

Texas Commission on Environmental Quality
Remediation Division Correspondence Identification Form

| SITE & PROGRAM AREA IDENTIFICATION | | | |
|--|------------------------|--|------------------------------|
| SITE LOCATION | | REMEDIATION DIVISION PROGRAM AND FACILITY IDENTIFICATION | |
| Site Name: Copano Enterprises LLC, dba CE Ranch LLC, Copano Site (Beds 1-4), Aransas and San Patricio County, Texas | | Is This Site Being Managed Under A State Lead Contract? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Address 1: 7037 CR 93 | | Program Area: IHW CORRECTIVE ACTION | |
| Address 2: | | Mail Code: MC-127 | |
| City: Aransas Pass | State: Texas | Is This A New Site To This Program Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Zip Code: 78336 | County: Aransas | | |
| TCEQ Region: Region 14 - Corpus Christi | | --Leaving This Field Blank-- | --Leaving This Field Blank-- |

| DOCUMENT(S) IDENTIFICATION | |
|----------------------------|--|
| PHASE OF REMEDIATION | DOCUMENT NAME |
| 1. MISCELLANEOUS | SEMI-ANNUAL MATERIALS PLACEMENT REPORT |
| 2. <input type="text"/> | <input type="text"/> |
| 3. <input type="text"/> | <input type="text"/> |
| 4. <input type="text"/> | <input type="text"/> |
| 5. <input type="text"/> | <input type="text"/> |

| CONTACT INFORMATION | | | |
|--|--|---------------------------------|-----------------------------|
| RESPONSIBLE PARTY INFORMATION | | | |
| Name: | | | |
| Company: Copano Enterprises LLC | Phone Number: 412-315-2785 | Fax Number: | |
| Address 1: 201 Isabella St. | City: Pittsburgh | State: PA | Zip Code: 15212-5858 |
| Address 2: | Email: ronald.morosky@alcoa.com | | |
| ENVIRONMENTAL CONSULTANT/REPORT PREPARER/AGENT | | | |
| Name: Matt Wickham | | | |
| Company: Golder Associates Inc | Phone Number: 361-573-6442 | Fax Number: 361-573-6449 | |
| Address 1: 620 E. Airline | City: Victoria | State: TX | Zip Code: 77901 |
| Address 2: | Email: Matthew_wickham@golder.com | | |
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| TCEQ INTERNAL USE ONLY | | | |
|------------------------|--------------------|--------------|--------------------|
| Document No. | TCEQ Database Term | Document No. | TCEQ Database Term |
| 1. | | 4. | |
| 2. | | 5. | |
| 3. | | | |

Copano Enterprises LLC
dba CE Ranch LLC
201 Isabella Street
Pittsburgh, PA 15212-5858 USA

December 11, 2020

Ms. Eleanor T. Wehner
VCP-CA Section
Remediation Division
Texas Commission on Environmental Quality
P.O Box 13087
Austin, Texas 78711-3087

Re: Transmittal
Notice of Applied Materials – Semi-Annual Report No. 5
June 1, 2020 to November 30, 2020
TCEQ SWR No. 30097; EPA ID No. TXD008129983
Copano Site

Please find enclosed the above-referenced document prepared by Golder Associates Inc. on behalf of Copano Enterprises LLC, dba as CE Ranch LLC, in accordance with Section 11 of our 9019 Settlement Agreement with TCEQ. The report will be posted on the Copano website.

Please contact me with any questions.

Sincerely,



Ronald M. Morosky
Operations Manager

Enc.

cc: Abigail Ryan, TCEQ (Hard Copy via Fed Ex)
Susan Clewis, TCEQ (Electronic copy on USB via Fed Ex)
Timothy Perdue, TCEQ (Electronic copy on USB via Fed Ex)
TCEQ Enforcement Division (Hard Copy via FedEx)
Diane Goss, TCEQ Office of General Counsel (Electronic copy on USB via Fed Ex)
Matt Wickham, Golder



REPORT

Notice of Applied Materials - Semi-Annual Report No. 5

June 1, 2020 to November 30, 2020

Submitted to:

CE Ranch LLC

Submitted by:

