

CREEK COUNTY LANDFILL

Mail:
P.O. Box 1597
Sapulpa, OK 74067

Site: 10250 S. 33rd W. Ave
Jenks, OK 74037
TEL (918)-299-3755
FAX (918)-299-3793

July 27, 2020

DEQ
PO Box 1677
Oklahoma City, OK 73101-1677

Attention: Hillary Young, DEQ

Ref: Tier III Permit Modification
Lateral Expansion of Permitted Boundary
Publication - Draft
Creek County Landfill, Creek County
Permit Number 3519020

RECEIVED

JUL 29 2020

LAND PROTECTION DIVISION
DEPT. OF ENVIRON. QLTY.

Dear Ms. Young,

Please see attached our Tier III Permit Application for Creek County Landfill. The draft notification for the Permit Modification can be reviewed in the local newspaper and viewed at the local library.

Please review this Application and we ask for your approval.

Upon completion and your approval of the results, we would proceed with In-Situ Liner installation in accordance with your regulations.

If you have any questions, please call Danny Rosencutter at (918) 299-3755.

Regards,



Danny Rosencutter
Creek County Landfill

c/2: Martha Grafton, DEQ
2 copies - DEQ

Oklahoma Department of Environmental Quality Notice

DRAFT

The Oklahoma Department of Environmental Quality (DEQ) has received an application for a C&D existing permit to expand at the Creek County Landfill, located at 10250, S. 33rd W. Ave. facility.

The DEQ has tentatively found the application meets the requirements of Title 27A of the Oklahoma Statutes, Section 2-1-101, *et seq.*, Section 2-10-101, *et seq.*, and rules of the DEQ, Oklahoma Administrative Code (OAC), Title 252, Chapters 4 and 515, and has prepared a draft permit for public review.

The draft permit conditions proposed expansion on the SW corner of the existing permitted area for the purpose in the C&D Landfill operations of C&D materials consisting of nonhazardous household trash, construction and demolition debris, yard and green waste, roofing materials and other non-hazardous type waste. This is an expansion of the existing landfill.

The application and related documents may be reviewed during normal business hours at:

Locally at Sapulpa Library, 27 W Dewey Ave, Sapulpa, OK 74066. The office of the land protection Division, Oklahoma Department of Environmental Quality, Located on the 5th floor of the DEQ building at 707 N. Robinson, P. O. Box 1677, OKC, OK 73101-1677. The DEQ contact is Martha Grafton, (405)720-5144.

Persons wishing to comment on the draft permit should submit their comments in writing to the DEQ at the above address. Also, any person may request, in writing, a formal public meeting to present written or oral statements and data concerning the draft permit. A request for a public meeting must identify the nature of the issues to be raised in the meeting. If the DEQ determines, based on the requests it receives, that there is significant degree of public interest in the draft permit, it will schedule a public meeting and provide notice of the date, time and place.

Written comments and requests for a public meeting must be received by the DEQ within 30 days after the date of this publication at the DEQ address given above. More specific information may be obtained by contacting the applicant at Creek County Landfill, PO Box 1597, Sapulpa, Ok 74067, Attention Danny Rosencutter, or the DEQ contact listed above.

**TIER III PERMIT APPLICATION
LATERAL EXPANSION OF PERMITTED BOUNDARY
CREEK COUNTY LANDFILL**

Permit No. 3519020
Creek County, Oklahoma

Prepared for:

ROSENCUTTER BROTHERS, INC.
P.O. Box 1597
Sapulpa, OK 74067

July 2020

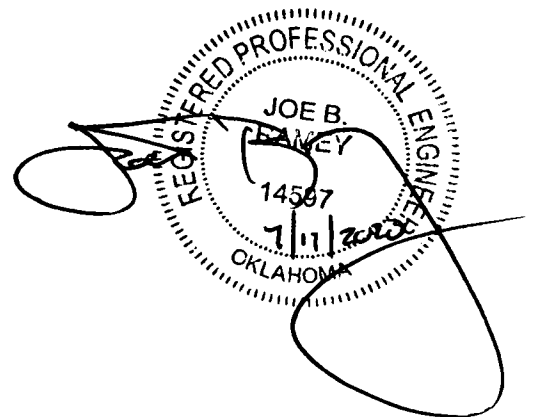
Prepared by:

Joe B. Ramey P.E.

and



136 Pecan Street
Keller, Texas 76248
(817) 337-0112



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1 INTRODUCTION

Rosencutter Brothers Inc. (Rosencutter) currently operates the Creek County Landfill under Permit Number 3519020. The site was originally permitted in 1983. At that time, Rosencutter was granted permission from the ODEQ to construct, operate, maintain, and close, a Type IV Construction and Demolition (C&D) landfill. The current C&D permit describes an area containing approximately 85 acres in Section 28, Township 18 North, Range 12 East.

Rosencutter seeks a Tier III permit modification to expand the permitted boundary. The total area of the expansion is approximately 12.5 acres west of the current C&D permit. Of the additional 12.5 acres, 9.86 acres will be used for disposal area, with the balance taken up by drainage control, buffer zones and other operational areas.

This Tier III Permit Application contains all of the applicable documentation required by 27 A. O. S. Supp. 1996, §2-10-301 et. Seq., OAC 252:4 and OAC 252:515. The following application is structured to follow the Oklahoma Department of Environmental Quality (ODEQ) Regulations and follow the Application Review, Construction and Demolition Landfill Checklist dated July 23, 2018. The C&D Landfill checklist is included in Appendix A-1.

2 PUBLIC PARTICIPATION

2.1 252:4-7-13, 27A O.S. 2-10-301 Public Notice

Pursuant to 252:4-7-13(a), a public notice is required to be submitted and published in local newspapers.

2.2 252:4-7-13(b) Notice to Landowner

Pursuant to 252:4-7-13(b), Rosencutter is required to certify by affidavit that they own the real property, have a current lease or easement which is given to accomplish the permitted purpose or have provided legal notice to the landowner. Rosencutter owns the property as described in the 'Legal Description' portion of Section 4.1. See applicable documents in Appendix C.

2.3 252:4-7-13(c) Notice Content

Rosencutter, as required by 252:4-7-13(c), will provide the ODEQ with a draft notice for approval prior to publication. The draft public notice will be submitted once approved by the ODEQ. The public notice will include the following information.

- Name and address of applicant;
- Name, address and legal description of the site facility and/or activity;
- Purpose of notice;
- Type of permit or permit action being sought;
- Description of activities to be regulated;
- Locations where the application may be reviewed;
- Names, addresses and telephone numbers of contact persons for the ODEQ and for the applicant; and
- Any other information required by the ODEQ.

2.4 252:4-7-13(d) Proof of Publication

A public notice that an application for a Tier III Permit Application has been filed, as required by 27A O.S. §2-10-301, 302, 303, and 252:4-7-13(d), was published in the Tulsa World. Proof of publication will be provided to the ODEQ as soon as practical after it is received by the applicant.

Once a public notice that a draft permit for a Tier III Permit Application has been issued by the ODEQ, as required by 27A O.S. §2-10-301, 302, 303 and 252:4-7-13 (d), it will be published in the Tulsa World upon issuance.

When public notice that a final permit for a Tier III Permit Application has been issued by the ODEQ, as required by 27A O.S. §2-10-301, 302, 303 and 252:4-7-13 (d), it will also be published in the Tulsa World upon issuance of the permit.

2.5 252:4-7-13(f)(3) Additional Notice

As required by 27A O.S. §2-10-301 and 252:4-7-13(f)(3), Rosencutter is required to provide notice by certified mail, return receipt requested, to owners of mineral interests and to adjacent landowners whose property may be substantially affected by installation of a landfill site. Appendix B contains copies of the notifications.

