Karen Blue (adpce.ad)

To: Greg Banic (adpce.ad)
Subject: RE: AEP Turk - Minor Modification Permit Application

AFIN: 29-00506
PMT#: 0311-S3N-R1
Received
By Karen Blue at 3:23 pm, Sep 5, 2023
DOC ID#: 84575
TO: AC>FILE <KMB

From: Bardella, Tony L [mailto:Tony.Bardella@terracon.com]
Sent: Monday, August 28, 2023 3:53 PM
To: Greg Banic (adpce.ad) <Greg.Banic@adeq.state.ar.us>
Cc: McCormick, Dave C. <Dave.McCormick@terracon.com>; Shahriyar S Baig <sbaig@aep.com>; Leslie E Fuerschbach <lefuerschbach@aep.com>; Greg Carter <wgcarter@aep.com>; Jason R Johnson <jrjohnson1@aep.com>
Subject: AEP Turk - Minor Modification Permit Application

Greg,

Please see the link below to download the Minor Permit Modification Application for AEP Turk to add a new waste stream for disposal at the landfill.
https://terracon.sharefile.com/d-s0b02d3ba7cf14e3baf43ecae5c69f603

Thank you,

Tony Bardella
Staff Engineer I Solid Waste Services

Terracon
25809 I-30 South I Bryant, Arkansas 72022
P (501) 847-9292 I F (501) 847-9210
D (501) 943-1049 I M (501) 794-9466
tony.bardella@terracon.com I **terracon.com**
Join us on **Facebook** and **LinkedIn**

American Electric Power
502 North Allen Avenue
Shreveport, LA 71101
AEP.com

August 28, 2023

Mr. Greg Banic
Engineer
Office of Land Resources
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

RE: Permit modification application
Permit No: 0311-S3N-R1
AFIN: 29-00506
Document ID: 83642

Dear Mr. Banic:

Enclosed find a Minor Permit Modification Application to add a new waste stream (spent catalysts) for disposal in the landfill. The application includes a revised Hazardous Waste and Unauthorized Waste Exclusion Plan, and a revised Operating Plan.

We are requesting that the fee paid for the Permit Modification Application submitted on August 9, 2018 (Document ID 74356). A correspondence email is attached.

If you have any questions, please call at 318-464-3123 or email at lefuerschbach@aep.com.

Sincerely,

Leslie Fuerschbach

Leslie Fuerschbach, Env. Engineer

Enclosures: Electronic copy of the permit modification application.
Correspondence email explaining the fee

From: Leslie E Fuerschbach
Sent: Monday, October 11, 2021 2:47 PM
To: Jason R Johnson (jrjohnson1@aep.com)
Subject: FW: Receipt of Application Fee for Permit Modification Application for SWEPCO - John W. Truk, Jr. Power Plant

---

From: Coker, Cristina <Coker@adeq.state.ar.us>
Sent: Wednesday, July 28, 2021 9:30 PM
To: Leslie E Fuerschbach <lefuerschbach@aep.com>
Cc: Cusher, Annette <Cusher@adeq.state.ar.us>; Daniels, Dillon <Dillon.Daniels@adeq.state.ar.us>
Subject: [EXTERNAL] Receipt of Application Fee for Permit Modification Application for SWEPCO - John W. Truk, Jr. Power Plant

Hi Leslie,

As I mentioned to you over the phone, here is this email to confirm that DEQ received the application fee for the Permit Modification Application submitted on August 9, 2018. This permit modification is under Document ID 74356 in the Solid Waste Database. As previously discussed , this modification was placed on hold until the facility can show that the use of Closure Turk as final cover meets regulatory requirement during the demonstration period.

Since I'm leaving DEQ, I've included my supervisor Annette and Dillon, the new engineer assigned to this facility. Feel free to contact them with any question or comments.

Thank you,
Cristy Coker | Permitting Engineer
Division of Environmental Quality | Office of Land Resources
Regulated Waste Operations
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0603 | e: coker@adeq.state.ar.us

ARKANSAS DEPARTMENT OF ENERGY AND ENVIRONMENT

ARKANSAS
ENERGY & ENVIRONMENT

Minor Modification Application

SWEPCO – John W. Turk, Jr. Power Plant
Fulton, Arkansas
Permit No. 0311-S3N-R1
AFIN: 29-00506

August 2023

Terracon Project No. 35237130

AEP SOUTHWESTERN ELECTRIC POWER COMPANY

A unit of American Electric Power

8.28.23

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9199
DAVID C. McCORMICK

CERTIFICATE OF AUTHORIZATION
TERRACON CONSULTANTS, INC.
No.223
ARKANSAS

Prepared for:
SWEPCO
3711 Highway 3555
Fulton, AR 71838

Prepared by:
Terracon Consultants, Inc.
25809 Interstate 30 South
Bryant, Arkansas 72022
(501) 847-9292

PROFESSIONAL ENGINEER'S CERTIFICATION

"I certify to the best of my professional judgment that the minor modifications requested for the SWEPCO – John W. Turk, Jr. Power Plant (Turk) Class 3N Landfill, located near Fulton, Arkansas was designed to comply with applicable Arkansas Department of Environmental Quality regulations.

Dave McCormick, P.E.
Arkansas Professional Engineer Registration No. 9199

8.28.23
Certification Date

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8.28.23

CERTIFICATE OF AUTHORIZATION
TERRACON CONSULTANTS, INC.
No.223
ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9199
DAVID C. McCORMICK

1.0 INTRODUCTION

Southwestern Electric Power Company (SWEPCO) owns and operates a coal-fired power plant (John W. Turk, Jr. Power Plant) with a Class 3 Non- Commercial (3N) solid waste facility (Class 3N Landfill) associated with the Power Plant. The site is located approximately 2.2 miles north of Fulton (Hempstead County), Arkansas. The Class 3N Landfill is used for disposal of fly ash, bottom ash, and other byproducts from the coal-fired Power Plant. The waste materials are non-hazardous and non-putrescible.

Currently 26.8 acres (Cells 1& 2) of the 73 acre Class 3N landfill have been constructed and are currently active. **FIGURE 1** shows the general geographic location of the Site. The facility is operated in accordance with Solid Landfill Permit No. 0311-S3N-R1 (Class 3N Landfill) as issued by the Arkansas Department of Environmental Quality (ADEQ). A copy of the existing Class 3N Landfill Permit (0311-S3N-R1) is presented in **ATTACHMENT A**. The information that follows constitutes a request for a minor permit modification in accordance with *Reg.22.308 of Regulation 22-Solid Waste Management Rules*.

2.0 DESCRIPTION OF MINOR PERMIT MODIFICATION REQUEST

In accordance with Reg.22.308 (a), the following information is necessary for requesting a permit modification:

1. **Name, current mailing address, and permit number of the applicant;**
2. **A complete description of the proposed modification including all necessary revisions to the original or previously modified permit application;**
3. **Revised permit plans, specifications, narrative;**
4. **Permit modification fee in accordance with the current fee schedule;**
5. **Any other requirements deemed necessary by the Department to adequately assess the impact of the proposed modification.**

A response to each of the requirements of Reg.22.308 (a) follows.

Reg.22.308 (a) (1):

The name, current mailing address, and permit number of the applicant is as follows:

SWEPCO – John W. Turk, Jr. Power Plant
3711 Highway 3555
Fulton, AR 71838
Class 3N Landfill; Permit 0311-S3N-R1, AFIN: 29-00506

The ADEQ permit modification application form, included in **ATTACHMENT B,** also provides the requested information. An aerial photograph of the Landfill is presented in **FIGURE 2**.

Reg.22.308 (a) (2):

The existing Turk facility consists of 2,800 acres, more or less, of which approximately 74 acres are permitted for waste disposal (see current Permit 0311-S3N-R1 in **ATTACHMENT A**).

Introduction

The waste disposal "footprint" acreage will not be altered in this modification. The waste capacity of the facility will not be increased in this modification. The facility proposes to perform the following modification:

- Expand the eligible waste streams listing for more plant operational flexibility. The spent catalyst sheets are a waste stream created from the operation of the facility. The DEQ previously authorized this waste stream for a one-time disposal waste stream. There will not be any additional waste capacity gained.

These proposed modification will be explained in more detail in this report and attached appendices.

Additional Waste Stream Listing

The facility requests that this additional waste be accepted:

- Spent catalyst sheets

The Hazardous Waste and Unauthorized Waste Exclusion Plan in **ATTACHMENT C** was updated with the above waste stream. The Operating Plan in **ATTACHMENT D** was also updated.

SWEPCO requests that the Director consider this proposal to be a minor modification as provided in Reg.22.308 (b). This modification will not change the permitted footprint or the permitted waste capacity.

Reg.22.308 (a) (4):

A permit modification fee ($2,000) for the minor modification is required. The Facility is requesting that the fee be paid for by the Permit Modification Application submitted on August 19, 2018 (Doc ID 74356).

Reg.22.308 (a) (5):

SWEPCO will provide additional information for this modification at the request of the ADEQ.

ATTACHMENT A

EXISTING SOLID WASTE LANDFILL PERMIT

ADEQ
ARKANSAS
Department of Environmental Quality

June 29, 2018

Mr. Terry Wehling, P.E.
Southwestern Electric Power Company (SWEPCO)
502 North Allen Avenue
Shreveport, LA 71101

Re: Approval of Minor Permit Modification and Transmittal of Permit
SWEPCO – John W. Turk, Jr. Power Plant, Class 3N Landfill
Permit No: 0311-S3N-R1; AFIN: 29-00506
Document ID: 74049; Reference Document ID: 73268

Dear Mr. Wehling:

The Arkansas Department of Environmental Quality Office of Land Resources (ADEQ) Regulated Waste Operations staff has completed the review of a minor permit modification application to modify the west side slope and add additional gravel drains to the leachate collection pond and to replace the twelve inches (12') of intermediate cover with an alternative intermediate cover option. The ADEQ hereby approves the minor permit modification and transmits the attached updated permit and permit modification application summary and rationale.

This approval is being given in reliance upon the statements and representations made to the ADEQ, and the ADEQ has no responsibility for ultimate proper functioning of the disposal facility. The ADEQ also reserves the right to request additional information if it is deemed necessary. This approval shall not remove any liability nor hold Southwestern Electric Power Company (SWEPCO) harmless in the event of any adverse environmental or public health conditions resulting from the disposal of the material. SWEPCO shall be solely and fully responsible for implementing any corrective action necessary to remediate any adverse condition resulting from the disposal at the site based on this authorization.

If you have any questions or need further assistance, please contact Cristina Coker of my staff at (501) 682-0603 or coker@adeq.state.ar.us.

Sincerely,

Charles M. Johnson
Senior Manager
Office of Land Resources

Enclosures: Updated Permit
Permit Modification Application Summary and Rationale

cc: ADEQ – C. Johnson, Rich, Cusher, Greenwood, and Coker
Mr. Dave McCormick, P.E., Terracon Consultant, Inc.

PERMIT
FOR THE CONSTRUCTION AND OPERATION OF A SOLID WASTE DISPOSAL FACILITY

ISSUED BY
STATE OF ARKANSAS
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF LAND RESOURCES

Class 3N Landfill

Permit Number:	0311-S3N-R1
AFIN:	29-00506
Effective Date:	June 29, 2018
Original Issue Date:	July 15, 2011
Modifications:	April 11, 2016 (Minor Modification)
Permit Owner and Address:	Southwestern Electric Power Company (SWEPCO) 502 North Allen Avenue Shreveport, LA 71101
Facility Site Name and Address:	SWEPCO – John W. Turk, Jr. Power Plant 3711 Highway 3555, Fulton, AR 71838
Location:	General: About 4 miles north of Fulton, Arkansas in Hempstead County, Arkansas) Power Plant: 2,800 acre site: Both sides of Hwy 355, T12S, R26W, portions of S32 and S33; T13S, R26W portions of S4 thru S9 and S16 thru S20; T13S, R27W, portions of S13 and S24. Landfill site: T12S, R26W portions of S8 and S9. Lat: N 33 deg, 38', 59"; Long: W 93 deg, 48', 44"

This permit aouthorizes the construction and operation of the Class 3 N lnafill as set forth in the permit application prepared by Southwestern Electric Power Company (SWEPCO), hereanfter called "owner" or "permittee".

This minor permit modification was originally completed thought a document furnished by the applicant on February 23, 2018 (DOC ID # 73227). The application was submitted to modify the west side slope and to add additional gravel drains to the leachate collection pond, and to replace the twelve inches (12") of intermediate cover with an alternative intermediate cover option.

This permit is issued pursuant to the provisions of the Arkansas Solid Waste Management Act (Arkansas Code Annotated 8-6-201 et seq.) as amended, hereinafter called the "Act;" Regulation No. 22, Arkansas Solid Waste Management Rules, as adopted by the Arkansas Pollution Control and Ecology Commission, hereinafter called "APC&EC Regulation No. 22;" and all other applicable rules and regulations administered by the Arkansas Department of Environmental Quality, hereinafter called "Department", and the following terms and condition:

DESCRIPTION OF THIS PERMIT ACTION

This permit modification is to modify the west side slope of the leachate collection pond by replacing the geotextile and 12–inch protective soil cover with a 60 mil HDPE sheet, rub sheet. Add additional gravel drains on the south and southeast side slope of the leachate collection pond. And, to replace the twelve inches (12") of intermediate cover with an alternative intermediate cover option.

SITE SPECIFIC PERMIT CONDITIONS

1. The permit will expire when the disposal area described in the final engineering plans for Cell 1 through Cell 5 have been filled to design capacity and is closed out in accordance with the approved closure and post-closure plans and provisions of APC&EC Regulation No. 22. The final grades and elevations shown on the approved plans, which include components of the final cover system, shall not be exceeded in anticipation of settlement and consolidation of the waste mass.

2. The approved permit plans for the facility are as follows: (from Document ID 68754 and Document ID 73227)

Drawing Number	Date	Title	Revision
1-30STE900	12-17-2015	Preparation Abbreviations	1
1-30STE901	12-17-2015	Key Plan, Drawing Index, and General Notes	2
1-30STE902	12-17-2015	Bench Marks & Piezometers	1
1-30STE903	12-17-2015	Leachate Collection Excavation and Grading Plan	2
1-30STE904	12-17-2015	Typical Sections and Details	2
1-30STE905	12-17-2015	Disposal Cell 1 Excavation & Grading	1
1-30STE906	12-17-2015	Disposal Cell 1 Final Grading & Cover	1
1-30STE907	12-17-2015	Disposal Cell 2 Excavation & Grading	1
1-30STE908	12-17-2015	Disposal Cell 2 Final Grading & Cover	1
1-30STE909	12-17-2015	Disposal Cell 1 Cross Sections	2
1-30STE910	12-17-2015	Disposal Cells 1 & 2 Cross Sections	2
1-30STE911	12-17-2015	Typical Sections and Details	2

1-30STE912	12-17-2015	Typical Sections and Details	3
1-30STE913	12-17-2015	Typical Sections and Details	1
1-30STE914	12-17-2015	Disposal Cell 3 Excavation & Grading	0
1-30STE915	12-17-2015	Disposal Cell 3 Final Grading & Cover	1
1-30STE916	12-17-2015	Cross-Section All Cells	2
1-30STE917	12-17-2015	Disposal Cell 4 Excavation & Grading	1
1-30STE918	12-17-2015	Disposal Cell 4 Final Grading & Cover	1
1-30STE919	12-17-2015	Disposal Cell 5 Excavation & Grading	1
1-30STE920	12-17-2015	Disposal Cell 5 Final Grading & Cover	1
1-30STE921	12-17-2015	Cross Sections Cells 1 & 2	2
1-30STE922	12-17-2015	Cross Sections 3 - 5	2
1-30STE923	12-17-2015	Disposal Cells 1 & 2 Profiles	A
1-30STE924	12-17-2015	Disposal Cells 1, 2 & 3 Profiles	A
1-30STE925	12-17-2015	Disposal Cell 1 UG Systems Plan	A
1-30STE926	12-17-2015	Disposal Cell 2 UG Systems Plan	A
1-30STE927	12-17-2015	Disposal Cell 3 UG Systems Plan	A
1-30STE928	12-17-2015	Disposal Cell 4 UG Systems Plan	A
1-30STE929	12-17-2015	Disposal Cell 5 UG Systems Plan	A
1-30STE930	12-17-2015	Stormwater Management Plan	-
1-30STE931	12-17-2015	Chimney Drain & Stormwater Details	-
1-30STE932	12-17-2015	Makeup & Wastewater Pond DWG Index & General Notes	4
1-30STE933	12-17-2015	Makeup & Wastewater Pond Excavation & Grading Plan	5
1-30STE934	12-17-2015	Makeup & Wastewater Pond Sections and Notes	7
1-30STE935	12-17-2015	Makeup WW & Leachate Pond Access RD Plan & Sec's	6
1-30STE936	5-23-2018	Leachate Collection Pond (Document ID 73227)	1
1-30STE937	12-17-2015	Leachate Collection Pond Sections & Notes	5
1-30STE938	12-17-2015	Makeup & Wastewater Pond U/G Systems Plan	0
1-30STE939	12-17-2015	Sumps, Plans, and Sections	3
1-30STE940	12-17-2015	Leachate Sump Plan and Sections	C

3. The facility is permitted for 6,884,235 cubic yards of solid waste disposal including daily and intermediate cover material.

4. This permit is for the disposal of solid waste generated by Southwestern Electric Power Company at the John W. Turk, Jr. Power Plant. The authorized waste streams include bottom ash, economizer ash, fly ash (including flue gas desulfurization (FGD) waste ash), scrubber waste, waste coal, coal mill rejects, cooling tower sediments, cooling water screenings, construction and demolition debris, sump pit sediments, make-up water treatment sediment, fire brick and refractory materials, non-hazardous sand blast media, sediments from dredging operations, water treatment systems sediments, sand filter media, waste lime, waste activated carbon, demineralizer resins, box liners, bag filters.

a. Additional waste items not mentioned above may be authorized by the Department for disposal at the facility on a case-by-case basis when requested by the permittee.

b. Regulated PCBs and PCB items as defined in 40 CFR 761 or "Hazardous waste" as defined by APC&EC Regulation No. 23 are not authorized for disposal in the facility.

All disposed materials or waste streams and their volumes shall be reported in the annual report that is to be submitted to the Office of Land Resources.

5. The permittee is exempted from implementing a routine methane monitoring program unless the Department determines that:

a. The nature and quantity of waste poses a significant potential for the generation of explosive gases; or

b. Explosive gases have been detected in concentrations exceeding the standards identified in APC&EC Regulation 22.514 (a).

6. Salvage of disposed bottom and fly ash material for recycling purposes is authorized by the Department under the following conditions:

a. An area has been designated by the permittee for recovery of salvageable material.

b. The operations do not interfere with or otherwise delay the activities of the disposal working face.

c. The recovery of salvageable material must be conducted in an orderly manner and do not harm human health and the environment.

d. All salvaged material is removed from the landfill site daily, or properly stored so that they do not create a nuisance or unsightly appearance.

Salvage is otherwise prohibited in accordance with General Condition No. 12.

7. The permittee is granted an exemption from the minimum daily cover requirements contained in APC&EC Regulation 22.512(a) provided that the exemption will control disease vectors, fires, odors, blowing litter, scavenging, and causes no harm to human health or the environment. However, the Department reserves the right to rescind this exemption if deemed necessary to provide for the control of disease vectors, fires, odors, blowing litter, scavenging, or to prevent harm to human health or the environment. APC&EC Regulation 22.512(b) requires a compacted layer of cover soil of sufficient quality to ensure there is not exposed waste but, not less than twelve inches (12") shall be applied upon surface that will not receive an additional application of waste or final cover within thirty (30) days. The modification application dated February 23, 2018 presents

acceptable alternatives to the twelve inches (12") intermediate cover. The Permittee may utilize these alternatives as presented or suitable approved equivalent.

8. The permittee is permitted to spray fly ash and bottom ash with water in order to encourage the pozzolanic reaction and develop the cementitious property of the ash material, and to control dust. Collected landfill leachate may be used as described herein only over permitted lined landfill areas.

   a. The permittee shall take all the necessary steps to prevent the generation of standing water.

   b. No waste shall be deposited in standing water.

9. The permittee is granted an exemption from providing aeration of leachate in the Leachate Pond. From the Leachate Pond the leachate shall be conveyed to the power block area, subsequently used in the power generation operations. The leachate shall not be discharged from the landfill facility. Visual high leachate level alarms shall be installed and maintained at the Leachate Pond. High leachate levels shall be immediately corrected. Leachate Pond levels shall be recorded daily and made part of Operating Record as required by the General Permit Conditions.

10. The following bottom liner system configurations are approved for Cells 1 through 5 as shown on Drawings 1-30STE905, 1-30STE907, 1-30STE914, 1-30STE917, and 1-30STE919 of the Permit Application, Document ID 68754. The bottom liner system (including the bottom sideslopes) consists of, listed from bottom to top,

    Cell 1 Liner System:
    --compacted prepared subgrade
    --2 feet compacted clay liner soil with maximum hydraulic conductivity of 1×10^{-7} cm /s
    --60 mil high density polyethylene (HDPE) geomembrane
    --woven monofilament geotextile fabric (8-oz / yd^2)
    --12 inches leachate collection drainage layer on disposal cell bottom with minimum hydraulic conductivity of 3.0×10^{-1} [side slopes consists of composite geonet in-lieu of drainage layer material]
    --woven monofilament geotextile fabric (8-oz / yd^2) over the drainage layer
    --12 inches of soil protective layer

    Cell 2 to 5 Liner System:
    --compacted prepared subgrade
    --2 feet compacted clay liner soil with maximum hydraulic conductivity of 1×10^{-7} cm /s
    --60 mil high density polyethylene (HDPE) geomembrane
    --double-sided geocomposite
    --12 inches of protective soil or bottom ash layer with hydraulic conductivity of 0.5×10^{-4} cm/s
    --Chimney drains located in the protective layer with a maximum 85 foot separation

11. The following landfill final cover system configurations are approved for Cells 1 through

5 as shown on Drawings 1-30STE906, 1-30STE908, 1-30STE915, 1-30STE918, and 1-30STE920 of the Permit Application, Document ID 68754. The final cover liner system consists of, listed from bottom to top.

The final cover liner system consists of, listed from bottom to top.
--18 inches of low permeability clay soil with maximum permeability 1 x 10^{-7} cm/sec
--60 mil high density polyethylene (HDPE) geomembrane
--double-sided geocomposite
--18 inches of common fill (soil protective layer)
--6 inches of topsoil

12. The permittee shall implement the Hazardous Waste and Unauthorized Waste Exclusion Plan presented in Attachment H of the Permit Application (Document ID 68754). In addition to the implementation of the approved Hazardous Waste and Unauthorized Waste Exclusion Plan, the facility shall fully meet all requirements of APC&EC Regulation No. 22.412 regarding the exclusion of all unauthorized waste streams.

