

APPLICABILTY EXTENSION REPORT
MEREDOSIA ENERGY CENTER
FLY ASH POND
MEREDOSIA, ILLINOIS

Prepared for

AmerenEnergy Medina Valley Cogen, LLC

Prepared by

Geosyntec 
consultants

engineers | scientists | innovators

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Chesterfield, Missouri 63005

Project Number GLP8085

November 2024

INTRODUCTION

This Applicability Extension Report (“Report”) has been prepared on behalf of AmerenEnergy Medina Valley Cogen, LLC (Medina Valley) to meet the requirements of 40 CFR 257.100(f)(1), revised May 2024. The revised CCR rule is the legacy coal combustion residuals (CCR) Rule (“Legacy Rule”). The purpose of the applicability extension report is to obtain additional time to identify whether the Legacy Rule is applicable to the closed Fly Ash Pond. This Report is due no later than 8 November 2024 and is submitted by Ameren Missouri, an affiliate of Medina Valley. Both Medina Valley and Ameren Missouri are subsidiaries of Ameren Corporation.

REPORT CONTENTS

The Report includes the following:

- (A) The name and address of the person(s) owning and operating the potential legacy CCR surface impoundment with their business phone number and email address.
- (B) The name associated with the potential legacy CCR surface impoundment.
- (C) Information to identify the potential legacy CCR surface impoundment, including a figure of the facility and where the unit is located at the facility, facility address, and the latitude and longitude of the facility.

This Report presents the required available information in accordance with (A) through (C), above. It also includes a statement by the owner that available information does not provide a sufficient basis to determine, with certainty, that the inactive impoundment contained free liquids on or after October 19, 2015, as required by 40CFR257.100(f)(1)(iii) (2), as well as a field exploration work plan as required by 40CFR257.100(f)(1)(iii) (3).

AVAILABLE INFORMATION

(A) Owner's Contact Information

The name and address of the person(s) owning and operating the legacy CCR surface impoundment with their business phone number and email address, is as follows:

Owner:

AmerenEnergy Medina Valley Cogen, LLC

Name and address of authorized representative agent for AmerenEnergy Medina Valley Cogen, LLC:

Craig J. Giesmann, P.E., P.M.P.
Director, Environmental Services
AmerenEnergy Medina Valley Cogen, LLC
1901 Chouteau Avenue
St. Louis, MO 63103

Phone Number:
314-554-2955

Email address:
cgiesmann@ameren.com

(B) Name of the Legacy CCR Surface Impoundment

The name of the potential legacy CCR surface impoundment is the Fly Ash Pond.

(C) Legacy CCR Surface Impoundment Location Information

A figure that illustrates where the unit is located at the facility, facility address, and the latitude and longitude of the facility is presented in **Attachment 1**. This figure was developed by Ramboll and was extracted from their 2023 Groundwater Monitoring Annual Report for the Meredosia site [1].

The address of the facility is:

800 South Washington Street
Morgan County
Meredosia, IL 62665

OWNER STATEMENT

Section 40 CFR 257.100(f)(1)(iii)(2) requires a statement by the owner or operator that to the best of their knowledge or belief, existing and available information does not provide a sufficient basis to determine, with certainty, that the unit contained free liquids on or after October 19, 2015. This statement is provided in **Attachment 2**.

FIELD INVESTIGATION WORKPLAN

Section 40 CFR 257.100(f)(1)(iii)(3) requires a written field investigation workplan that describes the approach the owner or operator intends to follow to determine whether the inactive impoundment contains free liquids. This written workplan is provided in **Attachment 3**.

OWNER CLOSING STATEMENT

Ameren has prepared this extension report in good faith in order to meet the requirements of 40 CFR 257.100 applicable to legacy CCR surface impoundments. Please note, that the CCR units at issue here were previously closed under active state of Illinois oversight. As a result, even if they are subsequently identified as legacy CCR surface impoundments through the field investigation presented herein, Ameren respectfully submits that these units should be exempt from EPA's CCR rule, as amended, and should not be required to re-close. Ameren understands that the retroactive effect of EPA's rule is under review by the United States Court of Appeals for the District of Columbia Circuit in a series of consolidated cases titled, *City Utilities of Springfield, Missouri, v. EPA*, Case No. 24-1200, and Ameren respectfully reserves its legal position against retroactive application of the rule to the CCR units at issue here.

