interview Conducted with	Nathan Charles	Method	Via phone	Date	8/1/2023
				Time	0906

Division of Environmental Quality Official Photograph Sheet


Location	City of Little Rock Compost Yard			Permit	0031-SCYW	AFIN	60-01071
Photographer	Kim Davenport, Inspector		<i>KD</i>	Witness	N/A		
Photo #	1	Of	3	Date	7/31/2023	Time	0942
Description	Operational change: The western half of the compost yard is vegetated and no longer in use.						



Location	City of Little Rock Compost Yard			Permit	0031-SCYW	AFIN	60-01071
Photographer	Kim Davenport, Inspector		<i>KD</i>	Witness	N/A		
Photo #	2	Of	3	Date	7/31/2023	Time	0956
Description	A depression in the eastern compost yard was observed with ponding water.						



Division of Environmental Quality Official Photograph Sheet

Location	City of Little Rock Compost Yard			Permit	0031-SCYW	AFIN	60-01071
Photographer	Kim Davenport, Inspector		<i>KD</i>	Witness	N/A		
Photo #	3	Of	3	Date	7/31/2023	Time	0950
Description	Litter was observed collecting outside the fence, near the northern stormwater pond.						
							

September 18, 2023

Kim Davenport, Inspector
Arkansas Department of Environmental Quality
Solid Waste Management Division
5301 Northshore Drive
North Little Rock, AR 72118-5317

Re: Quarterly Inspection, AFIN 60-01071, Permit 0031-SCYW

Dear Ms. Davenport:

In response to your inspection of July 31, 2023, the following is a list of comments and corrective actions to be undertaken on the City of Little Rock's Compost Site:

Compost Site, Permit # 0031 – SCYW

- **Category 1, Regulation 805(b)(2): Conforms to Operating Plan.** Document #81838 describes the compost yard as a 20 – acre asphalt paved site where aerobic compost occurs. This document also states, in part, no changes in the current method of operations were required. *Comment: The western half of the asphalt pad is no longer present and operations have had to be moved eastern of the pad.*
The City is currently updating the operating plan to revise the description of the facility. The City has also completed a design to rehabilitate the facility and hopefully will be constructing the improvements soon.
- **Category 1, Regulation (a)(2)(4): Record Keeping and Reporting.** *An annual report has not been submitted for 2022 and was due by March 31. Incoming waste totals have not been provided as requested.*
The annual report was submitted on September 7th, 2023. Waste totals have been provided.
- **Category 2, Regulation 806(a)(2). Adequate Composting Area Surface.** *Ponding water was observed in depressions across the eastern side of the compost yard.*
The compost yard rehabilitation project will eliminate this condition. A new hard surface is proposed and will be sloped to drain.
- **Category 2, Regulation 806(a)(5): Odor, Noise, Dust, Vector & Litter Control.** *Litter was observed outside of the litter fence, on the northern side of the compost yard.*
The City will pick up the litter that made it past the litter fence. The City will also readjust the litter fence in an effort to prevent this from occurring.

Thank you for your cooperation in this matter. If I can be of any further assistance please contact me at your convenience.

Sincerely,

A handwritten signature in blue ink, appearing to read "Nathan Charles".

Nathan Charles, PE
City of Little Rock
Solid Waste Services Manager



DIVISION OF
ENVIRONMENTAL QUALITY

128339

Sarah Huckabee Sanders
GOVERNOR

Shane E. Khoury
SECRETARY

11/20/2023

Bernard Owens
Solid Waste Service Manager
10803 Ironton Cutoff Road
City of Little Rock Disposal Facility
Little Rock, AR 72206

RE: Inspection conducted on November 13, 2023
AFIN 60-01071
Permit Number 0031-SCYW

Dear Mr. Owens,

The Arkansas Division of Environmental Quality Office of Land Resources (DEQ) conducted a routine inspection of your facility pursuant to the Arkansas Solid Waste Management Act (Arkansas Code, Annotated, § 8-6-201 *et seq.*), of 1971, as amended, the Arkansas Pollution Control & Ecology Commission Regulation 22 (Solid Waste Management), and the above-referenced permit. The inspection identified conditions at your facility which the DEQ alleges are violations. A copy of the inspection report is attached.

You should immediately initiate actions to correct the alleged violations cited. A written response of the corrective actions taken, or to be taken, must be submitted within thirty (30) calendar days from the date on this letter to the attention of Casey Jackson. The response may include, but is not limited to, photographs, copies of disposal receipts, records, or analytical results, as applicable. If you have any questions regarding the alleged violations, please do not hesitate to contact me at (501) 682-0832 or casey.jackson@adeq.state.ar.us.

Sincerely,

A handwritten signature in black ink that reads "Casey J. Jackson".

Casey Jackson
Solid Waste Inspector

cc: Nicholas Jones P.E., Senior Operations Manager, Office of Land Resources

**Division of Environmental Quality
Office of Land Resources
Compost Inspection Form**

Site Name	City of Little Rock	County	Pulaski	AFIN	60-01071
Facility Address	10803 Ironton Cutoff Rd., Little Rock, AR	Phone #	501-888-4493	Permit #	0031-SCYW
Permittee Address	10803 Ironton Cutoff Rd., Little Rock, AR	Email Address	sowens@littlerock.gov	PDS #	128339
Date	11/13/2023	Entry Time	14:11	Exit Time	14:50
Classification	<input checked="" type="checkbox"/> Y – Yard Waste	<input type="checkbox"/> O – Source Separated Organic Waste	<input type="checkbox"/> S – Mixed Solid Waste		

Operational Standards

Category 1


	Regulation	Item Description	Comments
	804	Application Requirements	
X	805(b)(1); (c)(5)	Operating Records Maintained	Document #81838 describes the compost yard as a 20-acre asphalt paved site where aerobic compost occurs. This document also states, in part, no changes in the current method of operations were required. Comment: The western half of the asphalt pad is no longer present and operations have had to be moved eastern portion of the pad.
	805(b)(2); (c)(6)	Conforms to Operating Plan	
	806(a)(4); (b)(9)	Site Access & Security Measures	
	808(a)(b)(c)	Record Keeping & Reporting	

Category 2

	Regulation	Item Description	Comments
	805(a)(2)	Operations Follow Acceptable Methods	
	805(a)(3)	Operations Performed by Licensed Operator	
	805(a)(4); (b)(2)	Monitoring Types of Waste Received	
	805(c)(2) Type O&S	Daily Temperature Readings Recorded	
	805(c)(4) Type O&S	Finished Compost not Sold Within 6 Months	
	805(c)(3) Type O&S	Processing of Incoming Waste Within 3 Days	
X	806(a)(2)	Adequate Composting Area Surface	Ponding Water was observed in three (3) different locations on the compost yard. (Refer to Photos #1 - #3.)
	806(a)(5); (b)(10)	Odor, Noise, Dust, Vector & Litter Control	
	806(a)(6); (b)(11)	Handle and Remove Unacceptable Waste	
	807(a)(b)(c); 808(b)(9) Type O&S	Testing of Run-off and Compost	

Category 3

	Regulation	Item Description	Comments
	805(a)(1)	Operations Preclude Pollution	
	805(c)(1) Type O&S	Compost Process Meets PFRP	
	805(c)(3) Type O&S	Adequate Leachate and NPDES Control Measures	
	805(a)(3); (b)(7)	Control for Stormwater, Run-off & NPDES	

	806(b)(8) Type O&S	Leachate Collection and Removal System			
	809(a)(b)(c)	Compost Utilization			
Records					
Date of Last Annual Report	8/21/2023		Previous Month's Waste Received	18,378.12	
Operator Name & Number	Bernard Owens-004434		Signature of Inspector		
Exit Interview Conducted with	Bernard Owens		Method	On-Site	Date 11/13/2023
				Time	14:40

Division of Environmental Quality Official Photograph Sheet


Location	City of Little Rock Compost Yard	Permit	0031-SCTW	AFIN	60-01071
Photographer	Casey Jackson	CJS	Witness	Ryan Hayden	
Photo #	1	Of	3	Date	11/13/2023
Description	Ponding water observed on the south side of the compost yard in depressions.				



Location	City of Little Rock Compost Yard	Permit	0031-SCTW	AFIN	60-01071
Photographer	Casey Jackson	CJS	Witness	Ryan Hayden	
Photo #	2	Of	3	Date	
Description	Ponding water observed in the southeast corner of the compost yard.				



**Division of Environmental Quality
Official Photograph Sheet**

Location	City of Little Rock Compost Yard			Permit	0031-SCTW	AFIN	60-01071
Photographer	Casey Jackson		CJJ	Witness	Ryan Hayden		
Photo #	3	Of	3	Date	11/13/2023	Time	14:14
Description	Ponding water observed on the east side of the compost yard.						
							

Appendix B:

Photographic Log



Looking North over Compost Pad



Looking North over Compost Pad (left), Detention Pond (center), Class 4 (right)

Appendix C:

Updated Financial Assurance Report

2023 Financial Assurance Report

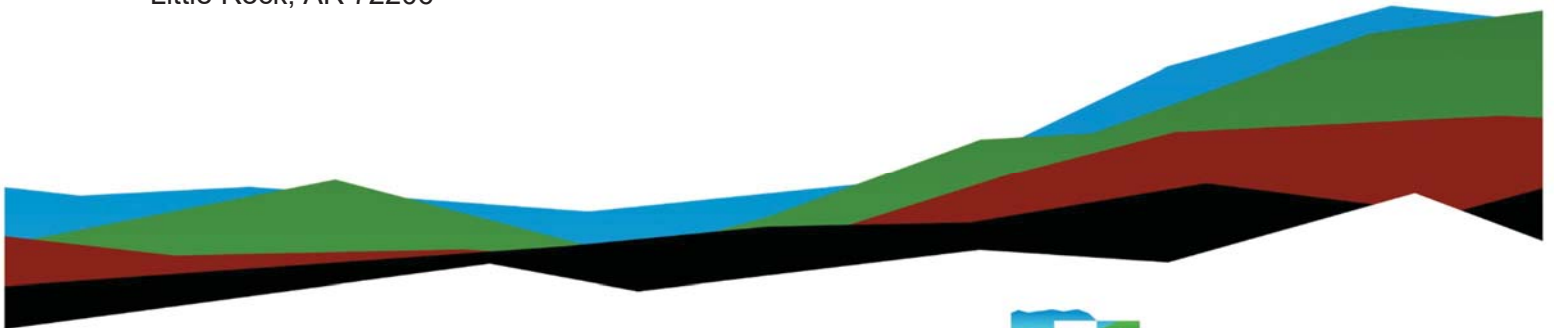
City of Little Rock

Class 1 Landfill / Class 4 Landfill /
Yard Waste Compost Facility

Prepared for:



City of Little Rock – Dept of Public Works
Division of Solid Waste Services
10803 Ironton Cutoff
Little Rock, AR 72206



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Figure 1.1	Site Location Map
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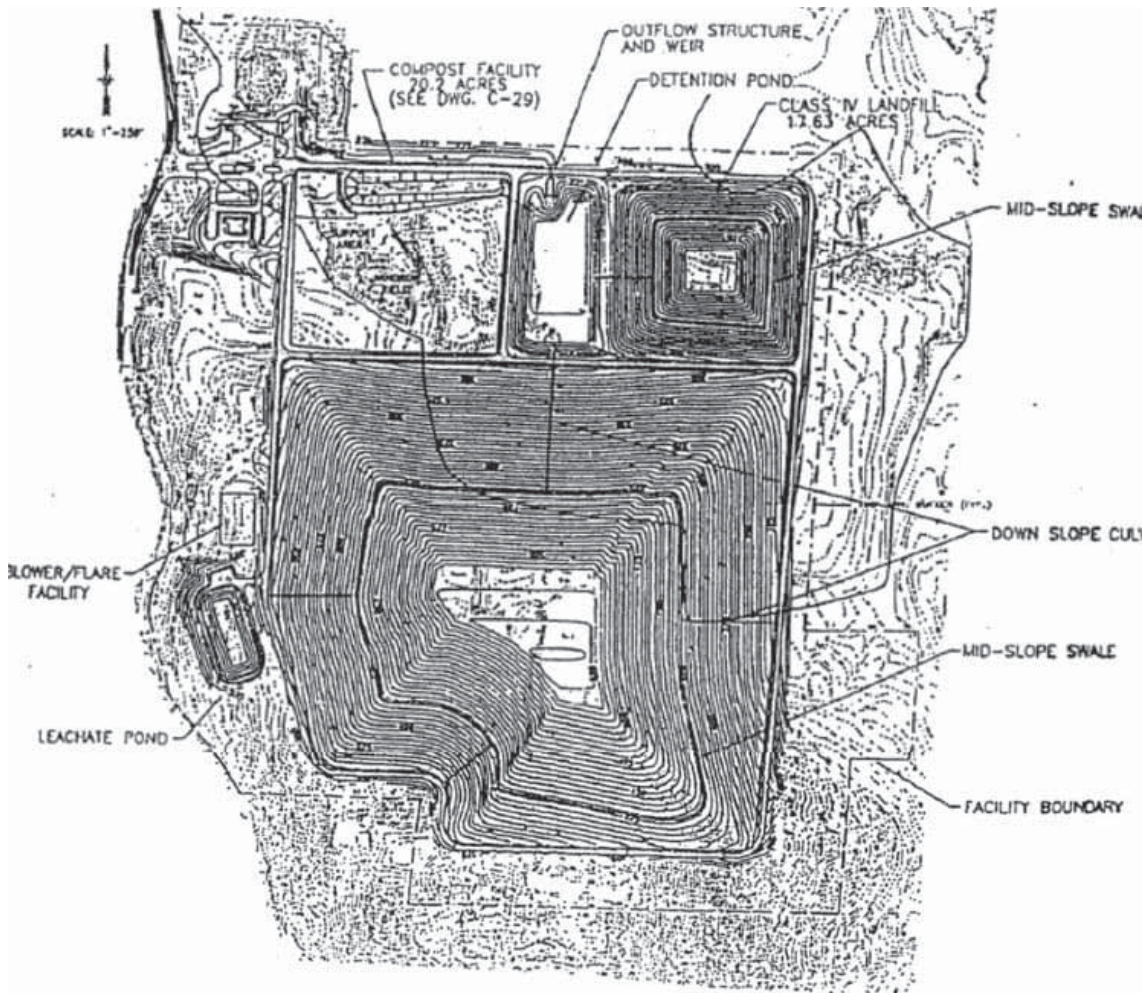


Figure 1.2 – General Site Layout

1.3 Purpose and Scope

This report was prepared to assist the City with financial assurance at the landfill facility for both the active MSW and C&D landfills. The scope of this report includes the closure plan, post-closure plan, calculations for the overall and remaining airspace volumes, in-place waste density (i.e. airspace utilization factor), tonnage data provided by the City, and overall and remaining site life for each landfill. The assumptions and the limits used to calculate the airspace volume are also presented in this report.

1.4 Organization of Report

The remainder of this report is organized as follows:

- Section 2 presents the airspace volume calculations for the MSW landfill;
- Section 3 presents the airspace volume calculations for the C&D landfill; and
- Section 4 provides a summary of the airspace management report.

2 Design and Operation Considerations

Class 1 landfills can accept all types of household waste including putrescible waste, non-hazardous industrial waste, and commercial waste. Due to the nature of the waste materials received, specific siting, design, and operating standards must be considered when developing Class 1 landfills. These standards assist in minimizing the potential for environmental impact associated with the waste disposal operations.

Class 4 landfills, as defined by Regulation No. 22, are eligible to receive non-hazardous C&D waste, furniture, appliances, and other materials that are considered inert. These materials are generally considered “non-putrescible” because they degrade very slowly or not at all. Due to the nature of the waste stream, less-stringent environmental controls are required for Class 4 landfills.

Composting facilities, as defined by Regulation No. 22, are eligible to receive yard waste and other vegetative materials such as grass clippings, leaves, and shredded or chipped brush and tree limbs.

At the CLR solid waste facility, the Class 1, Class 4, and composting operations are managed in separate areas. The Class 1 and Class 4 landfills are divided into cells of varying capacity in order to effectively control the incoming waste stream while managing the separation of leachate and stormwater runoff. For the Class 1 landfill, cell construction generally involves clearing, excavation to established subgrade, preparation of a clay liner, installation of geomembrane (60-mil high-density polyethylene [HDPE]), construction of a leachate collection system, construction of a road for landfill operations, and construction of related drainage improvements. A Class 4 waste disposal cell is similar in design but generally does not include a geomembrane and a leachate collection system. Once a cell or isolated waste disposal area has been prepared, the construction must be certified by an Arkansas-licensed professional engineer and approved by the DEQ Regulated Waste Program, formerly the Solid Waste Management Division.

As waste is deposited in a prepared cell, interim cover soil or an approved alternate daily cover material must be installed on a regular basis to control blowing litter, fires, and disease vectors. During the utilization of a cell, waste is confined to the smallest practical area using heavy compaction equipment. In addition, measures are employed to divert, collect, and manage leachate derived from the waste disposal operations (Class 1 landfill only).

As a portion of a landfill cell is filled to the designed and permitted capacity, that portion of the cell or area of the landfill unit is “closed” in accordance with state and federal regulations. Depending on the landfill unit, closure may consist of placing an impermeable final layer on the landfill, providing topsoil, seeding, constructing drainage or erosion control improvements, installing gas collection systems, and constructing other environmental controls.

After the final cell of the landfill is filled to permitted capacity, and final closure work is completed, there is a mandatory post-closure care period that varies from 30 years for the Class 1 landfill to 2 years for the Class 4 landfill. During this time, CLR must maintain the site by repairing erosion and settlement associated with the Class 1 and Class 4 waste disposal areas. In addition, all systems and environmental controls at the site, including the groundwater monitoring system, leachate collection and treatment systems, and landfill gas control systems, must be maintained.

The CLR composting facility was built in accordance with Regulation No. 22 to include a surface that can withstand heavy equipment loads as well as stormwater management controls to prevent ponding and run-on to the work area. Incoming yard waste materials are processed to produce boiler fuel, mulch, and compost.

2.1 Landfill Operations

In Arkansas, each landfill is required to have a written operating plan that identifies, among other things, the operating sequence of the landfill. CLR has developed operating plans for both the Class 1 and Class 4 waste disposal areas.

The Class 1 landfill is to be developed in nine landfill cells or units. Cells 1 through 8 require bottom liner and leachate collection system construction. Cell 9 expands the height of the landfill by filling over Cells 1 through 8. As portions of each landfill cell are filled to capacity, portions of those areas of the landfill are closed. These areas are designated in the original permit and operating plan as “closure areas.” It should be noted that closure areas do not correspond in size with cell areas. As the landfill is developed, closure work is done only on those areas of the landfill that will not receive waste in the future, primarily completed outer slopes.

To date, Cells 1, 2 and 4 of the Class 1 landfill have been filled to the capacities listed in the original permit, and partial closure of Cells 1 and 2 has been completed. A permanent grass cover has been established on portions of Cells 1 and 2. Partial closure of the east slope of Cell 4 was completed in 2021.

As the footprint of the landfill expands, waste can be placed at higher elevations. During 2016, waste in Cells 1, 2 and 4 reached levels within Cell 9, the upper cell covering Cells 1 through 8. Operationally, it is more cost effective to maximize the height of the open area before expanding horizontally by constructing a new cell.

Originally, the Class 1 cells were to be developed in sequence from one through nine. Due to the cost of rock excavation in Cell 3, the planned utilization sequence has changed. In the future, disposal operations will move to the western, remaining portion of Cell 5, and progress to Cells 3, 6, 7, and 8. Waste will continue to be placed within Cell 9 as the landfill develops.

For the Class 4 landfill, the unit is divided into four operating cells that are to be developed in sequence from Cells 1 through 4. As of the date of this report, Cells 1 and 2 are at capacity and filling operations have moved to Cell 3. The next cell to be developed at the Class 4 landfill will be Cell 4. Figure 2.1 illustrates the revised general layout and orientation of the Class 1 and Class 4 waste disposal areas.

2.2 Final Cover System Design

According to applicable state (DEQ) and federal (EPA) solid waste management regulations, municipal solid waste landfills (Class 1, as defined by Regulation No. 22) must be designed and constructed with a final cover system that will minimize infiltration of surface water while controlling drainage and preventing erosion of soils. The final cover system also serves to reduce landfill gas emissions that can adversely affect air quality.

