

OKLAUNION INDUSTRIAL PARK, LLC

2023 ANNUAL DAM AND DIKE INSPECTION REPORT

CCR PONDS COMPLEX
PROJECT NO. 135110

REVISION 0
FEBRUARY 2024

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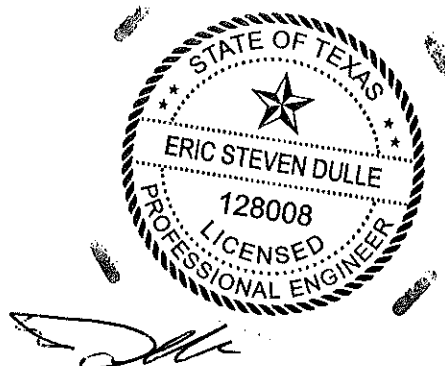
Abbreviation	Term/Phrase/Name
Burns & McDonnell	Burns and McDonnell Engineering Company, Inc.
DIMP	Park Dam Inspection and Maintenance Program
OIP	Oklaunion Industrial Park LLC
CCR	Coal Combustion Residuals
TCEQ	Texas Commission on Environmental Quality
USEPA	United States Environmental Protection Agency


Index and Certification

OKLAUNION INDUSTRIAL PARK, LLC
2023 ANNUAL DAM AND DIKE INSPECTION REPORT
Project No. 135110

Certification

I hereby certify, as a Professional Engineer in the state of Texas, that the information in this document was assembled under my direct personal charge. This report is not intended or represented to be suitable for reuse by the OKLAUNION INDUSTRIAL PARK, LLC or others without specific verification or adaptation by the Engineer.




Eric S. Dulle, P.E. (Texas)

Date: February 2, 2024

1.0 INTRODUCTION

This report was prepared by Burns & McDonnell Engineering Company Inc. (Burns & McDonnell), on behalf of Oklaunion Industrial Park LLC (OIP), to fulfill requirements of the United States Environmental Protection Agency (USEPA) *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule of 40 Code of Federal Regulations (CFR) Part 257 and 261* of §257.83 (collectively referred to herein as the CCR Rule) to document the status of the five inactive CCR units at the site and recommend corrective actions for the CCR units, if required, summarize key actions completed, describe any problems encountered, discuss any actions to resolve the problems, and provide key activities for the upcoming year (2024). The CCR Rule was established to regulate the disposal of CCR produced by electricity generating facilities (USEPA, 2015; USEPA, 2018; USEPA, 2020a; and 2020b). The USEPA's CCR rules require this Report be posted to OIP's operating record and OIP's publicly accessible CCR reporting website for the preceding year no later than January 31, 2024.

This Report is the annual report for the five inactive CCR Units at the site and summarizes activities performed in 2023 related to the maintenance and condition of the following CCR Units: Pond 6, Pond 21, Pond 22, Pond 23, and Wastewater and Sludge Pond (WWSP). Closure activities have not yet started for the closure of the five inactive CCR Units. A Registration Application was submitted to the TCEQ on March 9, 2022 (Registration No. CCR117, Tracking No. 27363596, EPA ID No. TXD982294803; RN101062255; CN605853951) and is awaiting approval. Upon approval of the Registration Application, OIP will commence closure of the CCR Units.

The OIP is located at 12567 FM Rd 3430, Vernon, TX 76384. The plant was a coal-fired facility, which includes wastewater evaporation ponds containing cooling tower blowdown. Five of the ponds are used to manage coal combustion residuals and other wastewater treatment solids. **Figure 1** shows the plant's vicinity map.

OIP administers the Oklaunion Industrial Park Dam Inspection and Maintenance Program (DIMP). As part of the DIMP, OIP staff conduct monthly dam and dike inspections. This report contains the annual inspection findings, observations, photographic descriptions, conclusions, and recommendations. The inspection report addresses the five inactive CCR Ponds at the OIP facility.

2.0 DESCRIPTION of IMPOUNDMENTS

The five CCR surface impoundments, referred to as Ponds 6, 21, 22, 23 and the Wastewater and Sludge Pond (WWSP), have a total area of 104.1 acres. Oklahoma Ponds for storing CCR include a 60+ acre pond for waste fly ash and bottom ash storage (Pond 6), two 5+ acre ponds for CCR (Pond 21 and Pond 22), a 13+ acre pond for CCR (Pond 23), and a 22+ acre pond for Waster Water and Sludge (WWSP) storage. These ponds are located at the south-central edge of the main evaporation pond complex of the generating station. The ponds were constructed as a continuous up ground homogeneous earthen embankment with 3H:1V inboard and outboard slopes and crest width of 20-feet. The design elevation of the crest is 1215 feet. These CCR ponds do not have any outlet structures or spillways and rely on evaporation to remove water from the impoundments. **Figure 2** shows the general layout of the CCR pond complex containing the five inactive CCR ponds.

3.0 REVIEW OF AVAILABLE INFORMATION (257.83(b)(1)(i))

A review of available information regarding the status and condition of the inactive CCR Ponds, which include files available in the CCR operating record, such as design and construction information, periodic structural stability assessments, previous 7-day inspection reports, 30-day instrumentation data, and previous annual inspections has been conducted. Based on the review of the data there were no signs of actual or potential structural weakness or adverse conditions.

4.0 INSPECTION (257.83(b))

4.1 CRITERIA

The summary of the visual observations uses terms to describe the general appearance or condition of an observed item, activity, or structure. Their meaning is understood as follows:

Good: A condition or activity that *is* generally better or slightly better than what is minimally expected or anticipated from a design or maintenance point of view.

Fair or Satisfactory: A condition or activity that generally meets what is minimally expected or anticipated **from a design** or maintenance point of view.

Poor: A condition or activity that is generally below what is minimally expected or anticipated from a design or maintenance point of view.

Minor: A reference to an observed item (e.g., erosion, seepage, vegetation, etc.) where the current maintenance condition is below what is normal or desired, but which is not currently causing concern from a structure safety or stability point of view.

Significant: A reference to observed items (e.g. erosion, seepage, vegetation, etc.) where the current maintenance program has neglected to improve the condition. Usually, conditions that have been previously identified in the previous inspections but have not yet been corrected.

Excessive: A reference to an observed item (e.g., erosion, seepage, vegetation, etc.) where the current maintenance condition is below or worse than what is normal or desired, and which may have affected the ability of the observer to properly evaluate the structure or area being observed which may be a concern from a structure safety or stability point of view.

In addition, a “deficiency” is some evidence that a dam has developed a problem that could impact the structural integrity of the dam. There are four general categories of deficiencies. These four categories are described below:

1. Uncontrolled Seepage
 - a. Uncontrolled seepage is seepage that is not behaving as the design Engineer has intended. An example of uncontrolled seepage is seepage that comes through or around the embankment and is not picked up and safely carried off by a drain. Seepage that is collected by a drain can still be uncontrolled if it is not safely collected and transported, such as seepage that is not clear. Seepage that is unable to be measured and/or observed is considered uncontrolled seepage. [Wet or soft areas are not considered as uncontrolled seepage but can lead to this type of deficiency. These areas should be monitored frequently.]
2. Displacement

- a. Displacement of the embankment is large scale movement of part of the dam. Common signs of displacement are cracks, scraps, bulges, depressions, sinkholes and slides.
- 3. Blockage of Control features:
 - a. Blockage of control features is the restriction of flow at spillways, decant or pipe spillways or drains.
- 4. Erosion:
 - a. Erosion is the gradual movement of surface material by water, wind or ice. Erosion is considered a deficiency when it is more than a minor routine maintenance item.