3 GENERAL PROVISIONS

3.1 252:515-3-1 Permit Required

Rosencutter Brothers currently owns and operates a permitted C&D Landfill (ODEQ Permit No. 3519020). This Tier III Permit Application is for expansion of the existing permitted boundary.

3.2 252:515-3-31(f) Tier III Permit Modification

As required by 252:515-3-31(f), Rosencutter Brothers is applying for a Tier III Permit Modification of the existing C&D Landfill. Rosencutter Brothers is expanding the permitted boundary of the existing C&D Landfill.

3.3 252:515-3-31(g) Disclosure Statement

As required by 252:515-3-31(g), persons submitting a permit application for a new solid waste disposal facility, or the transfer of an existing solid waste permit, are subject to disclosure statement requirements. This application is for a Tier III modification to expand the current permitted boundary of an existing facility. Therefore, no disclosure statement is required.

3.4 252:515-3-33 Oath Required

As required by 252:515-3-33, this application includes the Application Form signed under oath by Rosencutter Brothers. Appendix C-1 contains the application form.

3.5 252:515-3-34(a) Legal Right to Property

As described in Section 2.2, Rosencutter Brothers owns the property that contains the proposed expansion of the existing C&D Landfill. See Appendix C-2 for Warranty Deed.

3.6 252:515-3-34(c) Easement to the ODEQ

As required by 252:515-3-34(c), Rosencutter Brothers has granted temporary easement to the ODEQ. A copy of the easement is included in Appendix C-3.

3.7 252:515-3-35 Engineer of Record

This application also contains a signed application page sealed by an Oklahoma registered professional engineer. Appendix C-1 contains the application page. Also, all relevant engineering drawings and maps are sealed and signed by an Oklahoma registered professional engineer.

4 GENERAL INFORMATION

4.1 252:515-3-36(c) Permit Modification Applications

As required by 252:515-3-36(c), applications for modification to an existing permit shall submit information identified in 252:515-3-36(a) related to the proposed modification.

Facility Owner: Rosencutter Brothers, Inc.
P.O. Box 1597
Sapulpa, OK 74067
Telephone: (918) 299-3755

Contact: Mr. Danny Rosencutter

Facility Name: Creek County Landfill

Mailing Address: P.O. Box 1597
Sapulpa, OK 74067

Physical Address: 10250 South 33rd West Avenue
Sapulpa, OK

Disclosure Statement: Not required

Legal Description: Beginning at the Southeast Corner of the SE/4 of the NW/4, said point being a 3/8" iron pin found in place, also being the true point of beginning, Thence N 01°03'34"W along the East Line of the SE/4 of the NW/4 a distance of 1322.03 feet to the Northeast-Corner thereof, Thence S 88°49'51"W along the North Line of the SE/4 NW/4 a distance of 452.24 feet, Thence S 01°03'34"E a distance of 254.08 feet, Thence S 56°21'20" E a distance 238.21 feet to a point on the South line of the SE/4 NW/4, Thence N 88°50'35" E along the South line of the SE/4 NW/4 a distance of 80.92 feet to the point of beginning.

Latitudes/Longitudes: The latitude and longitude of the facility entrance and all property corners are illustrated on the Site Plan Drawing 1.

Nearest Town: Sapulpa, OK

Proposed Operation: The Tier III modification application proposes to expand the permit boundary of the existing landfill by approximately 12.5 acres. Approximately 9.86 acres of the expanded boundary to be used to establish, construct, operate, close and monitor during post-closure

a construction and demolition waste landfill. The remainder of the area to be used for drainage areas, buffer areas and operational areas.

Anticipated Waste Stream: The anticipated waste stream will remain the same as before the expansion. Waste will consist of construction and demolition waste collected by the public or by hauling contractors servicing the public and waste resulting from construction activities by private individuals or contractors. Construction and demolition waste created by high winds and natural disasters, including yard waste and tree limbs, will also be accepted. The average amount of waste received by the current landfill over the past 5 years is 58,968.5 tons/year. This receipt rate is anticipated to remain the approximately the same.