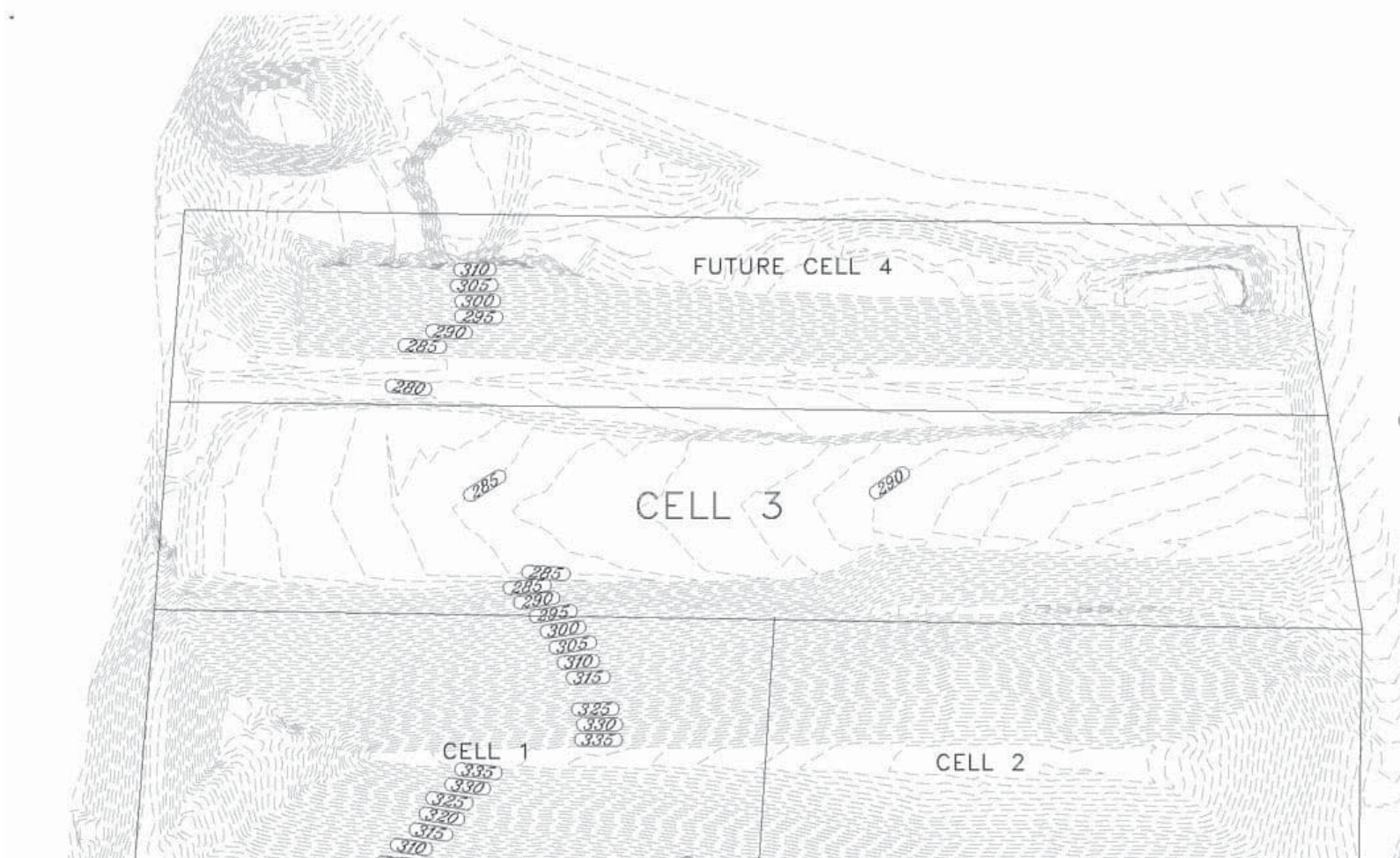


Figure 2.1 – Revised General Layout of Class 4 Waste Disposal Areas

The final cover system design for the Class 1 landfill includes the following general cross-section from top to bottom:

- A 6-inch topsoil layer;
- A 12-inch protective cover layer (onsite sandy, silty soil);
- A 12-inch drainage layer of sand, or a geocomposite, or geotextile;
- A geomembrane layer (40-mil very-low-density polyethylene [VLDPE]);
- A compacted clay cover (24-inch minimum thickness, $k < 1.0 \times 10^{-7}$ cm/s); and
- A 12-inch foundation layer (onsite sandy, silty soil).

On March 29, 2004, DEQ approved an alternative final cover system for the closure of Cells 2 through 9. The alternative final cover system design includes the following general cross-section from top to bottom:

- A vegetative cover/erosion layer with a minimum thickness of 18 inches,
- A protective cover with a minimum thickness of 18 inches,
- A drainage geocomposite layer,
- A low-permeability geosynthetic clay liner (GCL), and
- Daily and intermediate cover layers over the waste (with a minimum thickness of 18 inches).

The Class 4 waste disposal area will receive a final cover system that includes at least 24 inches of compacted clay cover and 6 inches of topsoil. The compacted clay cover for the Class 4 waste disposal area must demonstrate a maximum hydraulic conductivity of 1.0×10^{-5} cm/s.

The final cover systems for both the Class 1 and Class 4 waste disposal areas will be placed over the entire surface of the completed portions of the landfill as soon as practicable once final contours are achieved. Once the final cover layers have been placed, the completed areas will be graded and hydroseeded. Erosion control measures will be employed as needed and required to control soil loss from the area.

2.3 Closure Requirements

Each landfill owner or operator must have a written closure plan, as required by Regulation No. 22, describing the steps necessary to close all facility operations at any point during its active life, and an estimate of the cost to hire a third party to conduct closure activities. The plan is developed as part of the initial permitting of the facility and updated as necessary.

2.4 Post-Closure Care Requirements

Each landfill owner or operator must have a written post-closure care plan, as required by Regulation No. 22, that describes the monitoring and maintenance that will be performed during the post-closure care period, a description of planned land uses, and the person or office responsible for post-closure activities. This plan is also developed as part of the initial permitting of the facility and updated as necessary.

3 Municipal Solid Waste Landfill

3.1 Introduction

The CLRLF has been serving the disposal needs of the City since 1993, utilizing the Class 1 landfill. The landfill is permitted to comply with Subtitle D of Title 40 Code of Federal Regulations (CFR) Part 258. The landfill accepts household waste and non-hazardous industrial waste (NHIW). The landfill has a permitted volume of 19,860,298 cubic yards over an area of approximately 110 acres. The landfill will hold approximately 8,003,987 tons of waste.

3.2 Estimated Volumes

Table 3.1 presents the acreage, estimated volume, and estimated tonnage data of MSW accepted and disposed in Cells 1 - 9.

TABLE 3.1 CELL AREAS AND ASSOCIATED WASTE DISPOSAL CAPACITIES CLASS 1 LANDFILL				
Cell/ Area	Cell Acreage ⁽¹⁾⁽⁴⁾ (Acres)	Partial Closure Area ⁽⁴⁾ (Acres)	Estimated Volume ⁽²⁾⁽⁴⁾ (CY)	Estimated Waste ⁽³⁾⁽⁵⁾ (Tons)
1	12.30	4.22	821,527	331,942
2	12.60	4.41	1,269,075	527,340
3	12.00	7.82	865,800	338,203
4	18.86	16.61	2,280,617	1,094,284
5 EAST	6.36	0.00	1,676,654	654,943
5 WEST	9.80	0.00	2,728,831	1,065,950
6	11.00	7.00	2,146,200	838,359
7	17.08	23.04	4,507,970	1,760,926
8	10.00	25.50	2,131,300	832,539
9	0.00	21.40	1,432,324	559,502
TOTAL	110.00	110.00	19,860,298	8,003,987

Notes:

- (1) Cells 1 and 2 updated in 1999 to reflect actual surveyed area of the completed cells
- (2) Volumes for Cell 1 and 2 are final measured volumes
- (3) Cell 1 and Cell 2 tonnage is actual amount recorded
- (4) Closure Area and Estimated Volume and Waste reflect the 2001 size increase of Cells 4 and 5 and the corresponding decrease in size of Cell 7.
- (5) Estimated tons for Cells 3 and 5 through 9 calculated as Estimated Volume/2.56

3.3 Airspace Volume Calculations

AutoCAD® Civil 3D® [Autodesk, 2020] was used to compute the airspace volumes. Civil 3D® calculates volumes from a digital terrain model that represents each surface of interest (i.e., base surface and comparison surface). From these surfaces, Civil 3D® calculates the respective difference in elevations and generates isopachous (isopach) maps (i.e., contour lines of equal thickness over an area). The volume is then calculated by integrating the isopachs over the area being considered.

3.3.1 Consumed Operating Airspace

An aerial survey was completed by Terracon in March 2024 to measure the total volume of waste that had been placed in open cells between January 2023 and March 2024. To maintain consistency between reporting periods, a factor of approximately 0.869 was used to adjust for the aerial survey being taken in March as opposed to January of 2024. The consumed operating airspace as of March 2024 was 6,842,847 cubic yards and encompassed Cells 1, 2, 4, 5, & 9 of the landfill. According to the most recent financial assurance report, the total consumed operating airspace as of January 2023 was 6,513,188 cubic yards. From January 2023 to March 2024, approximately 329,659 cubic yards was placed in the active cells of the landfill, with 56 cubic yards being filled in Cell 1, 39,811 cubic yards being filled in Cell 2, 7,841 cubic yards being placed cut from Cell 4, and 297,633 cubic yards being placed in Cell 5. All cut and fill volumes for Cells 1, 2, and 4 included as Cell 9 volumes. These volumes are shown in **Table 3.2**.

3.3.2 Effective In-Place Density

Table 3.2 presents the summary of the gross fill volumes, tonnages, landfill utilization, effective in-place densities, and daily/ intermediate cover based on survey data ranging from January 2023 & March 2024 and also based on information provided by the City. The effective waste density is a measure of the tons of waste disposed divided by the overall (gross) airspace consumed during the period in question. The volume includes waste, cover soil, construction materials, gas system materials and anything else that consumes landfill space. As shown in **Table 3.2**, the airspace utilization rate for 2023 was 1.93 cubic yards per ton and the effective waste density was 1,037 pounds per cubic yard.

3.3.3 Remaining Operational Airspace

Based on the recent aerial survey, the remaining useable airspace as of March 2024 was 2,535,745 cubic yards, with Cell 5 having 1,751,053 cubic yards of useable airspace and Cell 9 having 784,692 cubic yards of remaining useable airspace. These volumes were obtained by comparing the existing contours to an intermediate surface developed for Cells 1 – 5 and Cell 9. The overall remaining permitted airspace for the entire Class 1 landfill as of March 2024 was 6,839,759 cubic yards with the remaining permitted airspace in Cell 5 of 3,034,662 cubic yards and remaining permitted airspace in Cell 9 of 3,805,097 cubic yards.