4.2 2023 Annual Inspection

Burns & McDonnell performed the annual dam and dike inspection report on January 29, 2024. Weather conditions on January 29, 2024, were sunny with good visibility, temperatures ranging from the upper 40's to the low 70's during the inspection. The inspection consisted of walking the perimeter of each inactive CCR pond and documenting the condition of the internal and external slopes, changes in geometry of the ponds, potential structural or stability issues, and changes in storage capacity. The results of the annual inspection were documented along with photographs to support the findings. The annual inspection is included as **Attachment A**. A Photolog containing the photographs taken during the inspection is attached to this report (**Attachment B**). Inspection observations were discussed with the OIP Site Superintendent after completion of the field work.

4.3 Changes in Geometry Since Last Inspection (257.83(b)(2)(i))

No modifications have been made to the geometry of the inactive CCR Ponds since the last annual inspection. The geometry of the impoundments has remained essentially unchanged since they ceased operation (Notice of Intent submitted on May 5, 2021). A Registration Application was submitted to the TCEQ on March 9, 2022, and is awaiting approval. Upon approval of the Registration Application, OIP will commence closure of the CCR Units.

4.4 Changes That Effect Stability or Operation (257.83(b)(2)(vii))

Based on field observations there were no changes to the five inactive CCR Ponds since the last annual inspection that would affect the stability or operation of the impounding structure. A Registration Application was submitted to the TCEQ on March 9, 2022, and is awaiting approval. Upon approval of the Registration Application, OIP will commence closure of the CCR Units.

4.5 Impoundment Characteristics 257.83(b)(2)(iii, iv, v))

Table 1 is a summary of the minimum, maximum and present depth, and elevation of the impounded water; the storage capacity of the impounding structure at the time of the inspection; and the approximate volume of the impounded water at the time of the inspection. The volume of CCR material in the ponds has remained unchanged as the ponds

are inactive and no material has been mined from the ponds. The amount of water in the ponds fluctuates based on seasonal conditions.

Table 1: Summary of Relevant Storage Information CCR Ponds Complex

IMPOUNDMENT CHARACTERISTICS – Inactive CCR Ponds					
	Pond 6	Pond 21	Pond 22	Pond 23	WWSP
Approximate Minimum depth of impounded water since last annual inspection	15 ft (1200)	18 ft (1208)	14 ft (1204)	14 ft (1208)	10 ft (1200)
Approximate Maximum depth of impounded water since last annual inspection	28 ft (1213)	24 ft (1214)	24 ft (1214)	23 ft (1213)	23 ft (1213)
Approximate Present depth of impounded water at the time of the inspection	14 ft (1204)	22 ft (1212)	22 ft (1212)	23 ft (1213)	22 ft (1212)
Approximate Minimum depth of CCR since last annual inspection	23 ft (1208)	22 ft (1212)	21 ft (1211)	25 ft (1215)	22 ft (1212)
Approximate Maximum depth of CCR since last annual inspection	29 ft (1214)	22 ft (1212)	22 ft (1212)	26 ft (1216)	24 ft (1214)
Approximate Present depth of CCR at the time of the inspection	29 ft (1214)	22 ft (1212)	22 ft (1212)	26 ft (1216)	24 ft (1214)
Storage Capacity of impounding structure at the time of inspection	1100 acre-ft	125 acre-ft	125 acre-ft	250 acre-ft	400 acre-ft
Approximate volume of impounded water at the time of the inspection	50 acre-ft	65 acre-ft	55 acre-ft	120 acre-ft	80 acre-ft
Approximate volume of CCR at the time of the inspection	885 acre-ft	45 acre-ft	55 acre-ft	125 acre-ft	320 acre-ft

4.6 Visual Inspection (257.83(b)(2)(i))

A visual inspection of the CCR Ponds Complex was conducted by a Burns & McDonnell Engineer on January 29, 2024, to identify any signs of distress or malfunction of the impoundment and appurtenant structures. Specific items inspected included all structural elements of the dam such as upstream and downstream slopes, crest, and toe. **Attachment B** includes a Photolog from the inspection.

Pond 6

Observations made by Burns & McDonnell Engineer:

- Observed several areas approximately 15-20 feet in length and 5 feet in width with apparent surface movement. Based on vegetation present, the slopes at

these locations have been in current condition for time. These areas will need future monitoring. **(Attachment B, pg. 1)**

- Walked around the southside of embankment and observed ponding of water near toe of embankment. Observed water was assumed to be from the rain event on Friday 1/26. **(Attachment B, pg. 2)**
- Observed erosion of the southeast embankment corner with geotextile exposed. This area will need to be monitored moving forward. **(Attachment B, pg. 3)**
- In the area around spillway along eastern side of Pond 6 erosion features present on the embankment, this area will need to be monitored moving forward. **(Attachment B, pg. 4)**
- Observed that the interior area of Pond 6 is developing erosion channels. There is no immediate need to address the observed erosion channels but will need future monitoring is needed to ensure they do not continue to progress towards the embankment. **(Attachment B, pg. 5)**
- Observed water collected in Pond 6 in the western middle area of the pond. **(Attachment B, pg. 6)**

Pond 21

Observations made by Burns & McDonnell Engineer:

- Walked the entire perimeter of Pond 21 on embankment but could not pass around the north side of the pond.
- Most of the water observed was collected in the northern and western side of pond. **(Attachment B, pg. 7)**
- No observed anomalies on southern or eastern side of embankment between Pond 21 and Pond 19 (Make Up Water Supply).
- A plastic pipe extends under the embankment between Pond 21 and 22, extends north and south along the eastern side of Pond 21. Piping appears to have disconnected. **(Attachment B, pg. 8)**

Pond 22

Observations made by Burns & McDonnell Engineer:

- Walked entire perimeter of Pond 22 on embankments but could not pass around the north side of the pond due to piping and pipe bridge. Photos were taken of embankments and other notable items around or in Pond 22. **(Attachment B, pg. 9)**
- Most of the water observed in Pond 22 was collected in the northern half. **(Attachment B, pg. 10)**
- No observed anomalies on southern side of embankment between Pond 22 and Pond 19 (Make Up Water Supply).
- Sections of the eastern embankment appear to have been undermined. **(Attachment B, pg. 11)**
- A plastic pipe extends under the embankment between Pond 21 and 22. **(Attachment B, pg. 12)**

Pond 23

Observations made by Burns & McDonnell Engineer:

- Walked the entire perimeter of Pond 23 on embankments. Photos were taken of embankments. Some sections of the embankment on the interior side of west embankment are steep or vertical. **(Attachment B, pg. 13)**
- Water in pond observed to collected toward the middle of Pond 23. **(Attachment B, pg. 14)**
- No observed anomalies on the northeastern section of embankment between Pond 23 and holding pond.
- No observed anomalies on southern side of embankment between Pond 23 and Pond 19 (Make Up Water Supply).

