

January 9, 2025

MC-124
Ms. Megan Henson, Manager
MSW Permits Section
Office of Waste, Waste Permits Division
P. O. Box 13087
Austin, TX 78711-3087

**Re: Permit Modification Request – Attachment 14 of the SDP
Response to December 17, 2024, Permit Modification NOD
Angelina County Waste Management Center
Municipal Solid Waste – Permit No. 2105A
Tracking No 30101044; RN101947323/CN600833511**

Dear Ms. Henson:

The following information is provided on behalf of Angelina County Waste Management Center (ACWMC) in response to the above-referenced correspondence. For your convenience, each comment requiring a response from the TCEQ correspondence is presented below followed by the prepared response. To provide continuity and ease of reference, the attached permit modification application is intended to fully replace the previously submitted modification.

TCEQ Comment 1:

The table of probes and vents has been updated to reflect the has been updated to reflect current conditions and extends to two pages; both pages are numbered GMP-7. Please modify the number on the second page to be unique (such as GMP-7a, GMP-7.1 or another format).

Response 1:

As requested, the pages have been updated.

TCEQ Comment 2:

Modify line patterns on Figure GMP-A-4 to distinguish the permit boundary from the property boundary.

Response 2:

Figure GMP-A-4 was inaccurately label. Included is the ACWMC Permit Boundary and pipe line right of ways.

TCEQ Comment 3:

Add Passive Vent Construction Details sheets for vents PW-2W, 3W, and 4W to Appendix E of the LGMP.



Texas Commission on Environmental Quality

Waste Permits Division Correspondence

Cover Sheet

Date: January 9, 2025

Facility Name: Angelina County Waste Management Center

Permit or Registration No.: 101947323

Nature of Correspondence:

☐ Initial/New

☒ Response/Revision to TCEQ Tracking No.:
30101044 (from subject line of TCEQ letter
regarding initial submission)

Affix this cover sheet to the front of your submission to the Waste Permits Division. Check appropriate box for type of correspondence. Contact WPD at (512) 239-2335 if you have questions regarding this form.

Table 1 - Municipal Solid Waste Correspondence

Applications	Reports and Notifications
<input type="checkbox"/> New Notice of Intent	<input type="checkbox"/> Alternative Daily Cover Report
<input type="checkbox"/> Notice of Intent Revision	<input type="checkbox"/> Closure Report
<input type="checkbox"/> New Permit (including Subchapter T)	<input type="checkbox"/> Compost Report
<input type="checkbox"/> New Registration (including Subchapter T)	<input type="checkbox"/> Groundwater Alternate Source Demonstration
<input type="checkbox"/> Major Amendment	<input type="checkbox"/> Groundwater Corrective Action
<input type="checkbox"/> Minor Amendment	<input type="checkbox"/> Groundwater Monitoring Report
<input type="checkbox"/> Limited Scope Major Amendment	<input type="checkbox"/> Groundwater Background Evaluation
<input checked="" type="checkbox"/> Notice Modification	<input type="checkbox"/> Landfill Gas Corrective Action
<input type="checkbox"/> Non-Notice Modification	<input type="checkbox"/> Landfill Gas Monitoring
<input type="checkbox"/> Transfer/Name Change Modification	<input type="checkbox"/> Liner Evaluation Report
<input type="checkbox"/> Temporary Authorization	<input type="checkbox"/> Soil Boring Plan
<input type="checkbox"/> Voluntary Revocation	<input type="checkbox"/> Special Waste Request
<input type="checkbox"/> Subchapter T Disturbance Non-Enclosed Structure	<input type="checkbox"/> Other:
<input type="checkbox"/> Other:	