**TABLE 3.2
 UTILIZATION RATE SUMMARY - CLASS 1 LANDFILL**

Year	Gross Fill Volume ⁽¹⁾		Waste Tonnage		Landfill Utilization ⁽²⁾		Effective Waste Density ⁽³⁾		Daily/Intermediate Cover		
	This Year (CY)	To Date (CY)	This Year (TONS)	To Date (TONS)	This Year (CY/TON)	To Date (CY/TON)	This Year (LBS/CY)	To Date (LBS/CY)	This Year (CY)	To Date (CY)	Percent of Fill (%/YEAR)
1993	17,920	17,920	3,122	3,122	5.74	5.74					
1994	215,036	232,956	83,793	86,915	2.57	2.68	779	746	48,945	48,945	23%
1995	211,731	444,687	118,890	205,805	1.78	2.16	1,123	926	89,290	138,235	42%
1996	242,590	687,277	76,222	282,027	3.18	2.44	628	821	61,109	199,344	25%
1997	264,366	951,643	93,993	376,020	2.81	2.53	711	790	71,560	270,904	27%
1998	230,140	1,181,783	87,695	463,715	2.62	2.55	762	785	78,681	349,585	34%
1999	174,950	1,356,733	85,270	548,985	2.05	2.47	975	809	90,566	440,151	52%
2000	202,920	1,559,653	84,557	633,542	2.40	2.46	833	812	93,461	533,612	46%
2001	225,293	1,784,946	86,118	719,660	2.62	2.48	764	806	77,957	611,569	35%
2002	157,269	1,942,215	79,584	799,244	1.98	2.43	1,012	823	70,006	681,575	45%
2003	187,610	2,129,825	75,047	874,291	2.50	2.44	800	821	97,895	779,470	52%
2004	192,998	2,322,823	76,257	950,548	2.53	2.44	790	818	70,784	850,254	37%
2005	206,062	2,528,885	71,518	1,022,066	2.88	2.47	694	808	83,818	934,072	41%
2006	232,333	2,761,218	97,770	1,119,836	2.38	2.47	842	811	84,083	1,018,155	36%
2007	261,334	3,022,552	113,311	1,233,147	2.31	2.45	867	816	86,606	1,104,761	33%
2008	228,998	3,251,550	106,942	1,340,089	2.14	2.43	934	824	67,325	1,172,086	29%
2009	159,997	3,411,547	97,346	1,437,435	1.64	2.37	1,217	843	51,207	1,223,293	32%
2010	162,109	3,573,656	87,406	1,524,841	1.85	2.34	1,078	853	61,270	1,284,563	38%
2011	250,402	3,824,058	93,131	1,617,972	2.69	2.36	744	846	92,454	1,377,017	37%
2012	221,129	4,045,187	97,699	1,715,671	2.26	2.36	884	848	98,687	1,475,704	45%
2013	211,617	4,256,804	131,758	1,847,429	1.61	2.30	1,245	868	117,821	1,593,525	56%
2014	272,415	4,529,219	106,137	1,953,566	2.57	2.32	779	863	82,340	1,675,865	30%
2015	263,673	4,792,892	124,617	2,078,183	2.12	2.31	945	867	92,556	1,768,421	35%
2016	254,940	5,047,832	118,704	2,196,887	2.15	2.30	931	870	118,892	1,887,313	47%
2017	261,030	5,308,862	115,074	2,311,961	2.27	2.30	882	871	88,371	1,975,684	34%
2018	274,980	5,583,842	123,796	2,435,757	2.22	2.29	900	872	99,725	2,075,409	36%
2019	221,670	5,805,512	129,706	2,565,463	1.71	2.26	1,170	884	90,014	2,165,423	41%
2020	153,610	5,959,122	77,985	2,643,448	1.97	2.25	1,015	887	58,132	2,223,555	32%
2021	311,820	6,270,942	132,439	2,775,887	2.35	2.26	849	885	140,322	2,363,877	37%
2022	242,246	6,513,188	131,442	2,907,329	1.84	2.24	1,085	893	109,884	2,473,762	52%
2023	329,659	6,842,847	170,878	3,078,207	1.93	2.22	1,037	900	158,176	2,631,938	42%
Cell Estimates ⁽⁴⁾ :	Total Cell 1:	56	1,029,972	--	437,605	--	--	--	--	--	--
	Total Cell 2:	39,811	1,475,511	--	626,902	--	--	--	--	--	--
	Total Cell 4:	-7,841	2,966,541	--	1,260,398	--	--	--	--	--	--
	Total Cell 5:	297,633	1,370,823	--	582,423	--	--	--	--	--	--
5-Year Average:	256,069	--	130,668	--	1.96	2.25	1,031	890	113,192	--	41%
Planned Average:	--	--	--	--	--	2.25	--	1,042	--	--	--

⁽¹⁾ Total in-place landfill volume utilized for waste and earthen/grindings berms and cover, in cubic yards.

⁽²⁾ Cubic yard volume of landfill space utilized per ton of waste.

⁽³⁾ Effective density of compacted waste in landfill with soil berms, roads and interim cover.

3.4 Life Expectancy

Table 3.3 presents the life expectancy for the entire landfill based on the calculated remaining airspace discussed in Section 3.3.3. Life expectancy is calculated adding the estimated yearly airspace depleted to the total airspace depleted to date.

TABLE 3.3 PROJECTIONS OF REMAINING LIFE - CLASS 1 LANDFILL ⁽¹⁾		
Scenario	Projected 2024 Waste (CY)	Estimated Site Life (Years)
Current Utilization Rate, No Growth	329,659	46
Current Utilization Rate Plus 1% Annual Growth	332,956	37
5-Year Historical Average Utilization Rate Plus 1% Annual	332,956	35
5-Year Historical Average Utilization Rate Plus 3% Annual	339,549	27

⁽¹⁾ As of January 2024.

The lifetime is calculated for no growth, and average of 1% annual growth, a 5-year historical average plus 1% annual growth, and a 5-year historical average plus 3% annual growth. For purposes of annual financial projections, it is recommended that the 5-year historical average landfill utilization rate plus and a 1% annual growth rate used for this year and years after. Under this scenario, the timing of cell construction, closure, and post-closure care would be approximately as described in **Table 3.4**.



TABLE 3.4 PROJECTION OF USEFUL LIFE BASED ON 5-YEAR AVERAGE UTILIZATION RATE, 1% GROWTH					
End of Year	Operation in Cell	Volume Added in New Construction	Volume Depleted	Total Depleted To Date	Constructed Volume Remaining
1993	1	821,527	17,920	17,920	803,607
1994	1		215,036	232,956	588,571
1995	1		211,731	444,687	376,840
1996	1		242,590	687,277	134,250
1997	1&2	1,260,019	264,366	951,643	1,129,903
1998	2		230,140	1,181,783	899,763
1999	2		174,950	1,356,733	724,813
2000	2		202,920	1,559,653	521,893
2001	2		225,293	1,784,946	296,600
2002	2		157,269	1,942,215	139,331
2003	2&4	2,239,718	187,610	2,129,825	2,191,439
2004	4		192,998	2,322,823	1,998,441
2005	4		206,062	2,528,885	1,792,379
2006	4		232,333	2,761,218	1,560,046
2007	4		261,334	3,022,552	1,298,712
2008	4		228,998	3,251,550	1,069,714
2009	4		159,997	3,411,547	909,717
2010	4		162,109	3,573,656	747,608
2011	4		250,402	3,824,058	497,206
2012	4		221,129	4,045,187	276,077
2013	4		211,617	4,256,804	64,460
2014	4 & 5 E	1,676,654	272,415	4,529,219	1,468,699
2015	5 EAST		263,673	4,792,892	1,205,026
2016	5 EAST		254,940	5,047,832	950,086
2017	5 EAST		261,030	5,308,862	689,056
2018	5 EAST		274,980	5,583,842	414,076
2019	5 EAST		221,670	5,805,512	192,406
2020	5E & 5W	2,728,831	153,610	5,959,122	2,767,627
2021	5 WEST		311,820	6,270,942	2,455,807
2022	5 WEST		242,246	6,513,188	2,213,561
2023	5 WEST		329,659	6,842,847	1,883,902
2024	5 WEST		332,956	7,175,803	1,550,946
2025	5 WEST		336,285	7,512,089	1,214,660
2026	5 WEST		339,648	7,851,737	875,012
2027	5 WEST		343,045	8,194,782	531,967
2028	5 WEST		346,475	8,541,257	185,492
2029	5 W & 3/6	3,012,000	349,940	8,891,197	2,847,552
2030	3/6		353,439	9,244,636	2,494,113



TABLE 3.4 PROJECTION OF USEFUL LIFE BASED ON 5-YEAR AVERAGE UTILIZATION RATE, 1% GROWTH					
End of Year	Operation in Cell	Volume Added in New Construction	Volume Depleted	Total Depleted To Date	Constructed Volume Remaining
2031	3/6		356,974	9,601,610	2,137,139
2032	3/6		360,544	9,962,154	1,776,595
2033	3/6		364,149	10,326,303	1,412,446
2034	3/6		367,790	10,694,093	1,044,656
2035	3/6		371,468	11,065,562	673,187
2036	3/6		375,183	11,440,745	298,004
2037	3/6 & 7	4,507,970	378,935	11,819,679	4,427,040
2038	7		382,724	12,202,404	4,044,315
2039	7		386,551	12,588,955	3,657,764
2040	7		390,417	12,979,372	3,267,347
2041	7		394,321	13,373,693	2,873,026
2042	7		398,264	13,771,958	2,474,761
2043	7		402,247	14,174,205	2,072,514
2044	7		406,269	14,580,474	1,666,245
2045	7		410,332	14,990,806	1,255,913
2046	7		414,435	15,405,242	841,477
2047	7		418,580	15,823,822	422,897
2048	7		422,766	16,246,587	132
2049	7 & 8	2,131,300	426,993	16,673,581	1,704,438
2050	8		431,263	17,104,844	1,273,175
2051	8		435,576	17,540,420	837,599
2052	8		439,932	17,980,351	397,668
2053	8 & 9	1,482,279	444,331	18,424,682	1,435,616
2054	9		448,774	18,873,457	986,841
2055	9		453,262	19,326,719	533,579
2056	9		457,795	19,784,513	75,785
2057	9		462,373	20,246,886	-386,588
Totals		19,860,298	20,246,886		
Final Closure:		3/1/2057			

Table 3.5 presents the useable life expectancy and the permitted life expectancy for the permitted cells of the landfill (Cells 1 - 5, & 9).