Wastewater Sludge Pond (WWSP)

Observations made by Burns & McDonnell Engineer:

- Walked the entire perimeter of Wastewater/Sludge Pond on embankments.
- Sections of the interior side of embankments have steep slopes, vertical, or areas that have been undermined. **(Attachment B, pg. 15)**
- Observed isolated areas of shallow ponded water within Wastewater/Sludge Pond. **(Attachment B, pg. 16)**
- No observed anomalies on northern side of embankment between Wastewater/Sludge Pond and holding pond.
- No observed anomalies on eastern side of embankment between Wastewater/Sludge Pond and lower collection pond.
- No observed anomalies on southern side of embankment between Wastewater/Sludge Pond and Pond 19 (Make Up Water Supply).
- Rusty metal pipe observed in northeast corner of pond extends from Wastewater/sludge Pond into eastern embankment in the direction of intake structure of Lower Collection Pond. No plug observed in pipe. **(Attachment B, pg. 17)**
- Noticed slight sulfur smell down wind of ponds (only noticed on east side of Wastewater/Sludge Pond).

4.7 Instrumentation (2S7.83(b)(2)(U))

On-site instruments at the OIP include open pipe piezometers. These piezometers are measured periodically, and the results are discussed below.

Piezometers

The locations of the instrumentations are shown on **Figures 3A and 3B**. The results of the measurements of various piezometers are shown in **Figures 4 and 5**. The maximum recorded readings of each instrument since the previous inspection are shown in **Table 2**.

Table 2: CCR Ponds Maximum recorded Readings

INSTRUMENTATION DATA CCR Ponds Complex			
Instrument	Type	Maximum Reading since Last Inspection	Date of Reading
B – 1	Piezometer	1207.6	10/05/23
B – 3	Piezometer	1209.8	6/15/23
B – 4	Piezometer	1210.7	6/15/23
B – 5	Piezometer	1210.0	11/02/23
B – 6	Piezometer	1204.5	11/02/23
B – 1502A	Piezometer	1178.07	3/23/23
B – 1506A	Piezometer	1200.14	10/05/23
B – 1507A	Piezometer	1200.63	11/02/23
B – 1508A	Piezometer	1200.23	4/20/23
B – 1512	Piezometer	1187.67	2/23/23
B – 1513	Piezometer	1177.62	3/23/23

Five piezometers (B-1, B-3, and B-6) were installed in July 2016 around the Pond 21, 22, 23 and WWSP. Each piezometer was installed at the crest surrounding the ponds. **Figure 4** shows the static water levels of those piezometers measured during monthly inspections beginning in August 2016. Pond levels were not measured but are generally around 1213 feet. Over periods of monthly measurement data, the static water levels in the piezometers have indicated some fluctuations. All the piezometers except B-5 indicate static water levels below the nominal pond pool level (1, 2, 13 feet). The elevated static water levels in B-5 are related to elevated pool levels in Ponds 21 and 22 due to operations.

Piezometers (B-1502A, B-1506A, B-1507A, B-1508, 81512, and 81513) were installed in various locations along the crest of Pond 6 as a plan of raising the dikes in 2015. **Figure 5** shows the static water levels of those piezometers measured during monthly plant inspections. The pond level was not measured but is estimated to be around elevation 1200 feet at the time of this inspection, but it varies up to elevation 1213 during the year. All piezometers indicated static water levels within expected tolerance for this year's readings.

5.0 SUMMARY OF FINDINGS

Based on the visual observations made during the annual inspection, the dam, and appurtenances of the five inactive CCR ponds do not need immediate attention. A summary of Burns & McDonnell's recommendations for general maintenance and continued monitoring, as well as any recommendations for remedial activities, is provided as follows:

5.1 Maintenance Items

The following maintenance items were identified during the annual inspection:

All Ponds

- Continue to maintain vegetation as prescribed in the regulations and repair erosion rills as they develop.

Wastewater and Sludge Pond (WWSP)

- Rusty metal pipe observed in the northeast corner of pond extends from Wastewater/Sludge Pond into eastern embankment in the direction of intake structure of Lower Collection Pond. No plug observed in the pipe. Remove or plug the pipe.

5.2 Items to Monitor

The following items to monitor are based on the visual observations made during the inspection:

Pond 6

- Monitor erosion along the toe of the western embankment. Flatten slopes and seed graded areas as necessary to prevent sloughing and undermining.
- Monitor areas that are 15-20 feet in length and 5-feet in width with apparent surface movement and flatten these slopes and seed graded areas as necessary to prevent sloughing and undermining.
- Continue to monitor the erosion of the southeast embankment. Flatten slopes and seed graded areas as necessary to prevent further erosion. Cover exposed geotextile with like material covering non-exposed geotextile areas around Pond 6.
- Continue to monitor the erosion located around the spillway along the eastern side of Pond 6. Flatten slopes and seed graded areas as necessary to prevent sloughing and undermining.
- Continue to monitor the developing erosion channels in the interior area of Pond 6 and flatten slopes and seed graded areas as necessary to ensure that they do not continue to progress towards the embankment causing instability to the structure.

Pond 21

- Continue to monitor side slopes of interior and exterior pond embankments to maintain long term stability of embankments around pond 21. If necessary, flatten slopes and seed graded areas to ensure long term stability.
- Piezometers B-1, B-3, 8-4, 8-5, and 8-6 surrounding Pond 21 should continue to be monitored monthly and OIP personnel will be immediately notified should the piezometer readings shift above pool levels.

Pond 22

- Continue to monitor side slopes of interior and exterior pond embankments to maintain long term stability of embankments around Pond 22. Flatten slopes and seed graded areas where necessary to prevent sloughing and undermining.
- Piezometers B-1, B-3, 8-4, 8-5, and 8-6 surrounding Pond 22 should continue to be monitored monthly and OIP personnel will be immediately notified should the piezometer readings shift above pool levels.

Pond 23

- Continue to monitor side slopes of interior and exterior Pond embankments to maintain long term stability of embankments around Pond 23. Flatten slopes and seed graded areas as necessary to prevent sloughing and undermining.
- Piezometers B-1, B-3, 8-4, 8-5, and 8-6 surrounding Pond 23 should continue to be monitored monthly and OIP personnel will be immediately notified should the piezometer readings shift above pool levels.

Wastewater and Sludge Pond

- Flatten slopes and seed graded area of interior side of embankment where there are steep slopes, vertical or areas that have undermining.
- Continue to monitor side slopes of interior and exterior pond embankments. Flatten slopes and seed graded area if necessary to prevent sloughing and undermining.
- Piezometers B-1, B-3, 8-4, 8-5, and 8-6 surrounding the WWSP shall continue to be monitored monthly and OIP personnel will be immediately notified should the piezometer readings shift above pool levels.

5.3 Deficiencies (257.83(b)(2)(vi))

There were no structural deficiencies observed at the time of the inspection that require additional investigation and/or remedial action.

5.4 Proposed Activities for 2024

A Registration Application was submitted to the TCEQ on March 9, 2022, and is awaiting approval. Upon approval of the Registration Application, OIP will commence closure of the CCR Units. Prior to approval of the Registration Application, OIP may perform some preparatory activities such as grading of the CCR materials, stockpiling materials, and removing contact water within the ponds. These activities are dependent upon approval from the TCEQ.