Attachments:

Attachment 1: Location Information

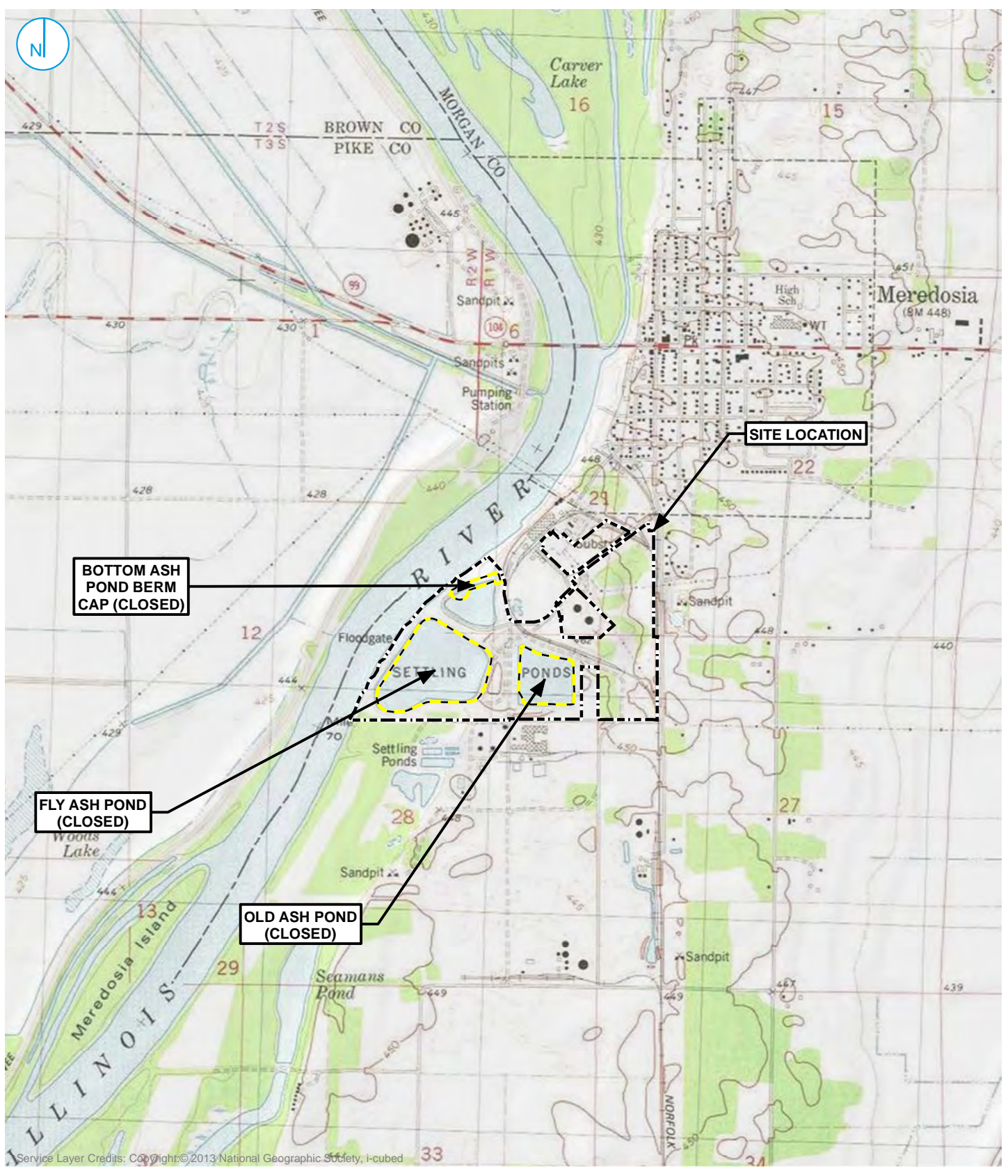
Attachment 2: Statement by Owner

Attachment 3: Field Investigation Workplan



REFERENCES

- [1] Ramboll, "2023 Groundwater Monitoring Annual Report Closed Fly Ash & Bottom Ash Ponds Former Meredosia Power Station," 2024.