13. The permittee shall implement the requirements detailed in the Operating Plan and Narrative presented in Volume 2 of 4, Appendix D of the Permit Application (Document ID 59305). In addition to the implementation of the approved Operating Plan and Narrative, the facility shall fully meet all operating requirements of APC&EC Regulation No. 22 unless specifically addressed by a permit condition.

14. Landfill cells shall be constructed in accordance with the approved CQA Plan located in Volume 3 of 4, Appendix A of Document ID 59305 and furthermore in accordance with APC&EC Regulation No. 22 and permitted designs. Before construction of a new landfill cell, notification shall be submitted in accordance with APC&EC Regulation No. 22.428.

15. The permittee shall maintain closure and post-closure care plans that describes the steps necessary to close all landfill units at any point during its active life and to maintain the integrity and effectiveness of the closure system to minimize infiltration and erosion, as required by APC&EC Regulation No. 22.1301, *et seq.* As such, the permittee shall implement the requirements detailed in the Closure and Post-Closure Plan presented in Volume 2 of 4, Appendix H of the Permit Application (Document ID 59305).

16. The initial total amount of financial assurance is $4,972,823. Of this amount, $1,602,500 dollars will be required for closure costs and $3,370,323 will be required for the post-closure costs. This amount shall be subject to annual adjustments and may be increased at the discretion of the Department based upon the estimated cost for a third party to close the largest area requiring final cover during the active life of the facility and the cost for a third party to perform post closure care.

    a. The instruments used must be in one of the forms set forth in APC&EC Regulation No. 22 or as otherwise approved by the Department.

    b. Operations allowed under this permit shall not commence until all financial assurance is satisfactorily filed with the Department.

c. A portion or all of the financial assurance may be held by the Department beyond the time of cessation of disposal operations at the site to ensure satisfactory closure and post closure care in accordance with APC&EC Regulation No. 22.

GROUNDWATER MONITORING PERMIT CONDITIONS

17. The groundwater monitoring program at the site shall follow the provisions of APC&EC Regulation No. 22.

18. A groundwater monitoring system shall be established and maintained at the landfill and leachate pond that consists of a sufficient number of wells or sampling points, installed at appropriate locations and depths that will yield representative samples of groundwater quality. The monitoring system shall be designed, installed, operated, and maintained in accordance with the approved design specifications throughout the active life of the facility and the post-closure care period.

19. The initial groundwater monitoring system shall utilize, at a minimum, nine (9) monitoring wells (MW-1 through MW-9D). Monitoring wells MW-1 through MW-8 will be screened in the upper Arkadelphia Marl while well MW-9D will be screened in the upper Nacatoch Formation. The monitoring well locations are shown on Figure 2, Volume 2 of 4, Appendix J, in the document titled *Groundwater Sampling and Analysis Plan* (Document ID 59305). These initial nine wells are to monitor waste in Cell 1 and 2 of the landfill and the leachate pond. Additional wells will be required to monitor Cells 3, 4, and 5 of the landfill at a future date. Additional wells must be installed and sampled at least one year prior to placing waste into each of the cells after Cell 2 (Cells 3, 4, or 5).

20. The facility will follow the approved Sampling and Analysis Plan (SAP). The SAP shall comply with the requirements of APC&EC Regulation No. 22. The currently approved SAP is contained within Appendix J, Volume 2 of 4 of Document ID 59305. Changes to this approved SAP will be accomplished following the provisions of APC&EC Regulation No. 22.1203.

21. Monitoring Frequency & Reporting: Per APC&EC Regulation No. 22, the groundwater monitoring frequency shall be at least semiannual during the active life of the facility and the post-closure period. During the first year of monitoring, four quarterly samples from each well shall be collected. A groundwater monitoring report shall be submitted to the ADEQ within 90 calendar days from the date of the monitoring event.

    Monitoring Parameters: During detection monitoring, groundwater samples shall be analyzed for the following:

    Arsenic, Barium, Boron, Cadmium, Chromium, Fluoride, Iron, Lead, Manganese, Mercury, Molybdenum, Selenium, Silver, Strontium, Chloride, Sulfate, Total Dissolved Solids (TDS), pH, Specific Conductance, and Turbidity.

All parameter concentrations above the Method Detection Limit (MDL) must be reported. The Department may modify the monitoring frequency or parameters required under this permit per APC&EC Regulation No. 22 Chapter 12.

Leachate from the landfill will be sampled at the same frequency and for the same parameters as groundwater monitoring except that turbidity is not a required parameter. [APC&EC Regulation No. 22.529 (i.e. APC&EC Regulation No. 22.429)].

GENERAL PERMIT CONDITIONS FOR A CLASS 3N LANDFILL

22. This permit is issued in reliance upon the statements and representations made in the application, operating narrative, plans, specifications, correspondence, and other related documents. The Department bears no responsibility for the adequacy or proper functioning of the disposal facility. Nothing contained herein shall be construed as releasing the permittee from any liability from damage to persons or property due to the installation, maintenance, or operation of the disposal facility or any act of the permittee, or the permittee's employees or agents.

23. The disposal facility shall be constructed, operated and maintained in accordance with the final plans, specifications and operation narrative as approved by the Department and in compliance with applicable provisions of the Arkansas Solid Waste Management Act A.C.A. 8-6-201 et. seq, APC&EC Regulation No. 22.510, and all other applicable rules and APC&EC Regulations.

24. At all times the disposal facility shall be maintained in good condition and operations shall be conducted by licensed, qualified, on-site operators holding the appropriate license in accordance with APC&EC Regulation No. 27, Licensing of Solid Waste Management Facilities and Illegal Dump Control Officers.

25. This permit may be revoked or modified whenever, in the opinion of the Department, the facility is no longer in compliance with the Arkansas Solid Waste Management Act A.C.A. 8-6-201 et. seq, APC&EC Regulation No. 22, or other applicable rules and regulations (APC&EC Regulation No. 22.308). Except where expressly authorized by the Department, this permit shall not relieve the permittee, or the permittee's employees or agents, from compliance with the provisions of the Act and APC&EC Regulation No. 22.

26. The Department may issue modifications or amendments to this permit governing the design, operation, maintenance, closure or post-closure of the facility during the term of this permit. Such modifications or amendments will be incorporated to this permit and shall be fully maintained and enforceable as a condition or conditions of this permit.

27. The Department has received an initial permit fee from the permittee. Annual permit fees due thereafter shall be assessed in accordance with APC&EC Regulation No. 9, Fee System for Environmental Permits. The facility shall also be responsible for quarterly payments for disposal fees no later than January 15, April 15, July 15, and October 15 following the quarter to which the payments pertain (APC&EC Regulation No. 11.207(a)). Failure to pay annual fees or quarterly payments when due may result in revocation of this permit (APC&EC Regulation No. 22.309(e)).

28. The permittee shall maintain an Operating Record at the location indicated in the permit application, or at an alternate location approved in writing by the Department.

    a. At a minimum, the following documents and materials shall be retained in the facility operating record for review by authorized representatives of the

Department:

i.) The approved facility operating plan, approved permit plans and specifications, CQA reports, site inspection reports, operator licenses, this disposal permit and written authorizations issued by the Department that provide modifications to the facility or its operations, all environmental monitoring (including leachate pond levels) or test results, and other pertinent records, certifications and correspondence as required by APC&EC Regulation No. 22 or other permit conditions herein;

ii.) All construction test results, certifications, acceptances, construction reports, photographs, layout drawings, record (as-constructed) drawings, shop drawings, construction drawings, and other documentation required by the specifications, and CQA/QC plans, reports and documents; and

iii.) Other documents that pertain to the operation, maintenance, closure or post-closure of the facility, or as directed by the ADEQ.

b. The permittee shall forward a copy of information from the Operating Record when requested by the Department.

29. Transactions that affect the ownership of the facility must be fully disclosed to the Department.

a. For purposes of evaluating whether a change in ownership occurs, ownership or control may result from a change in the equity of the permittee of five percent (5%) or more.

b. If applicable, the permittee shall submit to the Department annual and quarterly reports required by the Securities and Exchange Commission (SEC) that provide information regarding legal proceedings in which the permittee has been involved in order to determine whether any change in ownership or control of the operation of this landfill has occurred.

c. A permit transfer will not be required when a change in ownership or control of the facility is among the persons and/or entities previously disclosed to the Department in Section E of the Disclosure Statement or similar disclosure.

30. The permittee shall furnish the Department annual engineering inspection reports no later than June 30 of the following year in accordance with APC&EC Regulation No. 22.522.

31. A survey control system shall be established and maintained at the landfill site that complies with APC&EC Regulation No. 22.426.

32. The landfill working face shall be confined to the smallest practicable area.

33. The permittee shall not engage in or allow salvage operations at the facility except with

written authorization from the Department or as may be provided in the section titled Site Specific Permit Conditions. The Department may review and approve requests for future salvage of disposed materials for recycling purposes on a case-by-case basis.

34. Disposal of bulk liquid waste in the landfill is prohibited. Liquid waste is waste that contains "free liquids" as defined by Method 9095 (Paint Filter Liquids Test) in EPA Publication No. SW-846.

35. Measures to control and prevent storm water run-on from running through or into the active disposal area shall be constructed and maintained. Grading, dikes, diversion ditches, silt fencing, silt, traps, and other best management practices (BMP) for storm water control shall be provided as necessary to control/prevent off-site sediment accumulation from landfill related operations.

36. Appropriate NPDES construction/storm water permit(s) shall be obtained for storm water discharges from the landfill site and borrow sites. A Storm Water Pollution Prevention Plan (SWPPP), which outlines erosion and sediment control measures, shall be prepared and implemented in accordance with applicable NPDES requirements. A copy of the SWPPP shall be maintained on-site for reference by operating staff.

37. The permittee shall comply with the air criteria requirements of APC&EC Regulation No. 22.515. Those requirements include meeting the State Implementation Plan (SIP) pursuant to Section 110 of the Clean Air Act; prohibiting open burning of solid waste, unless authorized by the Department; and establishing fire safety procedures.

38. Litter control measures shall be implemented, if necessary, to confine litter to the smallest practicable extent and prevent litter from leaving the site.

39. The permittee shall implement a Class 3N unauthorized waste exclusion screening and detection program at the facility in accordance with the approved Hazardous Waste and Unauthorized Waste Exclusion Plan and APC&EC Regulation No. 22.511(b). The program shall include procedures for evaluation of any questionable wastes prior to disposal to determine whether the waste complies with the APC&EC Regulation No. 22 requirements for disposal in the facility.

40. The permittee must cover disposed waste with at least six inches of soil at the end of each operating day, or at more frequent intervals if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging as required by APC&EC Regulation No. 22.512. No portion of the waste is to be left exposed at the end of the operating day. Alternative materials for daily cover, such as synthetic materials, shall only be used when specifically authorized in writing by the Department. Any alternative daily cover that is proposed by the permittee must comply with Department guidelines and include specific written operating procedures that will be implemented to control disease vectors, fires, odors, blowing litter, and scavenging. The use of synthetic material will not be authorized unless it is incorporated within operating procedures that also rely on use of at least six inches of soil cover for daily cover on some days; any proposal for daily cover based solely upon full-time use of synthetic material will not be approved.

The permittee has been granted a variance from the daily cover requirements. Details of the variance are outlined in the Site Specific Permit Conditions. The Department reserves the right to rescind this exemption if deemed necessary to provide for the control of disease vectors, fires, odors, blowing litter, scavenging, or to prevent harm to human health or the environment.

41. The final grades and elevations shown on the plans shall not be exceeded at any time or in anticipation of settlement and consolidation of the waste mass.

    a. Timely initiation and completion of closure of landfill cells or units shall be made in accordance with APC&EC Regulation No. 22.1301(f) and (g).

    b. Proper construction of the final cover system shall be observed and certified in writing to the Department by a Registered Professional Engineer in a Construction Certification Report in accordance with the approved CQA Plan whenever a cell, area or phase of the landfill is closed-out.

    c. The Certification Report shall include CQA/QC test results as indicated in the approved CQA Plan; drawings indicating the location, designation and extent of closed area(s); and test locations.

42. Any statements in the operational narrative, specifications, and/or engineering plans that conflict with APC&EC Regulation No. 22, permit conditions herein, or other applicable laws and regulations shall not be considered authorized by the Department.

43. This permit authorizes one (1) active disposal area at the facility per APC&EC Regulation No. 22. Multiple working faces shall not be utilized at the facility unless the permittee can provide adequate justification for more than one working face and specific authorization for such is granted in writing by the Department. It is not anticipated that such authorization will be granted except on a temporary basis for highly unusual or emergency situations.

44. The Department, its employees, agents, or any authorized person shall have the right to enter the property at any time for any reason as set out in APC&EC Regulation No. 22 for the purposes of, including but not limited to, taking samples, reviewing the operating record, inspecting the facility, and perform other enforcement or engineering action without interference or delay from the permittee.

45. The Department's decision to issue this permit is final for purposes of appeal as of the date indicated in the Certificate of Service below. If any provision of these conditions or the application of these conditions thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of these conditions that can be given effect without the invalid provision or application. Therefore, to this end, the provisions of these conditions are declared to be severable.

APPROVED BY: **Arkansas Department of Environmental Quality**
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

for Kevin White

July 5, 2018
Date

CERTIFICATE OF SERVICE

I, Karen Blue, hereby certify that a copy of this permit has been mailed by first-class mail to Mr. Terry Wehling at 502 North Allen Avenue, Shreveport, LA. 71101, on or before this 6th day of July, 2018.

PERMIT MODIFICATION APPLICATION SUMMARY AND RATIONALE

SWEPCO- John W. Turk, Jr. Power Plant
Permit No. 0311-S3N-R1;
AFIN: 29-00506
June, 2018

PERMIT MODIFICATION APPLICATION SUMMARY

This summary form consists of information submitted during the permitting process. It represents basic information from the administrative record utilized in forming recommendations from the Solid Waste Management Division. The entire file for the solid waste permit application specified below should be reviewed for complete details on the proposed facility.

PERMIT APPLICATION SUMMARY	
1. Name of Applicant:	Southwestern Electric Power Company (SWEPCO) 502 North Allen Avenue Shreveport, LA 71101
2. Type of Facility:	Class 3N Landfill
3. Engineering Firm:	Terracon Consultants, Inc., Bryant, Arkansas
4. Application Date:	February 22, 2018 - Minor Permit Modification
5. Site Location	General: The site is located between McNab and Fulton, Arkansas in Hempstead County.
6. Permit Area:	Permitted Landfill Area: 73 acres
7. Residences Within 2 Miles:	Approximately 500 dwellings identified from USGS 7.5 minute quadrangle
8. Water Supplies Within 2 Miles:	Thirty one (31) water wells were identified within 2 miles of the proposed landfill. The wells were identified through well construction records on file at the Arkansas Geological Commission and by sending a well survey questionnaire to locations within ½ mile of the proposed landfill. The water well inventory is documented in Section 2.6 and Appendix A of the Hydrogeologic and Geotechnical Report (Document #59305)
9. Wetlands:	Landfill footprint changed to prevent disturbance of preliminarily identified adjacent wetlands.
10. Geology:	This Class 3N landfill sits on the Cretaceous Age Arkadelphia Marl. The marl consists of a limy clay with variable amounts of silt and gravel at shallow depths and grading into a firm shaley clay/clayey shale. Variable amounts of rounded chert gravel occurs within the upper clay unit especially in the northern portion of the site. Gypsum veins are present within the marl. The weathered upper marl unit ranged in thickness from approximately 30 to 45 feet. Dark gray shaley clay/clayey shale (shale) of the Arkadelphia Marl is present below the weathered upper marl. The lower shale unit of the Arkadelphia Marl ranges in thickness from approximately 65 to 95 feet. The total thickness of the Arkadelphia Marl beneath the proposed landfill ranges from 110 to 135 feet.

PERMIT APPLICATION SUMMARY	
	The Nacatoch formation is located below the Arkadelphia Marl and is represented by a hard sandstone layer overlying a fine grained, loosely cemented sand. The sandstone is generally medium to light gray with a calcareous cement and is 3 to 15 feet thick.
11. Groundwater:	Groundwater within the upper Arkadelphia Marl appears to flow within the gravelly units, the gypsum veins, and fissile zones due to the blocky nature of the marl. Groundwater within the marl appears connected and to represent the uppermost aquifer. The depth to groundwater ranges from 10 to 30 feet below ground surface. The general direction of groundwater flow across the site within the intermediate wells in the Arkadelphia Marl was to the east with components northeast and southeast during the Hydrogeologic Investigation (Document #59305). Beneath the Arkadelphia Marl, at 110 to 135 feet below ground surface, the Nacatoch Sand is present and is used as a water supply aquifer in the area. The groundwater in the Nacatoch Sand is under confined conditions at the site. The general direction of groundwater movement in the Nacatoch Sand was to the southwest during the Hydrogeologic Investigation (Document #59305).
12. Surface Drainage Sequence:	Bridge Creek is a natural drainageway approximately bisecting the permittee's property between the power block and solid waste landfill area. The topography of the proposed landfill site is relatively flat with approximately 20 feet of relief. The existing generalized overland flow conditions within the north portion of the landfill drains to the perennial Bridge Creek, while the southeast drainage is through an intermittent drainage way to Bridge Creek. Bridge Creek flows into Bois d'Arc Creek approximately five miles southeast of the landfill site within the Bois d' Arc Creek Wildlife Management Area. Surface water from the south portion of the proposed landfill drains through an unnamed intermittent drainage way to the Red River near the town of Fulton.
13. Waste Streams:	Eligible Class 3N waste generated at the site.
14. Capacity	Total Capacity = 6,884,235 Cubic Yards
15. Disposal Rate (estimation)	177,927 cubic yards per year.
16. Projected Active Life (estimation)	34 years
17. Bottom Liner System:	The bottom liner system includes a leachate collection and recovery system (LCRS) consisting of lateral permeable drainage layer (12" of drainage material on bottom landfill areas and geosynthetic geonet on landfill side slopes), and a series of pipes designed to remove leachate from the waste mass. Overlaying the LCRS is a geosynthetic geotextile and a 12" protective soil cover to shield the LCRS. Underlying the LCRS, the liner design consists of a 60 mil high density polyethylene

PERMIT APPLICATION SUMMARY	
	(HDPE) geomembrane above a two foot thick layer of select, low permeable clay soil material placed and compacted to achieve the required maximum $1x10^{-7}$ cm/sec hydraulic conductivity.
18. Final Cover:	Overlying the waste mass is designed a final cover consisting of an 18" low permeable clay constructed to achieve a maximum hydraulic conductivity of $1x10^{-7}$ cm/sec. The clay is overlain by a 60 mil high density polyethylene (HDPE) geomembrane and a geosynthetic geotextile fabric. Over the geotextile is a 12" sand drainage layer which directs any rainfall percolation to an 8" diameter slotted drain pipe installed along the perimeter of the final cover area, and then to 12" diameter outfall pipes periodically spaced at the toe of the final cover slope. A geosynthetic geotextile and an 18" layer of common soil fill are placed atop the sand drainage layer, and finally a 6" topsoil layer is placed for vegetative growth.

PERMIT RATIONALE

The following information was considered during the preparation of a draft permit for the proposed facility:

- Original Permit Application dated February 25, 2011 (Doc #59305).
- Correspondence from the Permittee; the Arkansas Solid Waste Management Code, as Amended; Regulation Number 22; and all other applicable rules and regulations of the Arkansas Department of Environmental Quality.

Condition No.	Site Specific Permit Conditions
1	Refers to the landfill disposal area for the Class 3N facility as shown in the approved application and operational narrative plans (APC&EC Regulation No. 22.309)
2	Lists the approved design plans. (APC&EC Regulation No. 22.303)
3	Permitted disposal volume as calculated by design engineer based on permitted bottom and waste grades (APC&EC Regulation No. 22.303)
4	Concerns the types of wastes that can be accepted at the facility. The facility is permitted as a Class 3N landfill and may accept nonhazardous industrial, commercial, non-putrescible waste generated only by the permittee. Hazardous and/or toxic waste materials, liquid or semi-liquid waste, household garbage, and putrescible wastes are not authorized for acceptance and disposal at the facility (APC&EC Regulation No. 22.102)
5,6,7,8& 9	Concerns various exemptions granted to permittee.
10	The minimum requirements of the approved bottom liner system (APC&EC Regulation No. 22.524). Permittee requested geomembrane component to enhance liner performance.

Condition No.	Site Specific Permit Conditions
11	The minimum requirements of the approved final cover liner system (APC&EC Regulation No. 22.528). Permittee requested geomembrane component to enhance liner performance.
12	Concerns the approved hazardous waste exclusion plan (APC&EC Regulation No. 22.511)
13	Concerns the approved operating plan and narrative (APC&EC Regulation No. 22.510)
14	CQA Plan requirements (APC&EC Regulation No. 22.524)
15	Closure and Post-Closure Plan requirements and implementation (APC&EC Regulations No. 22.1301 and No. 22.1302)
16	Specifies the initial amount of financial assurance. (APC&EC Regulations 22.1402 and No. 22.1403).

Condition No.	Groundwater Monitoring Permit Conditions
17	Statement requiring the facility to follow the provisions of APC&EC Regulation No. 22 for groundwater monitoring. In addition, no groundwater monitoring conditions in this permit or currently approved Sampling and Analysis Plan (Volume 2 of 4, Appendix J (Doc #59305) are intended to conflict with APC&EC Regulation No. 22.
18	A general summary of APC&EC Regulations No. 22.1202(a); No. 22.1201(d); and No. 22.1202(c). Monitoring of groundwater around the leachate pond is based on the clause "landfills and other facilities" in APC&EC Regulation No. 22.1201(a) – *Applicability*; and on the definition of "facility" in APC&EC Regulation No. 22.102 - *Definitions*.
19	Defines the initial groundwater monitoring system to be installed for Cells 1 and 2 of the landfill and the leachate pond. The upper portion of the Arkadelphia Marl has been defined as the uppermost aquifer in the Hydrogeological Investigation of the site (Volume 2 of 4, Document ID 59305). Monitoring wells MW-1 through MW-8 will be screened in the same zone as the intermediate wells in the Hydrogeological Investigation. Monitoring well MW-9D will be screened in the Nacatoch Formation because of the importance of this formation as a source of drinking water.
20	Requires the permittee to monitor in accordance with the approved Sampling and Analysis Plan (SAP). Defines the current SAP. An approved SAP is required in APC&EC Regulation No. 22.1203.
21	Defines the frequency, parameters, and some reporting aspects for groundwater monitoring during background sampling and detection monitoring. Frequency and reporting are based on APC&EC Regulations No. 22.1203(k), No. 22.1203(h)(5), and No. 22.11204(b). Parameters are based on leaching and leachate results from the SWEPCO Flint Creek plant and other coal combustion plants. Leachate sampling requirements are based on APC&EC Regulation No. 22.529 (i.e. APC&EC Regulation No. 22.429).

