

**2016 ANNUAL CCR UNIT INSPECTION REPORT  
LUMINANT SANDOW 5 GENERATING PLANT  
AX LANDFILL  
MILAM COUNTY, TEXAS**

January 13, 2017

Prepared for:

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**TABLE OF CONTENTS**

	<u>Page</u>
LIST OF FIGURES .....	iii
LIST OF APPENDICES .....	iii
1.0 INTRODUCTION .....	1
1.1 Sandow 5 Units Subject to Annual CCR Inspection Requirements .....	1
1.2 Annual CCR Landfill Inspection Requirements .....	2
2.0 RECORDS REVIEW.....	4
2.1 CCR Unit Fugitive Dust Control Plan .....	4
2.2 Weekly Qualified Person Inspection Records .....	4
2.3 CCR Unit Design and Construction Documentation .....	5
2.4 2015 Annual CCR Inspection Report .....	5
3.0 CCR LANDFILL INSPECTION.....	6
3.1 Perimeter Embankments .....	6
3.2 Active CCR Placement Areas.....	7
3.3 Storm Water and Contact Water Controls .....	7
3.4 Comparison to 2015 Annual CCR Inspection Findings.....	7
4.0 SUMMARY OF FINDINGS .....	8
4.1 Visual Observation of Embankment Alignments .....	8
4.2 Visual Observations of Structural Integrity .....	8
4.3 CCR Volume at Time of Inspection .....	8
5.0 RECOMMENDATIONS .....	9
6.0 REFERENCES .....	10

**LIST OF FIGURES**

<u>Figure</u>	<u>Title</u>
1	Site Location Map
2	Site Vicinity Map
3	Annual Inspection Findings Summary Map - AX Landfill
4	Annual Inspection Photograph Log – AX Landfill

**LIST OF APPENDICES**

<u>Appendix</u>	<u>Title</u>
A	Photographs – AX Landfill

Luminant

## **1.0 INTRODUCTION**

Luminant Generation Company, LLC (Luminant) operates the Sandow 5 Generating Plant (Sandow 5) located approximately 7 miles southwest of Rockdale in Milam County, Texas (see Figure 1). Unit No. 5 is an approximately 581-megawatt, lignite-fired electric generation unit that was placed into service in 2009. Coal Combustion Residuals (CCRs) such as fly ash and bed ash are generated as part of Unit No. 5 operation. CCR material is currently managed in the AX Landfill located approximately 7,500 feet south of Unit No. 5.

The CCR Rule (40 CFR 257 Subpart D - *Standards for the Receipt of Coal Combustion Residuals in Landfills and Surface Impoundments*) has been promulgated by EPA to regulate the management and disposal of CCRs as solid waste under Resource Conservation and Recovery Act (RCRA) Subtitle D. The final CCR Rule was published in the Federal Register on April 17, 2015. The effective date of the CCR Rule was October 19, 2015.

The CCR Rule establishes operating criteria for existing CCR surface impoundments and landfills, including annual inspection requirements for all CCR units to ensure that the design, construction, operation, and maintenance of the CCR units are consistent with recognized and generally accepted good engineering standards. Pastor, Behling & Wheeler, LLC (PBW) was retained by Luminant to perform the 2016 annual inspection of the CCR units at Sandow 5. This report presents the findings of the 2016 annual inspection.

### **1.1 Sandow 5 Units Subject to Annual CCR Inspection Requirements**

The CCR Rule defines coal combustion residuals such as fly ash, bottom/bed ash, boiler slag, flue gas desulfurization (FGD) materials (gypsum), and related solids generated from burning coal for the purpose of generating electricity by electric utilities and independent power producers. The annual inspection requirements of the CCR Rule apply to surface impoundments and landfills that dispose or otherwise engage in solid waste management of CCRs.

No CCR surface impoundments are located at Sandow 5. The AX Landfill is the only CCR unit located at Sandow 5.

The AX Landfill consists of Cells 1, 2 and 2A and covers an area of approximately 148.9 acres (PBW,

2016b). The AX Landfill is located approximately 7,500 feet south of Sandow 5 on reclaimed mine land that is leased by Luminant from Alcoa (Figure 2). A site plan for the AX Landfill is shown on Figure 3. The AX Landfill was registered with the TCEQ as a Class 2 Non-hazardous Waste Landfill in 2008, and the registration was updated in 2015. The landfill is primarily used to manage fly ash and bed ash generated from Unit No. 5. Fly ash and bed ash are transported to the landfill in trucks and placed in the landfill as dry material.

AX Landfill Cells 1, 2 and 2A are lined landfill cells. Construction of Cell 1 was completed in July 2013 and construction of Cells 2 and 2A was initiated in May 2015. Cell 2 was completed in October 2015 and Cell 2A was completed in July 2016. Placement of Unit No. 5 CCRs began in Cell 1 in May 2015 and Cell 2 in September 2016. CCRs have not been placed to date in Cell 2A.