TABLE 3.5 PERCENTAGE OF CLASS 1 LANDFILL DEPLETION ⁽¹⁾							
Cell	Permitted Total Volume (CY)	Estimated Volume Used to Date (CY)	Estimated Utilization To Date (%)	Usable Remaining Volume ⁽²⁾ (CY)	Usable Remaining Life ⁽³⁾ (Years)	Permitted Remaining Volume (CY)	Permitted Remaining Life ⁽³⁾ (Years)
Constructed Cells:							
Cell 1	821,527	821,527	100.0%	0	0.0	0	0
Cell 2	1,269,075	1,269,075	100.0%	0	0.0	0	0
Cell 4	2,280,617	2,280,617	100.0%	0	0.0	0	0
Cell 5	4,405,485	1,370,823	31.1%	1,751,053	5.3	3,034,662	9
Cell 9	1,432,324	1,100,805	76.9%	784,692	2.4	3,755,405	11
TOTAL	8,776,704	6,842,847	78.0%	2,535,745	7.6	6,790,067	20
All Cells:							
Cells 1-9	19,860,298	6,842,847	34.5%			13,017,451	35
Depreciation of Capital Improvements:							
Construction Cost for Cell 1				100.0%			
Construction Cost for Cell 2				100.0%			
Construction Cost for Cell 4				100.0%			
Construction Cost for Cell 5				100.0%			
General Class 1 Landfill Capital Improvements				34.5%			
Depreciation of Capital Improvements:							
Cell 1 Phased Closure Cost				100.0%			
Cell 2 Phased Closure Cost				100.0%			
Cell 4 Phased Closure Cost				27.7%	(4.6 acres closed)		
Cell 5 Phased Closure Cost				N/A	(Internal cell)		
Class 1 Closure Cost (Area Closed / Total Area)				13.6%			

⁽¹⁾ As of March 2024.

⁽²⁾ Usable remaining volume/life based upon estimated maximum fill elevation before a new cell must be constructed.

⁽³⁾ Estimated. Based on 5-year historical average utilization rate plus 1%.

4 Construction & Demolition Landfill

4.1 Introduction

The Class 4 landfill has been receiving waste since 1993 and is permitted to comply with Subtitle D of Title 40 Code of Federal Regulations (CFR) Part 258. The landfill accepts construction and demolition (C&D) waste. The landfill has a permitted volume of 1,217,800 cubic yards over an area of approximately 18 acres. The landfill will hold approximately 900,052 tons of waste.

4.2 Estimated Volumes

Table 4.1 presents the acreage, estimated volume, and estimated tonnage data of C&D waste accepted and disposed in Cells 1 - 4.

TABLE 4.1 LANDFILL CAPACITY SUMMARY - CLASS 4 LANDFILL				
Cell	Total Area (Ac)	Phased Closure Area (Ac)	Gross Volume (CY)	Total Waste Capacity (Tons)
1	4.5	2.1	181,860	127,925
2	4.5	2.1	229,100	195,812
3	4.3	2.3	351,534	251,095
4	4.7	11.5	455,306	325,220
TOTAL	18.0	18.0	1,217,800	900,052

4.3 Airspace Volume Calculations

AutoCAD® Civil 3D® [Autodesk, 2020] was used to compute the airspace volumes. Civil 3D® calculates volumes from a digital terrain model that represents each surface of interest (i.e., base surface and comparison surface). From these surfaces, Civil 3D® calculates the respective difference in elevations and generates isopachous (isopach) maps (i.e., contour lines of equal thickness over an area). The volume is then calculated by integrating the isopachs over the area being considered.

4.3.1 Consumed Operating Airspace

An aerial survey was completed by Terracon in March 2024 to measure the total volume of waste that had been placed in open cells between January 2023 and March 2024. To maintain consistency between reporting periods, a factor of approximately 0.869 was used to adjust for the aerial survey being taken in March as opposed to January of 2024. The consumed operating airspace as of January 2024 was 630,922 cubic yards and encompassed Cells 1, 2, & 3 of the landfill. According to the most recent financial assurance report, the total consumed operating airspace as of January 2023 was 620,884 cubic yards. From January 2023 to January 2024, approximately 10,038 cubic yards was placed in the active cells of the landfill, with all waste being placed in Cell 3.

4.3.2 Effective In-Place Density

Table 4.2 presents the summary of the gross fill volumes, tonnages, landfill utilization, effective in-place densities, and daily/ intermediate cover based on survey data ranging from January 2023 & January 2024 and also based on information provided by the City. The effective waste density is a measure of the tons of waste disposed divided by the overall (gross) airspace consumed during the period in question. The volume includes waste, cover soil, construction materials, gas system materials and anything else that consumes landfill space. As shown in **Table 4.2**, the airspace utilization rate for 2023 was 1.50 cubic yards per ton and the effective waste density was 2,389 pounds per cubic yard.



**TABLE 4.2
 UTILIZATION RATE SUMMARY - CLASS 4 LANDFILL**

Year	Gross Fill Volume ⁽¹⁾		Waste Tonnage		Landfill Utilization ⁽²⁾		Effective Waste Density ⁽³⁾		Daily/Intermediate Cover	
	This Year (CY)	To Date (CY)	This Year (TONS)	To Date (TONS)	This Year (CY/TON)	To Date (CY/TON)	This Year (LBS/CY)	To Date (LBS/CY)	This Year (CY)	Percent of Fill (%/YEAR)
1993	1,524	1,524	343	343	4.44	4.44	450	450		
1994	18,284	19,808	3,675	4,018	4.97	4.93	402	406		
1995	18,284	38,092	16,030	20,049	1.14	1.90	1,753	1,053		
1996	47,896	85,988	20,053	40,101	2.39	2.14	837	933		
1997	71,411	157,399	73,161	113,262	0.98	1.39	2,049	1,439		
1998	24,555	181,954	10,775	124,037	2.28	1.47	878	1,363		
1999	33,489	215,443	36,430	160,467	0.92	1.34	2,176	1,490		
2000	20,135	235,578	17,937	178,403	1.12	1.32	1,782	1,515		
2001	25,348	260,926	37,197	215,600	0.68	1.21	2,935	1,653		
2002	33,550	294,476	15,002	230,602	2.24	1.28	894	1,566		
2003	17,424	311,900	9,253	239,855	1.88	1.30	1,062	1,538		
2004	13,582	325,482	11,879	251,735	1.14	1.29	1,749	1,547		
2005	16,904	342,386	10,249	261,984	1.65	1.31	1,213	1,530		
2006	15,160	357,546	10,612	272,596	1.43	1.31	1,400	1,525		
2007	32,200	389,746	22,950	295,546	1.40	1.32	1,425	1,517		
2008	3,108	392,854	2,220	297,766	1.40	1.32	1,429	1,516		
2009	3,570	396,424	2,550	300,316	1.40	1.32	1,429	1,515		
2010	8,879	405,303	15,051	315,367	0.59	1.29	3,390	1,556		
2011	3,500	408,803	8,150	323,517	0.43	1.26	4,657	1,583		
2012	2,100	410,903	6,526	330,043	0.32	1.24	6,215	1,606		
2013	20	410,923	14	330,057	1.42	1.25	1,409	1,606		
2014	24,706	435,629	12,813	342,870	1.93	1.27	1,037	1,574		
2015	27,523	463,152	16,481	359,351	1.67	1.29	1,198	1,552		
2016	44,658	507,810	16,400	375,751	2.72	1.35	1,042	1,480	13,173	29%
2017	18,655	526,465	19,678	395,429	0.95	1.33	2,659	1,502	3,855	21%
2018	19,370	545,835	12,463	407,892	1.55	1.34	1,555	1,495	3,343	17%
2019	27,592	573,427	13,314	421,206	2.07	1.36	1,111	1,469	3,622	13%
2020	17,270	590,697	8,420	429,626	2.05	1.37	1,313	1,455	4,445	22%
2021	20,299	610,996	9,081	438,707	2.24	1.39	1,124	1,436	4,140	18%
2022	9,888	620,884	8,563	447,270	1.15	1.39	3,661	1,441	5,210	46%
2023	10,038	630,922	6,685	453,956	1.50	1.39	2,389	1,439	4,441	38%
Total Cell 1:	0	181,860		127,925		1.42		1,407		
Total Cell 2:	0	229,100		202,132		1.13		1,765		
Total Cell 3:	10,038	219,962		123,899		1.78		1,127		
3-Year Average:	13,046		8,341			1.39	2,391			

⁽¹⁾ Total in-place landfill volume utilized for waste and earthen berms and cover, in cubic yards.

⁽²⁾ Cubic yard volume of landfill space utilized per ton of waste.

4.3.3 Remaining Operational Airspace

Based on the recent aerial survey, the remaining permitted airspace as of January 2024 was 131,572 cubic yards, with all remaining airspace being in Cell 3. The overall remaining permitted airspace for the entire Class 1 landfill as of January 2023 was 586,878 cubic yards with the remaining permitted airspace in Cell 3 of 131,572 cubic yards and remaining permitted airspace in Cell 4 of 455,306 cubic yards. Note that Cell 4 has not yet been constructed. These volumes were obtained by comparing the topographic map generated from the January 2023 aerial survey with the March 2024 aerial survey. The March 2024 quantities were adjusted for January 2024.

4.4 Life Expectancy

Table 4.3 presents the life expectancy for the entire landfill based on the calculated remaining airspace discussed in Section 4.3.3.