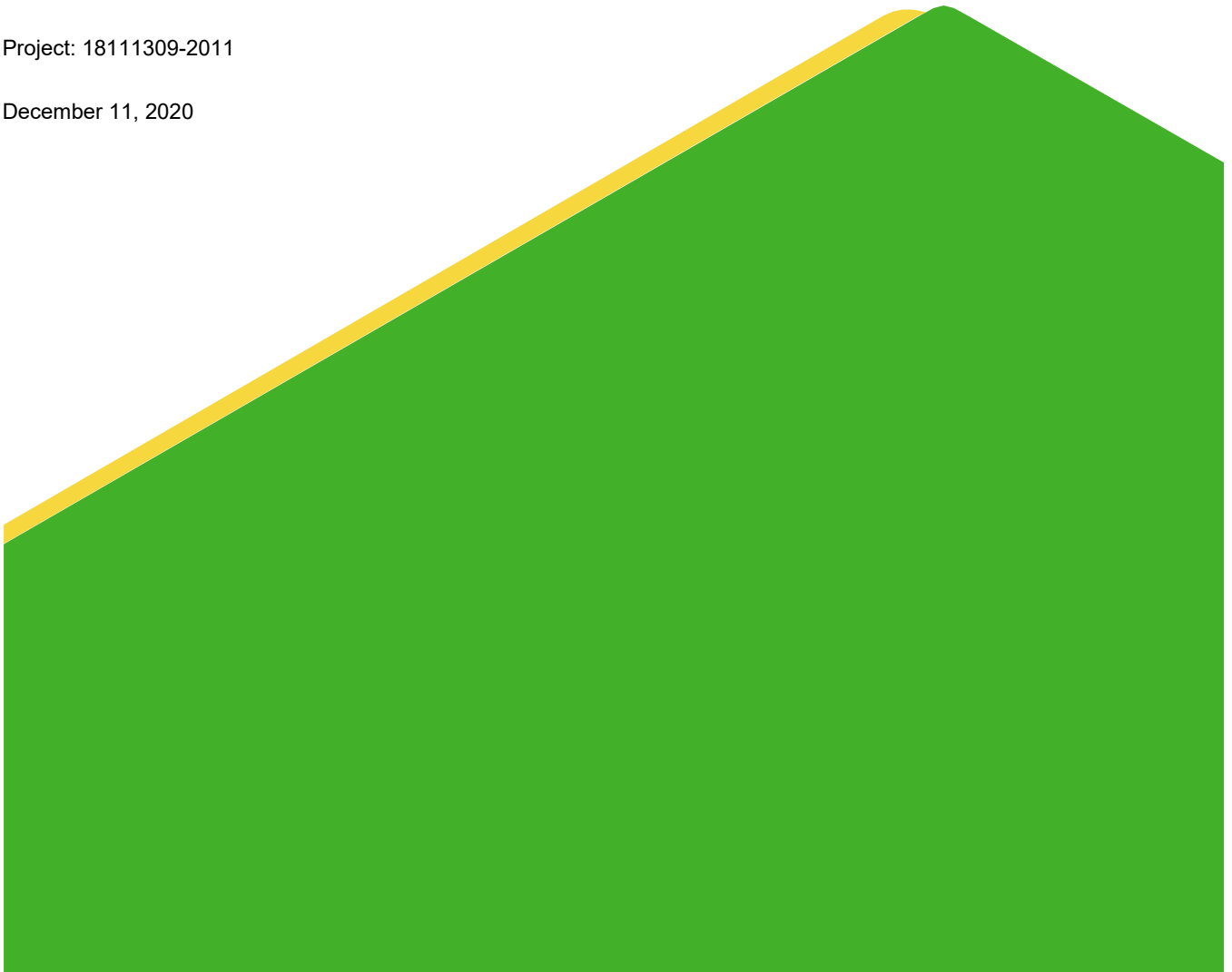
Golder Associates Inc.

620 E. Airline, Victoria, Texas USA 77901

+1 361 573-6442

Project: 18111309-2011

December 11, 2020



Distribution List

Eleanor Wehner - TCEQ VCP/CA Section/Remediation Division

TCEQ Enforcement Division

Diane Goss - TCEQ Office of General Counsel

Abigail Ryan - TCEQ Region 14

Susan Clewis - TCEQ Region 14

Timothy Purdue - TCEQ Region 14

Ron Morosky - Alcoa Corp.

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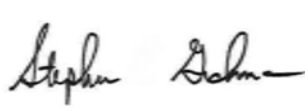
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|---|------------------------|
| A | Aerial Photos of Bed 1 |
|---|------------------------|

Signature Page

Golder Associates Inc.