The AX Landfill is constructed partially above and partially below grade and are surrounded by engineered earthen dikes that extend approximately 10 to 15 feet above surrounding grade. Smaller interior earthen dikes separate Cells 1, 2 and 2A from each other. A geosynthetic liner system, consisting of a 30 mil thick Geomembrane Supported Geosynthetic Clay Liner (GSGCL) installed on top of 2 feet of soil exhibiting a minimum hydraulic conductivity of  $5 \times 10^{-5}$  cm/sec, has been installed in the landfill cells. The liner system is installed across the bottom of each cell, extends across the interior dikes, and extends up the inside sides of the perimeter dikes. The liner system is covered with an approximately 18-inch thick layer of protective soil to prevent damage to the liner during landfill operations. The base of each landfill cell is sloped toward a collection area for runoff from active landfill areas at the downgradient edge of the cell.

CCRs are placed within the engineered earthen dikes that surround Cells 1, 2 and 2A. CCR levels at the embankment start approximately 2 feet below the top of the embankment and the material is sloped upward at approximately 4 (Horizontal) to 1 (Vertical) to an approximate height of 40 feet above the top of the embankment. The material then slopes upward from the top of the 4:1 sloped tier at 3 to 5 percent and reaches a peak elevation of approximately El. 586 near the center of the landfill.

## **1.2 Annual CCR Landfill Inspection Requirements**

Section 257.84(b) of the CCR Rule specifies that annual inspections be performed for CCR landfills by a qualified professional engineer. The annual CCR landfill inspection must include a review of available information regarding the status and condition of the CCR landfill including files available in the

operating record, such as the results of inspections by the qualified person as required under Section 257.84(a), and the results of previous annual CCR inspections (where applicable) and visual inspection of the CCR landfill to identify signs of distress or malfunction of the landfill. The qualified professional engineer must prepare a report following each inspection that addresses the following:

- Any changes in geometry of the structure since the previous annual inspection;
- The approximate volume of CCRs in the landfill at the time of the inspection;
- Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit; and
- Any other change(s) which may have affected the stability or operation of the CCR unit since the previous annual inspection.

The AX Landfill is classified as an Existing CCR Landfill under the CCR Rule and is therefore subject to the annual inspection requirements of Section 257.84(b). The first annual CCR inspection for the AX Landfill was performed in 2015 (PBW, 2016a).

## **2.0 RECORDS REVIEW**

In accordance with the requirements of 40 CFR Part 257.84(b)(i), Luminant provided PBW with the following information from the facility operating records for the AX Landfill:

- Fugitive Dust Control Plan (FDCP),
- Weekly qualified person inspection records,
- Historical CCR unit design and construction documentation, and
- 2015 Annual CCR Inspection Report.

### **2.1 CCR Fugitive Dust Control Plan**

The CCR FDCP for Sandow 5 dated October 2015 was reviewed by PBW as part of the annual CCR inspection process (Luminant 2015). The FDCP was certified by a Registered Professional Engineer on October 5, 2015, and placed into the operating record on October 19, 2015. The Sandow 5 CCR FDCP does include the following dust control measures:

- Water spray or fogging systems;
- Compaction;
- Vegetative cover; and
- Reduced vehicle speeds.

These dust control measures are implemented during transport and placement of CCRs in the landfill. The FDCP includes provisions to amend the plan as necessary, and the plan includes a log for citizen complaints. No citizen complaints were recorded with the FDCP at the time of the annual inspection.

### **2.2 Weekly Qualified Person Inspection Records**

Weekly inspections of CCR Units by a qualified person are required under Section 257.84(a) of the CCR Rule. Weekly CCR qualified person inspections of the AX landfill were performed throughout 2016. PBW reviewed the weekly qualified person inspection forms for the AX Landfill prepared from January 2016 through the date of the annual inspection by PBW.

Items identified for monitoring or action at the AX Landfill during the 2016 weekly qualified person inspections can be summarized as follows:

- Monitor small areas of feral hog damage to vegetation on west/northwest side of Cell 1;
- Monitor minor erosion on the south side of Cell 2 exterior embankment slope; and
- Minor erosion was observed beneath the inverts of two culverts near the toe of the exterior embankment on the west side of Cell 1. Rip rap stone was placed in this area in October 2016 to address the erosion.

The overall status of the AX Landfill was reported as “satisfactory” during all weekly qualified person inspections. No conditions with the potential to result in structural weakness of the landfill embankments or that could potentially disrupt the operation and safety of the landfill were reported.

### 2.3 CCR Unit Design and Construction Documentation

PBW reviewed the following document that included information concerning the design and construction of the AX Landfill:

- CCR Closure Plan - Sandow 5 Generating Plant - AX Landfill Cells 1, 2 and 2A, Rockdale, Texas (PBW, 2016b)

A description of the design and construction characteristics for the Ax Landfill is presented in Section 1.1 of this annual report.

### 2.4 2015 Annual CCR Inspection Report

PBW reviewed the 2015 Annual CCR Inspection Report for the AX Landfill (PBW, 2016a). The recommendations from the 2015 Annual CCR Inspection Report and the status of activities to address the recommendations at the time of the 2016 Annual CCR Inspection can be summarized as follows:

Recommendation from 2015 Annual CCR Inspection	Status at Time of 2016 Annual CCR Inspection
Luminant should continue to monitor the minor areas of concern listed in Section 3.0 of the report.	These areas are monitored as part of weekly qualified person inspections. In October 2016, rip rap stone was placed in the area of minor erosion beneath the inverts of two culverts near the toe of the exterior embankment on the west side of Cell 1.