Condition No.	General Conditions for Class 3N Facilities
22	States the Department has no responsibility for the proper functioning of the disposal facility and the permittee is not exempt from liability to third parties per APC&EC Regulation No. 8.
23	Concerns the requirements for construction and operation of the disposal facility in accordance with the approved plans/specifications/operation narrative are in accordance with APC&EC Regulation No. 22.
24	Concerns requirements to maintain the disposal facility in good operating condition under licensed, qualified, on-site landfill operators is in accordance with APC&EC Regulation No. 22 and with APC&EC Regulation No. 27.
25	Concerns the right of the Department to revoke or modify the permit in the event the facility is no longer in compliance with the Arkansas Solid Waste Management Act, APC&EC Regulation No. 22, or any other applicable regulations.
26	Concerns issuance of modifications to the permit by the Department is in accordance with APC&EC No. Regulation 22.
27	Concerns payment of permit fees in accordance with APC&EC Regulation No. 9.
28	Concerns requirements for maintenance of landfill related documents in an Operating Record are in accordance with appropriate Sections of APC&EC Regulation No. 22.
29	Concerns permit transfer and disclosure is in accordance with Act 454 of 1991.
30	Concerns requirements for submittal of an annual engineering inspection report are in accordance with APC&EC Regulation No. 22.
31	Outlines the requirements for implementation and maintenance of a survey control system at the landfill site for horizontal and vertical control of landfill construction/operation is in accordance with APC&EC Regulation No. 22.
32	Outlines requirements for disposal in a single working area of the smallest practicable extent are in accordance with APC&EC Regulation No. 22.
33	Regards salvage operations are not allowed in accordance with APC&EC Regulation No. 22.
34	Concerns the prohibition of the disposal of bulk liquid waste in the landfill is in accordance with APC&EC Regulation No. 22.
35 & 36	Concerns measures to control and prevent stormwater run through or into the active face and requirements for appropriate NPDES permit(s) and a Storm Water Pollution Prevention Plan (SWPPP) is in accordance with Sections 22.517, 22.518 and 22.527 of APC&EC Regulation No. 22, and the Clean Water Act.
37	Concerns requirements for compliance with applicable air criteria is in accordance with Section 22.515 of APC&EC Regulation No. 22 and the Clean Air Act.
38	Concerns with litter control fences and other control measures for blowing litter.
39	Concerns requirements for implementation of a Class 3N Exclusion Screening and Detection Program at the facility is in accordance with APC&EC Regulation No. 22.
40	Concerns the application of six inches of soil at the end of each operating day.
41	Concerns requirements to fill within the final grades and elevations indicated on the approved plans, timely initiation and completion of closure, and proper CQA

Condition No.	General Conditions for Class 3N Facilities
	monitoring and certification are in accordance with Sections 22.308, 22.510, 22.528, and 22.1301 of APC&EC Regulation No. 22
42	Concerns the requirements for the permittee to comply with APC&EC Regulation No. 22 or permit conditions in the event of a conflict between them and representations in the permit application documents is in accordance with Section 22.308 of APC&EC Regulation No. 22.
43	Concerns the permit authorizes only one (1) working face. APC&EC Regulation No. 22.510
44	Concerns the right of Department employees to enter the permittee's property to inspect the facility at any time without interference or delay is in accordance with Section 22.1501 of APC&EC Regulation No. 22.
45	Concerns providing notice for the purpose of appeal of the final permit in accordance with Section 22.306 of APC&EC Regulation No. 22 and in accordance with Regulation 8. Provisions regarding severability are in accordance with Section 22.1601 of APC&EC Regulation No. 22.

This document was prepared by Clark McWilliams, Engineer P.E. and Bill Sadler, P.G., Geologist Supervisor.

ADEQ

ARKANSAS
Department of Environmental Quality

April 11, 2016

Mr. Terry Wehling, P.E.
Southwestern Electric Power Company (SWEPCO)
502 North Allen Avenue
Shreveport, LA 71101

RE: Approval of Minor Permit Modification and Transmittal of Revised Permit
SWEPCO – John W. Turk, Jr. Power Plant Class 3N Landfill
Permit Number: 0311-S3N-R1; AFIN: 29-00506
Document Number: 68900; Cross Reference Numbers: 68754

Dear Mr. Wehling:

The Arkansas Department of Environmental Quality – Office of Land Resources (ADEQ) has completed review of a minor permit modification application regarding the leachate collection system, final cover configuration, replacing the twelve inches (12") of intermediate cover with alternative intermediate cover options, and expanding the eligible waste streams listing for more plant operational flexibility. ADEQ has made a decision to approve the minor permit modification, which is included in this transmittal.

This authorization is given in reliance upon the statements and representations made to the Department, and the Department has no responsibility for ultimate proper functioning of the disposal facility. The Department also reserves the right to request additional information if deemed necessary. This approval shall not remove any liability nor hold SWEPCO-John W. Turk, Jr., Power Plant Class 3N Landfill harmless in the event of any adverse environmental or public health conditions resulting from this authorization. SWEPCO shall be solely and fully responsible for implementing any corrective action necessary to remediate any adverse condition at the site based on this authorization.

If you have any questions or need additional information, please contact Ali Dorobati of my staff at (501) 682-0603 or ali@adeq.state.ar.us.

Sincerely,

Tammie J. Hynum, Senior Manager
Regulated Waste Program
Office of Land Resources

cc: ADEQ – Cusher, Sadler, Greenwood, Love, Hynum, Rich, Leamons, S. McWilliams, and Dorobati

Enclosures: Fact Sheet, Proposed Permit, and Permit Sign–off Sheet

Arkansas Department of Environmental Quality (ADEQ)

PROPOSED PERMIT MODIFICATION FACT SHEET

Permittee:	Southwestern Electric Power Company (SWEPCO)
Location:	3711 Highway 355S, Fulton, AR 71838 (About 4 miles north of Fulton, Arkansas in Hempstead County, Arkansas)
AFIN:	29-00506
Permit Number:	0311-S3N

Action: The Arkansas Department of Environmental Quality (ADEQ) reviewed the Permit Modification Application submitted by Southwestern Electric Power Company (SWEPCO) on January 12, 2016, to ensure compliance with Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation No. 22 and the Arkansas Solid Waste Management Act A.C.A. 8-6-201 et. seq. ADEQ proposes to issue a Class 3N Minor Permit Modification to SWEPCO for modifying the leachate collection system, final cover configuration, replacing the twelve inches (12") of intermediate cover with alternative intermediate cover options, and expanding the eligible waste streams listing for more plant operational flexibility. No capacity increase, change in estimated site-life, or change in waste unit boundary is permitted by this minor modification.

Statement of Basis for Permit Conditions: The basis for the conditions for this Permit Modification can be found in general in APC&EC Regulation No. 22, the Arkansas Solid Waste Management Act A.C.A. 8-6-201 et. seq. A copy of APC&EC Regulation No. 22 is available from the Department for the cost of printing the document or on the ADEQ web site: www.adeq.state.ar.us

Facility Description: Southern Electric power Company (SWEPCO) owns and operates a coal-fired power plant (John W. Turk, Jr. Power Plant) with a Class 3 Non-Commercial (3N) solid waste facility (Class 3N Landfill) associated with the Power Plant. The site is located approximately 2.2 miles north of Fulton (Hempstead County), Arkansas. The Class 3N Landfill is used for disposal of fly ash, bottom ash, and other byproducts from the existing coal-fired Power Plant. The waste materials are non-hazardous and non-putrescible.

This permit modification provides SWEPCO the authority to construct and operate the Solid Waste Disposal Facility set forth in this modification application received on January 12, 2016 (Doc ID#68754) for the leachate collection system, final cover configuration, replacing the twelve inches (12") of intermediate cover with alternative intermediate cover options, and expanding the eligible waste streams listing for more plant operational flexibility.

The change include: 1) modify the leachate collection system to allow the option to utilize a double sided geocomposite with chimney drains, and on site protective cover material (soils and/or bottom ash); 2) to modify the final cover system by replacing the twelve inches (12") of drainage sand with a double sided geocomposite; 3) to modify the final cover with storm water drainage swales and let down structures in order to better control the run-off from the final cover system; 4) to replace the twelve inches (12") of intermediate cover with alternative intermediate cover option; 5) to expand the eligible waste streams listing for more plant operational

flexibility. These waste streams are from the operation of the facility.

No capacity increase, change in estimated site-life, or change in waste unit boundary is permitted by this minor modification.

Facility Location: Power Plant: 2,800 acre site: Both sides of Hwy 355, T12S, R26W, portions of S32 and S33; T13S, R26W portions of S4 thru S9 and S16 thru S20; T13S, R27W, portions of S13 and S24. Landfill site: T12S, R26W portions of S8 and S9. Lat: N 33 deg, 38', 59 ; Long: W 93 deg, 48', 44".

Documents On File: Individuals may review the administrative record in the ADEQ Records Management Section located at 5301 Northshore Drive, North Little Rock, Arkansas. In addition, the public may also review the administrative record at http://www.adeq.state.ar.us/sw/permits/p_facil_report.asp:PermitNumber=0311-S3N

Variances Or Waivers: The Permittee is granted an exemption from the minimum daily cover requirement contained in APC&EC Regulation 22.512(a) as allowed by APC&EC Regulation 22.512(d). Condition 7 of this permit modification explains in detail about this exemption.

The correspondence consists of the following documents:

	Doc #	Received/Sent	
1.	68754	01/12/2016	Minor Permit Modification Application
2.	Sign off Sheet		

End of Fact Sheet

PERMIT
FOR THE CONSTRUCTION AND OPERATION OF A
CLASS 3N SOLID WASTE DISPOSAL FACILITY

ISSUED BY
STATE OF ARKANSAS
DEPARTMENT OF ENVIRONMENTAL QUALITY
REGULATED WASTE PROGRAMS

PERMIT NUMBER:	0311-S3N-R1
AFIN:	29-00506
PERMIT CLASS:	Class 3N Landfill
PERMIT OWNER AND ADDRESS:	Southwestern Electric Power Company (SWEPCO) 502 North Allen Avenue Shreveport, LA 71101
PERMIT LOCATION:	3711 Highway 355, Fulton, AR 71838 (About 4 miles north of Fulton, Arkansas in Hempstead County, Arkansas)
LEGAL DESCRIPTION:	Power Plant: 2,800 acre site: Both sides of Hwy 355, T12S, R26W, portions of S32 and S33; T13S, R26W portions of S4 thru S9 and S16 thru S20; T13S, R27W, portions of S13 and S24. Landfill site: T12S, R26W portions of S8 and S9. Lat: N 33 deg, 38', 59"; Long: W 93 deg, 48', 44"

DESCRIPTION OF THIS PERMIT ACTION : This minor permit modification application was submitted to revise the leachate collection system, final cover configuration, replacing the 12 inches of intermediate cover with alternative intermediate cover options, and expanding the eligible waste streams listing for more plant operational flexibility.

PERMIT CONDITIONS: This permit modification provides SWEPCO the authority to construct and operate the Solid Waste Disposal Facility set forth in this modification application revised on January 12, 2016, to include: 1) modify the leachate collection system to allow the option to utilize double sided geocomposite with chimney drains, and on-site protective cover material (soils and/or bottom ash); 2) to modify the final cover system by replacing the twelve inches (12") of drainage sand with a double-sided geocomposite; 3) to modify the final cover with storm water drainage swales and let down structures in order to better control the run-off from the final cove system; 4) to replace the twelve inches (12") of intermediate cover with alternative intermediate cover option; 5) to expand the eligible waste streams listing for more plant operational flexibility. These waste streams are from the operation of the facility. Based in this modification, original conditions 2, 3, 7, 10, 11 and 12 of the original permit have been revised. No capacity increase, change in estimated site-life, or change in waste unit boundary is permitted by this minor modification.

This permit modification is issued pursuant to the provisions of the Arkansas Solid Waste Management Act (Arkansas Code Annotated 8-6-201 et seq.) as amended, hereinafter called the "Act;" Regulation No. 22, Arkansas Solid Waste Management Rules, as adopted by the Arkansas Pollution Control and Ecology Commission, hereinafter called "APC&EC Regulation No. 22;" and all other applicable rules and regulations administered by the Arkansas Department of Environmental Quality, hereinafter called "Department", and the following terms and conditions:

PERMIT CONDITIONS

1. The permit will expire when the disposal area described in the final engineering plans for Cell 1 through Cell 5 have been filled to design capacity and is closed out in accordance with the approved closure and post-closure plans and provisions of APC&EC Regulation No. 22. The final grades and elevations shown on the approved plans, which include components of the final cover system, shall not be exceeded in anticipation of settlement and consolidation of the waste mass.

2. The approved permit plans for the facility are as follows: (from Document ID 68754)

Drawing Number	Date	Title	Revision
1-30STE900	12-17-2015	Preparation Abbreviations	1
1-30STE901	12-17-2015	Key Plan, Drawing Index, and General Notes	2
1-30STE902	12-17-2015	Bench Marks & Piezometers	1
1-30STE903	12-17-2015	Leachate Collection Excavation and Grading Plan	2
1-30STE904	12-17-2015	Typical Sections and Details	2
1-30STE905	12-17-2015	Disposal Cell 1 Excavation & Grading	1
1-30STE906	12-17-2015	Disposal Cell 1 Final Grading & Cover	1
1-30STE907	12-17-2015	Disposal Cell 2 Excavation & Grading	1
1-30STE908	12-17-2015	Disposal Cell 2 Final Grading & Cover	1
1-30STE909	12-17-2015	Disposal Cell 1 Cross Sections	2
1-30STE910	12-17-2015	Disposal Cells 1 & 2 Cross Sections	2
1-30STE911	12-17-2015	Typical Sections and Details	2
1-30STE912	12-17-2015	Typical Sections and Details	3
1-30STE913	12-17-2015	Typical Sections and Details	1
1-30STE914	12-17-2015	Disposal Cell 3 Excavation & Grading	0
1-30STE915	12-17-2015	Disposal Cell 3 Final Grading & Cover	1
1-30STE916	12-17-2015	Cross-Section All Cells	2
1-30STE917	12-17-2015	Disposal Cell 4 Excavation & Grading	1

1-30STE918	12-17-2015	Disposal Cell 4 Final Grading & Cover	1
1-30STE919	12-17-2015	Disposal Cell 5 Excavation & Grading	1
1-30STE920	12-17-2015	Disposal Cell 5 Final Grading & Cover	1
1-30STE921	12-17-2015	Cross Sections Cells 1 & 2	2
1-30STE922	12-17-2015	Cross Sections 3 - 5	2
1-30STE923	12-17-2015	Disposal Cells 1 & 2 Profiles	A
1-30STE924	12-17-2015	Disposal Cells 1, 2 & 3 Profiles	A
1-30STE925	12-17-2015	Disposal Cell 1 UG Systems Plan	A
1-30STE926	12-17-2015	Disposal Cell 2 UG Systems Plan	A
1-30STE927	12-17-2015	Disposal Cell 3 UG Systems Plan	A
1-30STE928	12-17-2015	Disposal Cell 4 UG Systems Plan	A
1-30STE929	12-17-2015	Disposal Cell 5 UG Systems Plan	A
1-30STE930	12-17-2015	Stormwater Management Plan	-
1-30STE931	12-17-2015	Chimney Drain & Stormwater Details	-
1-30STE932	12-17-2015	Makeup & Wastewater Pond DWG Index & General Notes	4
1-30STE933	12-17-2015	Makeup & Wastewater Pond Excavation & Grading Plan	5
1-30STE934	12-17-2015	Makeup & Wastewater Pond Sections and Notes	7
1-30STE935	12-17-2015	Makeup WW & Leachate Pond Access RD Plan & Sec's	6
1-30STE936	12-17-2015	Leachate Collection Pond Excavation & Grading Plan	4
1-30STE937	12-17-2015	Leachate Collection Pond Sections & Notes	5
1-30STE938	12-17-2015	Makeup & Wastewater Pond U/G Systems Plan	0
1-30STE939	12-17-2015	Sumps, Plans, and Sections	3
1-30STE940	12-17-2015	Leachate Sump Plan and Sections	C

3. The facility is permitted for 6,884,235 cubic yards of solid waste disposal including daily and intermediate cover material.

4. This permit is for the disposal of solid waste generated by Southwestern Electric Power Company (SWEPCO) at the John W. Turk, Jr. Power Plant. The authorized waste streams include bottom ash, economizer ash, fly ash (including flue gas desulfurization (FGD) waste ash), scrubber waste, waste coal, coal mill rejects, cooling tower sediments, cooling water screenings, construction and demolition debris, sump pit sediments, make-up water treatment sediment, fire brick and refractory materials, non-hazardous sand blast media, sediments from dredging operations, water treatment systems sediments, sand filter media, waste lime, waste activated carbon, demineralizer resins, box liners, bag filters.

   a. Additional waste items not mentioned above may be authorized by the Department for disposal at the facility on a case-by-case basis when requested by the permittee.

   b. Regulated PCBs and PCB items as defined in 40 CFR 761 or "Hazardous waste" as defined by APC&EC Regulation No. 23 are not authorized for disposal in the facility.

   All disposed materials or waste streams and their volumes shall be reported in the annual report that is to be submitted to the Office of Land Resources.

5. The permittee is exempted from implementing a routine methane monitoring program unless the Department determines that:

   a. The nature and quantity of waste poses a significant potential for the generation of explosive gases; or

   b. Explosive gases have been detected in concentrations exceeding the standards identified in APC&EC Regulation 22.514 (a).

6. Salvage of disposed bottom and fly ash material for recycling purposes is authorized by the Department under the following conditions:

   a. An area has been designated by the permittee for recovery of salvageable material.

   b. The operations do not interfere with or otherwise delay the activities of the disposal working face.

   c. The recovery of salvageable material must be conducted in an orderly manner and do not harm human health and the environment.

   d. All salvaged material is removed from the landfill site daily, or properly stored so that they do not create a nuisance or unsightly appearance.

   Salvage is otherwise prohibited in accordance with General Condition No. 12.

7. The permittee is granted an exemption from the minimum daily cover requirements contained in APC&EC Regulation 22.512(a) provided that the exemption will control disease vectors, fires, odors, blowing litter, scavenging, and causes no harm to human health or the environment. However, the Department reserves the right to rescind this exemption if

deemed necessary to provide for the control of disease vectors, fires, odors, blowing litter, scavenging, or to prevent harm to human health or the environment. APC&EC Regulation 22.512(b) requires a compacted layer of cover soil of sufficient quality to ensure there is not exposed waste but, not less than twelve inches (12") shall be applied upon surface that will not receive an additional application of waste or final cover within thirty (30) days. The modification application dated January 12, 2016 (Doc ID 68754) presents acceptable alternatives to the twelve inches (12") intermediate cover. The Permittee may utilize these alternatives as presented or suitable approved equivalent.

8. The permittee is permitted to spray fly ash and bottom ash with water in order to encourage the pozzolanic reaction and develop the cementitious property of the ash material, and to control dust. Collected landfill leachate may be used as described herein only over permitted lined landfill areas.

   a. The permittee shall take all the necessary steps to prevent the generation of standing water.

   b. No waste shall be deposited in standing water.

9. The permittee is granted an exemption from providing aeration of leachate in the Leachate Pond. From the Leachate Pond the leachate shall be conveyed to the power block area, subsequently used in the power generation operations. The leachate shall not be discharged from the landfill facility. Visual high leachate level alarms shall be installed and maintained at the Leachate Pond. High leachate levels shall be immediately corrected. Leachate Pond levels shall be recorded daily and made part of Operating Record as required by the General Permit Conditions.

10. The following bottom liner system configurations are approved for Cells 1 through 5 as shown on Drawings 1-30STE905, 1-30STE907, 1-30STE914, 1-30STE917, and 1-30STE919 of the Permit Application, Document ID 68754. The bottom liner system (including the bottom sideslopes) consists of, listed from bottom to top,

    Cell 1 Liner System:
    --compacted prepared subgrade
    --2 feet compacted clay liner soil with maximum hydraulic conductivity of 1×10^{-7} cm /s
    --60 mil high density polyethylene (HDPE) geomembrane
    --woven monofilament geotextile fabric (8-oz / yd^2)
    --12 inches leachate collection drainage layer on disposal cell bottom with minimum hydraulic conductivity of 3.0×10^{-1} [side slopes consists of composite geonet in-lieu of drainage layer material]
    --woven monofilament geotextile fabric (8-oz / yd^2) over the drainage layer
    --12 inches of soil protective layer

Cell 2 to 5 Liner System:
--compacted prepared subgrade
--2 feet compacted clay liner soil with maximum hydraulic conductivity of 1×10^{-7} cm /s
--60 mil high density polyethylene (HDPE) geomembrane
--double-sided geocomposite
--12 inches of protective soil or bottom ash layer with hydraulic conductivity of 0.5×10^{-4} cm/s
--Chimney drains located in the protective layer with a maximum 85 foot separation

11. The following landfill final cover system configurations are approved for Cells 1 through 5 as shown on Drawings 1-30STE906, 1-30STE908, 1-30STE915, 1-30STE918, and 1-30STE920 of the Permit Application, Document ID 68754. The final cover liner system consists of, listed from bottom to top.

    The final cover liner system consists of, listed from bottom to top.
    --18 inches of low permeability clay soil with maximum permeability 1×10^{-7} cm/sec
    --60 mil high density polyethylene (HDPE) geomembrane
    --double-sided geocomposite
    --18 inches of common fill (soil protective layer)
    --6 inches of topsoil

12. The permittee shall implement the Hazardous Waste and Unauthorized Waste Exclusion Plan presented in Attachment H of the Permit Application (Document ID 68754). In addition to the implementation of the approved Hazardous Waste and Unauthorized Waste Exclusion Plan, the facility shall fully meet all requirements of APC&EC Regulation No. 22.412 regarding the exclusion of all unauthorized waste streams.