Matthew K. Wickham, P.G.
Principal Hydrogeologist



Stephen E. Grahmann, P.E.
Senior Project Engineer

SEG

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1.0 INTRODUCTION

Copano Enterprises LLC (dba CE Ranch LLC) (CE) owns and operates the Copano Property (the Site), in San Patricio and Aransas Counties, Texas (Figure 1). CE and the Texas Commission on Environmental Quality (TCEQ) entered into a 9019 Settlement Agreement (the Agreement) on May 21, 2018 that outlines various environmental and other requirements. Section 11 of the Agreement requires semi-annual reporting for placement of various materials within the beds at the Site.

This Semi-Annual Report No. 5 has been prepared by Golder Associates Inc. (Golder) and summarizes the materials applied at the Site from June 1, 2020 through November 30, 2020. Section 2 of this report contains a description of the placement activities, and Section 3 describes planned activities for the next six months. Aerial photos of Bed 1 taken during the reporting period are included in Appendix A.

2.0 CURRENT CONDITIONS AND MATERIALS PLACEMENT

The entire Copano Property consists of more than 11,000 acres and is bisected (into north and south portions) by State Highway 188. Beds 1, 2, 3 and 4 of the Site covers approximately 3,100 acres. From the time period of 1972 until 2016, bauxite residue was pumped to the Site via pipelines from the alumina refinery located approximately 10 miles to the south of the property.

2.1 Bed 1

Bed 1 is approximately 838 acres in surface area and is made up of three sections (Offset Area, Borrow Area and Inner Area) that are separated from each other with internal levees (Figure 2). The Offset Area (174 ac.) is the mostly vegetated perimeter area that is irrigated on a periodic basis with effluent water purchased from the City of Aransas Pass (AP); this portion of Bed 1 includes an external levee and a subsurface leachate collection system. Also located within the Offset Area is the Sump Area where stormwater accumulates from the Borrow and Inner Areas before it is either pumped to Bed 2 or evaporates. The Borrow Area (137 ac.) is situated inside of the Offset Area and includes subsurface leachate and stormwater collection systems. The surface of the Borrow Area was covered with hay prior to the start of this reporting period; however, additional hay was applied to certain areas for continued dust control purposes. The remaining portion of Bed 1 makes up the Inner Area (527 ac.) which contains stacked bauxite residue, the surface of which has been ripped, disked, plowed and covered with mulch, and cotton gin residuals. The use of cotton gin residuals as a dust suppressant was approved by TCEQ

in a letter dated January 25, 2019 from Mr. Brent Wade. The entire Inner Area, along with the interior levee slopes and roadways have been covered with cotton gin residuals during the 2020 ginning season, which will be complete by mid-December 2020. The existing all-weather access roadways that were constructed during a previous reporting period across the Inner Area and along several of the internal levees to allow for the off-loading of mulch on Bed 1 without the need for additional road material placement during this reporting period. The type, estimated amount, source, and placement locations for the materials placed during the reporting period are listed in Table 1; also included are the approximate totals since May 2018. Figure 2 shows the coverage and general placement areas for hay, mulch, and cotton gin residuals on Bed 1 as of the end of November 2020. The aerial views that show the conditions of Bed 1 during the reporting period are included in Appendix A.

TABLE 1: PLACEMENT OF MATERIALS - BED 1

| Material Description | Source of Material | Quantity During Reporting Period | Placement Location | Approx. Total Quantity Since May 2018 |
|--|--|---|--|--|
| Hay | Off-site Suppliers and Copano Ranch | 22 bales | See Figure 2 and Aerials in App. A | 13,780 bales |
| Mulch | Dawson and Others | 44,100 cubic yards | See Figure 2 and Aerials in App. A | 347,500 cubic yards |
| Grass Seed | Off-site Source | 0 pounds | N/A | 61,570 pounds |
| Effluent Water | City of Aransas Pass | 63,125,000 gallons | Offset & Inner Areas Irrigation & Flushing | 1,336,070,000 gallons |
| Sludge (River Mud) | San Patricio MWD | 119,220 pounds | Offset & Inner Areas | 490,809 pounds |
| Mix of Stone, Crusher Run Limestone and Binder | Off-site Sources | 0 cubic yards | N/A | 6,100 cubic yards |
| Cotton Gin Residuals | Gregory Gin 600 6 th Street Gregory, TX 78359 | 38,400 cubic yards | See Figure 2 and Aerials in App. A | 74,160 cubic yards |
| | Edcot Gin 5019 CR 51 Odem, TX 78370 | 31,920 cubic yards | See Figure 2 and Aerials in App. A | 31,920 cubic yards |
| | Midway Gin 5455 CR 3567 Taft, TX 78390 | 11,400 cubic yards | See Figure 2 and Aerials in App. A | 11,400 cubic yards |

The total volume of the effluent water and sludge (river mud) applied during the reporting period is based on the estimated application rate. The quantities of hay, mulch, cotton gin residuals and crushed limestone placed on Bed 1 are based on estimated amounts recorded in the daily field records.