### **3.0 CCR LANDFILL FIELD INSPECTION**

The 2016 annual inspection of the AX Landfill was performed on November 29, 2016. Patrick J. Behling, PE, a registered professional engineer in the State of Texas, was accompanied by a Luminant qualified person (Terry Richter) during the inspection.

The inspection consisted of a walking visual survey of the embankments, CCR placement areas, and storm water/contract water control in AX Landfill Cells 1, 2 and 2A. Figure 3 summarizes the field observations from the inspection. Photographs of the landfill taken during the annual inspection are included as Appendix A and Figure 4 illustrates the location where the photographs were taken. The following sections present the results of the annual inspection, including specific observations related to the structural elements of the landfill.

The inspection requirements for CCR landfills include a review of the design, construction, operation and maintenance of the landfill in order to determine if the CCR unit meets generally accepted good engineering practice. The primary objective of the visual inspection of AX Landfill Cell 1 was to identify any evidence of actual or potential structural weakness of the CCR unit, including conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit. Landfill conditions observed during the 2016 inspection were compared to conditions reported from the 2015 inspection to identify changes in geometry of the structure.

#### **3.1 Perimeter Embankments**

The embankments surrounding the AX Landfill were generally in very good condition. Consistent with the recently completed weekly inspections, no evidence of slope movements or misalignments that have potential to affect the structural integrity of the perimeter embankments around the landfill were noted.

As indicated on Figure 3, the following areas were noted for future monitoring for the landfill:

- Minor erosion was observed in a small area along the exterior slope of the permanent embankment on the west side of Cell 1. This area should be monitored and repaired as necessary.
- Feral hog damage was observed in a small area on the exterior slope of the permanent embankment on west side of Cell 1. This area should be monitored and repaired as necessary.
- Two areas of limited vegetation were observed on the exterior slopes of the permanent embankment on the south sides of Cells 2 and 2A. These areas should be monitored and repaired as necessary.

- Areas of minor erosion were observed on the interior slopes of the permanent embankment on the south side of Cell 2 and the temporary embankment between Cells 2 and 2A. These areas should be monitored and repaired as necessary.
- A small area of significant erosion (liner visible) was observed along the temporary embankment between Cells 1 and 2. This area should be repaired.
- Minor erosion was observed in a small area along the exterior slope of the permanent embankment on the north side of Cell 2A. This area should be monitored and repaired as necessary.
- An accumulation of silt was observed partially blocking the inlets to two culverts that cross the haul road on the north side of the AX Landfill, northeast of the access ramp. The silt should be removed from the culvert inlets.

### **3.2 Active CCR Placement Areas**

CCRs (fly ash and bed ash from Unit 5) are currently being placed in Cells 1 and 2. Approximately 1,623,000 tons of CCRs were placed in the AX Landfill during 2015 and approximately 1,670,000 tons of CCRs were placed in the landfill from January through November, 2016.

### **3.3 Storm Water and Contact Water Controls**

The earthen embankments that surround Cells 1, 2 and 2A prevent storm water run-on from areas outside the cells. Contact water from the active areas of the landfill is temporarily contained in the active cells and allowed to evaporate or is sprayed on the active portions of the landfill for dust control. No evidence of problems associated with the storm water and contact water controls at the AX Landfill were observed during the inspection.

### **3.4 Comparison to 2015 Annual CCR Inspection Findings**

The findings of the 2016 Annual CCR Inspection of the AX Landfill compare to the findings/recommendations from the 2015 Annual CCR Inspection Report as follows:

- No changes in geometry of the landfill since the previous annual inspection were observed;
- No other changes which could affect the stability or operation of the landfill since the previous annual inspection were observed; and
- The recommendations presented in the 2015 Annual CCR Inspection Report have been addressed by Luminant (See Section 2.4 of this report).

## **4.0 SUMMARY OF FINDINGS**

The findings of the 2016 annual inspection of the AX Landfill are summarized herein. Luminant qualified persons responsible for the weekly inspections accompanied PBW during the annual inspection to ensure that observed conditions did not represent a change in geometry since previous inspection or have the potential to disrupt operation and safety of the CCR unit.

### **4.1 Visual Observation of Embankment Alignments**

Consistent with the previous annual CCR inspection performed on behalf of Luminant, and recently completed weekly inspections, no evidence of slope movements or misalignments that have potential to affect the structural integrity of the landfill were noted.

### **4.2 Visual Observations of Structural Integrity**

No conditions were observed during the 2016 annual inspection that indicate an actual or potential structural weakness of the perimeter embankments surrounding the AX Landfill. In addition, conditions observed during the annual inspection indicate that a disruption or the potential for disruption of the operation and safety of the CCR unit is not currently anticipated. A review of weekly inspections completed to date by Luminant and the completion of the annual inspection suggest that changes that may affect the stability or operation of the landfill have not been observed.