13. The permittee shall implement the requirements detailed in the Operating Plan and Narrative presented in Volume 2 of 4, Appendix D of the Permit Application (Document ID 59305). In addition to the implementation of the approved Operating Plan and Narrative, the facility shall fully meet all operating requirements of APC&EC Regulation No. 22 unless specifically addressed by a permit condition.

14. Landfill cells shall be constructed in accordance with the approved CQA Plan located in Volume 3 of 4, Appendix A of Document ID 59305 and furthermore in accordance with APC&EC Regulation No. 22 and permitted designs. Before construction of a new landfill cell, notification shall be submitted in accordance with APC&EC Regulation No. 22.428.

15. The permittee shall maintain closure and post-closure care plans that describes the steps necessary to close all landfill units at any point during its active life and to maintain the integrity and effectiveness of the closure system to minimize infiltration and erosion, as required by APC&EC Regulation No. 22.1301, *et seq.* As such, the permittee shall implement the requirements detailed in the Closure and Post-Closure Plan presented in Volume 2 of 4, Appendix H of the Permit Application (Document ID 59305).

16. The initial total amount of financial assurance is $4,972,823. Of this amount, $1,602,500 dollars will be required for closure costs and $3,370,323 will be required for the post-closure costs. This amount shall be subject to annual adjustments and may be increased at the discretion of the Department based upon the estimated cost for a third party to close the

largest area requiring final cover during the active life of the facility and the cost for a third party to perform post closure care.

a. The instruments used must be in one of the forms set forth in APC&EC Regulation No. 22 or as otherwise approved by the Department.

b. Operations allowed under this permit shall not commence until all financial assurance is satisfactorily filed with the Department.

c. A portion or all of the financial assurance may be held by the Department beyond the time of cessation of disposal operations at the site to ensure satisfactory closure and post closure care in accordance with APC&EC Regulation No. 22.

GROUNDWATER MONITORING PERMIT CONDITIONS

17. The groundwater monitoring program at the site shall follow the provisions of APC&EC Regulation No. 22.

18. A groundwater monitoring system shall be established and maintained at the landfill and leachate pond that consists of a sufficient number of wells or sampling points, installed at appropriate locations and depths that will yield representative samples of groundwater quality. The monitoring system shall be designed, installed, operated, and maintained in accordance with the approved design specifications throughout the active life of the facility and the post-closure care period.

19. The initial groundwater monitoring system shall utilize, at a minimum, nine (9) monitoring wells (MW-1 through MW-9D). Monitoring wells MW-1 through MW-8 will be screened in the upper Arkadelphia Marl while well MW-9D will be screened in the upper Nacatoch Formation. The monitoring well locations are shown on Figure 2, Volume 2 of 4, Appendix J, in the document titled *Groundwater Sampling and Analysis Plan* (Document ID 59305). These initial nine wells are to monitor waste in Cell 1 and 2 of the landfill and the leachate pond. Additional wells will be required to monitor Cells 3, 4, and 5 of the landfill at a future date. Additional wells must be installed and sampled at least one year prior to placing waste into each of the cells after Cell 2 (Cells 3, 4, or 5).

20. The facility will follow the approved Sampling and Analysis Plan (SAP). The SAP shall comply with the requirements of APC&EC Regulation No. 22. The currently approved SAP is contained within Appendix J, Volume 2 of 4 of Document ID 59305. Changes to this approved SAP will be accomplished following the provisions of APC&EC Regulation No. 22.1203.

21. Monitoring Frequency & Reporting: Per APC&EC Regulation No. 22, the groundwater monitoring frequency shall be at least semiannual during the active life of the facility and the post-closure period. During the first year of monitoring, four quarterly samples from each well shall be collected. A groundwater monitoring report shall be submitted to the ADEQ within 90 calendar days from the date of the monitoring event.

    Monitoring Parameters: During detection monitoring, groundwater samples shall be analyzed for the following:

    Arsenic, Barium, Boron, Cadmium, Chromium, Fluoride, Iron, Lead, Manganese, Mercury, Molybdenum, Selenium, Silver, Strontium, Chloride, Sulfate, Total Dissolved Solids (TDS), pH, Specific Conductance, and Turbidity.

    All parameter concentrations above the Method Detection Limit (MDL) must be reported. The Department may modify the monitoring frequency or parameters required under this permit per APC&EC Regulation No. 22 Chapter 12.

Leachate from the landfill will be sampled at the same frequency and for the same parameters as groundwater monitoring except that turbidity is not a required parameter. [APC&EC Regulation No. 22.529 (i.e. APC&EC Regulation No. 22.429)].

GENERAL PERMIT CONDITIONS FOR A CLASS 3N LANDFILL

22. This permit is issued in reliance upon the statements and representations made in the application, operating narrative, plans, specifications, correspondence, and other related documents. The Department bears no responsibility for the adequacy or proper functioning of the disposal facility. Nothing contained herein shall be construed as releasing the permittee from any liability from damage to persons or property due to the installation, maintenance, or operation of the disposal facility or any act of the permittee, or the permittee's employees or agents.

23. The disposal facility shall be constructed, operated and maintained in accordance with the final plans, specifications and operation narrative as approved by the Department and in compliance with applicable provisions of the Arkansas Solid Waste Management Act A.C.A. 8-6-201 et. seq, APC&EC Regulation No. 22.510, and all other applicable rules and APC&EC Regulations.

24. At all times the disposal facility shall be maintained in good condition and operations shall be conducted by licensed, qualified, on-site operators holding the appropriate license in accordance with APC&EC Regulation No. 27, Licensing of Solid Waste Management Facilities and Illegal Dump Control Officers.

25. This permit may be revoked or modified whenever, in the opinion of the Department, the facility is no longer in compliance with the Arkansas Solid Waste Management Act A.C.A. 8-6-201 et. seq, APC&EC Regulation No. 22, or other applicable rules and regulations (APC&EC Regulation No. 22.308). Except where expressly authorized by the Department, this permit shall not relieve the permittee, or the permittee's employees or agents, from compliance with the provisions of the Act and APC&EC Regulation No. 22.

26. The Department may issue modifications or amendments to this permit governing the design, operation, maintenance, closure or post-closure of the facility during the term of this permit. Such modifications or amendments will be incorporated to this permit and shall be fully maintained and enforceable as a condition or conditions of this permit.

27. The Department has received an initial permit fee from the permittee. Annual permit fees due thereafter shall be assessed in accordance with APC&EC Regulation No. 9, Fee System for Environmental Permits. The facility shall also be responsible for quarterly payments for disposal fees no later than January 15, April 15, July 15, and October 15 following the quarter to which the payments pertain (APC&EC Regulation 11.207(a)). Failure to pay annual fees or quarterly payments when due may result in revocation of this permit (APC&EC Regulation No. 22.309(e)).

28. The permittee shall maintain an Operating Record at the location indicated in the permit application, or at an alternate location approved in writing by the Department.

    a. At a minimum, the following documents and materials shall be retained in the facility operating record for review by authorized representatives of the Department:

i.) The approved facility operating plan, approved permit plans and specifications, CQA reports, site inspection reports, operator licenses, this disposal permit and written authorizations issued by the Department that provide modifications to the facility or its operations, all environmental monitoring (including leachate pond levels) or test results, and other pertinent records, certifications and correspondence as required by APC&EC Regulation No. 22 or other permit conditions herein;

ii.) All construction test results, certifications, acceptances, construction reports, photographs, layout drawings, record (as-constructed) drawings, shop drawings, construction drawings, and other documentation required by the specifications, and CQA/QC plans, reports and documents; and

iii.) Other documents that pertain to the operation, maintenance, closure or post-closure of the facility, or as directed by the ADEQ.

b. The permittee shall forward a copy of information from the Operating Record when requested by the Department.

29. Transactions that affect the ownership of the facility must be fully disclosed to the Department.

b. For purposes of evaluating whether a change in ownership occurs, ownership or control may result from a change in the equity of the permittee of five percent (5%) or more.

c. If applicable, the permittee shall submit to the Department annual and quarterly reports required by the Securities and Exchange Commission (SEC) that provide information regarding legal proceedings in which the permittee has been involved in order to determine whether any change in ownership or control of the operation of this landfill has occurred.

d. A permit transfer will not be required when a change in ownership or control of the facility is among the persons and/or entities previously disclosed to the Department in Section E of the Disclosure Statement or similar disclosure.

30. The permittee shall furnish the Department annual engineering inspection reports no later than June 30 of the following year in accordance with APC&EC Regulation No. 22.522.

31. A survey control system shall be established and maintained at the landfill site that complies with APC&EC Regulation No. 22.426.

32. The landfill working face shall be confined to the smallest practicable area.

33. The permittee shall not engage in or allow salvage operations at the facility except with written authorization from the Department or as may be provided in the section titled Site Specific Permit Conditions. The Department may review and approve requests for future

salvage of disposed materials for recycling purposes on a case-by-case basis.

34. Disposal of bulk liquid waste in the landfill is prohibited. Liquid waste is waste that contains "free liquids" as defined by Method 9095 (Paint Filter Liquids Test) in EPA Publication No. SW-846.

35. Measures to control and prevent storm water run-on from running through or into the active disposal area shall be constructed and maintained. Grading, dikes, diversion ditches, silt fencing, silt, traps, and other best management practices (BMP) for storm water control shall be provided as necessary to control/prevent off-site sediment accumulation from landfill related operations.

36. Appropriate NPDES construction/storm water permit(s) shall be obtained for storm water discharges from the landfill site and borrow sites. A Storm Water Pollution Prevention Plan (SWPPP), which outlines erosion and sediment control measures, shall be prepared and implemented in accordance with applicable NPDES requirements. A copy of the SWPPP shall be maintained on-site for reference by operating staff.

37. The permittee shall comply with the air criteria requirements of APC&EC Regulation No. 22.515. Those requirements include meeting the State Implementation Plan (SIP) pursuant to Section 110 of the Clean Air Act; prohibiting open burning of solid waste, unless authorized by the Department; and establishing fire safety procedures.

38. Litter control measures shall be implemented, if necessary, to confine litter to the smallest practicable extent and prevent litter from leaving the site.

39. The permittee shall implement a Class 3N unauthorized waste exclusion screening and detection program at the facility in accordance with the approved Hazardous Waste and Unauthorized Waste Exclusion Plan and APC&EC Regulation No. 22.511(b). The program shall include procedures for evaluation of any questionable wastes prior to disposal to determine whether the waste complies with the APC&EC Regulation No. 22 requirements for disposal in the facility.

40. The permittee must cover disposed waste with at least six inches of soil at the end of each operating day, or at more frequent intervals if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging as required by APC&EC Regulation No. 22.512. No portion of the waste is to be left exposed at the end of the operating day. Alternative materials for daily cover, such as synthetic materials, shall only be used when specifically authorized in writing by the Department. Any alternative daily cover that is proposed by the permittee must comply with Department guidelines and include specific written operating procedures that will be implemented to control disease vectors, fires, odors, blowing litter, and scavenging. The use of synthetic material will not be authorized unless it is incorporated within operating procedures that also rely on use of at least six inches of soil cover for daily cover on some days; any proposal for daily cover based solely upon full-time use of synthetic

material will not be approved.

The permittee has been granted a variance from the daily cover requirements. Details of the variance are outlined in the Site Specific Permit Conditions. The Department reserves the right to rescind this exemption if deemed necessary to provide for the control of disease vectors, fires, odors, blowing litter, scavenging, or to prevent harm to human health or the environment.

41. The final grades and elevations shown on the plans shall not be exceeded at any time or in anticipation of settlement and consolidation of the waste mass.

    a. Timely initiation and completion of closure of landfill cells or units shall be made in accordance with APC&EC Regulation No. 22.1301(f) and (g).

    b. Proper construction of the final cover system shall be observed and certified in writing to the Department by a Registered Professional Engineer in a Construction Certification Report in accordance with the approved CQA Plan whenever a cell, area or phase of the landfill is closed-out.

    c. The Certification Report shall include CQA/QC test results as indicated in the approved CQA Plan; drawings indicating the location, designation and extent of closed area(s); and test locations.

42. Any statements in the operational narrative, specifications, and/or engineering plans that conflict with APC&EC Regulation No. 22, permit conditions herein, or other applicable laws and regulations shall not be considered authorized by the Department.

43. This permit authorizes one (1) active disposal area at the facility per APC&EC Regulation No. 22. Multiple working faces shall not be utilized at the facility unless the permittee can provide adequate justification for more than one working face and specific authorization for such is granted in writing by the Department. It is not anticipated that such authorization will be granted except on a temporary basis for highly unusual or emergency situations.

44. The Department, its employees, agents, or any authorized person shall have the right to enter the property at any time for any reason as set out in APC&EC Regulation No. 22 for the purposes of, including but not limited to, taking samples, reviewing the operating record, inspecting the facility, and perform other enforcement or engineering action without interference or delay from the permittee.

45. The Department's decision to issue this permit is final for purposes of appeal as of the date indicated in the Certificate of Service below. If any provision of these conditions or the application of these conditions thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of these conditions that can be given effect without the invalid provision or application. Therefore, to this end, the provisions of these conditions are declared to be severable.

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
PERMIT
FOR A SOLID WASTE MANAGEMENT FACILITY

PERMITTEE:	Southwestern Electric Power Company (SWEPCO)
OWNER:	Southwestern Electric Power Company (SWEPCO)
OPERATOR:	Southwestern Electric Power Company (SWEPCO), John W. Turk. Jr Power Plant
FACILITY LOCATION:	3711 Highway 355S, Fulton, AR 71838 (About 4 miles north of Fulton, Arkansas in Hempstead County, Arkansas)
DOCUMENT ID NUMBER:	68900
ACTIVITY:	Minor Modification
AFIN:	29-00506
PERMIT NUMBER:	0311-S3N

Pursuant to the provisions of the Arkansas Solid Waste Management Act (Arkansas Code Annotated 8-6-201 et seq.) as amended, hereinafter called the "Act;" Regulation No. 22, Arkansas Solid Waste Management, as adopted by the Pollution Control and Ecology Commission, hereinafter called "APC&EC Regulation No. 22, a Permit is issued by the Arkansas Department of Environmental Quality (ADEQ) to SWEPCO(Permittee), to operate a solid waste management facility located in Fulton, Hempstead County, Arkansas.

The Permittee's location is summarily described as follows:

> Power Plant: 2,800 acre site: Both sides of Hwy 355, T12S, R26W, portions of S32 and S33; T13S, R26W portions of S4 thru S9 and S16 thru S20; T13S, R27W, portions of S13 and S24.
>
> Landfill site: T12S, R26W portions of S8 and S9. Lat: N 33 deg, 38', 59"; Long: W 93 deg, 48', 44"

The Permittee shall comply with all terms and conditions of this Permit. This Permit consists of the conditions contained in APC&EC Regulation No. 22, as specified in the Permit. Applicable regulations are those which are in effect on the date of issuance of the Permit Modification, in accordance with APC&EC Regulation No. 22. Nothing contained herein shall negate the Permittee's duty to comply with the regulations and this Permit, or ADEQ's ability to enforce the regulations and this Permit. This Permit is based on the assumption that the information submitted in the Application of February 20, 2009, revised February 25, 2011 and revised on January 12, 2016 is accurate, and the facility will be operated as specified in the Applications and this Permit.

The Permittee shall inform ADEQ of any deviation from or changes in the information in the Application which would affect the Permittee's ability to comply with the applicable regulations or Permit conditions.

The Director reserves the right to amend or add conditions to this Permit, as necessary to be protective of human health and the environment.

This Permit shall be effective on service of notice of the permit modification decision, as specified in APC&EC Regulation No. 8 (Administrative Procedures), Part 2, Section 2.1.10(b).

For the purposes of resolving conflicts between requirements to which the Permittee is subject, the following hierarchy and order of authority will govern in the Permittee's duty to comply: Regulations promulgated under APC&EC Regulation No. 22; General Permit Conditions; Permit Conditions/standards specific to activities, and the Permit Modification Application(s).

Issued this 15th day of April ,2016

Tammie J. Hynum
Senior Manager
Regulated Waste Programs; Office of Land Resources
Arkansas Department of Environmental Quality

Date of Service: _____

(Certificate of Mailing of Notice of Decision)

Effective Date: _____

END OF PERMIT SIGN-OFF SHEET

ATTACHMENT B

APPLICATION FORM – MINOR PERMIT MODIFICATION APPLICATION

SOLID WASTE DISPOSAL FACILITY
PERMIT MODIFICATION APPLICATION

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
SOLID WASTE MANAGEMENT DIVISION
5301 NORTHSHORE DRIVE
NORTH LITTLE ROCK, AR 72118

Note: This modification application is to be used for all modifications to solid waste disposal and processing facilities. The Department will classify this modification as major or minor in accordance with the provisions of Section 22.308 of Regulation 22. Major modifications will be subject to the provisions of Regulation 8.

I. FACILITY TYPE

_____Class 1 Landfill

_____Class 4 Landfill

_____Class 3C Landfill

X Class 3N Landfill

_____Class 3T Landfill

_____Transfer Station (TS)

_____Composting Facility (Y, O or S)

_____Solid Waste Recovery Facility (WRF)

_____Construction and Demolition Recycling Facility (CDRF)

II. FACILITY IDENTIFICATION

Facility Name SWEPCO - John W. Turk, Jr. Power Plant Permit Number: 0311-S3N-R1 AFIN: 29-00506

Facility Address: 3711 Highway 355S

City: Fulton State: AR Zip: 71838

County: Hempstead Telephone Number: 903-831-1500 Fax Number: _____

III. APPLICANT

Applicant Name: Southwestern Electric Power Company (SWEPCO)

Applicant Address: 502 North Allen Avenue

City: Shreveport State: LA Zip: 71101

Contact Person: Ms. Leslie Fuerschbach / Envir. Engineer Phone Number: 318.673.2744

PERMIT HISTORY

(Complete for each permit and modification to date)

	Number	Date Issued
Permit Number:	0311-S3N-R1	July 29, 2018
Modification #1:		
Modification #2:		
Modification #3:		
Modification #4:		

MODIFICATION DESCRIPTION

(Complete each part below as it applies to this modification - if an item doesn't apply, mark it "N/A")

CHANGE IN PERMITTED CAPACITY (Specify whether yards or tons)

Original Cubic Yards 6,884,235 (updated corrected waste capacity)
(This includes the volume of solid waste and any daily or intermediate soil cover)

Modified Cubic Yards 6,884,235

Cubic Yards Increase (Decrease) (0) No increase in air-space

SITE LIFE & SERVICE AREA

Current Service Area This facility consists of a 600 Megawatt Power Plant. This landfill only accepts waste from the John W. Turk Jr. Power Plant.

Current Tons per year through the gate 152,871 (tons/year)

Current Landfill Utilization Rate 114,940 (cu. yards/year)

Estimated remaining site life (after this modification) 34 years

CHANGE IN PERMITTED DISPOSAL ACREAGE

Original Site Acres 73

Modified Site Acres 73

Site Acres Increase (Decrease) (0)

CHANGE IN OPERATING PROCEDURES (Provide brief description of each proposed modification)

Modify the eligible waste streams listings to include an additional facility operations waste stream (spent catalyst plates).

CHANGE IN FACILITY DESIGN (Provide brief description of each proposed modification N/A

REASON FOR MODIFICATION (Check one or specify below)

Change in Regulation	
Additional Site Life	
Improve Site Operations	X
Correct Past Violation	
Other (Specify)	

DRAWING REVISIONS

(Identify below each drawing that was revised or added as a result of this modification. Each revised or added drawing should be included as an attachment to this application.)

Drawing Number	Title	Date	Revision Number
	N/A		

OPERATING NARRATIVE REVISIONS

(Identify below each change to the operating narrative as a result of this modification. Revised narrative pages should be included as an attachment to this application. Deletions from the previous narrative should be indicated by strikeout, additions should be redlined.)

Page Number	Change Description
	See attachment 4A

JOHN W. TURK JR. – LANDFILL PERMIT 2016 DRAWINGS

Original Drawing Number	Rev	New Drawing Number	Date	Rev	Title
0-30STE071	1	**1-30STE900**	12-17-2015	0	Preparation Abbreviations
0-30STE400	2	**1-30STE901**	12-17-2015	0	Key Plan, Drawing Index, and General Notes
0-30STE401	1	**1-30STE902**	12-17-2015	0	Bench Marks & Piezometers
0-30STE402	2	**1-30STE903**	12-17-2015	0	Leachate Collection Excavation and Grading Plan
0-30STE403	2	**1-30STE904**	12-17-2015	0	Typical Sections and Details
0-30STE404	1	**1-30STE905**	12-17-2015	0	Disposal Cell 1 Excavation & Grading
0-30STE405	1	**1-30STE906**	12-17-2015	0	Disposal Cell 1 Final Grading & Cover
0-30STE406	1	**1-30STE907**	12-17-2015	0	Disposal Cell 2 Excavation & Grading
0-30STE407	1	**1-30STE908**	12-17-2015	0	Disposal Cell 2 Final Grading & Cover
0-30STE408	2	**1-30STE909**	12-17-2015	0	Disposal Cell 1 Cross Sections
0-30STE409	2	**1-30STE910**	12-17-2015	0	Disposal Cells 1 & 2 Cross Sections
0-30STE410	2	**1-30STE911**	12-17-2015	0	Typical Sections and Details
0-30STE411	3	**1-30STE912**	12-17-2015	0	Typical Sections and Details
0-30STE412	1	**1-30STE913**	12-17-2015	0	Typical Sections and Details
0-30STE413	0	**1-30STE914**	12-17-2015	0	Disposal Cell 3 Excavation & Grading
0-30STE414	1	**1-30STE915**	12-17-2015	0	Disposal Cell 3 Final Grading & Cover
0-30STE415	2	**1-30STE916**	12-17-2015	0	Cross-Section All Cells
0-30STE416	1	**1-30STE917**	12-17-2015	0	Disposal Cell 4 Excavation & Grading
0-30STE417	1	**1-30STE918**	12-17-2015	0	Disposal Cell 4 Final Grading & Cover
0-30STE418	1	**1-30STE919**	12-17-2015	0	Disposal Cell 5 Excavation & Grading
0-30STE419	1	**1-30STE920**	12-17-2015	0	Disposal Cell 5 Final Grading & Cover
0-30STE420	2	**1-30STE921**	12-17-2015	0	Cross Sections Cells 1 & 2
0-30STE421	2	**1-30STE922**	12-17-2015	0	Cross Sections 3 - 5
0-30STE422	A	**1-30STE923**	12-17-2015	0	Disposal Cells 1 & 2 Profiles
0-30STE423	A	**1-30STE924**	12-17-2015	0	Disposal Cells 1, 2 & 3 Profiles
0-30STE424	A	**1-30STE925**	12-17-2015	0	Disposal Cell 1 UG Systems Plan
0-30STE425	A	**1-30STE926**	12-17-2015	0	Disposal Cell 2 UG Systems Plan
0-30STE426	A	**1-30STE927**	12-17-2015	0	Disposal Cell 3 UG Systems Plan
0-30STE427	A	**1-30STE928**	12-17-2015	0	Disposal Cell 4 UG Systems Plan
0-30STE428	A	**1-30STE929**	12-17-2015	0	Disposal Cell 5 UG Systems Plan
N/A	-	**1-30STE930**	12-17-2015	0	Stormwater Management Plan
N/A	-	**1-30STE931**	12-17-2015	0	Chimney Drain & Stormwater Details
0-30STE500	4	**1-30STE932**	12-17-2015	0	Makeup & Wastewater Pond DWG Index & General Notes
0-30STE501	5	**1-30STE933**	12-17-2015	0	Makeup & Wastewater Pond Excavation & Grading Plan
0-30STE502	7	**1-30STE934**	12-17-2015	0	Makeup & Wastewater Pond Sections and Notes
0-30STE503	6	**1-30STE935**	12-17-2015	0	Makeup WW & Leachate Pond Access RD Plan & Sec's
0-30STE504	4	**1-30STE936**	12-17-2015	0	Leachate Collection Pond Excavation & Grading Plan
0-30STE505	5	**1-30STE937**	12-17-2015	0	Leachate Collection Pond Sections & Notes
0-30STE506	0	**1-30STE938**	12-17-2015	0	Makeup & Wastewater Pond U/G Systems Plan
0-32STE250	3	**1-30STE939**	12-17-2015	0	Sumps, Plans, and Sections
0-123896CSK216	C	**1-30STE940**	12-17-2015	0	Leachate Sump Plan and Sections

Miscellaneous Updates

1. Hazardous Waste Plan
    a. Page 7 (Updated)

2. Operating Plan
    a. Page 15 (Updated)

SUPPLEMENTAL DATA SUBMITTED

(Any report, study, data, information, etc that was not part of previous permit documents should be identified below. In addition, any data identified below should be included as an attachment to this application.