2.2 Bed 2

Bed 2 is approximately 1,203 acres in surface area, contains bauxite residue, and is used for water management. Bed 2 is the destination point for water (i.e., leachate, effluent water, stormwater, and surface water) pumped from Bed 1. In the past, impounded water in Beds 3 and 4 was pumped to Bed 2 to lower the water levels in those two beds to mitigate foam generation. With less than 10 inches of rainfall received during the reporting period, there has not been a need to pump surface water from Beds 3 or 4 into Bed 2, where evaporation (from Bed 2) is significant, averaging >7.65 million gallons/day, and is higher during the summer months. Because wind and wave action can generate foam that accumulates along the downwind shorelines at the base of the interior levees, an anti-foaming agent (Unfoamer®) mixed with water (from an on-site well) is sprayed along the shorelines on an-as needed basis. Table 2 lists the type, amount, source, and location for the materials placed within Bed 2 during the reporting period and since May 2018.

TABLE 2: PLACEMENT OF MATERIALS - BED 2

| Material Description | Source of Material | Quantity During Reporting Period | Placement Location | Approx. Total Quantity Since May 2018 |
|--------------------------------|----------------------|----------------------------------|---|---------------------------------------|
| Effluent Water | City of Aransas Pass | 18,500,000 gallons | Discharged in SW Corner | 367,225,000 gallons |
| Sludge (River Mud) | San Patricio MWD | 54,205 pounds | Discharged in SW Corner | 178,387 pounds |
| Leachate | Bed 1 | 60,760,800 gallons | Discharged in SW Corner | 235,833,200 gallons |
| Storm Water | Bed 1 | 54,756,000 gallons | Discharged in SW Corner | 1,021,015,000 gallons |
| Surface Water | Beds 3 & 4 | 0 gallons | N/A | 853,170,000 gallons |
| Groundwater (Foam Elimination) | On-site Well | 333,000 gallons | Unfoamer and groundwater mixture sprayed on Foam accumulated along Bed 2 shorelines | 1,586,000 gallons |
| Unfoamer (Anti-foaming Agent) | Off-site Supplier | 13.88 gallons | | 77.76 gallons |

Quantities are estimated based on the daily flow rates for effluent water, leachate, and storm water. The total volume of sludge (river mud) placed during the reporting period is based on the estimated application rate. The quantities of groundwater and Unfoamer used during the reporting period were estimated amounts recorded in the daily field records.

2.3 Bed 3

Bed 3 is approximately 415 acres in surface area and contains bauxite residue and impounded water. With the lower water level within Bed 3 to control foam generation Unfoamer was not applied during the reporting period. However, to control dusting from within Bed 3, exposed areas were scarified and covered with hay to the extent possible. Table 3 lists the type, estimated amount, source and location for the materials placed within Bed 3 during the reporting period and since May 2018.

TABLE 3: PLACEMENT OF MATERIALS - BED 3

| Material Description | Source of Material | Quantity During Reporting Period | Placement Location | Approx. Total Quantity Since May 2018 |
|--------------------------------|--------------------|----------------------------------|--------------------------------------|---------------------------------------|
| Surface Water | Bed 4 | 0 gallons | N/A | 236,880,000 gallons |
| Hay | Copano Ranch | 42 bales | Exposed residue area along west side | 942 bales |
| Groundwater (Foam Elimination) | On-site Well | 0 gallons | N/A | 195,000 gallons |
| Unfoamer (Anti-foaming Agent) | Off-site Supplier | 0 gallons | | 8.13 gallons |