Table 2 - Industrial & Hazardous Waste Correspondence

Applications	Reports and Responses
<input type="checkbox"/> New	<input type="checkbox"/> Annual/Biennial Site Activity Report
<input type="checkbox"/> Renewal	<input type="checkbox"/> CPT Plan/Result
<input type="checkbox"/> Post-Closure Order	<input type="checkbox"/> Closure Certification/Report
<input type="checkbox"/> Major Amendment	<input type="checkbox"/> Construction Certification/Report
<input type="checkbox"/> Minor Amendment	<input type="checkbox"/> CPT Plan/Result
<input type="checkbox"/> CCR Registration	<input type="checkbox"/> Extension Request
<input type="checkbox"/> CCR Registration Major Amendment	<input type="checkbox"/> Groundwater Monitoring Report
<input type="checkbox"/> CCR Registration Minor Amendment	<input type="checkbox"/> Interim Status Change
<input type="checkbox"/> Class 3 Modification	<input type="checkbox"/> Interim Status Closure Plan
<input type="checkbox"/> Class 2 Modification	<input type="checkbox"/> Soil Core Monitoring Report
<input type="checkbox"/> Class 1 ED Modification	<input type="checkbox"/> Treatability Study
<input type="checkbox"/> Class 1 Modification	<input type="checkbox"/> Trial Burn Plan/Result
<input type="checkbox"/> Endorsement	<input type="checkbox"/> Unsaturated Zone Monitoring Report
<input type="checkbox"/> Temporary Authorization	<input type="checkbox"/> Waste Minimization Report
<input type="checkbox"/> Voluntary Revocation	<input type="checkbox"/> Other:
<input type="checkbox"/> 335.6 Notification	
<input type="checkbox"/> Other:	

Response 3:

The passive vent details sheets have been updated with the correct passive vent ID.

TCEQ Comment 4:

Replace the gas collection and control system (GCCS) figures and drawings in Appendix G of the LGMP with figures and drawings that show the actual as-built details of the layout and all the components and connections that make up the GCCS.

Response 4:

As requested, the GCCS figures have been included in Appendix G and are accurate.

Should you have any questions regarding this correspondence, please feel free to contact me at (936) 568-9451 or via email at jdimezzo@hydrex-inc.com.

Sincerely,
Hydrex Environmental
TBPG Firm No. 50027



Jordan L. DiMezzo, G.I.T.
Geologist



John Q. Hargrove, P.E.
Senior Project Engineer

Attachments:

Attachment 1 – TCEQ 20650
Attachment 2 – ~~Strikeout~~/Underline Pages Showing Changes
Attachment 3 – Replacement New Pages
Attachment 4 – Fee Payment Receipt
Attachment 5 – Land Ownership Map
Attachment 6 – Land Ownership List

Distribution:

(Original + 1)	MC-124 Ms. Megan Henson Manager MSW Permits Section Office of Waste, Waste Permits Division Texas Commission on Environmental Quality P. O. Box 13087 Austin, Texas 78711-3087
(1)	Ms. Marily Gates Waste Section Manager TCEQ Regional Office 10 3871 Eastex Freeway Beaumont, Texas 77703-1892
(1)	Mr. Arten Avakian, P.G. Municipal Solid Waste Permits Texas Commission on Environmental Quality E-Copy
(1)	Honorable Keith Wright Office of the County Judge Angelina County Courthouse P.O. Box 908 Lufkin, Texas 75902 Regional Environmental Compliance Manager GFL Environmental E-copy
(1)	Mr. Chuck Brooks Landfill Manager Angelina County Waste Management Center P.O. Box 1862 Lufkin, Texas 75902-1862 E-copy
(E-copy)	Hydrex Environmental

ATTACHMENT 1 - TCEQ 20650



Texas Commission on Environmental Quality

Application Form for Municipal Solid Waste Permit or Registration Modification or Temporary Authorization

Application Tracking Information

Facility Name: Angelina County Waste Management Cetner

Permittee or Registrant Name: Angelina County

MSW Authorization Number: 2105A

Initial Submission Date: September 9, 2024

Revision Date: January 9, 2025

Instructions for completing this form are provided in [form TCEQ-20650-instr](#)¹. If you have questions, contact the Municipal Solid Waste Permits Section by email to [REDACTED] or by phone at 512-239-2335.