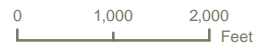
ATTACHMENT 1
APPLICABILITY EXTENSION REPORT
MEREDOSIA ENERGY CENTER
FLY ASH POND
SITE LOCATION FIGURES



Map Scale: 1:1,24,000;
Map Center: 90°34'10"W 39°49'15"N

-  APPROXIMATE PROPERTY BOUNDARY
-  LIMITS OF CCP MANAGEMENT

NOTE
Base map property lines were updated based on March 2019 Plat of Survey.



SITE LOCATION MAP

2023 GROUNDWATER MONITORING ANNUAL REPORT
AMEREN ENERGY RESOURCES
MEREDOSIAS POWER STATION
MORGAN COUNTY, ILLINOIS

FIGURE 1-1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





- MONITORING WELL LOCATION
- - - APPROXIMATE PROPERTY BOUNDARY
- - - LIMITS OF CCP MANAGEMENT
- - - APPROXIMATE GROUNDWATER MONITORING ZONE

0 240 480 Feet

NOTE
Base map property lines were updated based on March 2019 Plat of Survey.

MONITORING WELL LOCATION MAP

FIGURE 1-2

2023 GROUNDWATER MONITORING ANNUAL REPORT
AMEREN ENERGY RESOURCES
MEREDOSIA POWER STATION
MORGAN COUNTY, ILLINOIS

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.



ATTACHMENT 2
APPLICABILITY EXTENSION REPORT
MEREDOSIA ENERGY CENTER
FLY ASH POND
STATEMENT BY OWNER

To obtain additional time to complete the potential legacy impoundment applicability report required under 40 CFR 257.100(f)(1), the owner or operator, or an authorized representative, of any potential legacy CCR surface impoundment must state that available information does not provide a sufficient basis to determine, with certainty, that the inactive potential legacy CCR surface impoundment contained free liquids on or after October 19, 2015. This is completed through the following statement in accordance with 40 CFR 257.100(f)(1)(iii)(2):

A statement by the owner or operator that to the best of their knowledge or belief, existing and available information does not provide a sufficient basis to determine that the unit contained free liquids on or after October 19, 2015;

I certify that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. To the best of my knowledge, the existing information does not provide a sufficient basis to determine, with certainty, that the unit contained free liquids on or after October 19, 2015.



Craig J. Giesmann, P.E., P.M.P.
Director, Environmental Services

8 November 2024

ATTACHMENT 3
APPLICABILITY REPORT EXTENSION
MEREDOSIA ENERGY CENTER
FLY ASH POND
FIELD INVESTIGATION WORKPLAN

1.0 INTRODUCTION

The purpose of this workplan is to conduct a field investigation to assess whether free liquids are present in the coal combustion residuals (CCR) present in the closed Fly Ash Pond surface impoundment. The closed surface impoundment is the Fly Ash Pond shown on the figure in **Attachment 1**.

2.0 WORK PLAN

The CCR Legacy Rule requires a Field Investigation Work Plan (Work Plan) to evaluate the presence of free liquids in the potential legacy pond. In accordance with 40 CFR 257.100(f)(1)(iii)(A)(3), the Work Plan is required to provide the following details¹:

The details of a written field investigation work plan, including of the following:

2.1 Approach to Characterize the CCR and Native Geologic Materials

(i) A detailed description of the approach to characterize the physical, topographic, geologic, hydrogeologic, and hydraulic properties of the CCR in the unit and native geologic materials beneath and surrounding the unit, and how those properties will be used to investigate for the presence of free liquids in the CCR unit.

The CCR in the Fly Ash Pond and the native geologic materials beneath and surrounding the unit have been characterized in prior geotechnical investigations and documents prepared to support the implementation of closure [1] [2] [3]. No further characterization is necessary to investigate for the presence of free liquids in the Fly Ash Pond. Additional piezometers are proposed to determine the presence of free liquids through direct measurement.

The physical, topographic, geologic, hydrogeologic, and hydraulic properties investigated and reported previously will be utilized with the additional piezometer readings to determine the

¹ *Italicized font* indicates direct wording from the CCR Rule.

presence of free liquids in The Fly Ash Pond. The CCR in the closed Fly Ash Pond can generally be characterized as a mixture fly ash and bottom ash.

Existing drawings document the vertical and lateral limits of the CCR in the CQA Report [2].

2.2 Methods and Tools

(ii) A detailed description of the methods and tools that will be employed to determine whether the unit contains free liquids, the rationale for choosing these methods and tools, how these methods and tools will be implemented, and at what level of spatial resolution at the CCR unit to identify and monitor for the presence of free liquids.