FIGURES (1 - 5)

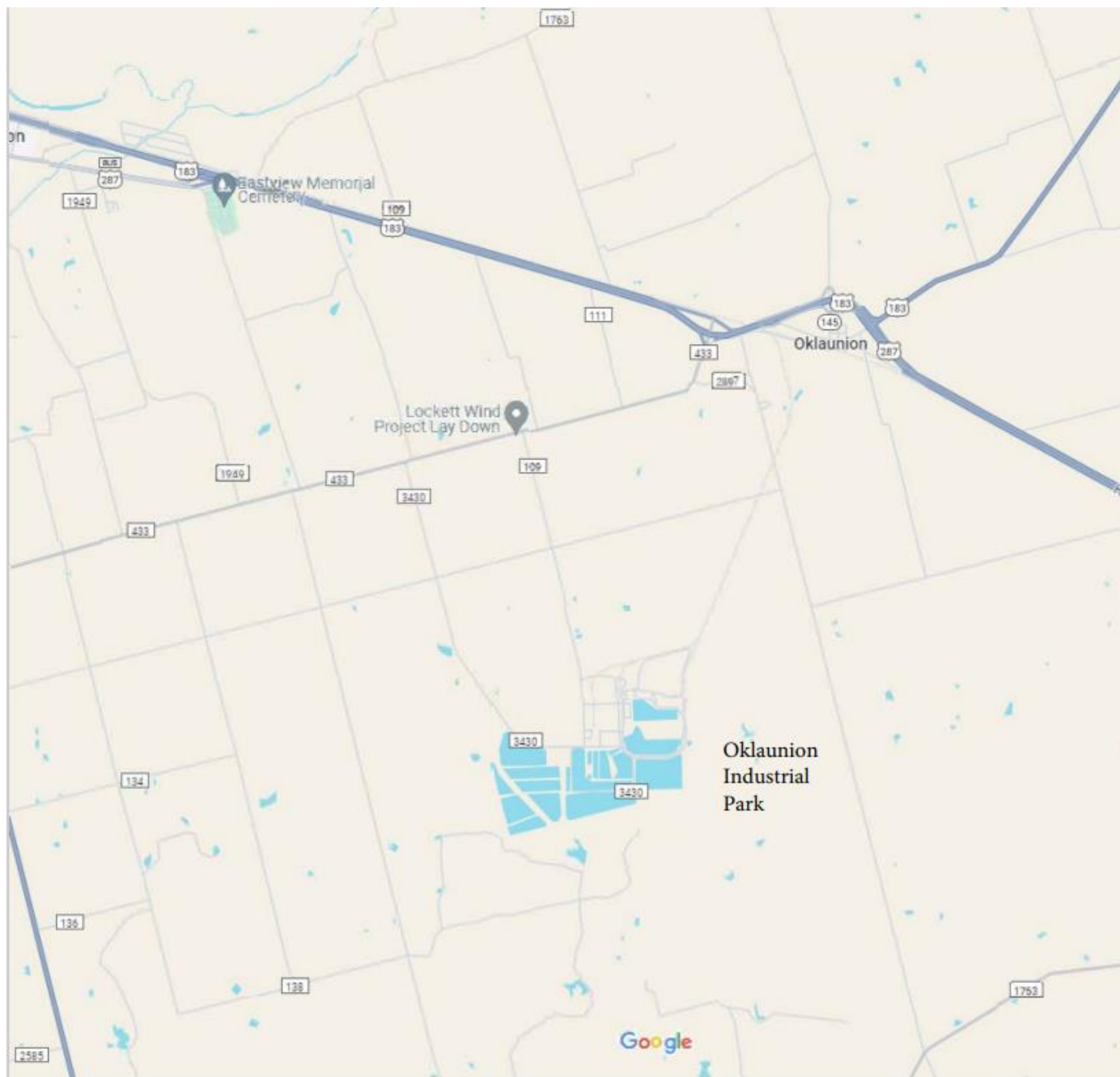


FIG. 1.
PLANT INSPECTION
VICINITY MAP
OKAUNION POWER PLANT



FIG. 2.
CCR POND COMPLEX
GENERAL LAYOUT
OKAUNION POWER PLANT