Application Data

1. Submission Type

☐ Initial Submission ☒ Notice of Deficiency (NOD) Response

2. Authorization Type

☒ Permit ☐ Registration

3. Application Type

☒ Modification with Public Notice ☐ Modification without Public Notice
☐ Temporary Authorization (TA) ☐ Modification for Name Change or Transfer

4. Application Fee

Amount

The application fee for a modification or temporary authorization is \$150.

Payment Method

☐ Check
☒ Online through ePay portal www3.tceq.texas.gov/epay/

If paid online, enter ePay Trace Number: [REDACTED]

¹ www.tceq.texas.gov/downloads/permitting/waste-permits/msw/forms/20650-instr.pdf

5. Electronic Versions of Application

For modifications that require notice (other than those for arid exempt landfills), TCEQ will publish electronic versions of the application online. Applicants must provide a clean copy of the administratively complete application and technically complete application. TCEQ will also publish electronic versions of NOD responses online.

6. Party Responsible for Mailing Notice

For modifications that require notice, indicate who will be responsible for mailing notice:

☐ Applicant ☐ Agent in Service ☒ Consultant

Contact Name: Jordan DiMezzo

Title: Geologist

Email Address: [REDACTED]

7. Confidential Documents

Does the application contain confidential documents?

☐ Yes ☒ No

If "Yes", reference the confidential documents in the application, but submit the confidential documents as an attachment in a separate binder marked "CONFIDENTIAL."

8. Facility General Information

Facility Name: Angelina County Waste Management Center

Contact Name: Chuck Brooks Title: Landfill Manager

MSW Authorization Number (if existing): 2105A

Regulated Entity Reference Number: **RN** 101947323

Physical or Street Address: 7521 FM 58

City: Lufkin County: Texas State: TX Zip Code: 75901

Phone Number: _____

Latitude (Degrees, Minutes, Seconds): 31°14'47.74"

Longitude (Degrees, Minutes, Seconds): 94°41'58.88"W

9. Facility Types

☒ Type I ☐ Type IV ☐ Type V
☐ Type IAE ☐ Type IVAE ☐ Type VI

10. Description of the Revisions to the Facility

Provide a brief description of revisions to permit or registration conditions and supporting documents referred to by the permit or registration, and a reference to the specific provisions under which the modification or temporary authorization application is being made. Also, provide an explanation of why the modification or temporary authorization is needed:

Notice permt modification for the inclusion of the Remediation Plan GMP-1 and GMP-4 into the Landfill Gas Management Plan.

11. Facility Contact Information

Site Operator (Permittee or Registrant)

Name: Angelina County

Customer Reference Number: **CN** 600833511

Contact Name: Chuck Brooks Title: Landfill Manager

Mailing Address: PO BOX 1862

City: Lufkin County: Angelina State: Tx Zip Code: 75902

Phone Number: _____

Email Address: [REDACTED]

Texas Secretary of State (SOS) Filing Number: _____

Operator (if different from *Site Operator*)

Name: _____

Customer Reference Number: **CN** _____

Contact Name: _____ Title: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____

Email Address: _____

Texas Secretary of State (SOS) Filing Number: _____

Consultant (if applicable)Firm Name: Hydrex EnvironmentalConsultant Name: John Q. HargroveTexas Board of Professional Engineers Firm Registration Number: F-13588Contact Name: John Q. Hargrove Title: Senior EngineerMailing Address: 312 Old Tyler RoadCity: Nacogdoches County: Nacogdoches State: TX Zip Code: 75961Phone Number: 936-568-9451Email Address: [REDACTED]**Agent in Service (required for out-of-state applicants)**

Name: _____

Mailing Address: _____

City: _____ County: _____ State: TX Zip Code: _____

Phone Number: _____

Email Address: _____

12. Ownership Status of the Facility

Is this a modification that changes the legal description, the property owner, or the Site Operator (Permittee or Registrant)?

☐ Yes ☒ No

If the answer is "No", skip this section.

Does the Site Operator (Permittee or Registrant) own all the facility units and all the facility property?

☐ Yes ☐ No

If "No", provide the following information for other owners.