### **4.3 CCR Unit Volumes at Time of Inspection**

During 2016, CCR placement (fly ash and bed ash from Unit 5) occurred in AX Landfill Cells 1 and 2. Approximately 1,623,000 tons of CCRs were placed in the AX Landfill during 2015 and approximately 1,670,000 tons of CCRs were placed in the landfill from January through November, 2016. Since the AX Landfill began receiving CCRs in 2015, approximately 3,293,000 tons of CCRs have been placed in the landfill.

## 5.0 RECOMMENDATIONS

The following recommendations are based on the results of the 2016 annual CCR inspection of the AX Landfill:

- Minor erosion was observed in a small area along the exterior slope of the permanent embankment on the west side of Cell 1. This area should be monitored and repaired as necessary.
- Feral hog damage was observed in a small area on the exterior slope of the permanent embankment on west side of Cell 1. This area should be monitored and repaired as necessary.
- Two areas of limited vegetation were observed on the exterior slopes of the permanent embankment on the south sides of Cells 2 and 2A. These areas should be monitored and repaired as necessary.
- Areas of minor erosion were observed on the interior slopes of the permanent embankment on the south side of Cell 2 and the temporary embankments between Cells 2 and 2A. These areas should be monitored and repaired as necessary.
- A small area of significant erosion (liner visible) was observed along the temporary embankment between Cells 1 and 2. This area should be repaired.
- Minor erosion was observed in a small area along the exterior slope of the permanent embankment on the north side of Cell 2A. This area should be monitored and repaired as necessary.
- An accumulation of silt was observed partially blocking the inlets to two culverts that cross the haul road on the north side of the AX Landfill, northeast of the access ramp. The silt should be removed from the culvert inlets.
- This annual inspection report should be completed by filing the report in the operating record of Sandow Unit 5 no later than January 18, 2017.
- The 2017 annual inspection of the AX Landfill should be performed in November/December 2017.

## 6.0 REFERENCES

Luminant, 2015. CCR Fugitive Dust Control Plan – Sandow 5 Generating Plant, October 5.

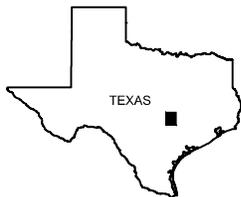
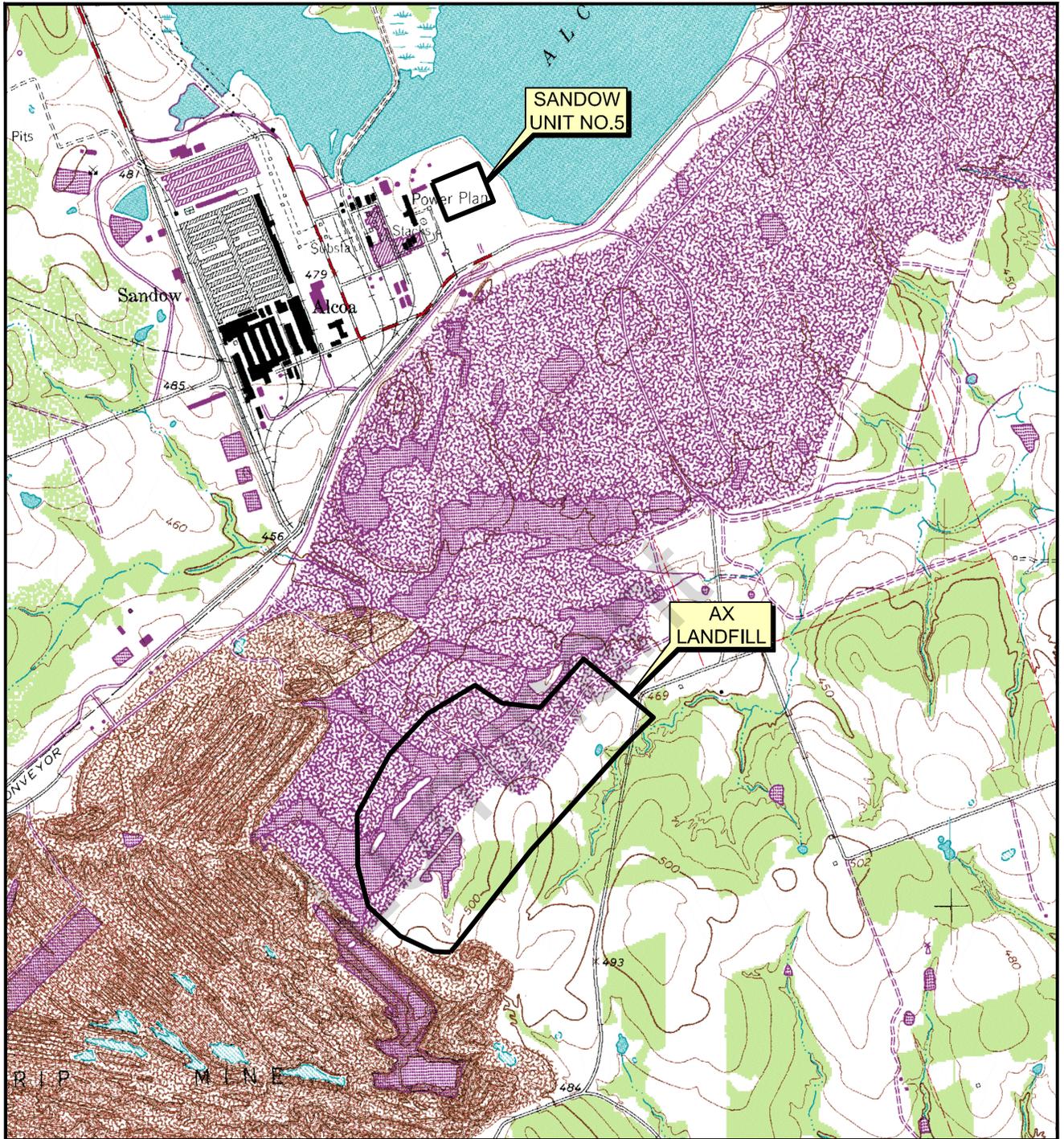
Pastor, Behling & Wheeler, LLC (PBW), 2016a. 2015 Annual CCR Unit Inspection Report – Sandow 5 Generating Plant, January 14.