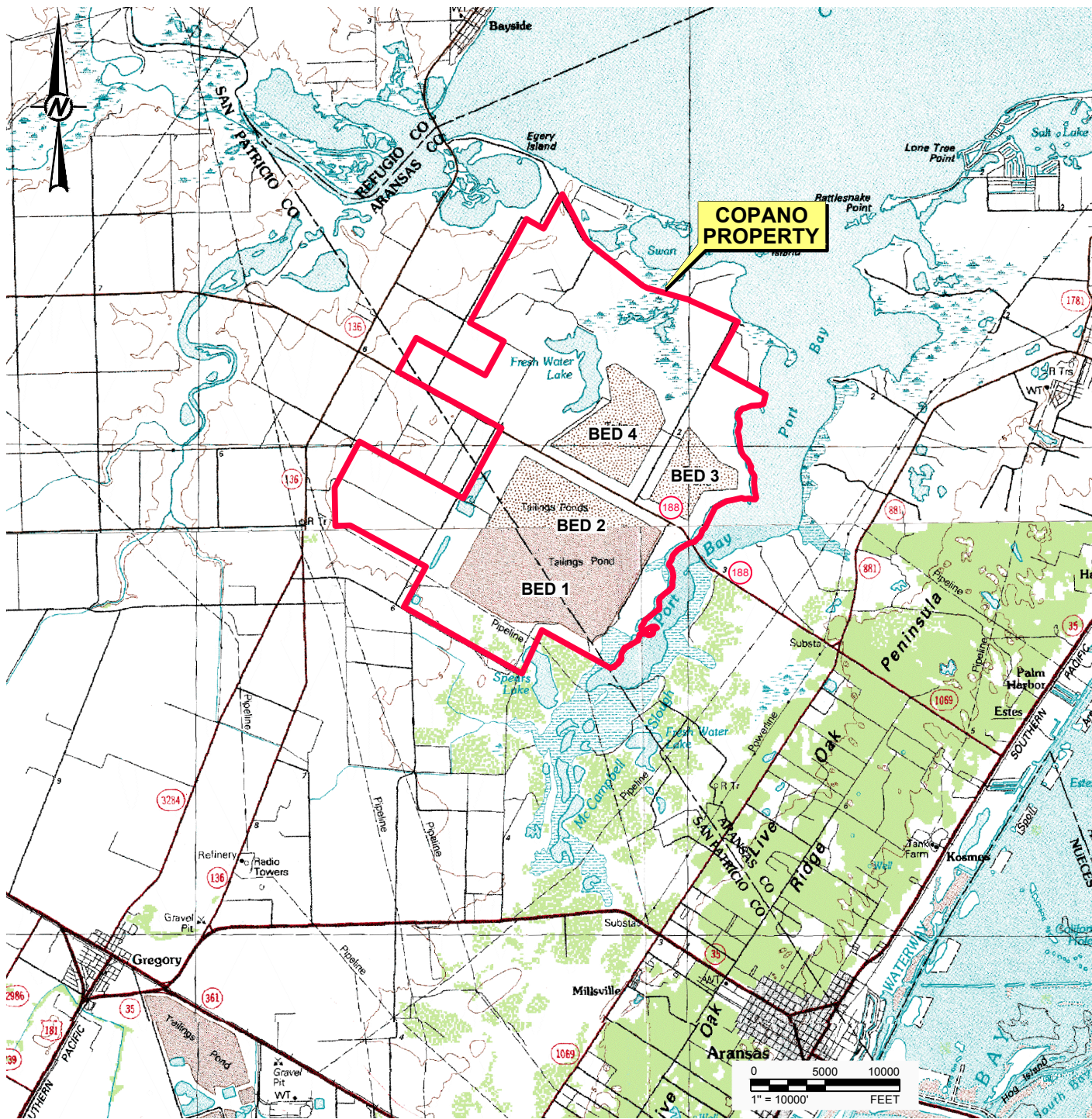
The quantity of hay applied during the reporting period was based on amounts recorded in the daily field records.

3.0 PLANNED ACTIVITIES

Maintaining adequate water volumes and placement of materials into the beds will continue primarily for dust and foam control. Specifically, within Bed 1, placement and incorporation of materials into the upper surface layer will continue to improve conditions to support vegetative growth and promote clean stormwater runoff. CE currently has existing stock or orders for hay and mulch and will continue to receive effluent water and sludge (river mud) from the City of Aransas Pass and San Patricio Municipal Water District, respectively, for the foreseeable future. Cotton gin residual materials will be applied on a

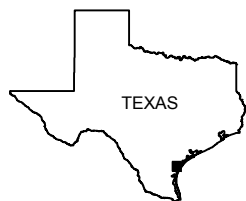
seasonal basis. On November 19, 2020, CE submitted a request for approval from the TCEQ for the application of soil amendments (gypsum/calcium sulfate and fertilizer) within the upper surface of Bed 1. It is expected that beginning in 1Q2021, portions of Bed 1 will become suitable for gypsum/calcium sulfate application. Once approval from the TCEQ has been received, CE will proceed with the procurement, delivery, spreading and disking of those materials.