Owner Name: _____

Mailing Address: _____

City: _____ County: _____ State: TX Zip Code: _____

Phone Number: _____

Email Address: _____

Signature Page

Site Operator or Authorized Signatory

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Chuck Brooks Title: Landfill Manager

Email Address: [REDACTED]

Signature: *Chuck Brooks* Date: 1-9-25

Operator or Principal Executive Officer Designation of Authorized Signatory

To be completed by the operator if the application is signed by an authorized representative for the operator.

I hereby designate _____ as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Operator or Principal Executive Officer Name: _____

Email Address: _____

Signature: _____ Date: _____

Notary

SUBSCRIBED AND SWORN to before me by the said *Chuck Brooks*

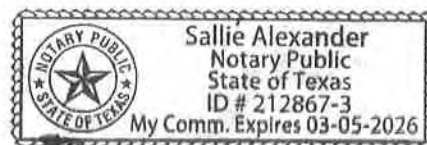
On this 9 day of January, 2025

My commission expires on the 5 day of March, 2025

Sallie Alexander

Notary Public in and for

Angelina County, Texas



Note: Application Must Bear Signature and Seal of Notary Public

Attachments for Permit or Registration Modification with Public Notice

Refer to instruction document **200650-instr** for professional engineer seal requirements.

Attachments Table 1. Required attachments.

Required Attachments	Attachment Number
Land Ownership Map	6
Landowners List	5
Marked (Redline/Strikeout) Pages	2
Unmarked Revised Pages	3

Attachments Table 2. Additional attachments as applicable.

Additional Attachments as Applicable (select all that apply and add others as needed)	Attachment Number
<input type="checkbox"/> TCEQ Core Data Form(s)	1
<input type="checkbox"/> Signatory Authority Delegation	
<input checked="" type="checkbox"/> Fee Payment Receipt	4
<input type="checkbox"/> Confidential Documents	

Attachments for Permit or Registration Modification without Public Notice, or Temporary Authorization

Refer to instruction document **200650-instr** for professional engineer seal requirements.

Attachments Table 3. Required attachments for modifications.

Required Attachments for Modification	Attachment Number
Marked (Redline/Strikeout) Pages	
Unmarked Revised Pages	

Attachments Table 4. Additional attachments for modifications and temporary authorizations, as applicable.

Additional Attachments as Applicable (select all that apply and add others as needed)	Attachment Number
<input type="checkbox"/> TCEQ Core Data Form(s)	
<input type="checkbox"/> Signatory Authority Delegation	
<input type="checkbox"/> Fee Payment Receipt	
<input type="checkbox"/> Confidential Documents	

Attachments for Permit or Registration Name Change or Transfer Modification

Refer to instruction document **200650-instr** for professional engineer seal requirements.

Attachments Table 5. Required attachments.

Required Attachments	Attachment Number
TCEQ Core Data Form(s)	
Property Legal Description	
Property Metes and Bounds Description	
Metes and Bounds Drawings	
On-Site Easements Drawing	
Land Ownership Map	
Land Ownership List	
Property Owner Affidavit	
Verification of Legal Status	
Evidence of Competency	

Attachments Table 6. Additional attachments as applicable.

Additional Attachments as Applicable (select all that apply and add others as needed)	Attachment Number
<input type="checkbox"/> Signatory Authority Delegation	
<input type="checkbox"/> Fee Payment Receipt	
<input type="checkbox"/> Confidential Documents	
<input type="checkbox"/> Final Plat Record of Property	
<input type="checkbox"/> Assumed Name Certificate	

ATTACHMENT 2 – Strikeout/Underline Pages Showing Changes

**ANGELINA COUNTY WASTE MANAGEMENT CENTER
ANGELINA COUNTY, TEXAS
PERMIT NO. MSW 2105A
LANDFILL GAS MANAGEMENT PLAN**

**PART III-SITE DEVELOPMENT PLAN
ATTACHMENT 14-LANDFILL GAS MANAGEMENT
PLAN**

Prepared for

**Mr. Chuck Brooks
MSW Manager
Angelina County Waste Management Center
7521 FM 58
Lufkin, TX 75901**

May 2014

Revised - September 6, 2017

Revised – January 9, 2025

**Hydrex Environmental, Inc.
~~1120 NW Stallings Drive~~
~~Nacogdoches, Texas 75964-3428~~
312 Old Tyler Road
Nacogdoches, Texas 75961**