Areas Served: The market for this landfill consists of the City of Sapulpa and the surrounding communities in Creek County.

Estimated Population Served: The Creek County Landfill accepted 67,019.4 tons in 2019, which is based on a 5 day work week (i.e., 257.77 tons per day). Based on 252:515-3-36(a)(10)(B), the population equivalent has been determined by dividing the anticipated amount of waste received per day by 4.4 pounds per person per day. Therefore, 257.77 tons multiplied by 2000 pounds per ton equals 515,540 pounds per day. Divide by 4.4 pounds per person per day and the population equivalent is 117,168 people.

Road Construction: The main entrance area around the existing scale and existing scale house is asphalt. The road from the asphalt area to the disposal area is compacted gravel. All weather roads will be constructed around the perimeter of the active waste disposal areas and to the operating face.

Operation Equipment: The Creek County Landfill site currently uses the following equipment: Cat-D9L bulldozer, Cat-D9R bulldozer, John Deere 700K bulldozer, Cat 350L excavator, Cat 330B excavator, 2-769B off road dump trucks, 2-621B cat scrapers. No changes in equipment are anticipated as a result of this expansion.

Permit Drawings: See Appendix D.

Location Restrictions: See Section 6.0 and Appendix E.

Operation Plan: See Section 13.0.

Stormwater Management: See Section 12.0 and Appendix J.

Closure/Post-Closure Plan: See Section 14.0 and Appendix L.

Aesthetic Enhancement Plan: See Appendix D.

4.2 252:515-3-38(1) Subsurface Investigation

Permit applications for land disposal facilities shall perform a subsurface investigation and install a groundwater monitoring system. The approved drilling plan is included in Appendix F-1 of Appendix F of this permit application.

4.3 252:515-3-38(2) Liner System

Waste disposal areas of new C&D landfills and expansions of waste disposal areas of existing C&D landfills shall, at a minimum, be constructed with:

- Prepared subgrade;
- 3-foot thick compacted clay liner with a permeability of 1×10^{-5} cm/sec or less, or
- A 5-foot thick in-situ liner with a permeability of 1×10^{-5} cm/sec or less, and
- 1-foot thick soil protection layer.

The Construction Quality Assurance (CQA) Plan is included in Appendix H.

4.4 252:515-3-38(3) Leachate Collection Layer

C&D landfills and yard waste composting facilities are not subject to the requirements of leachate collection as per 252:515-13-1(c).

4.5 252:515-3-38(4) Explosive Gas Monitoring Plan

The Creek County Landfill has an Explosive Gas Monitoring Plan for the existing landfill. See Section 11.0 and Appendix I for the Explosive Gas Monitoring Plan.

4.6 252:515-3-38(5) Waste Exclusion Plan

The Creek County Landfill has an approved Waste Exclusion Plan. See Section 16.0 and Appendix N for the Waste Exclusion Plan.

4.7 252:515-3-38(6) Closure/Post-Closure Plan

The Creek County Landfill has an approved Closure/Post-Closure Plan. See Section 14.0 and Appendix L for the Closure/Post-Closure Plan.

4.8 252:515-3-38(7) Life of Site Calculations

See life of site calculations in Section 15.2.

5 MAPS AND DRAWINGS

As required by 252:515-3-31, the following is a list of maps and design drawings included in Appendix D of this application. These are the permit drawings completed as part of a joint technical effort by The Carel Corporation and Joe B. Ramey, P.E. for the Creek County Landfill.

5.1 252:515-3-51 Additional Maps

All maps required by the subsurface investigation and the Geology/Hydrogeology section of this application are located in Appendix F.

5.2 252:515-3-52 General Location Map

See Drawing No. 1 in Appendix D.

5.3 252:515-3-53 Flood Plain Map

See Drawing No. 2 in Appendix D.

5.4 252:515-3-54 Quadrangle Topographic Map

See Drawing No. 3 in Appendix D.