TABLE 4.3 PROJECTION OF USEFUL LIFE BASED ON 3-YEAR AVERAGE UTILIZATION RATE, 1% GROWTH					
End of Year	Operation in Cell	Volume Added in New Construction	Volume Depleted	Total Depleted To Date	Constructed Volume Remaining
1993	1	181,860	1,524	1,524	180,336
1994	1		18,284	19,808	162,052
1995	1		18,284	38,092	143,768
1996	1		47,896	85,988	95,872
1997	1		71,411	157,399	24,461
1998	1&2	229,100	24,555	181,954	229,006
1999	2		33,489	215,443	195,517
2000	2		20,135	235,578	175,382
2001	2		25,348	260,926	150,034
2002	2		33,550	294,476	116,484
2003	2		17,424	311,900	99,060
2004	2		13,582	325,482	85,478
2005	2		16,904	342,386	68,574
2006	2		15,160	357,546	53,414
2007	2		32,200	389,746	21,214
2008	2		3,108	392,854	18,106
2009	2		3,570	396,424	14,536
2010	2		8,879	405,303	5,657
2011	2		3,500	408,803	2,157
2012	2		2,100	410,903	57
2013	2		20	410,923	37
2014	3	351,534	24,706	435,629	326,865
2015	3		27,523	463,152	299,342
2016	3		44,658	507,810	254,684
2017	3		18,655	526,465	236,029
2018	3		19,370	545,835	216,659
2019	3		27,592	573,427	189,067
2020	3		17,270	590,697	171,797



TABLE 4.3 PROJECTION OF USEFUL LIFE BASED ON 3-YEAR AVERAGE UTILIZATION RATE, 1% GROWTH					
End of Year	Operation in Cell	Volume Added in New Construction	Volume Depleted	Total Depleted To Date	Constructed Volume Remaining
2021	3		20,299	610,996	151,498
2022	3		9,888	620,884	141,610
2023	3		10,038	630,922	131,572
2024	3		10,139	641,061	121,433
2025	3		10,240	651,301	111,193
2026	3		10,343	661,644	100,850
2027	3		10,446	672,090	90,404
2028	3		10,550	682,640	79,854
2029	3		10,656	693,296	69,198
2030	3		10,762	704,059	58,435
2031	3		10,870	714,929	47,565
2032	3		10,979	725,908	36,586
2033	3		11,089	736,996	25,498
2034	3		11,199	748,196	14,298
2035	3		11,311	759,507	2,987
2036	3&4	455,306	11,425	770,932	446,868
2037	4		11,539	782,471	435,329
2038	4		11,654	794,125	423,675
2039	4		11,771	805,896	411,904
2040	4		11,888	817,784	400,016
2041	4		12,007	829,791	388,009
2042	4		12,127	841,919	375,881
2043	4		12,249	854,168	363,632
2044	4		12,371	866,539	351,261
2045	4		12,495	879,034	338,766
2046	4		12,620	891,654	326,146
2047	4		12,746	904,400	313,400
2048	4		12,874	917,273	300,527
2049	4		13,002	930,275	287,525
2050	4		13,132	943,408	274,392
2051	4		13,264	956,671	261,129
2052	4		13,396	970,068	247,732
2053	4		13,530	983,598	234,202
2054	4		13,666	997,263	220,537
2055	4		13,802	1,011,065	206,735
2056	4		13,940	1,025,006	192,794
2057	4		14,080	1,039,085	178,715
2058	4		14,220	1,053,306	164,494
2059	4		14,363	1,067,668	150,132
2060	4		14,506	1,082,174	135,626
2061	4		14,651	1,096,826	120,974
2062	4		14,798	1,111,623	106,177
2063	4		14,946	1,126,569	91,231
2064	4		15,095	1,141,664	76,136
2065	4		15,246	1,156,911	60,889
2066	4		15,399	1,172,309	45,491
2067	4		15,553	1,187,862	29,938
2068	4		15,708	1,203,570	14,230
2069	4		15,865	1,219,435	-1,635
Totals		1,217,800	1,219,435		
				Final Closure:	11/24/2069

Life expectancy is calculated adding the estimated yearly airspace depleted to the total airspace depleted to date. The lifetime is calculated for a 3-year average plus 1% annual growth.

Table 4.4 presents the useable life expectancy and the permitted life expectancy for the permitted cells of the landfill (Cells 1 - 4).

TABLE 4.4 PERCENTAGE OF CLASS 4 LANDFILL DEPLETION ⁽¹⁾					
Cell	Permitted Total Volume (CY)	Estimated Volume Used to Date (CY)	Estimated Utilization To Date (%)	Permitted Remaining Volume (CY)	Permitted Remaining Life (Years) ⁽²⁾
Constructed Cells:					
Cell 1	181,860	181,860	100.0%	0	0
Cell 2	229,100	229,100	100.0%	0	0
Cell 3	351,534	219,962	62.6%	131,572	10.1
TOTAL	762,494	630,922	82.7%	131,572	10.1
All Cells:					
Cells 1-4	1,217,800	630,922	51.8%	586,878	45
Depreciation of Capital Improvements:					
	Construction Cost for Cell 1				100.0%
	Construction Cost for Cell 2				100.0%
	Construction Cost for Cell 3				62.6%
	General Class 4 Landfill Capital Improvements				51.8%
Depreciation of Capital Improvements:					
	Cell 1 Closure Cost				100.0%
	Cell 2 Closure Cost				100.0%
	Cell 3 Closure Cost				0.0%
	Class 4 Closure Cost				51.8%

⁽¹⁾ As of January 2024.

⁽²⁾ Based on 3-year historical average utilization rate plus 1% annual growth (Table 4.3)

5 Closure/ Post-Closure

The following information provides cost estimates for the closure of the composting facility, and cell preparation, closure, and post-closure care associated with the Class 1 and Class 4 landfills. Unit costs for the estimates are based on actual construction/maintenance costs associated with similar operations in Arkansas.

5.1 Closure Liability of the Class 1 Landfill

The costs for landfill closure associated with the Class 1 landfill are summarized in **Table 5.1**. These costs are based on the design considerations outlined in Section 2 and the facility closure plan. The current estimated cost per acre for landfill closure is shown below. According to Regulation No. 22, estimates involving closure for the purpose of establishing financial assurance are to be updated at least annually to consider inflation, design changes, etc.

TABLE 5.1 ESTIMATED CLOSURE CONSTRUCTION COSTS PER ACRE - CLASS 1 LANDFILL			
Item Description	Unit Cost for Closure Areas with Acreage Between:		
	0 and 10 Acres ⁽¹⁾	10 and 20 Acres ⁽¹⁾	20 and 30 Acres ⁽¹⁾
Top soil/Compost Layer ⁽²⁾	\$11,124.00	\$10,014.56	\$9,013.11
Soil Cover Layer	\$27,067.57	\$24,368.01	\$21,931.22
Geocomposite	\$23,145.87	\$20,837.44	\$18,753.71
Geosynthetic Clay Liner (GCL)	\$25,233.20	\$22,716.59	\$20,444.95
Subgrade preparation (foundation by CLR)	\$3,002.67	\$2,703.20	\$2,432.88
Seeding	\$2,872.82	\$2,586.30	\$2,327.67
Gas Collection Wells	\$10,466.98	\$9,423.07	\$8,480.77
Drainage Improvements	\$16,275.81	\$14,652.55	\$13,187.31
Erosion Control	\$2,945.94	\$2,652.13	\$2,386.92
Mobilization	\$17,236.90	\$15,517.79	\$13,966.02
Preparation of Plans and Specifications	\$5,745.63	\$5,172.60	\$4,655.34
Construction Quality Assurance	\$13,132.87	\$11,823.08	\$10,640.78
Contingencies - 5%	\$7,912.51	\$7,123.37	\$6,411.03
TOTAL CLOSURE COST PER ACRE	\$166,162.79	\$149,590.67	\$134,631.70
Largest area (acres) ever needing final cover (Area 7):			69.26
Largest area unit closure cost (\$/acre):			\$134,631.70
TOTAL FINANCIAL ASSURANCE CLOSURE COST:			\$9,324,591.54

⁽¹⁾ Cost per acre, as estimated based on 2020 bid unit prices. Adjusted by DEQ Inflation factor (2021: 1.016, 2022: 1.062, 2023: 1.065)

⁽²⁾ Includes letdowns, swales, toe drains, culverts, ditches.

⁽³⁾ Includes permitting, pre- and post-construction BMPs, and maintenance.

The estimated costs associated with each Class 1 landfill closure area are summarized in **Table 5.2**. To satisfy state and federal regulations (Regulation No. 22 and Subtitle D of 40 CFR 258), the largest area of the landfill that will need final cover at one time must be determined. This area will not correspond to the largest closure area identified in **Table 5.2**, but rather would be the largest open (unclosed) area that would have to be

closed should state or federal regulators order the landfill to close before it reaches the end of its operating life. This is a worst-case scenario.

TABLE 5.2 CLOSURE SEQUENCE AND ASSOCIATED COST ESTIMATES - CLASS 1 LANDFILL					
Event	Acreage Closed	Acreage Closed	Total Acreage Needing Final Cover	Approximate Year ⁽¹⁾	Estimated Closure Cost ⁽²⁾
Construction of Cell 1	12.30	0.00	12.30	1993	
Construction of Cell 2	12.60	0.00	24.90	1997	
Closure of Area 1		4.22	20.68	2000	COMPLETED
Construction of Cell 4	18.86	0.00	39.54	2002	
Closure of Area 2		4.41	35.13	2004/2005	COMPLETED
Construction of Cell 5 EAST 40%	6.36	0.00	41.49	2014	
Closure of Area 4		5.50	35.99	2021	COMPLETED
Construction of Cell 5 WEST 60%	9.80	0.00	45.79	2020	
Construction of Cell 3/6 ⁽³⁾	23.00	0.00	68.79	2029	
Closure of Area 5		16.61	52.18	2031	N/A ⁽⁴⁾
Construction of Cell 7	17.08	0.00	69.26	2037	
Closure of Area 3/6 ⁽²⁾		14.82	54.44	2039	\$2,216,933.80
Construction of Cell 8	10.00	0.00	64.44	2049	
Closure of Area 7		23.04	41.40	2051	\$3,101,914.37
Filling in Area 9, No Construction	0.00	0.00	41.40	2051	
Closure of Area 8		25.50	15.90	2053	\$3,433,108.35
Final Closure, Area 9		15.90	0.00	2057	\$2,378,491.73
TOTAL	110	110			\$11,130,448.24

⁽¹⁾Based on 5-year historical average LF utilization plus 1% annual growth (see Table 3.4)

⁽²⁾Cell 3 and Cell 6 will be constructed together and are hereby noted as Cell 3/6

⁽³⁾See Table 4.1 for Estimated Closure Costs per Acre.

⁽⁴⁾Cell 5 is internal cell. No closure required.

As can be seen from **Table 5.2**, the largest area needing final cover during the operating life of the landfill (69.26 acres) occurs when Cell 7 is placed in service but before the partial closure designated for Cells 3 and 6 is completed. This is projected to potentially occur in 2037 (see **Table 5.2**). The projected cost for this closure in December 2023 dollars would be \$9,297,058.30 (see **Table 5.1**). After Cells 3 and 6 are closed, financial assurance liability would be reduced for the remainder of the operating life. The final closure liability is projected to occur around 2057 when Cell 9 is filled to capacity (**Table 3.4**). At that time, \$2,371,468.62 (in December 2023 dollars) would be needed to perform closure activities (**Table 5.2**).