PBW, 2016b. CCR Closure Plan - Sandow 5 Generating Plant - AX Landfill Cells 1, 2 and 2A, Rockdale, Texas. October

Luminant

**FIGURES**

Luminant



QUADRANGLE LOCATION



Scale in Feet



**LUMINANT GENERATION COMPANY, LLC**  
SANDOW UNIT NO.5

Figure 1

**AX LANDFILL  
LOCATION MAP**

PROJECT: 5256

BY: ADJ

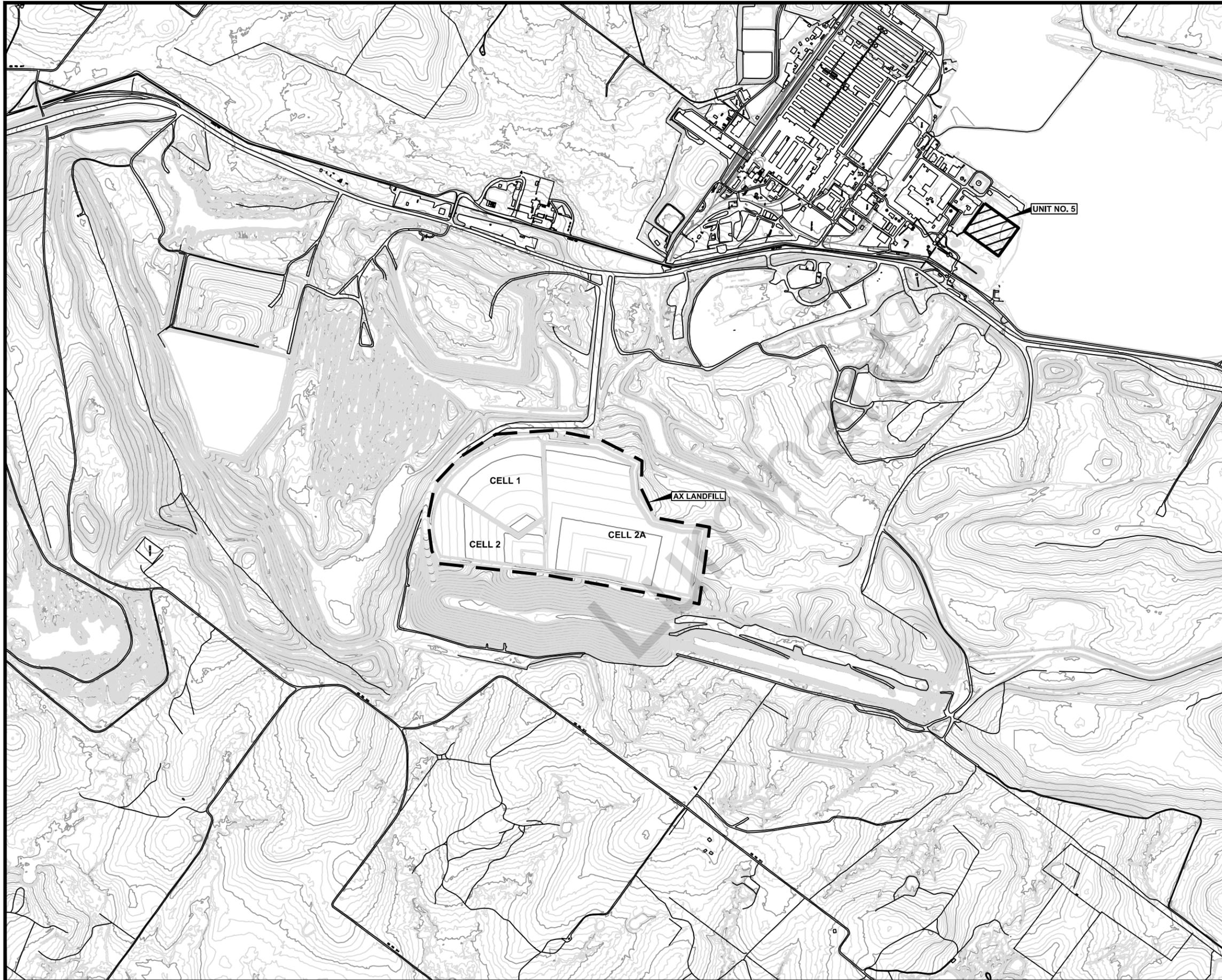
REVISIONS

DATE: DEC., 2016

CHECKED: PJB

**PASTOR, BEHLING & WHEELER, LLC**  
CONSULTING ENGINEERS AND SCIENTISTS