Description

Catalyst Sheet Information is in Attachment E.

SIGNATURE AND CERTIFICATION

(The application should be signed by an authorized representative of the applicant as well as the Consultant that prepared this application. By signing below, the representatives certify that all the information in this modification is accurate and truthful.)

APPLICANT

Signature & Title	Printed Name	Date
Plant Manager	Mr. Tim Gross	8/28/2023

ENGINEER/CONSULTANT

Signature & Title	Printed Name	Date
Solid Waste Dept. Man	Mr. David McCormick, P.E.	8/28/2023

CONFIDENTIALITY: *This application shall be available for public inspection, provided, however, that the Department shall not disclose, except to authorized persons, any information which the Director determines is entitled by law to protection as trade secrets without the consent of the applicant. Trade secrets shall not include the name and address of the applicant, nor any information necessary, as determined by the Director, for the public to evaluate the hazards associated with the proposed operation, nor any other information required by law to be available to the public.*

ATTACHMENT C
HAZARDOUS WASTE EXCLUSION PLAN

Hazardous Waste and Unauthorized Waste Exclusion Plan

SWEPCO – John W. Turk, Jr. Power Plant
Fulton, Arkansas
Permit No. 0311-S3N-R1
AFIN: 29-00506

November 2010
Revised August 2023
Terracon Project No. 35237130

Prepared for:
SWEPCO
3711 Highway 3555
Fulton, AR 71838

Prepared by:
Terracon Consultants, Inc.
25809 Interstate 30 South
Bryant, Arkansas 72022
(501) 847-9292

ENGINEER'S CERTIFICATION

"I certify to the best of my professional judgment that this document and attachments properly adhere to established, sound engineering practices. This certification is contingent on the fact that information supplied to the signatory authority, up to the date of this certification, is unquestionably accurate and was provided in good faith."

David C. McCormick, Arkansas Professional Engineer No. 9199

8.28.23

Date of Certification

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LIST OF APPENDICIES

1.0 INTRODUCTION

1.1 Purpose, Scope, and Applicability

The following document comprises the "Hazardous and Unauthorized Waste Exclusion Plan" (Plan) for the Class 3N Solid Waste Facility (Class 3N Landfill) which is proposed to be expanded at the John W. Turk, Jr. Power Plant. This document is intended to comply with ***Reg.22.511(b) and (c)***. This Plan will provide the basis for the Class 3N Landfill Hazardous and Unauthorized Waste Exclusion Program.

Reg.22.511(b) and (c) requires Class 3N solid waste facilities to develop and implement a "Hazardous and Unauthorized Waste Exclusion Program" which addresses the following:

1. A description of the proposed monitoring program and responsibilities of Class 3N facility personnel that will ensure that incoming loads do not contain regulated hazardous wastes or PCB wastes or additional unauthorized waste streams;
2. Methods to identify and screen potentially hazardous or unauthorized waste before it enters the Class 3N facility including, if applicable, the review of procedures for separating hazardous or unauthorized waste from other wastes;
3. Random inspection procedures, documentation of inspections, and maintenance of records or test results made to ensure compliance;
4. A contingency plan and description of remedial actions to be taken when hazardous or unauthorized waste is identified in the Class 3N waste stream;
5. Notification of the Director if a regulated hazardous waste, PCB waste or unauthorized waste is discovered in the Class 3N facility; and
6. Operating Procedures to prevent the disposal of or provide for the segregation of unauthorized wastes from the approved Class 3N waste stream. Suitable containers, vehicles, or transfer capability shall be provided at the Class 3N facility or the John W. Turk, Jr. Power Plant for the proper removal and disposal of unauthorized waste.

The "Hazardous and Unauthorized Waste Exclusion Program" outlined by this Plan is designed to provide a reference and directive for Class 3N Landfill operators and managers who are in contact with the waste material on a daily basis. The program is intended to provide clear direction to plant personnel for ensuring that only approved wastes are disposed at the Class 3N Landfill.

1.2 Class 3N Facility Layout

The Landfill site consists of approximately 73 acres and includes a Class 3N Landfill, various support facilities including entrance roads, vehicle/equipment facilities, groundwater monitoring wells, and surface water drainage systems. The only entrance to the landfill is closed and locked on off-hours. The gates are monitored via video surveillance during work hours. Only persons authorized by AEP Environmental Services are allowed access to the landfill.

2.0 CLASS 3N FACILITY WASTE MANAGEMENT PROGRAM

A waste management program will be implemented which will include waste identification and collection, waste disposal procedures, employee training, and procedures for documenting and reporting unauthorized waste disposal. The program will be managed by a specialist who has been trained in the principles of waste management and in solid and hazardous waste handling practices. Details of the Class 3N Facility Waste Management Program are summarized below.

2.1 Waste Identification and Collection

Waste to be disposed of at the Class 3N Landfill will have been generated within the John W. Turk, Jr. Power Plant. The wastes authorized for placement in the landfill are listed below:

- Fly ash
- Bottom ash
- Economizer ash
- Cooling tower sediments
- Coal mill rejects
- Flue gas desulfurization waste
- Flue gas emission control waste
- Mercury control waste
- Non-hazardous sand blast media
- Cooling water screenings
- Construction and Demolition debris
- Waste coal
- Scrubber waste
- Sump pit sediments
- Fire brick and refractory materials
- Sediments from dredging operations of facility storm water ditches and facility NPDES units
- Make-up water treatment sediments
- Sand filter media
- Waste lime
- Waste activated carbon
- Demineralizer resins
- Box liners
- Bag filters
- Spent catalyst plates

Other wastes must be specifically authorized by John W. Turk, Jr. Power Plant management, or designee, or AEP Environmental Services prior to being placed in the landfill. Only wastes allowed by the landfill Permit will be authorized for placement into the landfill. The following sections identify the origin, description, collection and disposal procedures for the Class 3N Landfill's

authorized waste streams.

2.1.1 Combustion Wastes

2.1.1.1 Fly Ash

Fly ash is a byproduct of the combustion process in coal-fired boilers. Fly ash is generally a very fine, light colored, non-combustible residue that is entrained in the stack gases. Fly ash will be captured in a bag house flue gas filtering operation. FGD waste will be captured at the same time. The FGD waste is intimately mixed with the fly ash. The waste drops from the bag house into silos. The ash is dropped from the silos into transport trucks. The material is trucked to the Class 3N Landfill. After the ash is placed in the Class 3N Landfill, it is sprayed with water. The water spray suppresses dust and causes the ash to solidify.

2.1.1.2 Bottom Ash

Bottom ash is generated during the combustion process and conveyed to a concrete bunker outside of the plant where the water contained within the ash is drained to a collection sump. The dry material (which also contains economizer ash and coal mill rejects) is then loaded into trucks to be shipped to the landfill.

2.1.1.3 Economizer Ash

The economizer fly ash is conveyed by dry drag chain conveyors from the economizer hoppers to the bottom ash conveyor enclosure. The economizer fly ash is then conveyed by means of a drag chain submerged within the conveyors water pool. The drag chain pulls the ash up an incline out of the water to the discharge head which stacks the mixture in a concrete bunker outside of the plant. Within the concrete bunker, the water contained within the ash drains from the pile to a collection sump. The dry mixture is then loaded into trucks to be shipped to the landfill.

2.1.2 Coal Wastes

2.1.2.1 Coal Mill Rejects

Coal mill rejects are generally pyrite or other hard tramp particles such as rock that are contained within the coal that is delivered to the JWTJPP. Coal mill rejects are removed from the coal at the crushers and coal mills prior to combustion in the boiler. The rejected material is mechanically transported for temporary storage prior to disposal in the Class 3N Landfill.

2.1.2.2 Waste Coal

Waste coal consists of coal rejected as unacceptable for combustion at the JWTJPP. The process of identifying the waste coal can occur at any point within the coal supply system for the JWTJPP.

Waste coal will be collected in dumpsters or similar storage containers and periodically transported to the Class 3N Landfill for disposal.

2.1.3 Other Wastes

2.1.3.01 Cooling Tower Sediments

Cooling tower sediments will generally consist of suspended solids and other particulate matter that concentrate within the cooling tower basin and precipitate out of solution in the form of sediments. The suspended solids and other particulate matter are carried into the cooling tower system from the JWTJPP water supply system or are scrubbed out of the ambient air that passes through the cooling tower. The sediments will be removed from the cooling tower system either through filtration or through periodic draining and dredging of the cooling tower. The sediments will be stored in dumpsters or similar storage containers prior to being transported to the Class 3N Landfill for disposal.

2.1.3.02 Cooling Water Screenings

Cooling water screenings will consist of matter removed from the cooling water supply to the JWTJPP. Examples of materials that could be screened from the cooling water stream include organic matter such as grass, weeds, and other plant life, as well as inorganic matter such as sand, dirt and other debris generally found in the cooling water supply to the JWTJPP. After being removed from the cooling water supply stream, the cooling water screenings will generally be collected in dumpsters or other storage container and periodically transported to the Class 3N Landfill for disposal.

2.1.3.03 Construction and Demolition Debris

Construction and demolition (C&D) waste material is produced in the process of construction renovation, or demolition of structures. Structures include buildings of all types as well as roads and bridges. The composition of C&D waste is variable and may include (but is not limited to) dirt, stones, concrete, bricks, plaster, gypsum wallboard lumber, shingles, roofing materials, scrap metal, HVAC components, and plumbing components. Wastes from razed buildings, broken-out roads, sidewalks, bridges, and other structures are classified as *demolition wastes*. The composition of demolition wastes is similar to construction wastes but may include broken glass, plastic, and reinforcing steel. The following is a list of the potential C&D wastes that may be disposed at the Class 3N Landfill.

- Wood
- Foaming and Framing Lumber
- Plywood
- Sheetrock, Gypsum Wallboard, and Drywall Materials
- Metals (including steel)
- Misc. Composite materials
- Glass
- Pipe
- Cardboard
- Paper

- Land clearing debris
- Composition roofing (including roofing paper)
- Plaster
- Wall coverings
- Plumbing Fixtures
- Tile
- Rebar
- Mirrors
- Plastic
- Wood pallets
- Furniture
- Insulation
- Floor Covering
- Flashing
- Vinyl siding
- Doors and Windows
- Carpet

The wastes listed above will only be authorized for disposal if the waste materials are generated from construction or demolition sites at the JWTJPP. Construction and demolition waste does not include cleanup materials contaminated with hazardous substances, friable asbestos, waste paints, solvents, sealers, adhesives, or similar materials. In addition, waste shipments should not include: appliances/electrical equipment containing hazardous materials, fluorescent light ballast, transformers, whole tires, drums, or containers, even though they may have been generated at the JWTJPP.

C&D waste will generally be collected in dumpsters or other temporary storage locations prior to being transported to the Class 3N Landfill through the use of open top dump trucks.

2.1.3.04 Sump Pit Sediments

Sump pit sediments will consist of precipitated solids and entrained solids that settle in the JWTJPP sumps. These sediments will be removed from the sumps either through filtration or through periodic maintenance of the JWTJPP sumps. The dewatered sediments will be stored in dumpsters or other similar storage containers prior to transport to and disposal in the Class 3N Landfill.

2.1.3.05 Water Treatment System Sediments and Resins

Water and wastewater services will be provided through the local municipality. The JWTJPP will not be generating water or wastewater treatment sludge.

The site will be generating sediments that are removed from the ponds at the plant. These ponds include: process water pond, waste water pond, makeup water pond, leachate pond, coal pile pond, and storm water ponds. Since these ponds are not covered, material may enter the pond, sink to the bottom and become sediments. Water flowing into these ponds may also contain suspended solids that settle to the bottom of the pond.

2.1.3.06 Fire Brick and Refractory Materials

Fire brick and refractory materials will be non-hazardous insulating material removed from the boiler furnace during construction or maintenance of the boilers. This material will be a very low

volume infrequently generated waste stream. The material will be dry and will be collected in dumpsters or other similar storage containers before being transported to and disposed of in the Class 3N Landfill.

2.1.3.07 Non-hazardous Sand Blast Media

Non–hazardous sand blast media is fine granular particles that are used to mechanically remove paint, rust and other deposits from metal surfaces. Non–hazardous sand blast media may be used during maintenance of the JWTJPP. Non–hazardous sand blast media will be a low volume waste stream and will generally be collected in hoppers or waste storage bins prior to transport to the Class 3N Facility.

2.1.3.08 Sediments from Dredging Operations

The stormwater control systems at the Class 3N Facility will be routinely cleaned out and the sediment collected will be transported to and disposed of in the Class 3N Landfill. The sediment will generally be fine grained particles, stone, gravel and plant life. The stormwater control sediments will generally be transported to the Class 3N Facility through the use of open top dump trucks.

2.1.3.09 Scrubber Waste

Flue gas desulfuization/ emission control waste scrubbers are used to remove different chemicals contained in the flue gas. The flue gas will go through a spray dryer absorber for SO_x removal. Then the flue gas goes to a bag house where the ash and calcium sulfate are captured. This waste is then sent to the landfill.

2.1.3.10 Mercury Control Waste

Mercury scrubbing will be used when operations at the plant begin. The mercury will be removed using an activated carbon mixed with the flue gas. This waste stream will be captured in the bag house.

2.1.3.11 Make-up Water Treatment Sediments

River water is treated to remove sediments. The treated water is not potable and will be used as make-up water for the cooling towers, as service water, and as fire water. The solids are consolidated and pressed to a cake that will pass the Paint Filter Test and be disposed in the landfill.

2.1.3.12 Sand Filter Media

Sand filters are used to remove suspended sediments from water. The water is pumped through

the sand filter and the sediments are retained on the sand. When the sand filters become full of sediments, the sand filter is backwashed and the sediments are removed. The removed sediments are dewatered and become another waste stream, Make-up Water Treatment Sediments. The sand filter media needs to be replaced at times and when removed from the filter is a waste.

2.1.3.13 Waste Lime

Lime is used in the flue gas scrubber to capture sulfur dioxide and other acid gasses. Waste Lime is generated from processes that prepare the flue gas scrubbing reagent. It includes: lime rejects (e.g., rocks), inerts, slurry tank cleanout material (a mixture of lime, inerts, and water), slaked lime (hydrated lime), spill cleanup, and off specification material.

2.1.3.14 Waste Activated Carbon

Activated carbon is injected into the flue gas to adsorb mercury. The activated carbon is collected in the bag house along with fly ash and flue gas desulfurization byproduct. The collected solids are permitted for disposal in the landfill and are described as either Fly Ash or Scrubber Waste. Waste activated carbon includes spilled activated carbon, off specification product, and cleanup of the carbon injection devices.

2.1.3.15 Demineralizer Resins

These are the resin beads used to remove trace minerals from water during the treatment process.

2.1.3.16 Box Liners

The plastic sheeting used to line the roll-off boxes. The box liners to be placed in the landfill will be unused box liners or used for holding materials allowed to be disposed in the landfill.

2.1.3.17 Bag Filters

The bag filters are used to filter fly ash and FGD material from the flue gas air stream. These bag filters can become torn or plugged and then require replacement. The used bag filters are disposed in the landfill.

2.1.3.18 Spent Catalyst Sheets

The spent sheets are waste catalyst used in the selective catalyst reduction (SCR) process. This process removes NO_x from in the flue gas generated from the burning of coal. Overtime, the catalyst degrades until no longer viable. The frames are removed, and the degraded plates are placed in the landfill.

2.2 Waste Disposal Procedures

Combustion Wastes (bottom ash, fly ash, and FGD waste) will be disposed of at the Class 3N Landfill on a regular basis and will account for the majority of the waste disposed of in the Class 3N Landfill. Combustion Wastes will be taken from their storage location, and quantified, either by weight, volume or inspection, prior to being transported to the Class 3N Landfill for disposal. Truck drivers hauling coal ash will be under the direction of the Class 3N Facility manager or his designated subordinate. The Class 3N Facility manager or his designated subordinate will inspect the Class 3N Facility for the presence of unauthorized material during waste disposal operations. If unauthorized wastes are detected, the John W. Turk, Jr. Power Plant environmental coordinator or designated representative will be notified, an investigation will be initiated and corrective actions will be implemented.

Other Wastes, as identified in **SECTION 2.1.3** of **APPENDIX E**, **VOLUME 2**, to be disposed of in the Class 3N Landfill will be approved in advance by the environmental coordinator or designated representative. These Other Wastes will be quantified, either by weight or volume, and logged prior to disposal in the Class 3N Landfill. The environmental coordinator or designated representative will randomly inspect loads of Other Wastes prior to disposal to ensure that they contain only approved wastes. These inspections will be performed during waste disposal operations involving Other Wastes. This landfill is only for wastes associated with this facility.

2.3 Unauthorized Waste Recognition and Handling Training

John W. Turk, Jr. Power Plant employees and contractors involved in waste collection, handling, transportation, and disposal will have basic environmental waste management training as administered by the John W. Turk, Jr. Power Plant environmental coordinator or designated representative. At a minimum, the basic environmental training program will cover the following subjects:

- Wastes authorized for disposal at the Class 3N Landfill
- Unauthorized waste streams (regulated hazardous waste, PCB wastes or additional unauthorized waste streams)
- Procedures for the documentation, notification , and removal of unauthorized wastes from the Class 3N Facility
- Regulations governing the disposal of waste
- Spillage control of a hazardous material or substance
- An overview of the federal regulations regarding hazardous waste

In addition, solid waste licensed employees will have the minimum hazardous waste recognition training as part of the Arkansas Licensing Program for Sanitary Landfills as outlined in *Arkansas Regulation 27*. Some employees may obtain additional training to comply with *OSHA 29 CFR 1910.120*.

2.4 Inspection Procedures

The Class 3N Landfill working face will be inspected during waste disposal operations for the presence of unauthorized waste. If any unauthorized waste is found at the Class 3N Landfill, the John W. Turk, Jr. Power Plant environmental coordinator or designated representative will be notified immediately. The operators of the landfill facility will have a Class 2 license. There will be at least one (1) Class 2C licensed manager or supervisor on-site at all times during period of operation as per ***Reg.27.203***. The John W. Turk, Jr. Power Plant environmental coordinator or designated representative will then initiate the procedures outlined in this plan.

When Other Wastes, as identified in **SECTION 2.1.3** of **APPENDIX E, VOLUME 2**, are hauled to the Class 3N Facility, the responsible John W. Turk, Jr. Power Plant supervisor or designated representative will perform random inspections of the wastes.

A record of each inspection event will be maintained in the permanent operating record at the Class 3N Facility. The inspection records will include:

- The date and time wastes were inspected
- Source of waste
- Documentation of ADEQ notification if required
- Observations made by the inspector

A sample inspection form is included in **APPENDIX A, APPENDIX E, VOLUME 2**. A facility approved inspection form shall be completed for each random inspection of Other Wastes and placed in the Class 3N Facility's permanent operating record system. Records associated with this program will be maintained in the Class 3N Facility permanent operating record throughout the active life of the Class 3N Facility and during the 2-year post closure care period.

2.5 ADEQ Notification Procedures

If during the routine inspections of Other Wastes (as defined in **SECTION 2.1.3**), the John W. Turk, Jr. Power Plant environmental coordinator or designated representative identifies unauthorized waste, prior to the waste being disposed at the Class 3N Landfill, the waste will be diverted from the Class 3N Landfill and disposed in accordance with applicable regulations. If the unauthorized waste is discovered after being disposed at the Class 3N Facility, the John W. Turk, Jr. Power Plant environmental coordinator or designated representative will notify the ADEQ within 48 hours at the address and phone number listed below:

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317
(501) 682-0744

2.6 Contingency Plan

As required by ADEQ ***Reg.22.511(b)***, the procedures and information provided in this HWEP are prepared to prohibit the acceptance and disposal of unacceptable waste at the Class 3N Facility. ADEQ ***Reg.22.511(b)(4)*** requires that the HWEP include a contingency plan and description of remedial action to be taken when hazardous, unauthorized or PCB waste is identified in the Class 3 waste stream. The contingency plan for the Class 3N Facility is presented in **APPENDIX B, APPENDIX E, VOLUME 2**.