5.2 Post-Closure Liability of the Class 1 Landfill

The current post-closure liability is estimated to be \$9,802,207.44 (see **Table 5.3**) and

post-closure is projected to begin in 2058. Because so many costs are fixed, this liability will remain substantially the same regardless of the actual year final closure occurs or the number of landfill cells that are actually constructed and filled. However, the estimated post-closure care cost is reviewed and adjusted each year (if needed) to consider inflation as required by the regulations.

TABLE 5.3 POST-CLOSURE COST ESTIMATE - CLASS 1 LANDFILL					
Item Description	Basis of Cost	Units	Estimated Quantity	Unit Cost ⁽¹⁾	Total Cost
Site Inspection	Includes site inspection and summary report, quarterly for 30 years	each	4	\$1,378.95	\$5,515.81
Groundwater Monitoring	Semiannual sampling, analysis, and report writing for 12 GW wells	\$/well	24	\$3,887.88	\$93,309.07
Groundwater Well Maintenance	Twelve GW wells, maintenance and occasional replacement as needed	\$/well	12	\$476.89	\$5,722.65
Gas Monitoring	Eight locations tested quarterly for monitoring	\$/well	32	\$402.19	\$12,870.22
Gas Probe & Gas Meter	Eight gas probes, general maintenance and replacement as needed	\$/well	8	\$6,325.94	\$50,607.53
Leachate Collection System	Annual O&M of leachate collection and recirculation systems	each	1	\$19,764.98	\$19,764.98
Leachate Treatment	Leachate Treatment cost at Little Rock Wastewater Utility	gallons	100,000	\$0.00	\$459.65
Leachate Pretreatment	Costs associated with pumping then aerobically treating leachate	gallons	100,000	\$0.00	\$459.65
Pump Station Maintenance	Pump Station Maintenance, including pumps and electrical	each	6	\$4,596.51	\$27,579.04
Electrical Power	Electrical power costs	kilowatts	175,000	\$0.14	\$24,131.66
Gas System Operation & Maintenance	O&M Costs for gas extraction and methane flaring system	system	1	\$48,837.88	\$48,837.88
Site Maintenance	Site Maintenance. Assumes one acre of surface repair each year	acre	1	\$4,021.94	\$4,021.94
Site Mowing	Site Mowing. Assumes four mowings per year	acre	117	\$160.88	\$18,822.69
Administration	General expenses for administration and supervision	lump sum	1	5%	\$15,605.14
Total Annual Cost for Post-Closure Care:					\$327,707.89
Total Post-Closure Cost for 30 Years:					\$9,831,236.69

⁽¹⁾ Cost per acre, as estimated based on 2020 actual unit prices.
 Adjusted by DEQ Inflation factor (2021: 1.016, 2022: 1.062, 2023:1.065)

Liability associated with certain landfill fixed costs such as pump station and force main construction, treatment facilities, leachate injection systems, roads, and drainage improvements should be depreciated throughout the operating life of the landfill. Also, the financial capability of CLR to cover this cost must be demonstrated and assured with an acceptable financial assurance mechanism as required by the regulations.

5.3 Closure Liability of the Class 4 Landfill

The current estimated cost per acre for closure of the Class 4 landfill is shown in **Table 5.4**. Each year these costs are updated based on the current inflation rate or actual current costs. This report shows current costs as of December 2023. It should be noted that the Class 4 landfill does not have to meet the same stringent closure criteria as the Class 1 landfill.

TABLE 5.4 ESTIMATED CLOSURE COSTS PER ACRE - CLASS 4 LANDFILL	
Item Description	Cost / Acre ⁽¹⁾
Clay Liner	\$53,800.88
Soil Cover Layer	\$17,667.90
Subgrade Preparation	\$3,002.67
Seeding	\$2,872.82
Mobilization	\$1,723.69
Preparation of Plans and Specifications	\$2,413.17
Construction Quality Assurance	\$5,860.55
Contingencies - 5%	\$4,367.08
Total Closure Cost per Acre:	\$91,708.74
Total Financial Assurance Closure Cost:	\$1,265,580.60

⁽¹⁾ Cost per acre, as estimated based on 2020 bid unit prices.

Adjusted by DEQ Inflation factor (2021: 1.016, 2022: 1.062, 2023: 1.065)

To satisfy state and federal regulations, a worst-case scenario must be determined using the largest area of the Class 4 landfill that will ever need final cover, should state regulators order the landfill to close before it reaches the end of its operating life.

As can be seen from **Table 5.5**, the largest area ever needing final cover during the operating life of the landfill (13.8 acres) occurs when Cell 4 is placed in service but before partial closure of Cell 3 is completed. This is projected to occur around 2036 (see **Table 5.3**). The projected cost for closure of this area in December 2023 dollars would be \$1,261,843.65 (see **Table 5.4**).

After Cell 3 is closed, financial assurance liability is reduced for the remainder of the operating life. The final closure liability is projected to occur around 2045 when Cell 4 is filled to capacity (**Table 5.3**). At that time, \$1,051,536.38 would be needed to perform closure activities (**Table 5.5**).

TABLE 5.5 CLOSURE AREA SEQUENCE AND ASSOCIATED COST - CLASS 4 LANDFILL					
Event	Acreage Added to Landfill	Acreage Closed	Total Acreage Needing Final Cover	Approximate Year	Estimated Closure Cost
Construction of Cell 1	4.5	0.0	4.5	1993	--
Construction of Cell 2	4.5	0.0	9.0	1998	--
Construction of Cell 3	4.3	0.0	13.3	2015	--
Closure of Area 1	0.0	2.1	11.2	2023	\$192,588.35
Closure of Area 2	0.0	2.1	9.1	2023	\$192,588.35
Construction of Cell 4	4.7	0.0	13.8	2036	--
Closure of Area 3	0.0	2.3	11.5	2040	\$210,930.10
Closure of Area 4	0.0	11.5	0.0	2069	\$1,054,650.50
TOTAL	18	18			\$1,650,757.31
2023 Closure Cost per Acre: \$91,708.74					

5.4 Post-Closure Liability of the Class 4 Landfill

The current post-closure liability is projected to be \$24,283.09 (see **Table 5.6**) and post-closure is projected to begin around 2070. This liability will remain substantially the same regardless of the actual year final closure occurs. The financial capability of CLR to cover this cost must be demonstrated and assured with an acceptable financial assurance mechanism as required by regulation.

TABLE 5.6 POST-CLOSURE COST ESTIMATE - CLASS 4 LANDFILL					
Item	Basis of Cost	Units	Estimated Quantity	Unit Cost ⁽¹⁾	Total Cost per Year
Site Inspection	Site insp.and summary report, quarterly for 2 years	each	4	\$1,378.95	\$5,179.16
Site Maintenance	Assumes one acre of surface needs repair each year	acre	1	\$4,021.94	\$3,776.47
Site Mowing	Assumes four mowing per year	acre	14	\$160.88	\$2,114.82
Administration	General exp. for administrative and supervision (10%)	LS	1	--	\$1,107.05
Total Annual Cost for Closure Care:					\$12,177.50
Total Post-Closure Cost for 2 Years:					\$24,355.01

⁽¹⁾ Cost per acre, as estimated based on 2020 actual unit prices.
 Adjusted by DEQ Inflation factor (2021: 1.016, 2022: 1.062, 2023:1.065)

5.5 Closure Liability of the Composting Facility

The current estimated closure cost for the composting facility, in December 2022 dollars, is \$214,968.34, as shown in **Table 5.7**. As required by DEQ, the cost is calculated by multiplying the maximum design storage capacity of 36,000 tons by 150% (45,000 tons), subtracting 36,000 tons that would be distributed to other CLR agencies, and multiplying the remainder (9,000 tons) by the cost to process and remove the remaining materials (\$23.89 per ton).

TABLE 5.7 ESTIMATED CLOSURE COSTS - YARD WASTE COMPOSTING FACILITY				
Item Description	Units	Estimated Quantity	Unit Cost ⁽¹⁾	Total Cost
Hauling & redistribution of compost material to parks	ton	36,000	\$0.00	\$0.00
Processing and distribution of remaining yard waste by private contractor	ton	9,000	\$23.82	\$214,337.30
Total Financial Assurance Closure Cost:				\$214,337.30

⁽¹⁾ Cost per acre, as estimated by Edwards Engineering, P.A. on January 2008 adjusted annually for inflation.

6 Requirements for Financial Assurance

Under state and federal regulations, each facility owner or operator must provide financial assurance to the state permitting authority. The purpose is to show that the owner or operator has the financial ability to close the composting facility and, for the Class 1 and Class 4 landfills, to close the largest open area of each landfill and to conduct post-closure care. A financial assurance mechanism must be in place throughout the operating life of the facilities, and the instrument must be updated annually.

Originally, CLR used a “contract of obligation” as the mechanism to satisfy financial assurance. A contract of obligation is essentially a resolution from the City Board recognizing the liability associated with landfill operations, a pledge to meet that obligation, and an agreement to allow the state to garnish turn-back money if CLR fails to fully meet the obligations. However, since that time, changes in state law removed the contract of obligation from the list of acceptable financial assurance mechanisms.

In 2002, CLR decided to utilize a financial test as the financial assurance mechanism. Under this option, an accounting demonstration is used to show that sufficient funds are

available to meet all needs for closure and post-closure care. If a successful demonstration can be made, the governing body can use that demonstration to guarantee financial assurance through a formal resolution.

According to DEQ, the total amount to be placed in the financial assurance instrument is calculated as 100% of the combined closure cost estimates plus 20% of the combined post-closure cost estimates. **Table 6.1** provides a summary of closure and post-closure costs for all three facilities.

The total financial assurance amount for the whole facility is the sum of the financial assurance for the Class 1 landfill, the Class 4 landfill, and the composting facility. Therefore, \$12,775,628 must be guaranteed by the financial assurance instrument utilized by CLR.