5.5 252:515-3-55 Existing Contour Map

See Drawing No. 4 in Appendix D.

5.6 252:515-3-56 Site Map

See Drawing No. 4 in Appendix D.

5.7 252:515-3-57 Design Drawings

The application is also required to include design drawings that show the following details.

5.7.1 252:515-3-57(1) Cell Disposal Areas

The expansion area is designed in order to maximize the amount of airspace that is available at the site. See Excavation/In-Situ Liner Plan, Drawing No. 5 in Appendix D.

5.7.2 252:515-3-57(2) Liner Construction

An in-situ liner has been previously used at the site and is planned for the expansion area. The top of in-situ liner is the same elevation as the excavation elevation and is illustrated on Drawing No. 5 in Appendix D. A small area of fill exists on the west slope. The uppermost 3 feet of the fill will be constructed to clay liner specifications discussed in Section 9. Liner details are shown on Drawing No. 9 in Appendix D.

5.7.3 252:515-3-57(3) Leachate Collection System

C&D landfills and yard waste composting facilities are not subject to the requirements of leachate collection.

5.7.4 252:515-3-57(4) Typical Well Installation

Please see Figure 3 for the typical well installation details in the Groundwater Study Report in Appendix F-2.

5.7.5 252:515-3-57(5) Dike Sections

Please see Drawing Nos. 6A and 6B in Appendix D.

5.7.6 252:515-3-57(6) Drainage Details

Please see drainage details on Drawing Nos. 8 and 9 in Appendix D and Figure 1 of the Closure Plan, Appendix L.

5.7.7 252:515-3-57(7) Groundwater Monitoring Wells, Gas Monitoring Probes

Proposed groundwater monitoring wells are discussed in Section 7.0 and illustrated on Figure 1 in Appendix F-3. Existing and proposed gas monitoring probes are illustrated Figure 1 of the Explosive Gas Monitoring Plan in Appendix I.

5.7.8 252:515-3-57(8) Surface Water Retention Structures

The perimeter surface water drainage structure is illustrated on Drawing Nos. 5 and 7 in Appendix D and Figure 1 of the Closure Plan, Appendix L.

5.7.9 252:515-3-57(9) Other Design Drawings

All design drawings are provided in Appendix D.

5.8 252:515-3-72 Groundwater Resource and Usage Map

The Groundwater Resource and Usage Map is illustrated on Figure 2 in Appendix F-3.

5.9 252:515-3-73 Surface Geologic Map

The Surface Geologic Map is illustrated on Figure 3 in Appendix F-3.

5.10 252:515-3-74 Highest Groundwater Contour Map

The Highest Groundwater Contour Map is illustrated on Figure 4 in Appendix F-3 and on Drawing No. 5A in Appendix D.

5.11 252:515-3-75 Potentiometric Surface Map

The Potentiometric Surface Map is illustrated on Figure 4 in Appendix F-3.

5.12 252:515-3-76 Site Specific Cross Sections

The Site Specific Cross Sections are illustrated on Figures 6 and 7 in Appendix F-3.

5.13 252:515-3-77 Fill Cross Section Map

The Fill Cross Section Map is shown on Drawings No. 6A and 6B in Appendix D.

5.14 252:515-3-78 Excavation Contour Map

The Excavation Contour Map is Drawing No. 5 in Appendix D.

5.15 252:515-3-79 Top of Liner Contour Map

See Drawing No. 5 in Appendix D.

5.16 252:515-3-80 Completion Map

See Drawing No. 7 in Appendix D for the Completion Map of the Expansion Area. A sitewide Landfill Completion Map can be found on Figure 1 of the Closure Plan, Appendix L.

6 LOCATION STANDARDS

The Creek County Landfill complies with the following location standards as per OAC 252:510-5.