SOURCE:  
Base map from www.tnris.gov, Alcoa Lake, TX 7.5 min. USGS quadrangle dated 1963,  
revised 1988.



**NOTE:**  
 EXISTING GRADE CONTOURS OUTSIDE OF CELLS 1, 2  
 AND 2A ARE CIRCA 2006 AND ARE SHOWN FOR  
 REFERENCE ONLY. CONTOURS DO NOT NECESSARILY  
 REFLECT EXISTING CONDITIONS.



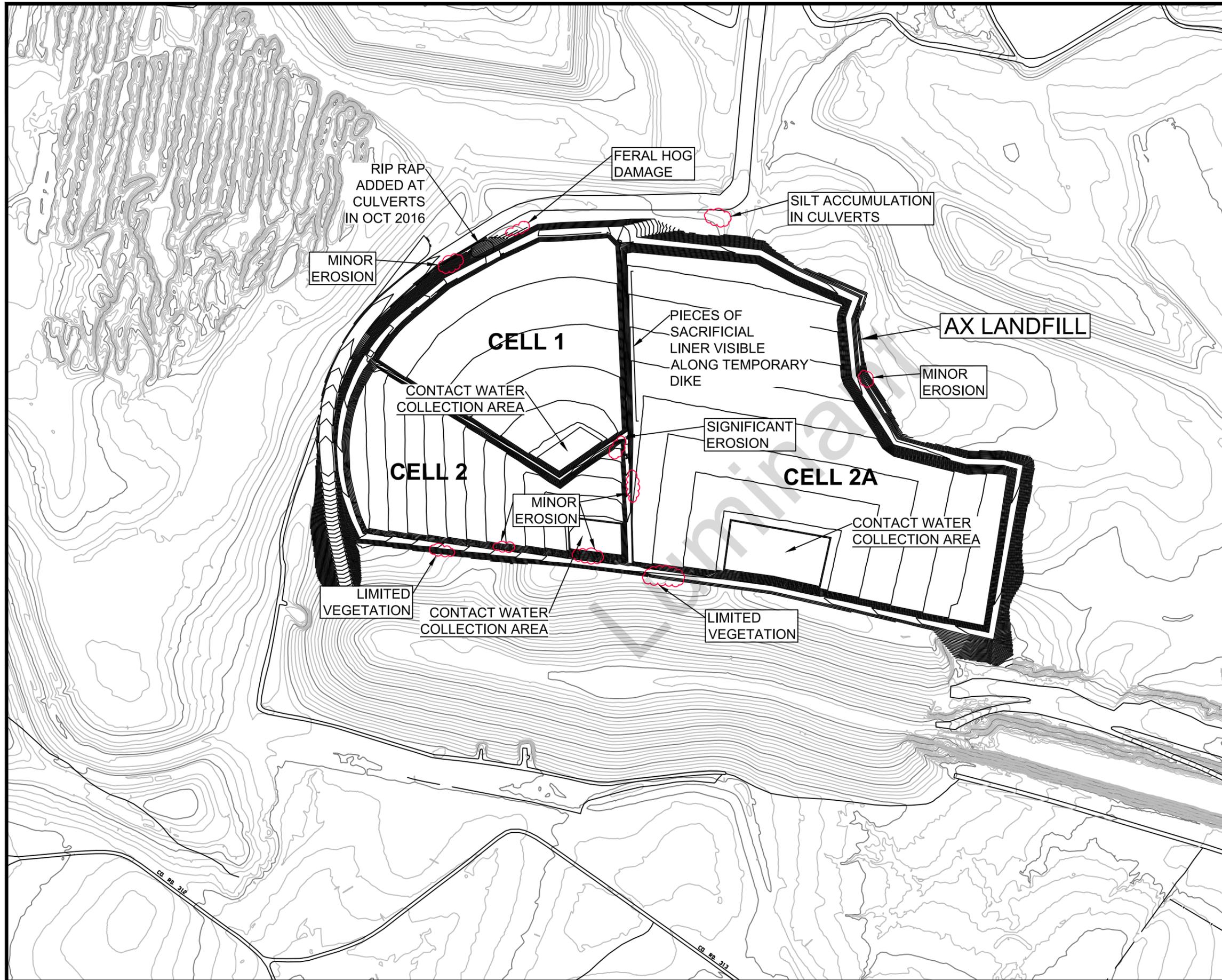
Scale in Feet  
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**LUMINANT GENERATION COMPANY, LLC**  
 SANDOW UNIT NO.5