APPENDIX A
Sample Inspection Form

RANDOM INSPECTION DOCUMENTATION

SOUTHWESTERN ELECTRIC POWER COMPANY
John W. Turk, Jr. Power Plant
Class 3N Facility
3711 Highway 355 South
Fulton, Arkansas 71838

DATE: _____

TIME: _____

INSPECTED BY: _____

WASTE GENERATOR: _____

_____

WASTE HAULER: _____

_____

DESCRIPTION OF QUESTIONABLE WASTE: _____

_____

ACTION TAKEN: _____

_____

APPENDIX B
Contingency Plan

CONTINGENCY PLAN
RECEIPT OF UNAUTHORIZED SPECIAL WASTE

The following procedures shall be followed if unauthorized wastes are found in the Class 3N Facility:

- Segregate the waste at the Class 3N Facility working face
- Interview the waste hauler to determine the origin, source, and type of material
- Contact the John W. Turk, Jr. Power Plant department which produced the waste to identify the material
- Contact a certified laboratory to perform an analysis of the material, if needed
- Make a determination to whether the waste is hazardous
- Notification to the ADEQ Director that an unauthorized waste was located.

If the unauthorized waste is determined to be non-hazardous, then the following procedures should be followed:

- John W. Turk, Jr. Power Plant personnel or approved contractor should don protective equipment, as appropriate
- Appropriate earthmoving equipment and hauling trucks should be obtained
- The unauthorized waste and all contaminated approved wastes shall be removed and disposed of in accordance with current disposal regulations
- A written report describing the incident should be prepared for the ADEQ
- Procedures should be implemented to prevent future disposal of this unauthorized waste stream

If the unauthorized waste is determined to be hazardous then the following procedures should be followed:

- The location of the hazardous waste should be evacuated and secured
- The ADEQ Solid and Hazardous Waste Divisions should be immediately notified
- John W. Turk, Jr. Power Plant should determine the appropriate method for removing the hazardous waste from the Class 3N Facility
- The hazardous waste will be removed in accordance with the method determined by John W. Turk, Jr. Power Plant
- The area affected will be sampled and tested in accordance with the methods determined by John W. Turk, Jr. Power Plant
- Procedures should be implemented to prevent future disposal of this hazardous waste stream

ATTACHMENT D
OPERATING PLAN

OPERATING PLAN AND NARRATIVE

SOUTHWESTERN ELECTRIC POWER COMPANY
JOHN W. TURK, JR. POWER PLANT CLASS 3N LANDFILL
HEMPSTEAD COUNTY

Permit No. 0311-S3N-R1
AFIN: 29-00506

Terracon Project No. 35237130
August 2023

***Prepared For*:**

SOUTHWESTERN ELECTRIC POWER COMPANY
3711 HIGHWAY 3555
FULTON, AR 71838

***Prepared By*:**

Terracon Consultants, Inc.
25809 Interstate 30 South
Bryant, AR 72022

Volume 2, Appendix D

ENGINEER'S CERTIFICATION

"I certify to the best of my professional judgment that this document and all attachments properly adhere to established, sound engineering practices. This certification is contingent on the fact that all information supplied to the signatory authority, up to the date of this certification, is unquestionably accurate and was provided in good faith."

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.9199
DAVID C. McCORMICK

David C. McCormick, Arkansas Professional Engineer No. 9199

8.28.23
Date of Certification

CERTIFICATE OF AUTHORIZATION
TERRACON CONSULTANTS, INC.
No.223
ARKANSAS

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1.0 INTRODUCTION

1.1 Purpose, Scope, and Applicability

The following document comprises the Operating Plan and Narrative (OP&N) for the Class 3N Solid Waste Facility (Class 3N Landfill) which is proposed to be constructed at the SWEPCO Facility. This document is intended to comply with ***Reg.22.521*** of *Arkansas Regulation 22*. This OP&N presents site specific methods and procedures by which the Class 3N Landfill will maintain and document compliance, and address the regulatory requirements applicable to the construction, operation and maintenance of the Class 3N Landfill.

This OP&N has been prepared to assist in the operation and maintenance of the Class 3N Landfill. This document includes procedures for the following:

- Site development
- Waste disposal
- Operating procedures
- Stormwater management
- Inspection and maintenance
- Health and safety
- Emergency response and contingency action
- Administrative qualities for a Class 3N

1.2 Facility Description and design

John W. Turk will produce up to approximately 600 MW of electrical power utilizing a new coal-fueled plant. The Class 3N SWEPCO Landfill will only accept waste materials associated with the construction and operation of the power plant facility.

The entire property (John W. Turk, Jr. Facility) consists of approximately 2,800 acres of land between the cities of McNab and Fulton. A portion of the Facility (approximately 73 acres) will be utilized for a proposed Class 3N Landfill. The Class 3N SWEPCO Landfill will be used for disposal of combustion wastes, coal wastes and other wastes generated by SWEPCO. The proposed waste materials are non-hazardous, inert, and non-putrescible. The property on which the Class 3N Facility will be located is currently used for agricultural purposes.

The design of the Class 3N SWEPCO John Turk Landfill was developed to comply with *Arkansas Regulation 22*. The following sections outline the design concept for the Class 3N Facility SWEPCO John Turk Plant.

1.2.1 Waste Disposal Area

The Class 3N SWEPCO Landfill's waste disposal area has been divided into 5 separate waste cells. Each disposal cell will accommodate approximately 5.1-7.9 years of operational disposal

capacity. The landfill is designed to provide an ultimate waste capacity of approximately 6,102,402 cubic yards.

The disposal facility has been designed as an area-fill. The waste cells have been designed near the existing ground surface. The final cover of the Class 3N Landfill generally slopes at 4 to 1 (horizontal to vertical) and then slopes at approximately five percent to elevation of 430 FMSL as shown in **APPENDIX B, VOLUME 3.**

1.2.2 Bottom Liner and Final Cover System

The Class 3N SWEPCO Landfill bottom liner system design includes a 24" compacted clay liner with a maximum permeability of $1X10^{-7}$ cm/sec overlaid by a HDPE geomembrane liner, a geotextile layer, a 12" LCRS drainage layer, a geotextiles, and a 12" protective cover layer as shown on **DRAWING 0-30STE410.** The leachate collection system will consist of a permeable drainage layer over the top of the liner system. The bottom liner system will be constructed over the entire base of the waste disposal area. The clay liner material will be taken from qualified clay excavated from the disposal area or borrow area.

The Class 3N Landfill final cover system consists of a 18" compacted clay cover with a maximum permeability of $1X10^{-7}$ cm/sec overlaid by a HDPE geomembrane liner, geotextile layer, 12'' sand drainage layer, geotextile layer, and 18" common fill layer, and a 6" vegetative cover layer seeded with native grasses as shown on **DRAWING 0-30STE410.**

The compacted clay liner and cover systems will be installed utilizing the guidelines established in the *Design Basis/ Design Analysis (DB/DA)* (Shaw, June 2008) and the *Arkansas Regulation 22-Solid Waste Management Rules* (March 28, 2008). A copy of the plan will be located in the Class 3N Facility Permanent Operating Record (POR).

1.2.3 Stormwater Management System

Stormwater run-on and run-off within the Class 3N Landfill will be diverted away from the disposal area by perimeter ditches. Stormwater will be routed to a stormwater control pond **DRAWING 0-30STE400**. The stormwater control pond is located directly east of the Class 3N Landfill waste disposal area. Diversion berms, erosion control devices and prompt seeding of the completed waste cells will reduce the potential of erosion on the finished Class 3N Landfill slopes.

Operating procedures for the stormwater management system are described in more detail in Section 3 of this OP&N.

1.3 Relationship to Other Facility Documents

This document will serve as a guide for the construction, operation and maintenance of the Class 3N Landfill. It should be used in connection with the following supporting documents to ensure efficient and effective operation of the Class 3N Landfill:

Arkansas Regulation 22-Solid Waste Management Rules (March 28, 2008)
Permit Application (Terracon, March 2010).

1.4 Revisions to the Operating Plan and Narrative

This OP&N will be updated as required to reflect current operations and regulations. Revisions to this document will be submitted to the ADEQ. The ADEQ may require that the changes be accomplished through permit modification prior to implementation. All applicable correspondence with the ADEQ will be maintained in the POR for the Class 3N Landfill.

2.0 GENERAL OPERATING PROCEDURES

This section addresses basic operating procedures for the Class 3N Landfill and is intended to serve as a reference and directive for the efficient and effective construction, operation and maintenance of the Class 3N Landfill.

2.1 Class 3N Facility Personnel and Equipment

2.1.1 Operator Certification

All operations at the Class 3N Landfill shall be performed under the direction of an Arkansas licensed operator. Licensing, training, and certification updates shall comply with the requirements of *ADEQ Regulations 22 and 27*. Copies of certifications shall be kept in the Class 3N Facility POR.

2.1.2 Equipment and Personnel Requirements

The rate of waste disposal at the Class 3N Landfill will vary based upon many factors. The types and amounts of equipment and quantity of personnel required to operate the Class 3N Landfill will vary depending on the types and quantities of waste requiring disposal. **TABLE 1** below lists the typical equipment and personnel associated with the operation of the Class 3N Landfill. Additional equipment may be obtained from outside sources as needed to support the construction, operation, and maintenance needs of the Class 3N Landfill.

TABLE 1
CLASS 3N FACILITY
EQUIPMENT AND PERSONNEL REQUIREMENTS

EQUIPMENT/PERSONNEL	TYPICAL QUANTITY	PURPOSE/USE
Equipment		
Dozer	1	Used for general site grading work and to spread cover soil over waste areas.
Front-End Loader	1 to 2	Used for excavation of waste areas and general site earthwork.
Dump Trucks	1 to 2	Used to deliver the waste to the landfill.
Grass Mower	1	Used to mow Class 3N Landfill
Waste Hauling Trucks	varies	Used to haul waste from the SWEPCO to the working face.
Portable Stormwater Pumps	1	Used to pump stormwater from inactive cells.
Personnel		
Class 3N Landfill Manager	1	Manages operations of the Class 3N Landfill. Completes the required paperwork associated with management of the facility. Will be licensed in accordance with Arkansas Regulation 27
Class 3N Landfill Operators	1 to 2	Perform operations of the Class 3N Landfill including directing waste placement, earthwork, and general facility maintenance. Will be licensed in accordance with Arkansas Regulation 27
Truck Drivers	varies	Flue gas desulfurization waste and fly/bottom ash waste hauling vehicles, and the dump trucks for transporting cover soils.

2.2 Hours of Operation and Signage

The Class 3N Landfill will operate as necessary to support the waste disposal needs of the Class 3N Landfill. A certified operator will be present on-site during all disposal operations.

A sign will be placed at all entrances to the Class 3N Landfill that will include the following information:

CLASS 3N SOLID WASTE FACILITY
SWEPCO JOHN W. TURK, JR. POWER PLANT
PERMIT 0311-S3N

NO HAZARDOUS OR UNAUTHORIZED WASTE PERMITTED

ACCESS LIMITED TO SWEPCO PERSONNEL
AND APPROVED CONTRACTORS

EMERGENCY PHONE: (XXX) XXX-XXXX

2.3 Access Control

Access to the Class 3N Landfill will be controlled and managed to prevent any unauthorized access to the Class 3N Landfill. The main access to the site will be located off of State Highway 355. There is one access to the facility. This gate will be monitored by security 24/7. Access to the working faces of the Class 3N Landfill will be via a permanent perimeter road to be located on the top of the perimeter levee. This is a Class 3N landfill, and will not be open to the public for disposal. A minimum of 12" of gravel will be used on all perimeter roads. Temporary access roads will be constructed as needed to support waste disposal activities.

All roads will be maintained as necessary to permit access during periods of inclement weather. **DRAWING 0-30STE403** identifies the permanent perimeter haul road cross-sections.

Informational and/or directional signs will be posted as necessary to direct traffic to the working face of the Class 3N Landfill.

2.4 Waste Screening Procedures

Class 3N Landfill operators will be trained to recognize acceptable wastes and procedures to prevent disposal of unauthorized wastes at the Class 3N Landfill. The Class 3N Facility *Hazardous and Unauthorized Waste Exclusion Plan (HWEP)* (Terracon, August 2023) outlines the training methods for waste screening, lists the acceptable and unacceptable wastes, inspection procedures, record keeping procedures, and notification procedures. A copy of the HWEP will be located in the Class 3N Facility POR.

2.5 Prohibited Activities

The following activities are prohibited at the Class 3N Landfill:

- Scavenging of materials from the Class 3N Landfill area
- Feeding of farm or domestic animals on Class 3N Landfill property
- Depositing waste in standing water; and
- Open burning of waste material

2.6 Survey Control

Horizontal and vertical controls must be maintained during the life of the Class 3N Landfill. These points are necessary so that the Class 3N Landfill can be constructed and filled according to the approved design. **DRAWING 0-30STE401** identifies the proposed locations of the permanent survey control points established for the Class 3N Landfill. If any of the permanent monuments for the Class 3N Landfill are damaged, destroyed or need to be relocated, then the permanent monuments will be replaced or relocated as necessary to establish the required benchmarks. Facility grid markers will be placed every 200 feet around the perimeter of the Class 3N Landfill as necessary to assist in waste disposal operations. The grid markers will include the northing and easting to indicate the coordinate location of each grid point.

Prominent landfill features have been or will be surveyed and referenced to the approved site grid. At a minimum, the following features have been or will be surveyed and referenced to the site grid system:

- Property boundaries or corners
- Monitoring wells and piezometers
- Leachate risers, manholes, and collection pipe;
- Limits of future placement and perimeters of the flexible membrane liner
- Liner and cap top and bottom
- Point source discharges
- Utility lines within fifty (50) feet of the disposal area
- Other features deemed significant by the operator or the Department

In accordance with ***Reg.22.426(f)***, limits of refuse placement will be continuously staked according to the approve site grid system.

2.7 Waste Filling Operations

2.7.1 Cell Preparation

The Class 3N Landfill design requires that the waste disposal area be constructed with a bottom liner system consisting of a 24” compacted clay liner with a maximum permeability of $1x10^{-7}$

cm/sec overlaid by a HDPE geomembrane liner, a geotextile layer, a 12" LCRS drainage layer, a geotextiles, and a 12" protective cover layer. An Arkansas licensed professional engineer will certify each newly constructed waste disposal cell and each cell must be approved by the ADEQ prior to waste disposal.

2.7.2 Placement of Waste

Waste will be delivered to the Class 3N Landfill by truck or overland conveyor. All wastes will be taken to the Class 3N Landfill and deposited on to the working face of the active cell. Wastes may be wetted in the vicinity of the working face to control dust and promote stability. The quantity of waste disposed of in the Class 3N Landfill will be established by dry weight, volume or visual inspection. A certified operator shall be present at the Class 3N Landfill to direct disposal activities.

The location for disposal of waste within the active cell will vary throughout the life of a waste cell. For the initial placement of waste in a new waste cell, the disposal vehicles haul the waste to the bottom area of the cell for disposal. The disposal vehicles will access the active disposal area via temporary roads. At no time will waste transportation equipment operate directly on the protective cover layer. After the waste truck has dumped the waste in the active disposal area, a bulldozer will spread and compact the waste into five to ten foot high lifts. The working face is typically the width of a waste cell. As waste is added to the cell, the working face moves across the active cell until each lift is completed. Subsequent lifts of waste are constructed similarly until the waste mass reaches the permitted waste grades as shown on the Permit Drawings (Shaw March 2010).

Temporary cell divider berms will be constructed along the ridgeline between waste cells to contain wastes to the active waste cell and to minimize stormwater run-on. Waste is placed up to the inside toe of the berm. **DRAWING 0-30STE415** shows a typical cell divider berm.

2.7.3 Working Face

The width of the working face will be kept as small as practical. The landfill will utilize one working face at the Class 3N Landfill. All unloading operations shall be supervised.

2.7.4 Closure of Waste Cell

When waste cells reach final permitted grades, the application of final cover should be initiated. Final cover consists of a 18" compacted clay cover with a maximum permeability of $1x10^{-7}$cm/sec overlaid by a HDPE geomembrane liner, a geotextile layer, a 12" sand layer, a geotextile layer, a 18" common fill layer, and a 6" vegetative cover layer in accordance with the construction QA/QC procedure. The area will then be seeded with native vegetation. Each waste cell will be certified closed by an Arkansas licensed professional engineer and each cell will be approved by the ADEQ.

3.0 STORMWATER MANAGEMENT PROCEDURES

A stormwater management system will be used at the Class 3N Landfill site to control surface water run-off. The system is designed to minimize erosion and induce settling of sediments. The primary erosion and sediment control measure is the presence of a vegetative cover on the finished Class 3N Landfill slopes. Other stormwater management system components include diversion berms, perimeter ditches, and a stormwater control pond.

3.1 Water Conveyance

All stormwater control facilities have been designed to handle the peak flows from a 25-year, 24-hour storm event. All water courses are designed to reduce erosion. Ditches and swales will be grass-lined (as necessary) and will be designed with a maximum gradient that will reduce erosion.

Stormwater runoff within the Class 3N Landfill is directed away from the finished slopes by a combination of diversion berms, and perimeter ditches and is ultimately routed to the stormwater control ponds as described in the Design Narrative in **VOLUME 3**.

3.2 Seeding

Permanent seeding of the Class 3N Landfill cover will be conducted in late winter and fall (typically during February through April, and September through November) on recently completed waste cells and areas requiring additional grass cover. Operations are typically timed to provide the maximum area available for seeding operations. Seeding operations include preparation of the seedbed, applying fertilizer or lime as needed, applying seed blend, and applying mulch, if necessary. The local county extension office will be contacted for suggestions for the seedbed preparation and seeding blends.

3.3 Erosion Control Measures

All exposed earth fill is subject to erosion. Both temporary and permanent erosion control measures will be utilized to mitigate the potential for severe erosion, and are part of the active maintenance program at the Class 3N Landfill. In addition to seeding, other erosion control measures may include the following:

- Stormwater letdowns
- Lined ditches
- Grassed swales

Temporary erosion control measures will be used as necessary to reduce erosion of exposed slopes on waste disposal areas, berms, and stockpiles. Temporary erosion control measures include the following (use will depend on the time of year and the length of time it is anticipated that the soil will remain exposed):

- Seeding

- Tracking slopes perpendicular to the fall line
- Covering with mulch
- Grass mats
- Diversion ditches and slope drains

Tracking of slopes (bulldozer tracks made perpendicular to the fall line of the slope) will be completed as soon as the slope is finished, regardless of the time of year. Mulching of exposed slopes is done during wet weather conditions when seeding is not possible. Diversion ditches and slope drains will be constructed as necessary to prevent surface water flow from eroding exposed and covered slopes as well as preventing runoff generated on surrounding land from running into the active areas of the Class 3N Landfill. Details regarding erosion control measures are indicated on **DRAWING0-30STE411** and in **Volume 3, Appendix K.**

3.4 Sedimentation Control

All erosion control measures mitigate off-site sedimentation by reducing the amount of soil carried away in the run-off. Sediment barriers including hay bales, rock check dams, and silt fencing will be utilized as necessary at the Class 3N Landfill. They require no engineering design, and will be placed as needed during operations. They are most frequently placed below disturbed slopes to prevent silt in overland flow from reaching channels or ditches. Sediment control fences shall also be constructed and maintained in the drainage channels of the active areas of the site. Sediment shall be removed to keep channels open and the soil replaced at the source as required.

3.5 System Maintenance Procedures

It is very important that the stormwater management system at the Class 3N Facility be maintained so that it functions properly during a storm event. The following maintenance is recommended:

- Keep all ditches and swales unobstructed
- Remove sediment from ditches, swales, sediment basins, and sediment barriers routinely
- Check and clean rock check dams and outlet control structures of sediment and other materials that may restrict flow
- Periodically inspect the stormwater system for damage and repair immediately

Additional inspection and maintenance requirements and procedures are included in **SECTION 4.0** of this OP&N.

4.0 INSPECTION AND MAINTENANCE PROCEDURES

Inspections and maintenance of the Class 3N Landfill will be performed routinely. Records of inspections conducted at the Class 3N Landfill, and documentation of any maintenance resulting from the inspections will be recorded on the Inspection Form included in **APPENDIX B** of this document. The inspection form is an example and may be modified. A proposed inspection and maintenance schedule is included in **TABLE 2** below. Inspection records will be placed in the Class 3N Facility POR System.

TABLE 2
INSPECTION AND ROUTINE MAINTENANCE SCHEDULE CHECKLIST

ITEM	MINIMUM FREQUENCY
Bottom Liner System	Monthly
Stormwater Facilities	Monthly or following all major stormwater events
Final Cover System	Monthly
Facility Roads	Monthly
Earth Moving Equipment	Monthly
Emergency Response Equipment	Monthly
Survey Grid Markers	Monthly
Survey Control Monuments	Annually

4.1 Bottom Liner System

The bottom liner system will be inspected monthly for defects. Lined areas that are exposed (not yet having received waste) will be inspected for damage. The protective cover layer will be inspected for erosion or rutting. Any damage found in the liner system will be repaired as necessary.

4.2 Stormwater Facilities

Stormwater facilities including all ditches, temporary and permanent erosion control structures, ponds and culverts shall be inspected monthly or after each significant rainfall event, whichever is more frequent. Stormwater facilities shall be cleaned, repaired, or replaced as necessary.

4.3 Final Cover System

The final cover system will be inspected monthly for evidence of erosion, cracking or surface depressions. Where severe erosion has taken place, soil cover should be re-applied and seeded, given the appropriate seeding conditions. Temporary or permanent erosion control measures will be used if significant erosion occurs.

4.4 Facility Roads

Temporary and permanent access roads will be maintained as needed to provide access, and to control dust and mud accumulations. The Class 3N Facility roads shall be graded and additional gravel applied as necessary to minimize rutting, washboarding, mudding, and dust accumulation.

4.5 Emergency Response Equipment

Communication equipment, the list of emergency phone numbers and all first aid kits will be checked monthly and deficiencies identified corrected. Fire extinguishers will be inspected annually and condition checked once per quarter.

4.6 Grid Marker System

The waste grid markers will be inspected monthly. Repairs or replacements will be accomplished as necessary.

4.7 Survey Control Markers

The survey control markers will be inspected annually as part of the annual engineering certification. Markers will be re-established as necessary.

4.8 Earth Moving Equipment

Earth moving equipment will be inspected monthly and repaired as needed. If earth-moving equipment will be disabled for an extended period of time for repairs, additional equipment will be leased as necessary to support the Class 3N Landfill.

5.0 HEALTH AND SAFETY PROCEDURES

5.1 Introduction

The primary purpose of this section is to provide guidance to help prevent personal injuries or illnesses that could be caused by conditions typically found at Class 3N solid waste facilities similar to the Class 3N Landfill. It is not the intent of this section to establish a comprehensive safety program for SWEPCO employees or contractors; but rather to augment the existing program with awareness of special hazards related to Class 3N solid waste facilities. More specific information related to safety issues will be contained within the SWEPCO facility wide safety program.