6.1 252:515-5-31(a) Scenic Rivers

Correspondence was sent to the Oklahoma Scenic Rivers Commission to request a determination based on the above referenced regulation. A response was received from the Oklahoma Scenic Rivers Commission which indicates that the Scenic Rivers Operations has no comments on this project. See Correspondence in Attachment E-1 of Appendix E.

6.2 252:515-5-31(b) Recreation/Preservation Areas

Correspondence was sent to the Oklahoma Archeological Survey (OAS) to request a determination based on the above referenced regulation. A letter was received by the OAS that stated that no sites are listed as occurring within the project area and based on topographic and hydrologic setting, no archaeological materials are likely to be encountered. See Correspondence in Attachment E-2a of Appendix E.

Correspondence was sent to the Oklahoma Tourism and Recreation Department to request a determination based on the above referenced regulation. Correspondence was received from the Oklahoma Tourism and Recreation Department that stated *“Based on the general locations you provided and the information we have regarding the location of the types of parks mentioned above RTP and LWCF, your project proposal will have no significant adverse impact on any federally funded park or recreation area or state park, regarding the LWCF Act 54 U.S.C. 200305(f)(3) no land may be permanently used for private or non-outdoor recreation purposes (defined by the program)”*. See Correspondence in Attachment E-2b of Appendix E.

6.3 252:515-5-31(c) Endangered or Threatened Species

Correspondence was sent to the Oklahoma Department of Wildlife Conservation and to the Oklahoma Biological Survey (OBS) to request a determination based on the above referenced regulation. Correspondence received from the Oklahoma Department of Wildlife Conservation (ODWC) states *“Based upon the site description provided, there are no species listed as species of state concern which may be at or within one mile of the permit boundary or expansion area.”* Correspondence received by the OBS indicated the presence of *Haliaeetus leucocephalus* (Bald Eagle) but noted that the occurrence is 1.5 miles from the site, which is beyond the 1 mile requirement stated in 252:515-5-31(c).

Therefore, based on these two agencies, "no area within the permit boundary of this solid waste disposal facility is located within 1 mile of any endangered or threatened wildlife or plant species listed in state and federal laws". See correspondence in Attachments 3a and 3b of Appendix E.

6.4 252-515-5-32(a) 100-year Floodplain

A copy of the Flood Insurance Rate Map (FIRM) for the vicinity of the expansion area is included in Attachment E-4 in Appendix E. The FIRM clearly indicates that the proposed expansion area is not located within the 100-year floodplain.

6.5 252:515-5-32(b) Public Water Supply

Correspondence was sent to the Oklahoma Department of Environmental Quality, Oklahoma Water Resources Board and City of Sapulpa to request a determination based on the above referenced regulation.

Correspondence from the ODEQ states "*there are no community public water supply wells within 2 miles of Section 28, T 18 N, R 12 E near Sapulpa in Creek County, OK.*" Correspondence from the OWRB stated "*there does not appear to be either 1) a public water supply surface water intake within 1 mile or 2) a public water supply well within 2 miles of the area described in your email.*" Correspondence from the City of Sapulpa states "*Sapulpa currently does not have or operate any publicly owned water wells. We are strictly a surface water system, and we pull off of Skiatook Lake and Sahoma Lake.*" Therefore, based on all three agencies, "the proposed waste disposal facility is not located within 1 mile up gradient of an existing public water supply surface water intake or within one year time of travel of a public water supply well". See Correspondence in Attachments E-5a, E-5b and E-5c of Appendix E.

6.6 252:515-5-32(c) Wellhead Protection Area

A wellhead protection plan is only required if a new waste management or disposal areas are located within two miles of a public water supply well. As indicated in Section 6.5, the Creek County Landfill is located outside two miles of a public water supply well.