Piezometers are the most effective method of measuring the presence of pore water. The installation of four temporary piezometers, placed to a depth of approximately two feet above the base of the pond will provide sufficient data to determine if free liquids are present. This will result in a spatial resolution of approximately one piezometer every nine acres.

The following methods and tools will be followed:

- Existing drawings provide bottom elevations of the CCR; the piezometers will be installed no closer than two feet from the bottom of the CCR to avoid creating a downward conduit for free liquid, should free liquid exist.
- Piezometer locations will be selected where the CCR appears to be at the lowest elevations and the ground surface will be established at those locations by survey. Due to the cap of the Fly Ash Pond being geomembrane the surveyor should not stake, nail, pin, or use any other method that might damage the geomembrane cap. The depth of CCR will be indicated in a noninvasive manner.
- The existing surface is comprised of ClosureTurf[®] with sand infill overlying a high-density polyethylene (HDPE) cover liner. The ClosureTurf[®] system will be removed in a two-foot by two-foot area down to the liner.
- The liner will be cut and removed in a one-foot diameter circle or square and will be repaired following completion of piezometer installation by a certified geomembrane contractor.
- The piezometers will be installed with a drilling rig using 4.25-inch diameter hollow stem auger equipment.
- Split barrel (“split spoon”) samples will be obtained every five feet in accordance with ASTM D1586.
- The piezometers are proposed to be a nominal two-inch diameter polyvinyl chloride (PVC) pipe casing with threaded joints. The piezometers are proposed to have a 5-ft screen with a 0.010-inch screen size and a No. 2 sand pack (approximately 20/40 mesh sand) placed in the annular spacing between the casing and borehole. A two-foot-thick bentonite plug will be placed above the sand pack and the annular space will be backfilled with auger cuttings

or allowed to collapse up to within two feet of the liner. A minimum of two feet below the liner will be grouted in place with a cement-bentonite grout. The ClosureTurf[®] system shall be replaced above the liner.

- The liner will be repaired using a “boot”. This will be done by a certified geomembrane contractor.
- The piezometers will be developed.
- A vented cap will be installed at the top of the piezometer casing.
- The piezometer shall be abandoned after sufficient data has been collected, as determined by the Qualified Professional Engineer.
- The liner and ClosureTurf[®] cover system shall be repaired.

A diagram of the proposed piezometer and a typical boot detail is shown on **Enclosure 1** of this workplan.

2.3 Groundwater Elevation Monitoring

(iii) A detailed description of how groundwater elevations will be determined, and at what level of spatial resolution, in relation to the sides and bottom of the CCR unit and how any intersection of the groundwater table with the CCR unit will be evaluated, and at what level of spatial resolution.

Piezometers will be installed within the limits of the Fly Ash Pond to measure groundwater elevations at a spatial resolution of approximately one piezometer every nine acres. The sides and bottom of the pond are well defined by the as-built drawings. The piezometers will provide pore water levels if free liquids are encountered. The free liquids would extend to the sides and base of the unit from the measurement level. The top of the piezometer elevations will be established by survey. These piezometers will be monitored weekly for one month to determine if free liquids are present within the CCR.

Water level indicators typically measure depth to groundwater to the nearest hundredth of a foot. Typically, groundwater levels and/or depths are then rounded and reported to the nearest tenth of a foot.

2.4 Stormwater Evaluation

(iv) A plan for evaluating stormwater flow over the surface of the unit, stormwater drainage from the unit, and stormwater infiltration into the unit and how those processes may result in the formation of free liquids in the CCR unit. This plan must include a current topographic map showing surface water flow and any pertinent natural or manmade features present relevant to stormwater drainage, infiltration and related processes.

As-built topographic plan sheets are provided as **Enclosure 2** to this plan with markups showing the potential flow of stormwater flow over the surface and around the closed unit. Stormwater conveyance ditches were constructed as part of closure construction activities. These ditches convey the stormwater off the unit’s capped surface and then off the site. The Fly Ash Pond capped with a closure turf system consisting of an HDPE geomembrane liner, synthetic turf geotextile, and sand infill. Infiltration of surface water past the HDPE liner into the CCR prior to being conveyed off the unit is unlikely due to the low permeability design of the closure turf cap system. The cover of the Fly Ash Pond and surrounding conveyance ditches will be inspected for evidence of erosion.