ANGELINA COUNTY WASTE MANAGEMENT CENTER
ANGELINA COUNTY, TEXAS
PERMIT NO. MSW 2015A

LANDFILL GAS MANAGEMENT PLAN



John Q. Hargrove, P.E.
Project Engineer

John Q. Hargrove 9/6/2017

Leonell N. Scarborough, P.G.
Senior Hydrogeologist

Leonell N. Scarborough



For January 9, 2025
Revisions Only

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Figure GMP-A-2	Topographic Map
Figure GMP-A-3	Site Buildings & Utilities
Figure GMP-A-4	Site Map Gas Monitoring System
Figure GMP-A-5	GCCS Expansion Layout

APPENDIX B - GAS MONITORING PROBE CONSTRUCTION DETAILS

Exhibit GMP-B-1	Schematic of Gas Monitoring Probe
Exhibit GMP-B-2	Gas Monitor Probe Data Sheet

APPENDIX C - REPORTING FORMAT

Exhibit GMP-C-1	Tabular Reporting Form
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APPENDIX D - MANUFACTURERS' SPECIFICATIONS FOR INSTRUMENTS

APPENDIX E - INSTALLED GAS MONITORING PROBE (GMP) LOGS

APPENDIX F – REMEDIATION PLANS

<u>Attachment 1</u>	<u>Trench Vents Drawings Installed in Association with Remediation of MW-13B</u>
<u>Attachment 2</u>	<u>Remediation Plan GMP-1 and GMP-4</u>

APPENDIX G – GCCS FIGURES AND DRAWINGS

<u>Attachment 1</u>	<u>December 2011 GCCS Installation Construction Drawings</u>
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Existing and Proposed Gas Monitoring Probes (GMPs)

Soil Vapor Gas Probes	Existing Probes	New Probes to be added around Tract 2	Approximate grid Coordinate Northing, Easting
S-1 & S-2 (replaced by GMP-1)	GMP-1	-	0+70, 0+90
S-3 & S-4 (replaced by GMP-2)	GMP-2	-	0+70, 9+00
E-1 & E-2 (replaced by GMP-3)	GMP-3	-	8+00, 12+50
W-1 & W-2 (replaced by GMP-4)	GMP-4	-	8+00, 0+20
-	GMP-5	-	3+00, 12+00
-	GMP-6	-	13+3-0, 13+00
-	GMP-7	-	18+20, 11+50
-	GMP-8	-	26+00, 6+50
-	GMP-9	-	18+00, 3+00
-	-	GMP-10	23+50, 15+00
-	-	GMP-11	20+00, 24+00
-	-	GMP-12	15+00, 32+00
-	-	GMP-13	10+00, 23+00
-	-	GMP-14	10+00, 17+00

Proposed Gas Monitoring Probes (GMPs)

Probe #	Surface Elevation	Elevation of Maximum Depth of Waste within 1,000 feet	Approximate Probe Base Elevation	Approximate Depth of Probe
GMP-10	274	249	249	25
GMP-11	268	249	249	19
GMP-12	260	243	243	17
GMP-13	272	255	255	17
GMP-14	272	253	253	17

Note: Measurements & elevations are in feet w/ elevations referring to Mean Sea Level Elevation of maximum depth of waste reported in Site Development Plan. Grid coordinates, depths & elevations provided by Everett Griffith, Jr. and Associates, Inc. Site grid 0, 0 (N 00+00.00, E 00+00.00) is located on concrete slab of office (shown on Figure GMP-A-3).