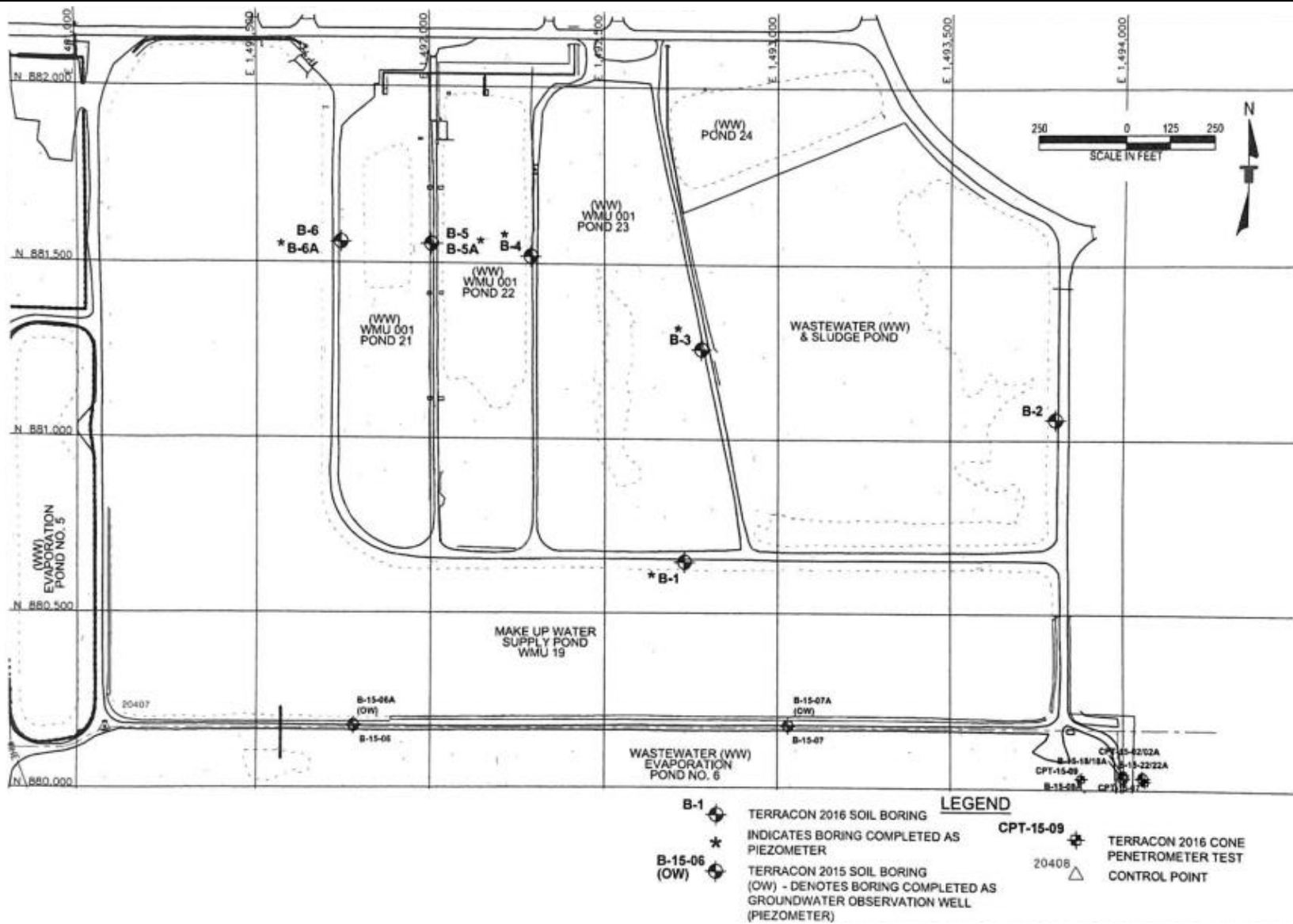


FIG. 3A.
BORING LOCATION PLAN
OKAUNION POWER PLANT

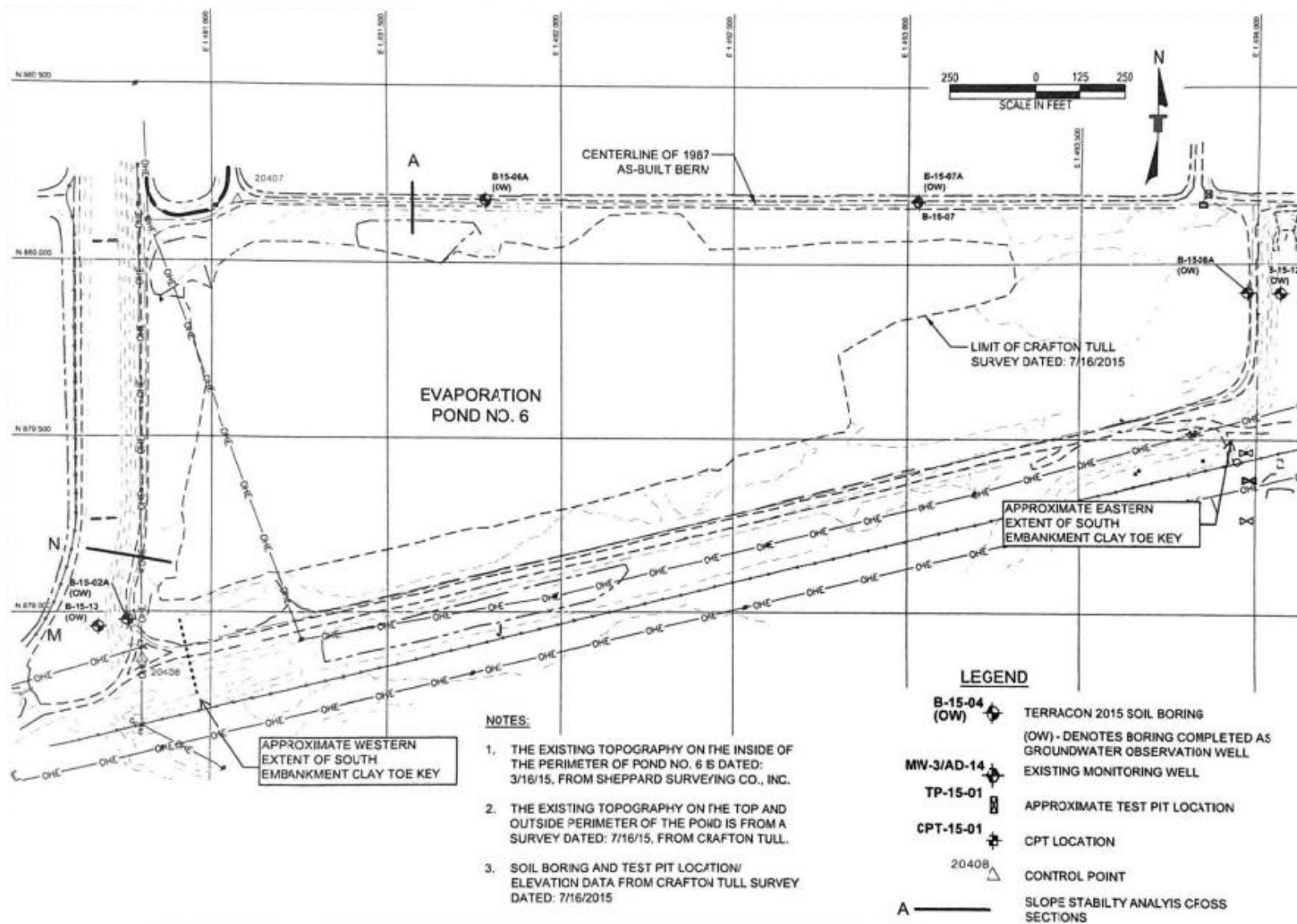
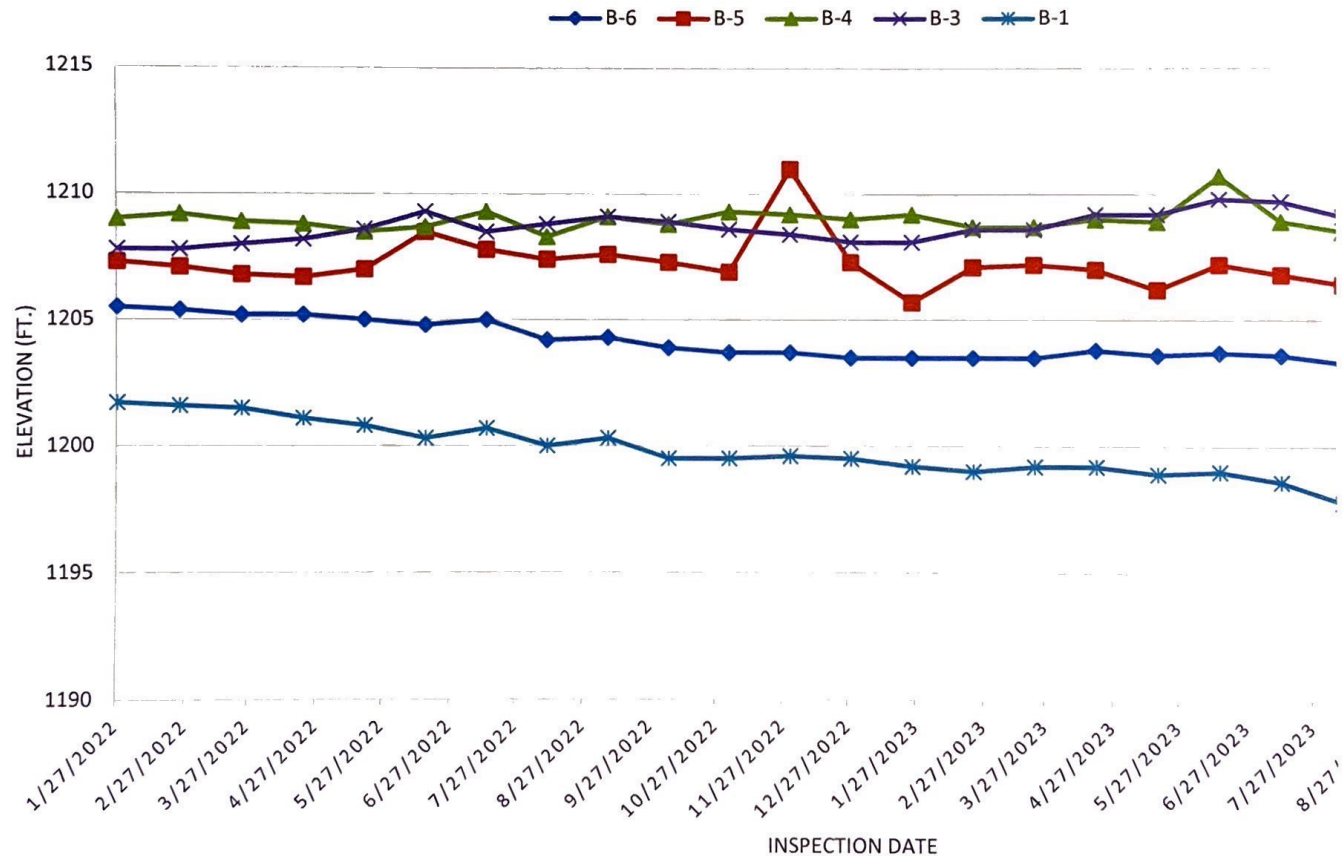


FIG. 3B.