2.5 Estimated Timeline

(v) An estimated timeline to complete the workplan and make a determination if the CCR unit contains free liquids.

It is estimated that this field investigation work plan, including the installation of proposed piezometers and subsequent monitoring events of the proposed piezometers, will be completed in less than six months from the date of this extension report. Estimated task lengths are provided below:

- Procure piezometer installation contractor: one and one/half months
- Procure piezometer geomembrane contractor: one and one/half months
- Survey location of piezometer: one week, maximum
- Install piezometers and HPDE geomembrane boot: one week, maximum
- Monitoring: weekly for one month
- Removal/abandonment of piezometer and cover repair: one week maximum

2.6 Assessment of the Presence of Free Liquids

(vi) A narrative discussion of how the results from implementing the workplan will determine whether the unit contains free liquids specified.

Implementing this work plan will give the owner or operator data showing the depths to pore water within the unit, which will indicate that free liquids are present. If pore water is not observed during the implementation of this work plan, free liquids are likely not present within the unit and the unit is not considered a legacy surface impoundment.

The Legacy Rule section 40 CFI 257.101(g) states: *If the owner or operator determines that the unit contains free liquids during implementation of the written field investigation workplan, the owner or operator must cease operating under these extension provisions and prepare the applicability report required by paragraph (f)(1) of this section within 14 days of determining that the unit contains free liquids.*

If free liquids are determined to be present, an applicability report will be submitted as required. Due to the Fly Ash Pond being already closed, no change in operations is necessary.

2.7 Anticipated Workplan Problems and Mitigations

(vii) A narrative discussion describing any anticipated problems that may be encountered during implementation of the workplan and what actions will be taken to resolve the problems, and anticipated timeframes necessary for such a contingency.

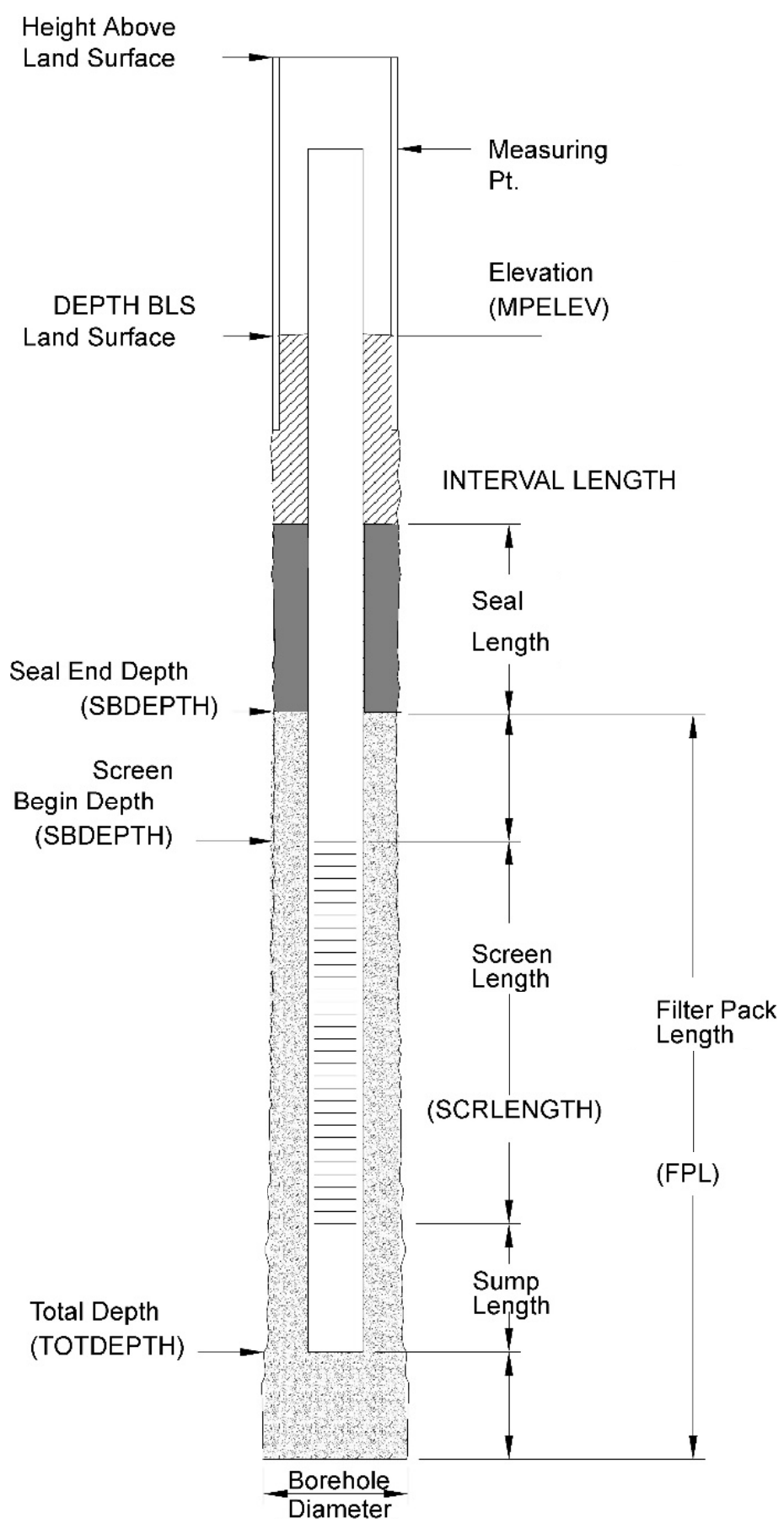
Anticipated problems that may arise from the execution of this workplan as well as their proposed mitigations are as follows:

1. Delays with contracting a drilling firm for the proposed installation of piezometers could lead to delays in the implementation of the work plan.
 - a. Proposed mitigation is to have working agreements in place with drilling firms that perform installation of piezometers in ash on a routine basis.
 - b. Multiple drilling firms shall be contacted in case a preferred firm is unable to complete the installation in a timely manner.
2. Delays with contracting a certified geomembrane contractor could lead to delays in the implementation of the work plan.
 - a. Proposed mitigation is to have working agreements in place with geomembrane firms that perform geomembrane installations and repairs on a routine basis.
 - b. Multiple firms shall be contacted in case a preferred firm is unable to complete the installation in a timely manner.
3. Cold weather conditions could delay the start of the field investigation or prolong the duration of the field investigation.
4. It may be determined that weekly monitoring of the piezometers for a single month may not be sufficient to determine the presence of free liquids and monitoring may need to be extended.

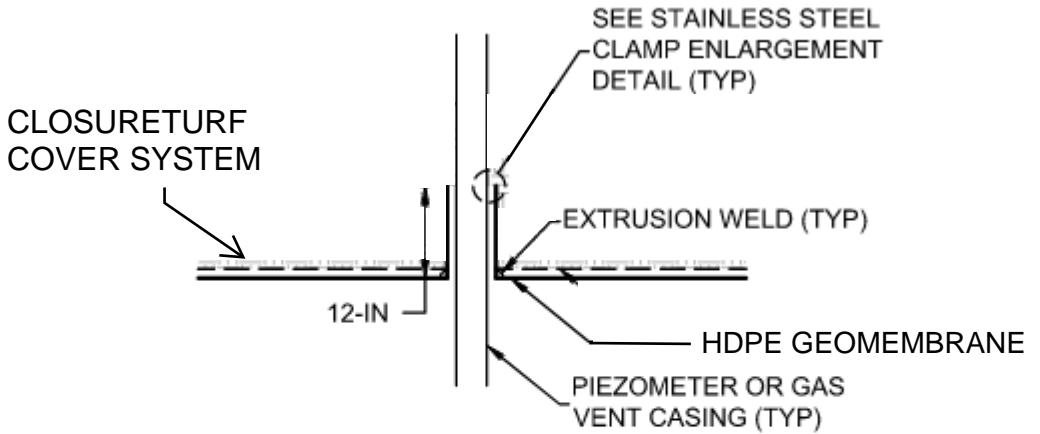
REFERENCES

- [1] Geotechnology, Inc., "Closure Plan Fly Ash Pond and Bottom Ash Pond Meredosia Power Station," 2018.
- [2] Geotechnology, Inc., "Construction Quality Assurance Report Closure of Bottom Ash Pond and Fly Ash Pond Meredosia Power Station," 2019.
- [3] Geotechnology, Inc., "Hydrogeologic Assessment Report Fly Ash Pond and Bottom Ash Pond," 2016.