Existing Gas Monitoring Probes (GMPs) and Passive Vents (PVs)									
Existing Probes	Approximate Latitude	Approximate Longitude	Surface Elevation	Top-of-casing Elevation	Total Depth (ft)	Depth to Filter Pack	Elevation of Filter Pack	Depth to top of Screen	Elevation of top Screen
GMP-1	31.246873	-94.698476	308	311	30	4	307	5	306
GMP-2	31.247282	-94.695655	308	311	34	4	307	6	305
GMP-3	31-2.50458	-94.695223	293	296	16	4	292	6	290
GMP-4	31.249194	-94.699146	303	306	43	4	302	6	300
GMP-5	31.248113	-94.69493	296.1	300.1	35	3	297.1	4	296.1
GMP-6	31.25118	-94.695287	296.1	299.4	49.5	3	296.4	4	295.4
GMP-7	31.25255	-94.695287	287.3	290.6	39.5	3	287.6	4	286.6
GMP-8	31.254536	-94.697967	274.1	277.4	25.5	3	274.4	5	272.4
GMP-9	31.25214	-94.698651	277	280.3	21.5	3	277.3	6	274.3
GMP-10	31.253968	-94.694791	275	279.04	32	5	274.04	5	274.04
GMP-11	31.253527	-94.671754	267	270.83	24	5	265.83	5	265.83
GMP-12	31.252457	-94.689190	263	266.71	20	5	261.71	5	261.71
GMP-13	31.250129	-94.693855	275	278.98	31	5	273.98	5	273.98
GMP-14	31.250899	-94.691142	285	288.76	42	5	283.76	5	283.76
PV-1	31.247382	-94.69584	308	316	20	4	312	5	311
PV-2	31.247405	-94.695673	308	316	20	4	312	5	311
PV-3	31.247423	-94.695522	308	316	20	4	312	5	311
PV-4	31.247608	-94.695127	305	313	34	12	293	14	291
PV-5	31.247704	-94.695115	305	313	35	13	292	15	290
PV-6	31.247802	-94.695103	305	313	35	13	292	15	290
PV-7	31.247896	-94.695094	305	313	35	13	292	15	290
PV-8	31.247994	-94.695083	304	312	35	13	291	15	289

Existing Gas Monitoring Probes (GMPs) and Passive Vents (PVs)									
Existing Probes	Approximate Latitude	Approximate Longitude	Surface Elevation	Top-of-casing Elevation	Total Depth (ft)	Depth to Filter Pack	Elevation of Filter Pack	Depth to top of Screen	Elevation of top Screen
PV-9	31.248088	-94.695071	303	311	35	13	290	15	288
PV-10	31.248191	-94.695034	302	310	35	13	289	15	287
PV-11	31.248277	-94.695041	301	309	35	13	288	15	286
PV-12	31.248370	-94.695025	301	309	35	13	288	15	286
PV-13	31.248496	-94.695014	300	308	35	13	287	15	285
PV-1W	31.246890	-94.698470	308	314	25	5	303	5	303
PV-2W	31.249083	-94.699083	303	309	25	5	298	5	298
PV-3W	31.249149	-94.699101	303	309	25	5	298	5	298
PV-4W	31.249217	-94.699114	303	309	25	5	298	5	298

Note: Measurements and Elevations are in feet with elevations referring to Mean Sea Level Elevation.

included as part of a remediation plan, the passive landfill gas wells described in Section 6.2.1 will be converted to active landfill gas wells. A piping network, condensate management system, and a blower/flare facility or an energy recovery facility may be used to dispose of collected landfill gas. A voluntary, active landfill gas system became operational in December 2011 for carbon credit offset purposes. The as-built figures for the landfill gas system are attached in Appendix G as Attachment 1.

In 2017, the active landfill gas extraction system was expanded to mitigate observed landfill gas migration beyond the permitted waste footprint. The expansion consisted of six extraction wells with associated header and lateral piping. The expansion connected to the northern limits of the existing system on the east and west sides of Tract 1. The layout of the system is illustrated on the attached Figure GMP-A-5.

Additional collection of landfill gas may be accomplished through connection of the active landfill gas extraction system to the leachate collection and recovery sidewall riser pipes.