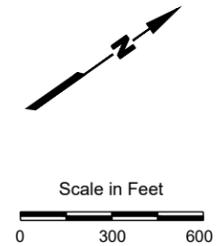
Figure 2  
**AX LANDFILL**  
**SITE VICINITY MAP**

PROJECT: 5256	BY: ADJ/GJM	REVISIONS
DATE: DEC., 2016	CHECKED: PJB	

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 CONSULTING ENGINEERS AND SCIENTISTS



**NOTE:**  
 EXISTING GRADE CONTOURS OUTSIDE OF CELLS 1, 2 AND 2A ARE CIRCA 2006 AND ARE SHOWN FOR REFERENCE ONLY. CONTOURS DO NOT NECESSARILY REFLECT EXISTING CONDITIONS.

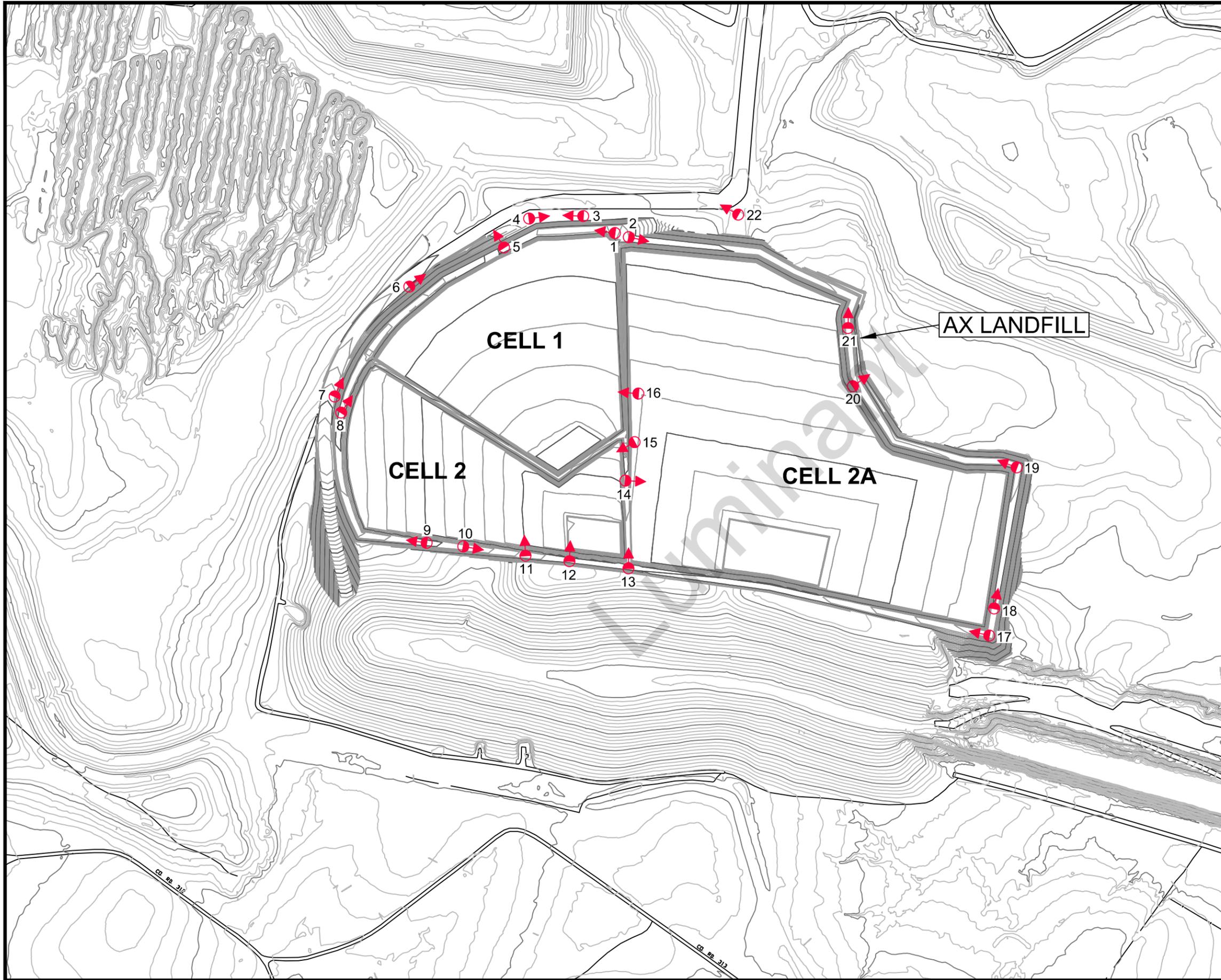


**LUMINANT GENERATION COMPANY, LLC**  
 SANDOW UNIT NO.5

Figure 3  
**ANNUAL INSPECTION FINDINGS SUMMARY MAP**  
**AX LANDFILL**

PROJECT: 5256	BY: ADJ	REVISIONS
DATE: DEC., 2016	CHECKED: PJB	

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**EXPLANATION**

📍➔ Photograph Location and Direction

**NOTE:**  
 EXISTING GRADE CONTOURS OUTSIDE OF CELLS 1, 2  
 AND 2A ARE CIRCA 2006 AND ARE SHOWN FOR  
 REFERENCE ONLY. CONTOURS DO NOT NECESSARILY  
 REFLECT EXISTING CONDITIONS.