TABLE 6.1 ESTIMATED CLOSURE COSTS - CLASS 1, CLASS 4, & COMPOST FACILITY		
Item Description	Source	Cost
100% of Closure Cost Estimates of Class 1 LF	From Table 5.1	\$9,324,592
20% of Post-Closure Cost Estimates of Class 1	From Table 5.3	\$1,966,247
Total Financial Assurance of Class 1		\$11,290,839
100% of Closure Cost Estimates of Class 4 LF	From Table 5.4	\$1,265,581
20% of Post Closure Estimates of Class 4	From Table 5.6	\$4,871
Total Financial Assurance of Class 4		\$1,270,452
100% of Closure Cost Estimate of Compost	From Table 5.7	\$214,337
Total Financial Assurance of Composting Facility		\$214,337
TOTAL FINANCIAL ASSURANCE		\$12,775,628

Appendix D:

Monthly Tonnages / Yard Waste Removed

**2023
MONTHLY AND YEARLY TOTALS**

MONTH	CLASS 1 TONS (Regular)	CLASS 1 TONS TORNADO 2023	CLASS 1 TOTAL TONS	CLASS 4 TONS (Regular)	CLASS 4 TONS TORNADO 2023	CLASS 4 TOTAL TONS	YW TONS (Regular)	YW TONS TORNADO 2023	YW TOTAL TONS	TIRES REC'D (Collection)	TIRE TONS (Collection)	TIRES W/RIMS & RIMS REC'D	PLS GBG CARTS	PLT GRB CARTS W/ITH LIDS	BRKN DOWN GRB CARTS	SCRAP TIN	RECYC PAP/CANS CRDBRD PLST	ELET TONS	APP TONS	CROSS TIES (For Sale)	TOTAL TONS
JANUARY	11,615.22	0.00	11,615.22	520.89	0.00	520.89	2,105.33	0.00	0.00	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	1.41	0	14,242.85
FEBRUARY	10,796.93	0.00	10,796.93	415.68	0.00	415.68	1,655.25	0.00	0.00	239	1.82	38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	12,869.68
MARCH	13,761.62	0.00	13,761.62	636.20	0.00	636.20	1,786.93	0.00	0.00	150	3.93	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	16,188.68
APRIL	11,596.49	271.73	11,868.22	556.78	34.79	591.57	1,680.00	646.24	2,326.24	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	13,833.27
MAY	13,857.33	8,087.86	21,945.19	374.57	183.39	557.96	1,918.95	3,733.31	5,652.26	0	0.00	0	0.00	0.00	0.00	4.49	0.00	0.00	0.00	0	16,155.34
JUNE	14,598.80	4,519.23	19,118.03	418.46	175.61	594.07	1,780.00	10,930.74	12,710.74	4	1.81	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	16,799.07
JULY	13,202.85	1,018.97	14,221.82	260.81	16.79	277.60	1,618.67	7,041.49	8,660.16	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	15,082.33
AUGUST	14,558.90	10.56	14,569.46	607.12	15.07	622.19	1,595.40	6,030.18	7,625.58	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	16,761.42
SEPTEMBER	11,929.17	0.00	11,929.17	875.83	0.00	875.83	2,092.38	0.00	2,092.38	406	7.10	10	0.00	0.00	0.00	7.12	0.00	0.00	0.00	0	14,911.60
OCTOBER	13,225.24	0.00	13,225.24	681.55	0.00	681.55	1,594.88	0.00	1,594.88	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	15,501.67
NOVEMBER	13,875.16	0.00	13,875.16	390.92	0.00	390.92	2,304.15	0.00	2,304.15	0	6.34	0	27.49	0.00	0.00	0.00	0.00	0.00	0.00	0	16,604.06
DECEMBER	13,952.30	0.00	13,952.30	520.74	0.00	520.74	2,444.42	0.00	2,444.42	299	4.22	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	16,921.68
TOTALS	156,970.01	13,908.35	170,878.36	6,259.55	425.65	6,685.20	22,576.36	28,381.96	45,410.81	1,098	25.22	52	27.49	0.00	0.00	11.61	0.00	0.00	1.41	0	185,871.65

January
2023
City of Little Rock - Landfill
Record of Processed Yardwaste Removed from the Facility

Ref. Code	Refuse Name	Tons	Refuse Charge	Tax	Total Charge	Loads
492	WOOD MULCH-COMM.	51.13	\$ 1,256.56	\$ 94.26	\$ 1,350.82	28
Total		51.13	\$ 1,256.56	\$ 94.26	\$ 1,350.82	28

February
2023
City of Little Rock - Landfill
Record of Processed Yardwaste Removed from the Facility

Ref. Code	Refuse Name	Tons	Refuse Charge	Tax	Total Charge	Loads
492	WOOD MULCH-COMM.	140.42	\$ 2,639.18	\$ 197.94	\$ 2,837.12	78
Total		140.42	\$ 2,639.18	\$ 197.94	\$ 2,837.12	78

March
2023
City of Little Rock - Landfill
Record of Processed Yardwaste Removed from the Facility

Ref. Code	Refuse Name	Tons	Refuse Charge	Tax	Total Charge	Loads
492	WOOD MULCH-COMM.	227.25	\$ 5,183.93	\$ 383.58	\$ 5,567.51	175
Total		227.25	\$ 5,183.93	\$ 383.58	\$ 5,567.51	175

April
2023
City of Little Rock - Landfill
Record of Processed Yardwaste Removed from the Facility

Ref. Code	Refuse Name	Tons	Refuse Charge	Tax	Total Charge	Loads
492	WOOD MULCH-COMM.	171.42	\$ 4,139.17	\$ 308.50	\$ 4,447.67	133
Total		171.42	\$ 4,139.17	\$ 308.50	\$ 4,447.67	133

May
2023
City of Little Rock - Landfill
Record of Processed Yardwaste Removed from the Facility

Refuse Code	Refuse Name	Tons	Refuse charge	Tax	Total charge	Loads
477	MULCH/COMM/EXEMPT	2.39	\$ 38.24	\$ -	\$ 38.24	2
484	COMPOST-INDIVIDUALS	0.41	\$ 10.25	\$ 0.77	\$ 11.02	1
488	WOOD MULCH-*FREE*	5.47	\$ -	\$ -	\$ -	3
491	WOOD MULCH-COMM.	4.56	\$ 72.96	\$ 5.47	\$ 78.43	3
492	HARDWOOD MULCH INDIV	64.00	\$ 1,600.00	\$ 120.04	\$ 1,720.04	73
Total		76.83	\$ 1,721.45	\$ 126.28	\$ 1,847.73	82

June
2023
City of Little Rock - Landfill
Record of Processed Yardwaste Removed from the Facility

Refuse Code	Refuse Name	Tons	Refuse charge	Tax	Total charge	Loads
477	MULCH/COMM/EXEMPT	3.97	\$ 63.52	\$ -	\$ 63.52	3
492	HARDWOOD MULCH INDIV	44.51	\$ 1,112.75	\$ 83.53	\$ 1,196.28	55
Total		48.48	\$ 1,176.27	\$ 83.53	\$ 1,259.80	58

July
2023
City of Little Rock - Public Works
Solid Waste - Landfill
Record of Processed Yardwaste removed from the Facility

Refuse Code	Refuse Name	Tons	Refuse charge	Tax	Total charge	Loads
484	COMPOST-INDIVIDUALS	14.05	\$ 351.25	\$ 26.35	\$ 377.60	22
491	WOOD MULCH-COMM.	1.33	\$ 21.28	\$ 1.60	\$ 22.88	1
492	HARDWOOD MULCH INDIV	34.01	\$ 850.25	\$ 60.41	\$ 910.66	30
<i>Total</i>		49.39	\$ 1,222.78	\$ 88.36	\$ 1,311.14	53

**August
2023**

**City of Little Rock - Landfill
Processed Yardwaste Removed from the Facility**

Date	Ref #	Refuse Name	Tons	Refuse Charge	Tax	Total Charge	Loads
8/7/2023	477	MULCH/COMM/EXEMPT	0.35	\$ 5.60	\$ -	\$ 5.60	1
8/16/2023	483	COMPOST-*FREE*	12.87	\$ -	\$ -	\$ -	2
8/31/2023	484	COMPOST-INDIVIDUALS	39.98	\$ 999.50	\$ 74.98	\$ 1,074.48	17
8/18/2023	488	WOOD MULCH-*FREE*	10.68	\$ -	\$ -	\$ -	4
8/16/2023	491	WOOD MULCH-COMM.	5.18	\$ 82.88	\$ 6.22	\$ 89.10	2
8/28/2023	492	HARDWOOD MULCH INDIV	16.95	\$ 423.75	\$ 31.79	\$ 455.54	20
Total			86.01	\$ 1,511.73	\$ 112.99	\$ 1,624.72	46

**September
2023**

**City of Little Rock - Landfill
Record of Processed Yardwaste Removed from the Facility**

Ref. Code	Refuse Name	Tons	Refuse Charge	Tax	Total Charge	Loads
494	WOOD MULCH-COMM.	74.72	\$ 1,774.71	\$ 129.53	\$ 1,904.24	68
Total		74.72	\$ 1,774.71	\$ 129.53	\$ 1,904.24	68

**October
2023**

**City of Little Rock - Landfill
Record of Processed Yardwaste removed from the Facility**

Refuse Code	Refuse Name	Tons	Refuse charge	Tax	Total charge	Loads
477	MULCH/COMM/EXEMPT	2.17	\$ 34.72	\$ -	\$ 34.72	1
483	COMPOST-*FREE*	11.60	\$ -	\$ -	\$ -	2
484	COMPOST-INDIVIDUALS	35.20	\$ 880.00	\$ 66.00	\$ 946.00	25
488	WOOD MULCH-*FREE*	6.94	\$ -	\$ -	\$ -	4
491	WOOD MULCH-COMM.	2.51	\$ 40.16	\$ 3.01	\$ 43.17	1
492	HARDWOOD MULCH INDIV	13.23	\$ 330.75	\$ 24.81	\$ 355.56	22
Total		71.65	\$ 1,285.63	\$ 93.82	\$ 1,379.45	55

**November
2023**

**City of Little Rock - Landfill
Record of Processed Yardwaste Removed from the Facility**

Refuse Code	Refuse Name	Tons	Refuse Charge	Tax	Total Charge	Loads
477	MULCH/COMM/EXEMPT	1.79	28.64	0	28.64	1
483	COMPOST-*FREE*	12.35	0	0	0	2
484	COMPOST-INDIVIDUALS	27.84	696	34.51	730.51	22
488	WOOD MULCH-*FREE*	2.59	0	0	0	1
491	WOOD MULCH-COMM.	5.79	92.64	6.94	99.58	2
492	HARDWOOD MULCH INDIV	3.56	89	6.68	95.68	6
Total		53.92	906.28	48.13	954.41	34

**DECEMBER
2023**

**CITY OF LITTLE ROCK - LANDFILL
RECORD OF PROCESSED YW REMOVED FROM THE FACILITY**

Refuse Code	Refuse Name	Tonna ge	Refuse Charge	Tax	Total Charge	Loads
492	WOOD MULCH-*FREE*	29.64	\$ 653.00	\$ 48.99	\$ 701.99	23
Total		29.64	\$ 653.00	\$ 48.99	\$ 701.99	23