6.7 252:515-5-32(d) Wetlands

Correspondence was sent to the U.S. Army Corps of Engineers to request a determination based on the above referenced regulation. Correspondence received from the Corps of Engineers (Attachment E-6a) stated "*our office reviews proposed projects for the placement of dredge or fill material pursuant to Section 404 of the Clean Water Act (CWA) into waters of the United States (WOUS). If a proposed project requires the placement of dredge or fill material into a WOUS, then a permit would be required from our office.*" The proposed expansion does not involve placement of dredge or fill material into a WOUS, therefore a permit from the Army Corps of Engineers is not required. Further, a review of the United States Fish and Wildlife Service's current national Wetlands Inventory (NWI) Map for the proposed expansion area indicates that

there are not any potential wetlands within the expansion area. See Correspondence in Attachment E-6b of Appendix E.

6.8 252:515-5-51(a) Terrace Deposits

In order to determine if the proposed lateral expansion of the Creek County Landfill was located in an area designated as alluvium or terrace deposits and their recharge areas, the map titled "*Maps Showing Principal Groundwater Resources and Recharge Areas in Oklahoma*" Sheet 1 - Unconsolidated Alluvium and Terrace Deposits, Compiled in 1983 by Kenneth S. Johnson of the Oklahoma Geological Survey was reviewed. A portion of the map illustrating the vicinity of the Creek County Landfill is provided in Attachment E-7 in Appendix E. As can be seen, the proposed expansion area is not located within, wholly or partially, an area designated as alluvium or terrace deposits and their recharge areas.

6.9 252:515-5-51(b) Karst Terrain

According to 252:515-5-51(b), no area within the permit boundary of a new MSWLF shall be in a location that is within a locally fractured or cavernous limestone or cherty limestone bedrock and within five miles of any water well owned by a rural water district that is used or has the potential to be used to provide water to customers of the district. Review of the logs of soil borings installed at the proposed expansion area indicate that the bedrock is primarily shale, not fractured or cavernous limestone or cherty limestone. Further, this is a proposed lateral expansion to an existing permitted C&D Landfill and is not subject to the requirements of Karst Terrain as per 252:515-5-51(b).

6.10 252:515-5-51(c) Earthquake Epicenter Areas

Except as provided for in 27 O.S. § 2-10-501(D)(3), no area within the permit boundary of a new land disposal facility accepting NHIW shall be located within five miles of a known epicenter of an earthquake of more than 4.0 on the Richter Scale, or number V on the modified Mercalli Scale, as recorded by the Oklahoma Geological Survey. This application is for a proposed lateral expansion to an existing C&D Landfill facility and is therefore not subject to the requirements of Earthquake Epicenter Areas as per 252:515-5-51(c).

6.11 252:515-5-52(a) Utility/Transmission Lines

An overhead powerline exists along the west side of the proposed expansion area. Except for two poles located near the northwest corner, the line is located outside of the area proposed for expansion. The facility owner is in the process of relocating these two poles to the west. The work is expected to be completed during the summer of 2020.

6.12 252:515-5-52(b) Fault Areas

ODEQ regulation 252:515-5-52(b) prohibits waste disposal facilities within 200 feet of a fault that has had displacement in Holocene time. Based on the US Geological Survey's Quaternary Fault and Fold Database of the United States¹, the proposed lateral expansion area of the Creek County Landfill is not located within 200 feet of a fault that has had displacement in Holocene Time.

6.13 252:515-5-52(c) Seismic Impact Zones

ODEQ regulation 252:515-5-52(c) prohibits new waste management or disposal areas located within a seismic impact zone. This application is for a proposed lateral expansion to an existing C&D landfill and is therefore not subject to the seismic impact zone requirements of 252:515-5-51(c)

6.14 252:515-5-52(d) Unstable Areas

Correspondence was sent to the Oklahoma Department of Mines (ODM) to request a determination based on the above referenced regulation. A letter received from the ODM provided information on a mining permit issued Rosencutter Brothers, Inc. dba Creek County Landfill. The mining permit was issued in order for the landfill to perform excavation activities related to the operation of the landfill. Based on this information, no subsurface mines exist beneath the proposed site. Additionally, the subsurface investigation completed by Aimright Testing did not indicate the presence of unstable geologic formations beneath the proposed lateral expansion area. See ODM correspondence in Attachment E-8 in Appendix E and the geologic information in Appendix F.