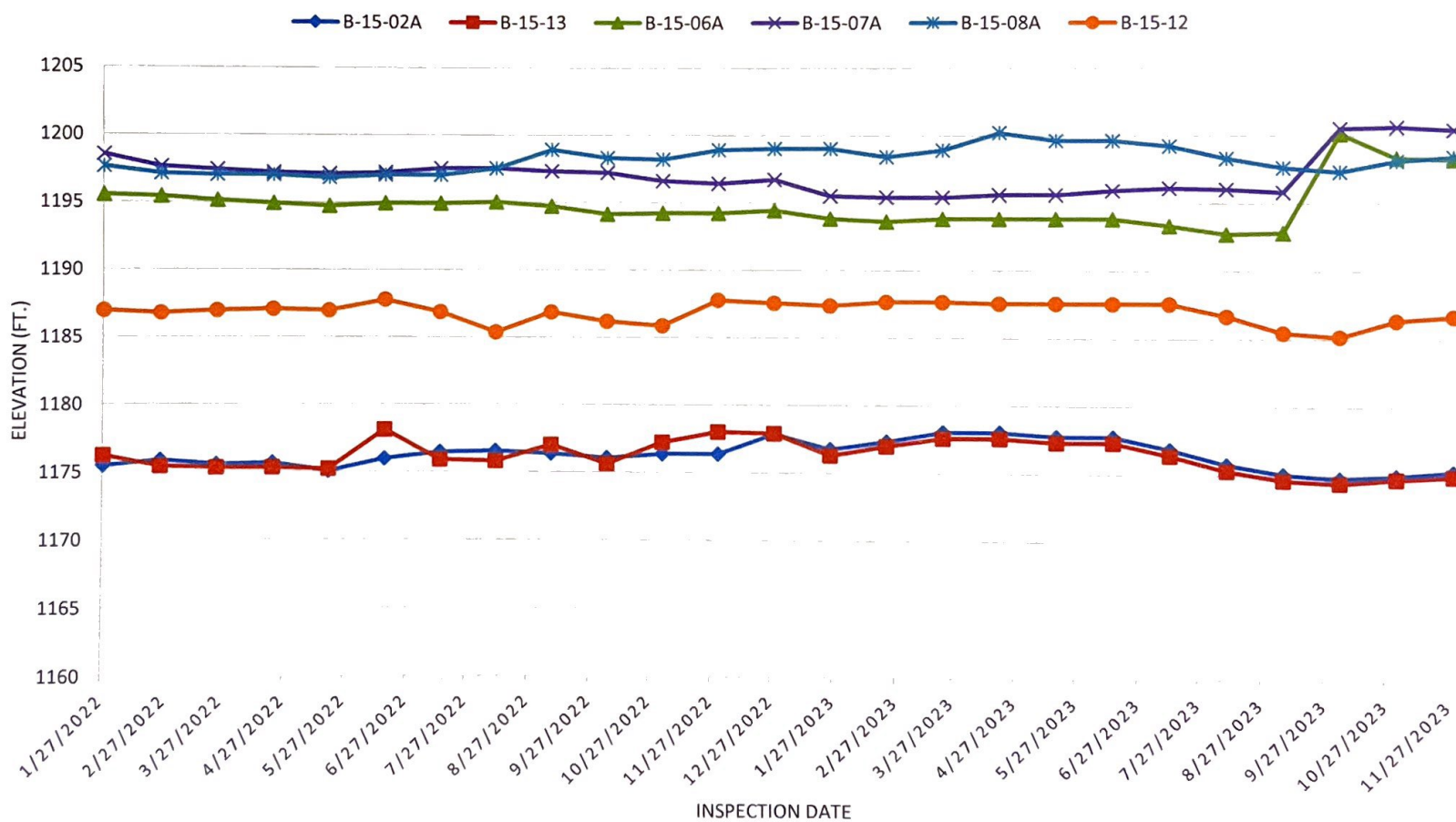
EXPLORTATION PLAN
OKAUNION POWER PLANT



FIGURE 4
PIEZOMETER READINGS
POND 21, 22, 23 & WWSP



**FIGURE 5
PIEZOMETER READINGS
POND 6**



ATTACHMENT A – 2023 ANNUAL INSPECTION REPORT

**Burns & McDonnell
Geotechnical Department
Site Visit Summary**

PROJECT NAME: Oklaunion CCR Pond Closure		DATE: 1/29/2024	
TASK / JOB NO.: 135110 – Pond Inspection		DAY: Monday	
Weather: AM: Sunny PM: Sunny	Temp: Low: 48 F High: 71° F	Wind: 0N – 10 mph Northeast to north	Precipitation: 0.00in

NAME/POSITION	HOURS ON-SITE
Eric Lindsey – Geotech	6.0
• E. Lindsey - Onsite from 09:00 to 15:00	

Wastewater and Sludge Pond – Inspection Summary

Start 09:55

- Walked entire perimeter of Wastewater/Sludge Pond on embankments. Photos were taken of embankments.
- Sections of interior side of embankments have steep slopes, vertical, or areas that have been undermined.
- Observed isolated areas of shallow ponded water within Wastewater/Sludge Pond.
- No observed anomalies on northern side of embankment between Wastewater/Sludge Pond and holding pond.
- No observed anomalies on eastern side of embankment between Wastewater/Sludge Pond and lower collection pond.
- No observed anomalies on southern side of embankment between Wastewater/Sludge Pond and Pond 19 (Make Up Water Supply)
- Rusty metal pipe observed in northeast corner of pond extends from Wastewater/sludge Pond into eastern embankment in the direction of intake structure of Lower Collection Pond. No plug observed in pipe.
- Noticed slight sulfur smell down wind of ponds (only noticed on east side of Wastewater/Sludge Pond).
- Per visual observation, no geotechnical observations need immediate attention.
- Continue to monitor side slopes of interior and exterior pond embankments to maintain long term stability of embankments around Wastewater/Sludge Pond.
- 19 photos taken of Wastewater/Sludge Pond.

End 10:55

Pond 23 – Inspection Summary

Start 10:55

- Walked entire perimeter of Pond 23 on embankments. Photos were taken of embankments. Some sections of the embankment on interior side of west embankment are steep or vertical.
- Water in pond observed to collected toward the middle of Pond 23.
- No observed anomalies on northeastern section of embankment between Pond 23 and holding pond.
- No observed anomalies on southern side of embankment between Pond 23 and Pond 19 (Make Up Water Supply)
- Per visual observation, no geotechnical observations need immediate attention.
- Continue to monitor side slopes of interior and exterior pond embankments to maintain long term stability of embankments around Pond 23.
- 14 photos taken of Pond 23.