Figures



REFERENCE(S)

BASE MAP TAKEN FROM WWW.TNRIS.GOV, BEEVILLE, TX 30X60 MIN. USGS QUADRANGLE DATED 1985 AND CORPUS CHRISTI, TX 30X60 MIN. USGS QUADRANGLE DATED 1984.



QUADRANGLE LOCATIONS

CLIENT

CE RANCH LLC

PROJECT

COPANO PROPERTY

TITLE

LOCATION MAP

CONSULTANT



YYYY-MM-DD 2020-12-09

DESIGNED AJD

PREPARED AJD

REVIEWED SEG

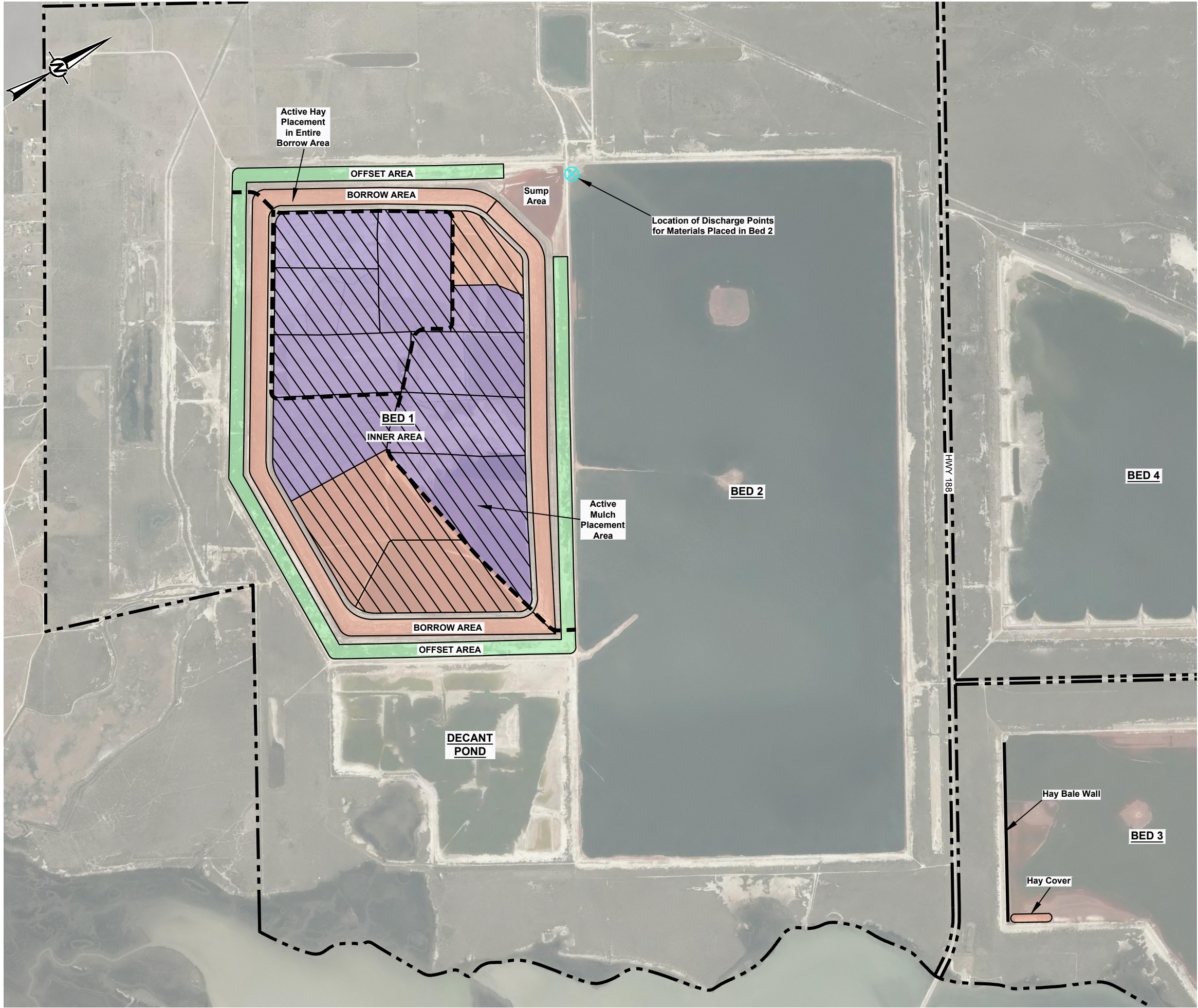
APPROVED SEG

PROJECT NO.
18111309

REV.
0

FIGURE
1

Path:\Users\andrea\p\Projects - Victoria_2018\18111309 - ALCOA CE Ranch\2020-12-10 Decimber\1 - File Name: FIG 2 - Site Map.dwg | Last Edited By: andrea | Date: 2020-12-10 Time: 1:38:07 PM | Printed By: andrea | Date: 2020-12-10 Time: 1:38:14 PM



LEGEND