6.15 252:515-5-52(e) Airports

Except as provided in 252:515-5-52(e)(2); if any waste management or disposal area of a new land disposal facility, or expansion of waste management or disposal areas of an existing land disposal facility, is to be located within 10,000 feet of any airport runway end used by turbojet aircraft or within 5,000 feet of any airport runway end used by only piston-type aircraft, a demonstration that the facility will not pose a bird hazard to aircraft shall be provided to the ODEQ. However, C&D Landfill facilities are not subject to the requirements of airports as per 252:515-5-52(e).

¹ <https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf>
Creek County C&D Landfill Lateral Expansion.docx

7 SUBSURFACE INVESTIGATION

All expansions of waste disposal boundaries of existing land disposal facilities require a subsurface investigation as per OAC 252:515-7-1. The following is a brief description of the subsurface investigation and how it correlates to OAC 252:515-7.

7.1 252:515-7-2(b) Methods

Dry drilling methods were used during the subsurface exploration. However, the ODEQ did approve the use of wet rotary techniques as an alternative drilling method in the event of auger refusal. See correspondence in Appendix F.

7.2 252:515-7-3 Compliance with OWRB Rules

As can be seen from the Geology/Hydrogeology Report in Appendix F, all field work associated with the installation of the piezometers and the drilling of the soil borings was completed in accordance with the OWRB Rules.

7.3 252:515-7-3(3) Notch

All well casings were notched by the surveyor to mark the point of measurement.

7.4 252:515-7-3(4) Latitude, Longitude and Surface Elevation

All of the monitoring wells were marked with the latitude, longitude and surface elevation by a licensed surveyor.

7.5 252:515-7-4 Drilling Plan

As required by 252:515-7-4, a drilling plan was prepared by Joe B. Ramey, P.E. and submitted to the ODEQ for approval. A copy of the Drilling Plan and all associated correspondence is included in Appendix F-1.

7.6 252:515-7-5 Drilling

Notice of Drilling was stipulated in the Drilling Plan and was provided by Aimright Testing. All associated drilling operations were supervised by a qualified groundwater scientist.

7.7 252:515-7-31 Data Collection

During the field investigation, data was collected in compliance with ODEQ requirements. The data included visual observation of soils recovered during drilling, monthly water level measurements of three (3) piezometers, logging of the piezometers, daily water level measurements from B/PZ14-1, and climatological information. More detailed information on the above is included in Appendix F.

7.8 252:515-7-32 Borehole Logs

A total of five (5) borings were drilled at the site. Three (3) of the borings were completed as piezometers for the groundwater study. Pertinent information such as the identification and characterization of soil and rock types and the depth at which groundwater was encountered is noted in the logs. Water level observations were made at the time of drilling and after 24-hours. See borehole logs in Appendix F-2.

7.9 252:515-7-33 Lithologic Sample Logs

The boring logs located in Appendix F-2 provide geotechnical test information and identification of all soil and rock layers encountered. The descriptions include the soil/rock color, texture, moisture as well as other information.

7.10 252:515-7-34 Geophysical Logs

Three borings located immediately east of the proposed expansion area have been logged using gamma ray geophysical tools. The geophysical logs are provided as Figure 10 in Appendix F-3.

7.11 252:515-7-35 Soil and Rock Sampling

Soil and rock samples were collected in accordance with the approved drilling plan. The samples were stored in accordance with 252:515-7-35(b).

7.12 252:515-7-36(1) Sample Collection

Bulk soil samples have been collected from various locations during previous construction projects at the facility. The samples were subjected to the tests listed in 252:515-7-36(3)(A) through (H), such as soil classification, moisture content, Atterberg limits, Grain size distribution, compaction, unit weight and permeability. These samples represent the soil that will be used in both the liner system and the final cover system. All of the test results are summarized in Appendix G.