End 11:39

Pond 22 – Inspection Summary

Start 11:40

- Walked entire perimeter of Pond 22 on embankments but could not pass around the north side of the pond due to piping and pipe bridge. Photos were taken of embankments and other notable items around or in Pond 22.
- Most of the water observed in Pond 22 was collected in the northern half.
- No observed anomalies on southern side of embankment between Pond 22 and Pond 19 (Make Up Water Supply)
- Sections of eastern embankment appear to have been undermined.
- Plastic pipe extends under the embankment between Pond 21 and 22.
- Per visual observation, no geotechnical observations need immediate attention.
- Continue to monitor side slopes of interior and exterior pond embankments to maintain long term stability of embankments around Pond 22.
- 16 photos taken of Pond 22.

End 12:15

Pond 21 – Inspection Summary

Start 12:19

- Walked entire perimeter of Pond 21 on embankment but could not pass around the north side of the pond. Photos taken of embankments and other notable items around or in pond.
- Most of the water observed was collected in the northern and western side of pond.
- No observed anomalies on southern or eastern side of embankment between Pond #21 and Pond 19 (Make Up Water Supply)
- Plastic pipe extends under the embankment between Pond 21 and 22, extends north and south along the eastern side of Pond 21. Piping appears to have disconnected.
- Per visual observation, no geotechnical observations need immediate attention.
- Continue to monitor side slopes of interior and exterior pond embankments to maintain long term stability of embankments around Pond 21.
- 19 photos taken of Pond 21.

End 12:47

Pond 06 – Inspection Summary

Start 13:00

- Drove along western side of Pond 6 using outer access road.
- Observed erosion along toe of the western embankment. Observed erosion is not critical at this time, but if erosion continues to occur, this could result in embankment instability.
- Walked west embankment from access road on southwest side of Pond 6.
- Observed several areas approximately 15-20 feet in length and 5 feet in width with apparent surface movement. Based on vegetation present, the slopes at these locations have been in current condition for time. These areas will need future monitoring.
- Walked southside of embankment and observed ponding of water near toe of embankment. Observed water was assumed to be from rain event on Friday 1/26
- Observed erosion of the southeast embankment corner with geotextile exposed. This area will need to be monitored moving forward.
- In area around spillway along eastern side of Pond 6 erosion features present on the embankment, this area will need to be monitored moving forward.
- The interior area of Pond 6 is developing erosion channels. There is no immediate need to address the observed erosion channels but will need future monitoring is needed to ensure they do not continue to progress towards the embankment.
- Observed water collected in Pond 6 in the western middle area of the pond.
- Per visual observation, no geotechnical observations need immediate attention.
- Continue to monitor the embankment toe on the western side, the southeastern corner, the interior erosion channels, and Pond 6 embankment around spillway.
- 40 photos taken of Pond 6 embankments and pond.

End 14:40

SIGNATURE:

En D. Ling

ATTACHMENT B - PHOTOLOG



Oklaunion Industrial Park



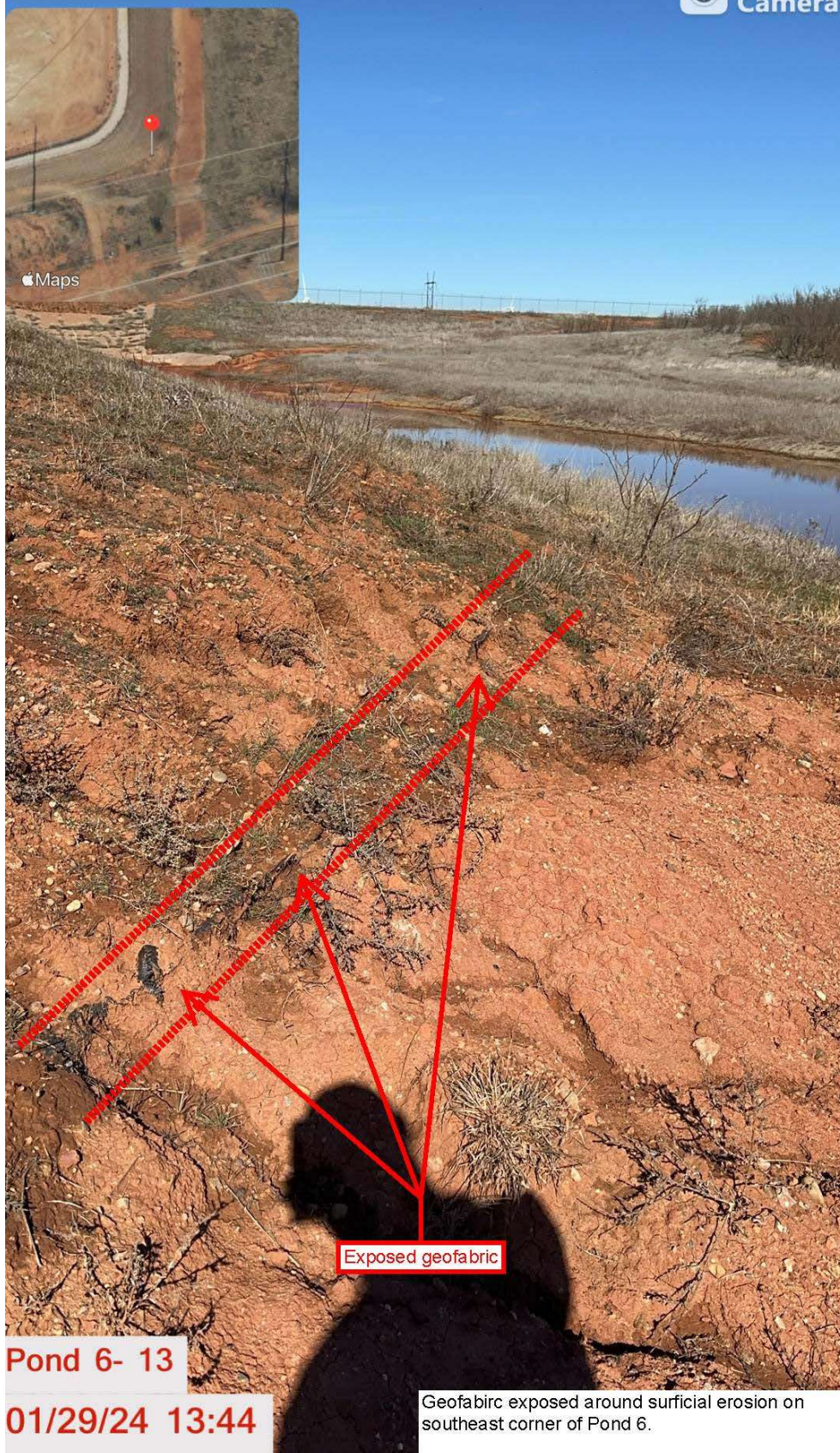
Photographs
1/29/2024
Vernon, TX



Oklaunion Industrial Park



Photographs
1/29/2024
Vernon, TX



Pond 6- 13

01/29/24 13:44

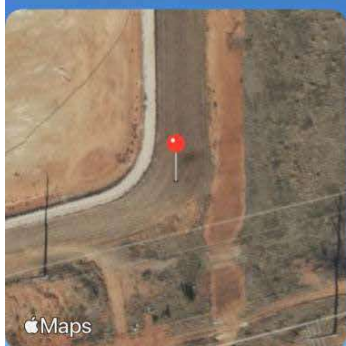
Exposed geofabric

Geofabirc exposed around surficial erosion on southeast corner of Pond 6.