- APPROXIMATE PROPERTY/RIGHT OF WAY BOUNDARY
- GRASS/VEGETATION COVER
- HAY COVER
- MULCH APPLIED
- COTTON GIN RESIDUAL APPLIED
- ALL WEATHER ACCESS ROADWAY

REFERENCE(S)

MAP BASED ON AERIAL PHOTOMETRIC MAP BY LANMON AERIAL PHOTOGRAPHY, FLOWN OCTOBER 23, 2019.

07501500
1" = 1500'FEET

CLIENT
CE RANCH LLC

PROJECT
COPANO PROPERTY

TITLE
SITE MAP

| | | |
|------------|------------|------------|
| CONSULTANT | YYYY-MM-DD | 2020-12-10 |
| | DESIGNED | AJD |
| | PREPARED | AJD |
| | REVIEWED | SEG |
| | APPROVED | MKW |

GOLDER

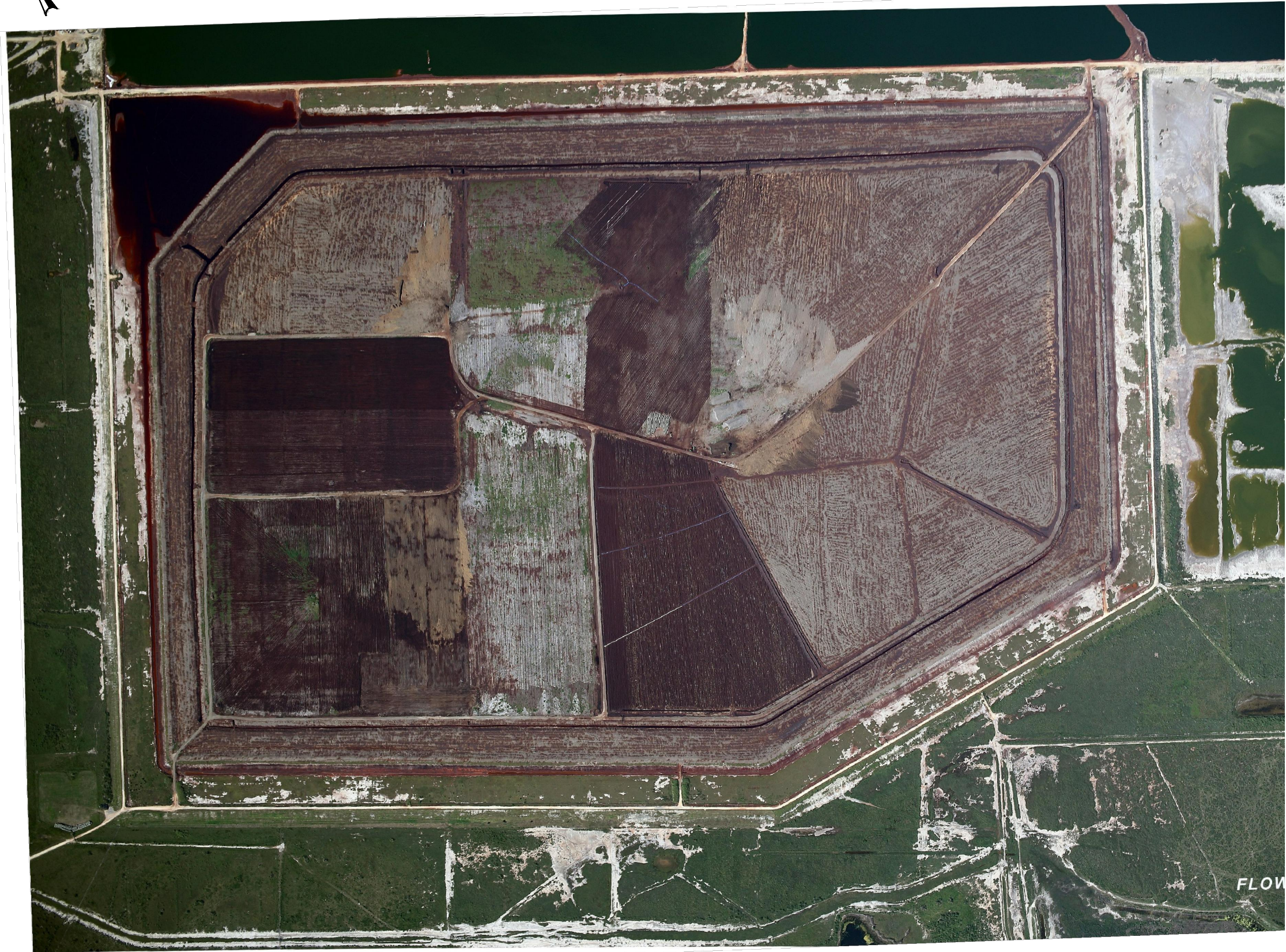
| | | |
|-------------------------|-----------|-------------|
| PROJECT NO. 18111309 | REV. 0 | FIGURE 2 |
|-------------------------|-----------|-------------|