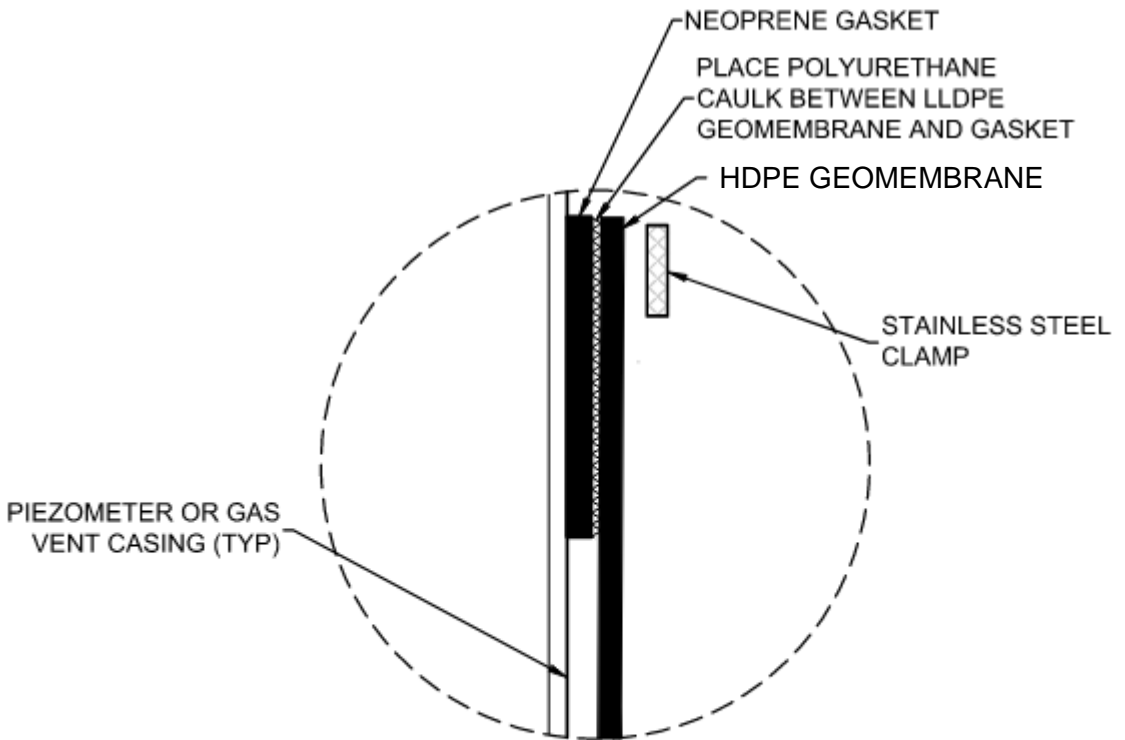
ENCLOSURE 1
FIELD INVESTIGATION WORKPLAN
MEREDOSIA ENERGY CENTER
FLY ASH POND
TYPICAL PIEZOMETER AND PIEZOMETER BOOT DETAILS