Oklaunion Industrial Park

**BURNS
MCDONNELL**

Photographs
1/29/2024
Vernon, TX



Pond 6- 15

01/29/24 13:47

Close up erosional feature at end of spillway. From Pond 6 embankment looking north east.

Oklaunion Industrial Park



Photographs
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Vernon, TX



Pond 6- 6

01/29/24 13:16

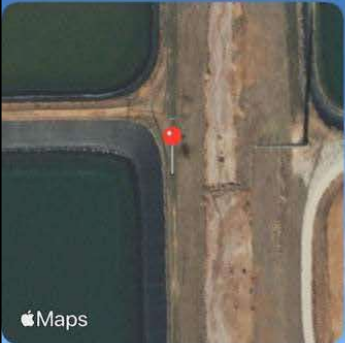
Surface with not vegetation on slope, development of erosional channels. looking north

Oklaunion Industrial Park



Photographs
1/29/2024
Vernon, TX

Timestamp
Camera



Apple Maps

Pond 6- 2
01/29/24 13:03

Western embankment looking south, southeast of
Pond #6

Oklunion Industrial Park



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P21- 10
01/29/24 12:33

Northwestern embankment looking southwest from
pipe bridge between Ponds #21 and #22

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Vernon, TX



Oklaunion Industrial Park



Photographs
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Vernon, TX



P22- 7
01/29/24 11:48

North embankment of Pond #22 from eastern embankment looking northwest.

Oklunion Industrial Park

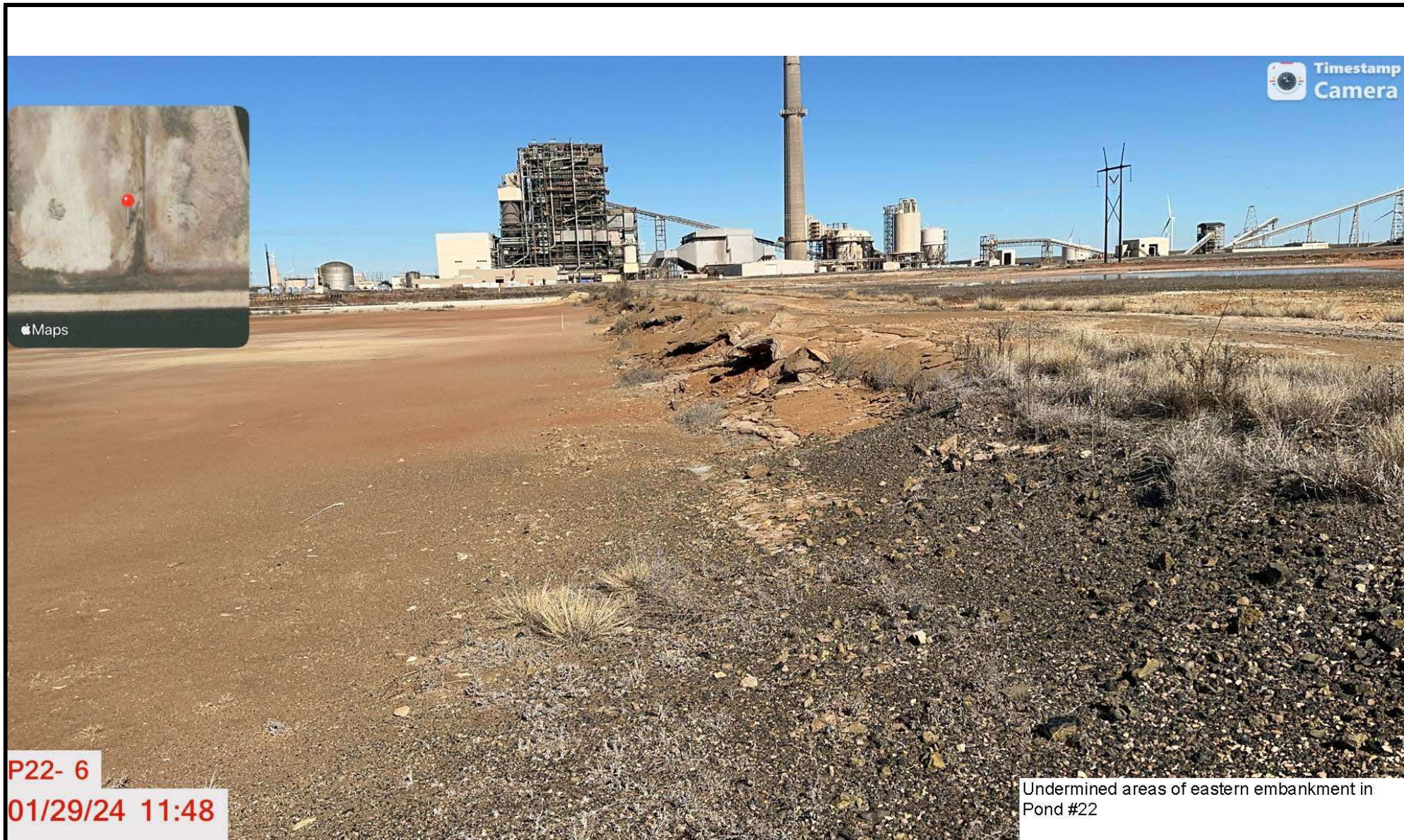


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P22- 11
01/29/24 11:57

Eastern embankment looking southeast from
pipe bridge in northwest corner of Pond #22.



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P22- 13

01/29/24 12:02

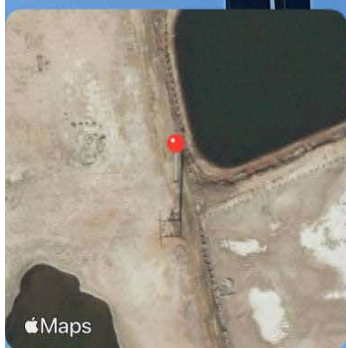
Plastic pipe going into western embankment

Oklunion Industrial Park



Photographs
1/29/2024
Vernon, TX

Timestamp
Camera



P23- 6

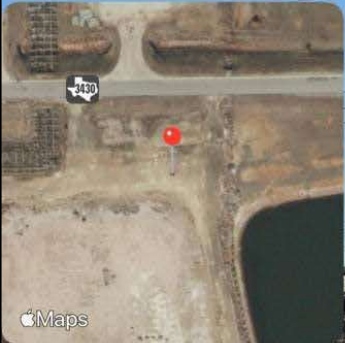
01/29/24 11:18

Photo of h-frame transmission structure on
west side of east embankment looking south.

Oklunion Industrial Park

 **BURNS
& McDONNELL**

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P23- 8
01/29/24 11:25

Eastern embankment looking south from NE corner of pond 23.

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Vernon, TX



Apple Maps



WWS- 23
01/29/24 10:52

Southern embankment from western
embankment looking east.

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