LUMINANT GENERATION COMPANY, LLC  
 SANDOW UNIT NO.5

Figure 4  
**ANNUAL INSPECTION  
 PHOTOGRAPH LOG  
 AX LANDFILL**

PROJECT: 5256	BY: ADJ	REVISIONS
DATE: DEC., 2016	CHECKED: PJB	

**PASTOR, BEHLING & WHEELER, LLC**  
 CONSULTING ENGINEERS AND SCIENTISTS

**APPENDIX A**  
**PHOTOGRAPHS – AX LANDFILL**

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Pastor, Behling & Wheeler	DESCRIPTION	<b>Photograph 1</b> – (View SW) View along top of permanent earthen embankment along north side of Cell 1. Cell 1 to left	
PROJECT NO. 5256	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler	DESCRIPTION	<b>Photograph 2</b> – (View NE) View along top of permanent earthen embankment along north side of Cell 2A. Cell 2A to right	
PROJECT NO. 5256	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler  PROJECT NO. 5256	DESCRIPTION	<b>Photograph 3</b> – (View SW) View along toe of permanent embankment along north side of Cell 1. Cell 1 to left	
	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler  PROJECT NO. 5256	DESCRIPTION	<b>Photograph 4</b> – (View NE) View along toe of permanent embankment along north side of Cell 1	
	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler  PROJECT NO. 5256	DESCRIPTION	<b>Photograph 5</b> – (View W) Rip rap placed to control erosion at culverts on north side of Cell 1	
	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler  PROJECT NO. 5256	DESCRIPTION	<b>Photograph 6</b> – Minor erosion on face of drainage ditch along north side of Cell 1	
	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler	DESCRIPTION	<b>Photograph 7</b> – (View N) View along toe of permanent embankment on west side of Cell 2	
PROJECT NO. 5256	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler	DESCRIPTION	<b>Photograph 8</b> – (View N) View along top of embankment on west side of Cell 2. Cell 2 to right, Cell 1 in background	
PROJECT NO. 5256	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler	DESCRIPTION	<b>Photograph 9</b> – (View SW) View along top of permanent embankment on south side of Cell 2. Cell 2 to right	
PROJECT NO. 5256	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler	DESCRIPTION	<b>Photograph 10</b> – (View NE) View along top crest of permanent embankment along south side of Cell 2. Cell 2 to left	
PROJECT NO. 5256	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler  PROJECT NO. 5256	DESCRIPTION	<b>Photograph 11</b> – Erosion on interior of south embankment of Cell 2	
	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler  PROJECT NO. 5256	DESCRIPTION	<b>Photograph 12</b> – Erosion on interior of south embankment of Cell 2, near contact water area	
	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler  PROJECT NO. 5256	DESCRIPTION	<b>Photograph 13</b> – (View W) View along top of temporary embankment between Cells 2 and 2A. Cell 2 to left, Cell 2A to right	
	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler  PROJECT NO. 5256	DESCRIPTION	<b>Photograph 14</b> – Erosion on interior of temporary embankment on west side of Cell 2A	
	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler  PROJECT NO. 5256	DESCRIPTION	<b>Photograph 15</b> – Significant erosion on interior wall in north corner of temporary embankment between Cells 1 and 2	
	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler  PROJECT NO. 5256	DESCRIPTION	<b>Photograph 16</b> – Sacrificial liner removed from temporary embankment along north side of Cell 1 when Cell 2A was constructed	
	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler	DESCRIPTION	<b>Photograph 17</b> – (View SW) View along top of permanent embankment on south side of Cell 2A. Cell 2A to right	
PROJECT NO. 5256	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler	DESCRIPTION	<b>Photograph 18</b> – (View NW) View along top of permanent embankment on east side of Cell 2A. Cell 2A to left	
PROJECT NO. 5256	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler	DESCRIPTION	<b>Photograph 19</b> – (View SW) View along top of permanent embankment on north side of Cell 2A. Cell 2A to left	
PROJECT NO. 5256	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler	DESCRIPTION	<b>Photograph 20</b> – (View N) Erosion on exterior face of permanent embankment on north side of Cell 2A	
PROJECT NO. 5256	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler	DESCRIPTION	<b>Photograph 21</b> – (View W) View along top of permanent embankment on north side of Cell 2A. Cell 2A to left	
PROJECT NO. 5256	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016



Pastor, Behling & Wheeler	DESCRIPTION	<b>Photograph 22</b> – Significant silt accumulation in culverts on north side of AX Landfill	
PROJECT NO. 5256	SITE NAME	Sandow Unit No. 5 – AX Landfill Annual Inspection	DATE 11/29/2016