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

APPENDIX A

Aerial Photos of Bed 1

Path: \\nasarkans@golder.com\Projects - Victoria_2018\18111309 - ALCOA CE Ranch\2020-12-09\Aerial Photo.dwg | File Name: FIG 1A-4A - Aerial Site Map.dwg | Last Edited By: pmcbride | Date: 2020-12-09 | Time: 4:40:08 PM | Printed By: pmcbride | Date: 2020-12-09 | Time: 4:59:47 PM



APPROXIMATE SCALE
0 400 800
1" = 800' FEET

CLIENT
CE RANCH LLC

PROJECT
COPANO PROPERTY

TITLE
BED 1 AERIAL PHOTO (FLOWN 7/31/2020)

| | | |
|------------|------------|------------|
| CONSULTANT | YYYY-MM-DD | 2020-12-09 |
| | DESIGNED | AJD |
| | PREPARED | PJM |
| | REVIEWED | SEG |
| | APPROVED | SEG |



PROJECT NO.
18111309

REV.
0

FIGURE
1A

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

Path: \\nasarkans@golder.com\Projects - Victoria_2018\18111309 - ALCOA CE Ranch\2020-12-09\Aerial Site Maps.dwg | File Name: FIG 1A-4A - Aerial Site Maps.dwg | Last Edited By: pmcbride Date: 2020-12-09 Time: 4:40:08 PM | Printed By: PMCbride Date: 2020-12-09 Time: 4:54:53 PM



APPROXIMATE SCALE
0 400 800
1" = 800' FEET

CLIENT
CE RANCH LLC

PROJECT
COPANO PROPERTY

TITLE
BED 1 AERIAL PHOTO (FLOWN 9/29/2020)

| | | |
|------------|------------|------------|
| CONSULTANT | YYYY-MM-DD | 2020-12-09 |
| | DESIGNED | AJD |
| | PREPARED | PJM |
| | REVIEWED | SEG |
| | APPROVED | SEG |



PROJECT NO.
18111309

REV.
0

FIGURE
2A

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

Path: \\nasarkans-golder\gis\desk\Projects - Victoria_2018\18111309 - ALCOA CE Ranch\2020-12-09\Aerial Site Maps.dwg | File Name: FIG 1A-4A - Aerial Site Maps.dwg | Last Edited By: pmcbride | Date: 2020-12-09 | Time: 4:48:08 PM | Printed By: PMCbride | Date: 2020-12-09 | Time: 4:48:08 PM



APPROXIMATE SCALE
0 400 800
1" = 800' FEET

CLIENT
CE RANCH LLC

PROJECT
COPANO PROPERTY

TITLE
BED 1 AERIAL PHOTO (FLOWN 11/15/2020)

| | | |
|------------|------------|------------|
| CONSULTANT | YYYY-MM-DD | 2020-12-09 |
| | DESIGNED | AJD |
| | PREPARED | PJM |
| | REVIEWED | SEG |
| | APPROVED | SEG |



PROJECT NO.
18111309

REV.
0

FIGURE
3A

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



golder.com