5.1.1 General

The Class 3N Facility will be maintained in such a manner as to continually provide a safe place to work. This can be done only by constantly THINKING SAFETY. Analyze jobs, work areas, and procedures from a safety standpoint, and learn to recognize potentially hazardous actions or conditions. When a hazard has been recognized, immediate steps will be taken to eliminate it by corrective action. If corrective action is not possible, guard against the hazard by proper use of warning signs and devices, and by the establishment and maintenance of safety procedures.

The safety hazards associated with Class 3N Facility operations are many and varied. Accidents may be prevented by using good common sense, applying a few basic rules, and particularly by becoming knowledgeable of the hazards peculiar to a job.

5.1.2 Reporting and Investigation of Accidents and Illnesses

Accidents must be reported PROMPTLY to the employee's immediate supervisor for evaluation and/or investigation. Immediate reporting is mandatory not only to comply with applicable laws and regulations, but also to ensure that steps are taken to correct the conditions that contributed to the accident. Since every accident includes a sequence of contributing factors, it is possible to avoid a repeat of the first event by recognizing and eliminating these factors. The removal of just a single factor could prevent a recurrence. Reporting procedures should be in compliance with the SWEPCO facility wide safety program.

5.2 Potential Hazards

Class 3N Facility personnel work in all types of weather, with many different types of heavy equipment, and with a variety of materials presenting diverse hazards. For this reason, safety equipment must be used and maintained in a sanitary and reliable condition. Personal protective equipment (for eyes, face, head, hearing, and extremities), protective clothing, respiratory devices, and other protective equipment must be worn whenever hazards of processes or environment are capable of causing injury.

First-aid kits will be located at various locations at the Class 3N Facility. Safety showers and eye

washes are accessible to SWEPCO employees and Class 3N Facility operators at the SWEPCO for use in the event of exposure to injurious materials.

5.3 Hazard Abatement Procedures

The following procedures, guidelines, and recommendations represent standards in the solid waste industry presently in use to mitigate or eliminate the various safety and health hazards that may exist at the Class 3N Facility.

5.3.1 Personal Protective Equipment

Refer to the SWEPCO facility wide safety program for requirements on personal protective equipment.

5.3.2 Operations Safety

Transporting and unloading solid waste is a serious area of safety concern. Uncontrolled dust, differing flows and direction of traffic and operational equipment, and equipment operation angles pose dangers to those in the vicinity of the working face. For these reasons, safeguards will be provided on Class 3N Landfill equipment to protect the operator and the vehicle. Operating personnel who direct the placement of the delivery vehicles must take care to maintain sufficient clearance between the vehicle and the equipment. Normal safety precautions will be exercised while operating or working in the vicinity of heavy equipment.

5.3.3 Fire Prevention and Control

The potential for a fire at the Class 3N Landfill is minimal due to the non-combustible wastes disposed in the Class 3N Landfill. However, in the event that a fire does occur, operators shall attempt to control it as soon as possible by:

- Covering it with soil
- Removing and covering it with soil
- Using a fire extinguisher

Portable fire extinguishers are kept on all operating equipment and at the SWEPCO Class 3N Landfill. Personnel will become familiar with the fire extinguisher's locations. The extinguishers will be inspected annually and maintained in a ready condition.

5.4 Emergency Procedures

The emergency conditions discussed in this section are general. It is not intended to cover every possible emergency situation. The Class 3N Landfill personnel must be constantly aware that problems may arise. In addition, the list of important phone numbers should be kept at the Class 3N Landfill and should be updated regularly. Emergency telephone numbers will be located in

the SWEPCO facility wide safety program.

5.5 Handling of Unacceptable Wastes

Only wastes authorized by Class 3N Landfill Hazardous and Unauthorized Waste Exclusion Plan are allowed for disposal at the Class 3N Landfill. These wastes include:

- Combustion Wastes:
  - Bottom ash
  - Economizer ash
  - Fly ash / scrubber waste
- Coal Wastes:
  - Waste coal
  - Coal mill rejects
- Other Wastes:
  - Cooling tower sediments
  - Cooling water screenings
  - Construction and demolition debris
  - Sump pit sediments
  - Fire brick and refractory materials
  - Non-hazardous sand blast media
  - Sediments from dredging operations
  - Make-up water treatment sediments
  - Spent Catalyst Sheet

All wastes except combustion and coal wastes must be authorized by the SWEPCO Environmental Specialist prior to disposal.

6.0 RECORDKEEPING

In accordance with *Arkansas Regulation 22*, a POR will be maintained for the Class 3N Landfill. The POR is kept within cabinets located at the SWEPCO or stored electronically when practical. The POR contains all records required by *Arkansas Regulation 22* and/or permit conditions. All information contained in the Class 3N Landfill POR is available for inspection and will be provided to the ADEQ upon request. All records will be maintained throughout the active life of the Class 3N Landfill and throughout the 2-year post closure care period.

The POR includes the following information:

- Permit information and operator licenses
- Location restriction demonstrations
- Operational plans and programs
- Inspection records, training records, and notification procedures
- Design demonstrations
- Geotechnical and hydrogeological information
- Closure and Post-Closure plans and any associated testing data related to the plans
- Financial assurance documentation

When documents pertaining to the above items have been placed, replaced or added to the POR, the ADEQ will be notified in writing.

7.0 CLASS 3N LANDFILL CLOSURE PLAN

The Class 3N Facility *Closure and Post-Closure Care Plan* (**APPENDIX H, VOLUME 2**), provides an explanation of the procedures for closure activities. The plan identifies the closure requirements, the procedures for installation of the final cover system, the Class 3N Landfill closure schedule, and the documentation requirements for the closure activities. A copy of this plan will be located in the Class 3N Landfill POR.

8.0 CLASS 3N FACILITY POST-CLOSURE CARE PLAN

The Class 3N Facility *Closure and Post-Closure Care Plan* (**APPENDIX H, VOLUME 2**), provides an explanation of the procedures for post-closure care activities to be performed at the Class 3N Landfill. The plan identifies the post-closure care monitoring and maintenance requirements, the contact individuals during the post-closure care period, estimates for post-closure care costs, proposed uses of the site and certification procedures for the post-closure activities. A copy of this plan is located in the facility POR.

APPENDIX A
Drawings

LIST OF CLASS 3N SOLID WASTE LANDFILL DRAWINGS

DRAWING 0-30STE071	Preparation Abbreviations
DRAWING 0-30STE400	Key Plan, Drawing Index, and General Notes
DRAWING 0-30STE401	Bench Marks & Piezpmeters
DRAWING 0-30STE402	Leachate Collection Excavation and Grading Plan
DRAWING 0-30STE403	Typical Sections and Details
DRAWING 0-30STE404	Disposal Cell 1 Excavation & Grading
DRAWING 0-30STE405	Disposal Cell 1 Final Grading & Cover
DRAWING 0-30STE406	Disposal Cell 2 Excavation & Grading
DRAWING 0-30STE407	Disposal Cell 2 Final Grading & Cover
DRAWING 0-30STE408	Disposal Cell 1 Cross Sections
DRAWING 0-30STE409	Disposal Cells 1 & 2 Cross Sections
DRAWING 0-30STE410	Typical Sections and Details
DRAWING 0-30STE411	Typical Sections and Details
DRAWING 0-30STE412	Typical Sections and Details
DRAWING 0-30STE413	Disposal Cell 3 Excavation & Grading
DRAWING 0-30STE414	Disposal Cell 3 Final Grading & Cover
DRAWING 0-30STE415	Cross-Section All Cells
DRAWING 0-30STE416	Disposal Cell 4 Excavation & Grading
DRAWING 0-30STE417	Disposal Cell 4 Final Grading & Cover
DRAWING 0-30STE418	Disposal Cell 5 Excavation & Grading
DRAWING 0-30STE419	Disposal Cell 5 Final Grading & Cover
DRAWING 0-30STE420	Cross Sections Cells 1 & 2
DRAWING 0-30STE421	Cross Sections 3 - 5
DRAWING 0-30STE422	Disposal Cells 1 & 2 Profiles
DRAWING 0-30STE423	Disposal Cells 1, 2 & 3 Profiles
DRAWING 0-30STE424	Disposal Cell 1 UG Systems Plan
DRAWING 0-30STE425	Disposal Cell 2 UG Systems Plan
DRAWING 0-30STE426	Disposal Cell 3 UG Systems Plan
DRAWING 0-30STE427	Disposal Cell 4 UG Systems Plan
DRAWING 0-30STE428	Disposal Cell 5 UG Systems Plan
DRAWING 0-30STE500	Makeup & Wastewater Pond DWG Index & General Notes
DRAWING 0-30STE501	Makeup & Wastewater Pond Excavation & Grading Plan
DRAWING 0-30STE502	Makeup & Wastewater Pond Sections and Notes
DRAWING 0-30STE503	Makeup WW & Leachate Pond Access RD Plan & Sec’s
DRAWING 0-30STE504	Leachate Collection Pond Excavation & Grading Plan
DRAWING 0-30STE505	Leachate Collection Pond Sections & Notes
DRAWING 0-30STE506	Makeup & Wastewater Pond U/G Systems Plan
DRAWING 0-32STE250	Sumps, Plans, and Sections
DRAWING 0-123896CSK216	Landfill Leachate Sump Plan and Sections

APPENDIX B
Inspection Form

SWEPCO – JOHN W. TURK, JR. POWER PLANT
CLASS 3N FACILITY
OPERATIONS INSPECTION FORM

DATE:_____ INSPECTOR:_____

DESCRIPTION	INSPECTION INTERVAL	PASS	FAIL**
Surface Water System	**Monthly**		
Drainage Ditches & Culverts		_____	_____
Berms		_____	_____
Letdowns		_____	_____
Stormwater Control Ponds/Outlet Structures		_____	_____
Bottom Liner System	Monthly		
Composite Liner System		_____	_____
Protective Cover Layer		_____	_____
Class 3N Facility Final Cover System	Monthly		
Erosion		_____	_____
Ponded Water		_____	_____
Settlement		_____	_____
Vegetation		_____	_____
Facility Roads	Monthly		
Safety		_____	_____
Routing		_____	_____
Condition		_____	_____
Mud		_____	_____
Passable Width		_____	_____
Earth Moving Equipment	Monthly		
_____		_____	_____
_____		_____	_____
_____		_____	_____
_____		_____	_____
Emergency Response Equipment			
Fire Extinguisher	Test annually; check quarterly	_____	_____
Communication System	Monthly	_____	_____
List of Emergency Phone Numbers	Monthly	_____	_____
First Aid Kits	Monthly	_____	_____
Survey Grid Markers	Monthly	_____	_____
Survey Control Markers	Annually	_____	_____

** Explain failure on back of form.

ATTACHMENT E
SPENT WASTE CATALYST

ARKANSAS
ENERGY & ENVIRONMENT

March 22, 2023

Ms. Leslie E. Fuerschbach (lefuerschbach@aep.com)
Southwestern Electric Power Company (SWEPCO)
502 North Allen Avenue
Shreveport, LA 71101

Re: Approval of Spent Catalyst Plates for Disposal in Class 3N Landfill
SWEPCO – John W. Turk, Jr. Power Plant, Class 3N Landfill
Permit No: 0311-S3N-R1; AFIN: 29-00506
Document ID: 83642; Reference Document ID: 83334

Dear Ms. Fuerschbach,

The Division of Environmental Quality Office of Land Resources (DEQ) has received and reviewed the Request for Spent Catalyst Plate Disposal for the SWEPCO – John W. Turk, Jr. Power Plant, Class 3N Landfill, dated January 30, 2023 under Document ID 83334. DEQ has determined that the catalyst plates are classified as non-hazardous material and may be disposed in the landfill. By this letter, DEQ authorizes a one-time disposal of the spent catalyst plates pursuant to Solid Waste Permit 0311-S3N-R1, Site Specific Permit Condition 4.a.

The spent catalyst plates are not currently an authorized waste stream as listed in Site Specific Permit Condition 4. If SWEPCO wishes to continue disposing of the catalyst plates, then please submit to DEQ a Minor Permit Modification Application and associated permit modification fee. The application will include a revised Hazardous Waste and Unauthorized Waste Exclusion Plan, a revised Operating Plan, specifically Section 2.4 *Waste Screening Procedures*, and any other sections of the permit application that may be affected by the permit modification.

Should you have any questions regarding this correspondence, please contact me at (501) 682-0040 or greg.banic@adeq.state.ar.us.

Best regards,

Greg Banic
Engineer, Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118-5317

cc: DEQ – Cusher, Hurt, Krou, Greenwood, and Banic

Kacy Murillo (adpce.ad)

Subject: RE: SWEPCO John W. Turk, Jr. Power Plant - Class 3N - Landfill

AFIN: 29-00506
PMT#: 0311-S3N-R1
Received
By Kacy Murillo at 2:18 pm, Jan 30, 2023
DOC ID#: 83334
TO: AC>FILE <KM

From: Leslie E Fuerschbach [mailto:lefuerschbach@aep.com]
Sent: Monday, January 23, 2023 11:11 AM
To: Greg Banic (adpce.ad)
Cc: Brian D Newton; Jason R Johnson
Subject: SWEPCO John W. Turk, Jr. Power Plant - Class 3N - Landfill

Mr. Banic,
Please see attached letter. My cell phone and office number are listed below if you have any additional questions.

Thanks,

AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

LESLIE E FUERSCHBACH | ENVIRONMENTAL ENGINEER
LEFUERSCHBACH@AEP.COM | D:318.673.2744 | C:318.464.3123
502 N ALLEN AVE, SHREVEPORT, LA 71101-2669

Arkansas Dept. Of Energy and Environment

Office of Land Resources

Attn: Mr. Greg Banic

5301 Northshore Drvie

North Little Rock, AR 72218-5317

January 23, 2023

Subject: Turk Catalyst Disposal Permit 0311-S3N-R1

Dear Mr. Banic,

This letter is to request approval from ADEQ for disposal of catalyst sheets in the permitted Class 3N landfill per site specific permit conditions 4(a) *Additional waste items not mentioned may be authorized by the Department for disposal at the facility on a case-by case basis when requested by the permittee.*

This letter will provide some background information describing the generation of waste catalyst from the selective catalyst reduction (SCR) process at the Turk Power Plant and explains the reasoning behind requesting authorization for disposal. Photos are included of the removed catalyst modules as well as the results of TCLP test on samples of the catalyst.

As background information, Southwestern Electric Power Company owns and operates a coal-fired power plant (John W. Turk, Jr. Power Plant) with a Class 3 Non-Commercial (3N) solid waste facility (Class 3N Landfill) associated with the Power Plant. The site is located approximately 2.2 miles north of Fulton (Hempstead County), Arkansas. The Power Plant produces up to 600 Megawatts (MW) of electrical power utilizing western subbituminous coal. The unit is equipped with an SCR to remove NOx in the flue gas generated from the burning of coal. The SCR removes NOx by injecting vaporized ammonia into a reactor that provides contact between the flue gas and the ammonia. The SCR reactors are located before the baghouse that removes the coal fly ash. As such, the reactors are designed for high dust operation. The ammonia reacts with the catalysts and NOx in the flue gas and converts it to

nitrogen and water. The system is designed to remove >90% of the NOx. The reactor includes a catalyst that speeds up the process. The catalyst lasts only so long then it must be replaced.

The SCR has four layers of catalyst modules that the flue gas passes through. In all, there are 672 catalyst modules. Each module is about 6.5 feet x 3 3 feet x 5 feet and contains about 1264 stainless steel screen plates (each approximately 2 feet x 1.5 feet, two layers per module) coated with titanium dioxide based ceramic coated with vanadium pentoxide catalyst (see attached photos). Of the 672 modules, 168 modules (One layer, original L2) was removed in December 2022 and was replaced. The deactivated layer that was removed is currently being stored at the plant site.

Another layer, existing L1, is scheduled for removal and disposal this fall of 2023.

Turk would like to remove the catalyst plates, recycle the frames, and place the plates in the landfill. These plates are somewhat depleted and do not have near the coating as new ones. An area would be prepared for the plates to be placed. This area would allow proper amounts of ash to be placed to meet compaction while layering the catalysts. We believe this is a good disposal method and should cause no issues.

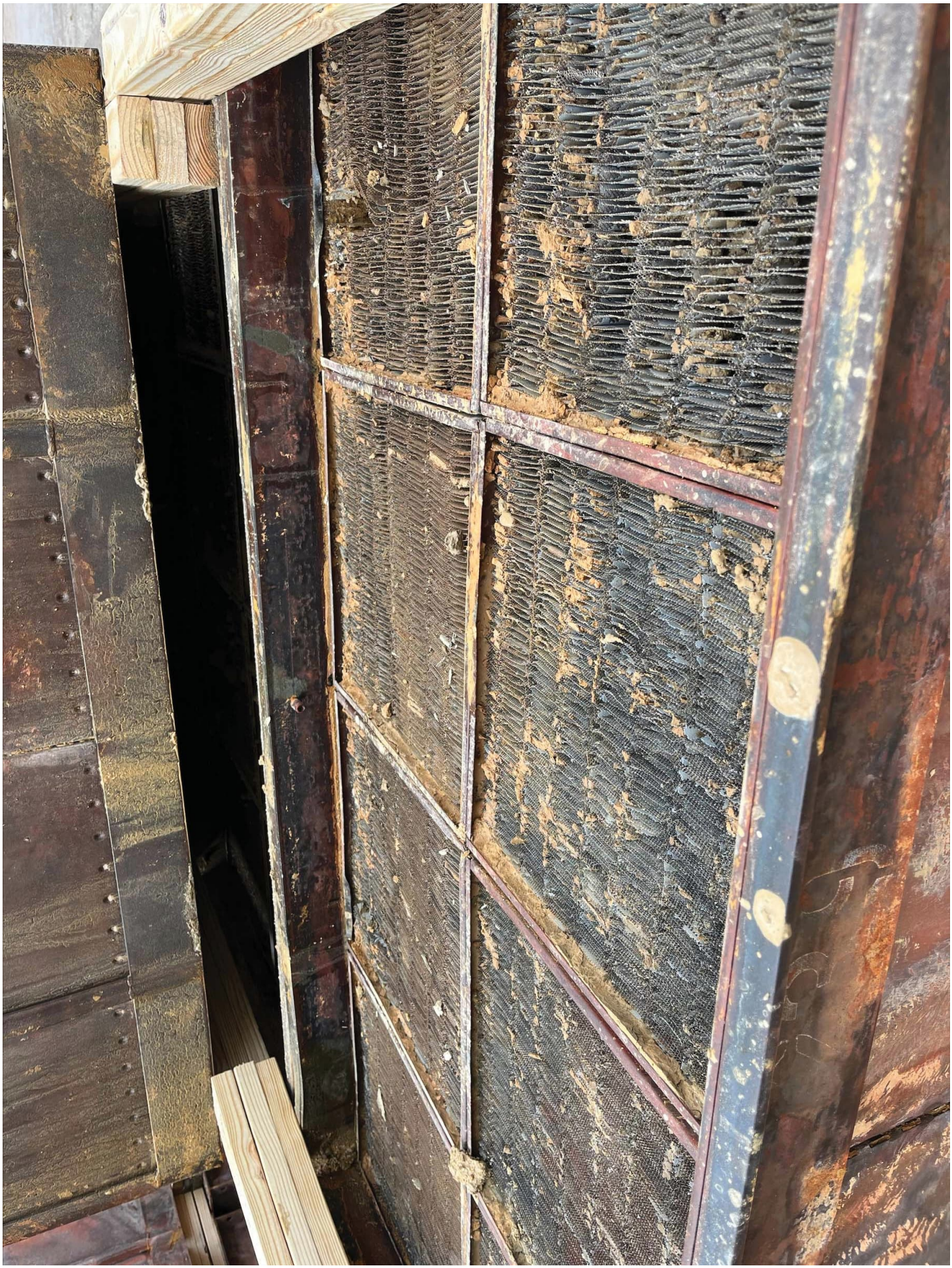
We are requesting disposal of all catalyst plates from 336 modules in landfill cell 2.

Sincerely,

Leslie Fuerschbach

Leslie Fuerschbach

Environmental Engineer



HAZARDOUS WASTE DETERMINATION

SECTION I FACILITY INFORMATION

Generating Facility Name: John W. Turk Power Plant

Waste Name: Plate Catalysts

Waste Description and Process Generating Waste: The waste described here are catalyst plates. These plates are stainless mesh wire with a ceramic like coating consisting of catalyst materials. These plates are fixed in metal frame boxes called cells. These cells are loaded into a large compartment which has an inlet and outlet for boiler flue gas. As the flue gas travels over the catalysts the gas interacts with the coated plates. Anhydrous ammonia is injected in the flue gas upstream of the catalysts. The ammonia and the boiler flue gas react with the plates to convert nitric oxides into nitrogen and water. The spent catalyst plates will be removed from the metal frame boxes, with the metal boxes being managed separately as scrap metal. This determination represents the spent catalyst plates which will be disposed. The metal frame boxes are steel, do not contain coating and will be recycled as scrap metal.

State Waste Code (if Applicable):

Initial Date of Waste Generation: December 1, 2022

SECTION II WASTE DETERMINATION

Hazardous Waste Determination

☐ Yes ☒ No Is the waste excluded from regulation as a hazardous waste (40 CFR 261.4)

If "Yes," the waste is **non-hazardous**. If "No," continue with remaining questions.

☐ Yes ☒ No Is the waste a listed hazardous waste, mixed with a listed hazardous waste, or derived from a listed hazardous waste? (descriptions of listed hazardous wastes are found in 40 CFR261.31 through 261.33)

If the waste is not listed as a hazardous waste in 40 CFR Part 261, Subpart D, you must then determine whether the waste exhibits any of the characteristics of hazardous waste identified in 40 CFR Part 261, Subpart C.

☐ Yes ☒ No Is the waste ignitable as described in 40 CFR 261.21?

☐ Yes ☒ No Is the waste corrosive as described in 40 CFR 261.22?

☐ Yes ☒ No Is the waste reactive as described in 40 CFR 261.23?

☐ Yes ☒ No Is the waste toxic as described in 40 CFR 261.24? (A waste is toxic for one or more of the 39 constituents identified in Table 1 of this section if it leaches greater than the regulatory level(s) set by EPA.)

☐ **If YES** to **any** of the preceding questions, the waste is hazardous.

☒ **If NO** to **all** of the preceding questions, the waste is non-hazardous.

Process Knowledge

Detailed description of generator's knowledge of process generating waste.

Process Knowledge includes but is not limited to MSDSs, manufacturer's literature, identification of chemicals/materials in the waste stream generation process, description of waste stream generation activities, identification of potential contaminant, preliminary testing results, etc.