TYPICAL PIEZOMETER DETAIL
SCALE: NTS



TYPICAL PIEZOMETER BOOT DETAIL
SCALE: NTS

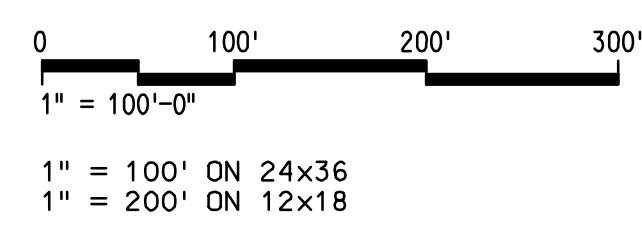
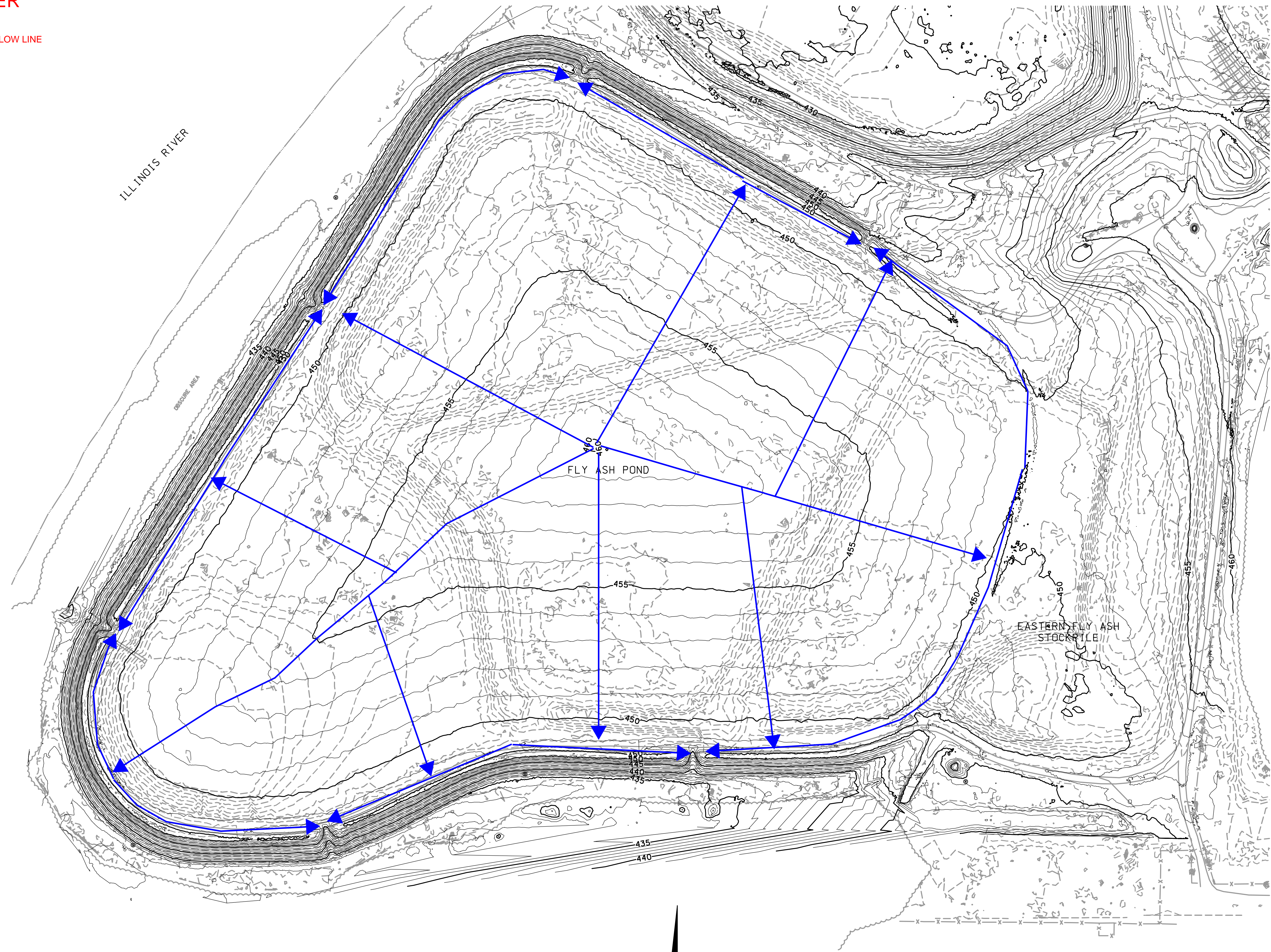


STAINLESS STEEL CLAMP ENLARGEMENT DETAIL

ENCLOSURE 2
FIELD INVESTIGATION WORKPLAN
MEREDOSIA ENERGY CENTER
FLY ASH POND
STORMWATER FLOW TOPOGRAPHIC MAP

ANNOTATED BY GEOSYNTEC ON OCTOBER 2024 TO INDICATE THE APPROXIMATE FLOW LINES OF SURFACE STORMWATER

← APPROXIMATE SURFACE STORMWATER FLOW LINE



AS-BUILTS

THE UNDERGROUND UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE OR OTHER UTILITIES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITIES, SHOWN OR NOT SHOWN, AND SHALL LOCATE THE UTILITIES IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION, OR CONSTRUCTION IMPROVEMENTS.

REV	PROJ ID	DATE	DRWN	RW	APPD
0	15093	3/8/19	HWB	MMV	MW
AS-BUILT CONDITION					

MEDINA VALLEY COGEN, LLC
ASH POND CLOSURE
AS-BUILT PLANS
AS-BUILT AERIAL TOPOGRAPHY

MEREDOSIA POWER STATION



C-703

REV 0

24x36

SCALE RATIO = 1

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