Process Knowledge: The SDS indicates the material is not hazardous. Section 5 of the SDS indicates the material is non-combustible. Use in emission control is not expected to change this or introduce ignitability. This material is solid and the corrosivity characteristic is not applicable. Section 10 of the SDS describes the new catalysts as stable and the application used is not expected to change that aspect. Listed waste, pesticides, herbicides, TCLP Volatiles, TCLP Semi-Volatiles and any other constituents which could make this material hazardous are not expected. A TCLP Metals analysis were ran and indicate the material is non-hazardous. The TCLP analysis was ran on the spent catalyst plates which will be disposed and does not include the steel frames which are managed separately as scrap metal.

SECTION III ANALYTICAL DATA

☒ Yes
☐ No

Was analysis conducted for the waste?

If YES, complete the following information.

Date of sample collection: 12/02/2022

Description of site and/or unit from which sample was taken (including sample locations)

Description: A catalyst sheet was removed from two different cells and enough sample was cut from each sheet to run analysis. The samples were cut into approximately 1/4 inch squares with tin snips over a paper towel. The cut pieces were emptied straight from the towel into plastic bags.

Sampling Method/Equipment Used

Method/Equipment: Tin snips, leather gloves (metal has sharp edges), plastic bags, shop towels

Sampling Techniques (including methods of collection, containerization, and preservation)

Techniques: Care was taken to not use materials that were contaminated. Leather gloves were used for safety. The samples were handled minimally. Sheets from two different cells were used for a homogenous sample. The amount of sample from each catalysts sheet was estimated to reach over 100 grams as required by the lab. The sample was cut over paper towels and then transferred to plastic bags. The tin snips were steel and were wiped with a clean towel to remove any material from them.

Rationale for sampling plan (why does plan accurately represent the waste stream?)

Rationale: The sample directly represents the characteristic of the entire waste stream. There is no reason to suspect a different catalyst. The waste does not vary in composition.

☒ Attach copy of Chain of Custody and applicable analytical data.

The safety Data Sheets (SDS) for the unused catalysts is attached. Also attached are the separate lab reports prepared for Hg and for the other RCRA metals. The lab reports include the sample chain-of-custody form and laboratory control data.

Material Safety Data Sheet

1. Chemical Product and Company Identification

Products Information:
Product name: Plate type catalyst (fresh)

Company Identification:

Company Name:	Babcock-Hitachi K. K.
Address:	14-1, Sotokanda 4-chome Chiyoda-ku, Tokyo, 101-0021 Japan (Head office)
Telephone:	+81-3-5209-7000
FAX:	+81-3-5209-7761
Emergency Contact:	Babcock-Hitachi K. K., Kure Division, Quality Assurance Department
Telephone:	+81-823-21-1151
FAX:	+81-823-21-8575

2. Hazard Identification

GHS Classification:

Physical hazards:	Explosives :	Not applicable
	Flammable gases :	Not applicable
	Flammable aerosols :	Not applicable
	Oxidizing gases :	Not applicable
	Gases under pressure :	Not applicable
	Flammable liquids :	Not applicable
	Flammable solids :	Not classified
	Self-reactive substance :	Not applicable
	Pyrophoric liquids :	Not applicable
	Pyrophoric solids :	Not classified
	Self-heating substance :	Not classified
	Substance and mixture which, in contact with water, emit flammable gases:	Not classified
	Oxidizing liquids :	Not applicable
	Oxidizing solids :	Not classified
	Organic peroxides :	Not applicable
	Corrosive to metals :	Classification not possible
Health hazards:		
	Acute toxicity (Oral) :	Not classified
	Acute toxicity (Dermal) :	Not classified
	Acute toxicity (Gases) :	Not applicable
	Acute toxicity (Vapors) :	Classification not possible
	Acute toxicity (Dusts) :	Not classified
	Acute toxicity (Mists) :	Not applicable
	Skin corrosion/irritation :	Category 2

Health hazards:	Serious eye damage/eye irritation :	Category 1
	Respiratory sensitization :	Classification not possible
	Skin sensitization :	Classification not possible
	Germ cell mutagenicity :	Category 1
	Carcinogenicity :	Category 2
	Reproduction toxicity :	Category 2
	Specific target organs systemic toxicity(Single exposure) :	Category 1
	Specific target organs systemic toxicity (Repeated exposure) :	Category 1
	Aspiration hazards :	Classification not possible
Environmental hazards:		
	Aquatic environment hazards(acute) :	Category 3
	Aquatic environment hazards(Chronic) :	Classification not possible

Label elements:

Labeling or Symbol: Exclamation mark, Health hazard, Corrosion

Signal words: Danger

Hazard statements:
Eye irritation
Suspected of causing cancer
Cause damage to heart, kidney and liver
Cause damage to lung through prolonged or repeated exposure

Precautionary statements:

Prevention:
Do not handle until all safety precautions have read and understood.
Wear proper protective equipment.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.
Do not breathe dusts.

Storage: The packed catalyst shall be stored well-ventilated indoors.

Disposal: Dispose of contents in accordance with local/regional/ regulation.

3. Composition/information on ingredients

Classification of the substance or mixture: mixture

Composition of product material:

Ingredient	Formula	Content (%)	CAS No.
Titanium dioxide (IV)	TiO_2	25 ~ 50	13463-67-7
Molybdenum trioxide (VI)	MoO_3	0 ~ 10	1313-27-5
Tungsten trioxide (VI)	WO_3	0 ~ 20	1314-35-8
Vanadium dioxide (IV) *	VO_2	0.1 ~ 10	12036-21-4
Silicon dioxide (IV)	SiO_2	0 ~ 10	7631-86-9
Aluminum oxide (III)	Al_2O_3	0 ~ 5	1344-28-1
Phosphorus pentoxide (V)	P_2O_5	0 ~ 10	1314-56-3
Aluminosilicate ceramic fiber	Al_2O_3, SiO_2	3 ~ 25	142844-00-6
Stainless steel	Fe, Cr, etc. (alloy)	40 ~ 50	-

* Vanadium compounds exist as VO_2 in this product. In this MSDS, hazardous data are described as the most hazardous vanadium compound, V_2O_5 (1314-62-1).

4. First-aid measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.

Eye: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists, get medical advice/attention.

Skin: Take off the adhered clothing, and flush the contacted part with water and soap.

Ingestion: Immediately give the person large quantities of water to vomit it. Get medical advice/attention.

Expected immediate and delayed symptoms:
Pain of eye.

5. Fire-fighting measures

Extinguishing media : Not combustible.

Unsuitable extinguishing media : None

Peculiar hazards : In case of high temperature, may generate fume.

Peculiar fire extinguishing method : Storage in room temperature: None
Product under using: read the "OPERATION, MAINTENANCE AND SAFETY MANUAL".

Protective equipment : Firefighters should wear a full set of protective clothing, including a breathing apparatus. Avoid working at the lee side.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:
Wear proper protective gloves/clothing and eye/face protections and avoid contact with skin and inhalation of dust. Keep away personnel except for authorized ones from spillage area by stretching ropes.

Environmental precautions: Attention should be given not to cause damage to the environment by flowing of spillage to rivers. In case of the dilution of copious water, do not cause damage to the environment by untreated wastewater.

Methods and materials for containment and cleaning up:
Wear proper protective equipment, sweep up or suck up dust and then place into a suitable container for disposal.

Prevention of side hazards Avoid working at the lee side.

7. Handling and storage

Handling:

Technical measures: Wear proper protective equipment and avoid contracting with skin and eyes, avoid inhalation of dust.
Catalyst block should be handled with a great care, so as not to drop it or give a strong impact to the catalyst.

Caution: Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.

Storage:

Conditions: Catalyst shall be stored in packed condition.
The packed catalyst shall be stored indoors.
Windows or gates shall be opened, and thereby fresh air shall be introduced into the warehouse with natural re-circulation on a fine day.

Safety container: No requirements

8. Exposure controls/personal protection

Exposure limit [1) 4) 5)]	ACGIH
Titanium dioxide (IV)	TWA 10 mg/m^3
Molybdenum trioxide (VI)	Insoluble compounds; TWA 10 mg /m^3 (as Mo) Soluble compounds; TWA 3 mg /m^3 (as Mo) Metal, Insoluble compounds, Inhalation(dust); TWA 10 mg /m^3 (as Mo) Metal, Insoluble compounds, Breathing(dust); TWA 3 mg /m^3 (as Mo)
Tungsten trioxide (VI)	TLV-TWA 0.2 mg/m^3
Silicon dioxide (IV)	TWA 0.1mg/m^3
Vanadium dioxide (IV)	TWA 0.05mg/m^3 (as V_2O_5)
Aluminum oxide (III)	TWA 10mg/m^3
Phosphorus pentoxide (V)	Not described
Aluminosilicate ceramic fiber	0.2 f/cm^3
Stainless steel	Not described

Facilities: In the case of creating dust, local exhaust ventilation should be provided.

Personal protective equipment:

Respirator protection: Dust mask is recommended.

Hands protection: Protective glove is recommended.

Eye protection: Goggle is recommended

Skin and body protection: Usual working wear and shoes is recommended.

9. Physical and chemical properties

Appearance: Solid (Plate type)

Odor: No data

pH: No data

Melting point: No data

Boiling point: No data

Flash point: No data

Explosive limits: No data

Vapor pressure: No data

Vapor density: No data

Relative density: No data

Solubility: No data

Partition coefficient (n-octanol/water): No data

Auto ignition temperature: No data

Decomposition temperature: No data

10. Stability and reactivity

Stability: Stable in general conditions.

Possibility of hazardous reactions: No information

Conditions to avoid: No information

Incompatible materials: No information

Hazardous decomposition products: No information

11. Toxicological information

Acute toxicity [1) 4) 5)] :

Ingredient	Acute toxicity (Oral) LD_{50}	Acute toxicity (Dermal) LD_{50}	Acute toxicity (Gases)	Acute toxicity (Vapors)	Acute toxicity (Dusts) LC_{50}
Titanium dioxide (IV)	Not classified (>10000 mg/kg)	Not classified (>10000 mg/kg)	Not applicable	Not applicable	Classification not possible (6.82 mg/L/4h)
Molybdenum trioxide (VI)	Category 3 (125 mg/kg)	Classification not possible	Not applicable	Not applicable	Category 5 (5.84 mg/L/4h)
Tungsten trioxide (VI)	Category 4 (1059 mg/kg)	Classification not possible	Not applicable	Not applicable	Classification not possible
Vanadium dioxide (IV)	Category 5	Category 5	Not applicable	Not applicable	Category 5
Silicon dioxide (IV)	Category 5 (3160 mg/kg)	Classification not possible	Not applicable	Not applicable	Category 3 (0.55 mg/L/4h)
Aluminum oxide (III)	Classification not possible	Classification not possible	Not applicable	Not applicable	Not classified
Phosphorus pentoxide (V)	Classification not possible	Classification not possible	Not applicable	Not applicable	Category 2
Aluminosilicate ceramic fiber	No data	No data	Not applicable	Not applicable	No data
Stainless steel	No data	No data	Not applicable	Not applicable	No data

Acute toxicity (Oral):

Toxicological information;
Category 2: VO_2,
Category 3: MoO_3,
Category 4: WO_3,
Category 5: SiO_2,
Classification not possible: TiO_2, Al_2O_3
Not applicable: Others
Formula; GHS UN document 3.1.3.6.2 [2) 3)]
Result; Not classified

Acute toxicity (Dermal):

Toxicological information;
Classification not possible: TiO_2
Not applicable: Others
Formula; GHS UN document 3.1.3.6.2 [2) 3)]
Result; Not classified

Acute toxicity (Gases):

Toxicological information;
Not applicable: All component
Result; Not applicable

Acute toxicity (Vapors):

Toxicological information;
Not applicable: All component
Result; Not applicable

Acute toxicity (Dusts):

Toxicological information;
Category 2: P_2O_5,
Category 3: SiO_2,
Category 4: VO_2,
Not classified: TiO_2, Al_2O_3
Result; Not classified

Skin corrosion/irritation:

Toxicological information;
Category 1: P_2O_5,
Not classified: TiO_2
Classification not possible: Others
Formula; GHS UN document 3.2.3.3 [2) 3)]
Result; Category 2

Serious eye damage/eye irritation:

Toxicological information;
Category 1: P_2O_5,
Category 2A: VO_2,
Category 2B: TiO_2, Aluminosilicate ceramic fiber,
Classification not possible: Others
Formula; GHS UN document 3.3.3.3 [2) 3)]
Result; Category 1

Skin sensitization:

Toxicological information;
Not classified: TiO_2
Classification not possible: Others
Formula; GHS UN document 3.4.3.3 [2) 3)]
Result; Classification not possible

Respiratory sensitization:

Toxicological information;
Classification not possible: All component
Formula; GHS UN document 3.4.3.3 [2) 3)]
Result; Classification not possible

Germ cell mutagenicity:

Toxicological information;
Category 1B: VO_2,
Not classified: TiO_2,
Classification not possible: Others
Formula; GHS UN document 3.5.3.3 [2) 3)]
Result; Category 1

Carcinogenicity:

Toxicological information;
Category 2: VO_2, MoO_3, Aluminosilicate ceramic fiber,
Not classified: TiO_2,
Classification not possible: Others
Formula; GHS UN document 3.6.3.3 [2) 3)]
Result; Category 2

Reproduction toxicity:

Toxicological information;
Classification not possible: All component
Formula; GHS UN document 3.7.3.3 [2) 3)]
Result; Classification not possible

Specific target organs systemic toxicity (Single exposure):

Toxicological information;
Category 1: VO_2, MoO_3,
Category 3: TiO_2, Al_2O_3, SiO_2
Classification not possible: Others
Formula; GHS UN document 3.8.3.4 [2) 3)]
Result; Category 1

Specific target organs systemic toxicity (Repeated exposure):

Toxicological information;
Category 1: VO_2, MoO_3, TiO_2, Al_2O_3, SiO_2
Not classified: Aluminosilicate ceramic fiber,
Classification not possible: Others
Formula; GHS UN document 3.9.3.4 [2) 3)]
Result; Category 1

Aspiration hazards:

Toxicological information;
Classification not possible: All component
Formula; GHS UN document 3.10.3.3 [2) 3)]
Result; Classification not possible

12. Ecological information

Aquatic environment hazards (acute):

Toxicological information;
Category 2: VO_2,
Category 3: MoO_3,
Not classified: TiO_2,
Classification not possible: Others
Formula; GHS UN document 4.1.3.5 [2) 3)]
Result; Category 3

Aquatic environment hazards (Chronic):

Toxicological information;
Category 2: VO_2,
Category 3: MoO_3,
Category 4: TiO_2,
Classification not possible: Others
Formula; GHS UN document 4.1.3.5 [2) 3)]
Result; Classification not possible

13. Disposal considerations

Waste disposal:

An authorized/registered waste disposer shall handle the disposal because the chemical waste should be disposed in accordance with local laws, codes and regulations. There are two recommendable methods below.

- The spent catalyst is crushed, encapsulated in concrete and disposed in the waste disposal site by an authorized/registered waste treatment company.
- The catalyst is melted by electric furnace. The metal is recovered as steel scrap. The catalyst powder is disposed as slag.
-

Containers:

Containers should be cleaned up, then recycle or dispose of in accordance with regulations.

14. Transport information

International regulation:

Transporting by sea: Not applicable

Transporting by air: Not applicable

Peculiar protection: Catalyst should be handled with a great care, so as not to drop or give a strong impact to the catalyst.

15. Regulatory information

Applicable regulations: No specific information

16. Other information

[References]

1) National Institute of Technology and Evaluation
http://www.safe.nite.go.jp/ghs/ghs_index.html
2) United Nations Economic Commission
http://www.unece.org/trans/danger/publi/ghs/ghs_rev02/02files_e.html
3) National Institute of Technology and Evaluation Chemical Management Center
http://www.safe.nite.go.jp/ghs/ghstext/kariyaku.html
4) Japan Advanced Information Center of Safety and Health
http://www.jaish.gr.jp/index.html
5) 2008 ILVs and BEIs, ACGIH

- **The information contained herein is based on several references and present state of our knowledge. However this MSDS does not always cover all information about the product.**
- **We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use.**
- **The catalyst is going to be adhered by other chemical compounds by exposing in flue gas. Users should make their own investigations to determine the suitability of the information for their particular purposes.**

Arkansas Analytical Inc.

8100 National Dr. - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

PRELIMINARY REPORT

12 December 2022

Kyle Kinard
John W Turk Power Plant
3711 Highway 355 South
Fulton, AR 71838

RE: TCLP Sample(s)

SDG Number: 2212083

Enclosed are the results of analyses for samples received by the laboratory on 05-Dec-22 14:52. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✔
Containers Correct	✔
COC/Labels Agree	✔
Preservation Confirmed	✔
Received On Ice	✔
Temperature on Receipt	3.0°C

Sincerely,

Norma James
Technical Director

12 December 2022

Kyle Kinard
John W Turk Power Plant
3711 Highway 355 South
Fulton, AR 71838
Project: TCLP Sample(s)

Project Number: December 2022 -- SCR Catalyst Sample
Date Received: 05-Dec-22 14:52

PRELIMINARY REPORT

ANALYTICAL RESULTS

Lab Number:	**2212083-01**
Sample Name:	**SCR Catalyst Sample 1 & 2**
Date/Time Collected:	**12/2/22 10:00**
Sample Matrix:	**Solid**

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Arsenic	mg/L	< 0.023		12/9/22 14:16	B212183	SW 1311,6010C
Barium	mg/L	**0.100**		12/9/22 14:16	B212183	SW 1311,6010C
Cadmium	mg/L	**0.046**		12/9/22 14:16	B212183	SW 1311,6010C
Chromium	mg/L	**0.197**		12/9/22 14:16	B212183	SW 1311,6010C
Lead	mg/L	< 0.016		12/9/22 14:16	B212183	SW 1311,6010C
Selenium	mg/L	< 0.052		12/9/22 14:16	B212183	SW 1311,6010C
Silver	mg/L	< 0.027		12/9/22 14:16	B212183	SW 1311,6010C

QUALITY CONTROL RESULTS

TCLP Metals -- Batch: B212183 (Water)
Prepared: 09-Dec-22 11:14 By: BS -- Analyzed: 09-Dec-22 13:59 By: BS

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Arsenic	<0.023 mg/L	96.3% / NA	103% / 103%		0.0772%	
Barium	<0.007 mg/L	98.5% / NA	100% / 100%		0.116%	
Cadmium	<0.001 mg/L	100% / NA	95.6% / 96.4%		0.680%	
Chromium	<0.012 mg/L	98.0% / NA	93.6% / 94.1%		0.474%	
Lead	<0.016 mg/L	101% / NA	92.2% / 93.5%		0.575%	
Selenium	<0.052 mg/L	98.0% / NA	105% / 103%		1.47%	
Silver	<0.027 mg/L	101% / NA	95.0% / 97.3%		2.43%	

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: Norma James

Norma James
Technical Director

Arkansas Analytical Inc.

8100 National Dr.
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION	Project Description	Turnaround Time
John W Turk Power Plant	~~Activated Carbon Silo~~ SCR	1 Day (100%)
3711 Hwy. 355 S		2 Day (50%)
Fulton, AR 71838	Reporting Information	3 Day (25%)
	Telephone: 903-831-1625	Routine
Attn: Kyle Kinard	Cell: 870-403-6476	Preservative Code:
	Email: kekinard@aep.com	Bottle Type: P

Preservation Codes:

1. Cool, 6 Degrees Centigrade
2. Sulfuric Acid (H_2SO_4), pH < 2
3. Nitric Acid (HNO_3), pH < 2
4. Thiosulfate for Dechlorination
5. Hydrochloric Acid(HCl)
6. Sodium Hydroxide (NaOH), pH > 12

Bottle Type Code: G = Glass; P = Plastic; V = Septum; A = Amber

Sampler(s) Signature: Kyle Kinard

Sampler(s) Printed: Kyle Kinard

Field Number	SAMPLE COLLECTION Date/s	Time/s	Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION	TCLP Metals	Arkansas Analytical Work Order Number:
	Start: 12/02/22	Start: 10:00 AM	X		2		SCR Catalyst Sample 1 & 2	X	22J2083 P -01
	Stop:	Stop:							

1. Relinquished by: (Signature)	Date/Time	2. Received by: (Signature)
Kyle Kinard	12/5/22 1300	12/5/22 1317
3. Relinquished by: (Signature)	Date/Time	4. Received by lab: (Signature)
	12/5/22 1452	

SAMPLE CONDITION UPON RECEIPT IN LAB

1. CUSTODY SEALS: ✓ Yes ___ No
2. CONTAINERS CORRECT: ___ Yes ___ No
3. COC/LABELS AGREE: ___ Yes ___ No
4. RECEIVED ON ICE: ___ Yes ___ No
5. TEMPERATURE ON RECEIPT: 3 °C
6. TEMPERATURE GUN ID: HHT# 5

FOR COMPLETION BY LAB ONLY

REMARKS / SAMPLE COMMENTS

Please also mail results to jrjohnson1@aep.com

Arkansas Analytical Inc.

8100 National Dr. - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

14 December 2022

Kyle Kinard
John W Turk Power Plant
3711 Highway 355 South
Fulton, AR 71838

Project: TCLP Sample(s)

Project Number: December 2022 -- SCR Catalyst Sample

SDG Number: 2212083

Enclosed are the results of analyses for samples received by the laboratory on 05-Dec-22 14:52. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✔
Containers Correct	✔
COC/Labels Agree	✔
Received On Ice	✔
Temperature on Receipt	3.0°C

Sincerely,

Norma James
Technical Director

14 December 2022

Kyle Kinard
John W Turk Power Plant
3711 Highway 355 South
Fulton, AR 71838
Project: TCLP Sample(s)

Project Number: December 2022 -- SCR Catalyst Sample
Date Received: 05-Dec-22 14:52

ANALYTICAL RESULTS

Lab Number:	**2212083-01**
Sample Name:	**SCR Catalyst Sample 1 & 2**
Date/Time Collected:	**12/2/22 10:00**
Sample Matrix:	**Solid**

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	mg/L	< 0.0020		12/13/22 15:16	B212253	SW 1311,7470A

QUALITY CONTROL RESULTS

TCLP Metals -- Batch: B212253 (Water)
Prepared: 12-Dec-22 16:59 By: ST -- Analyzed: 13-Dec-22 15:06 By: BS

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	99.4% / NA	97.6% / 99.9%		2.31%	

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: Norma James

Norma James
Technical Director

Arkansas Analytical Inc.

8100 National Dr.
Little Rock, AR 72209
PHONE: 501-455-3233
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