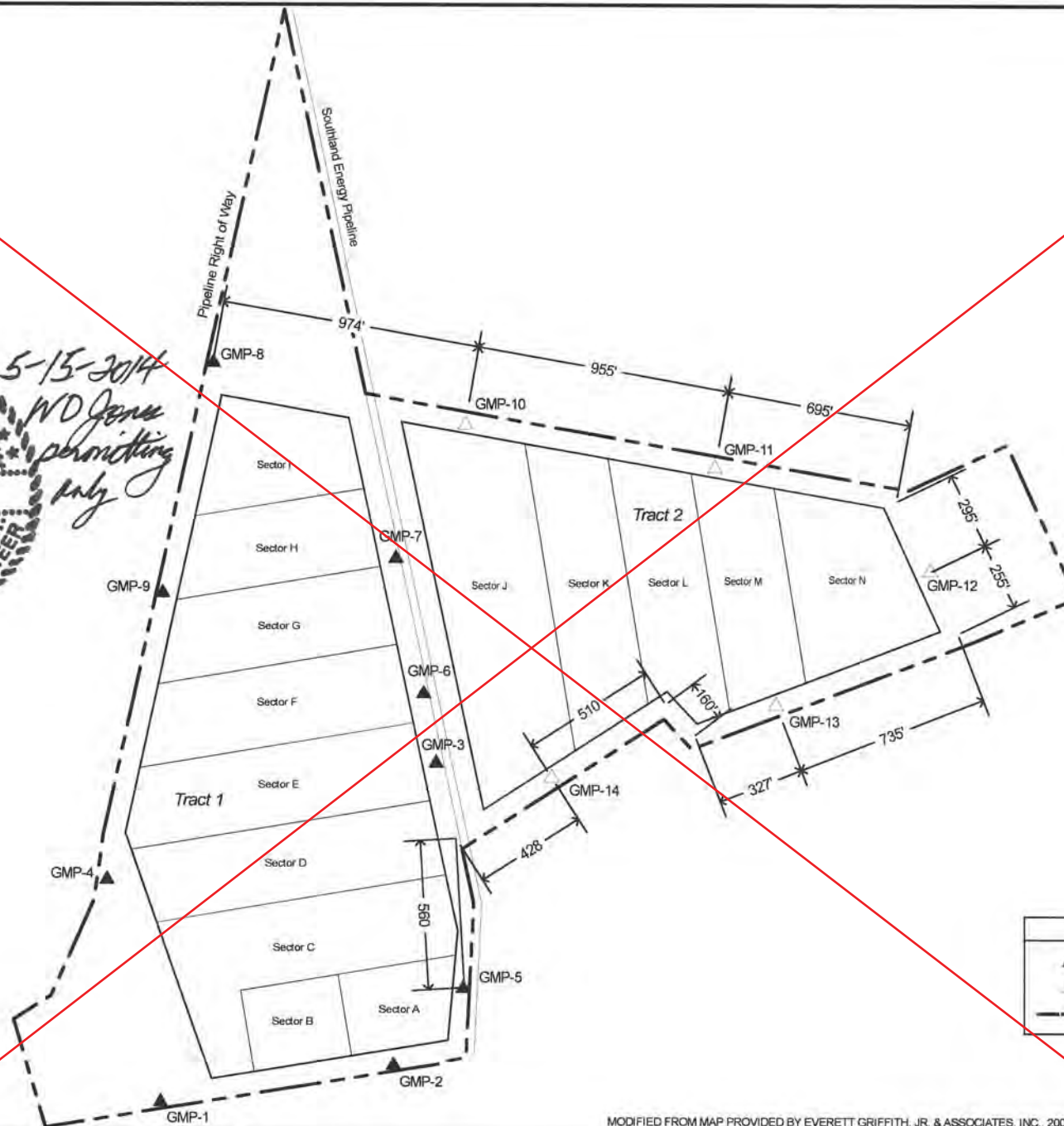
6.2.5 Remediation Plan GMP-1 and GMP-4

Exceedances of the regulatory limit for methane have been noted in gas monitoring probes GMP-1 and GMP-4. The estimated depth of landfill gas migration was determined during assessment efforts conducted January 11, 2024. Results from this assessment indicated that methane concentrations coincide with coarser-grained silty sands noted in the vicinity of GMP-1 and GMP-4.

It was determined that methane migration in the vicinity of GMP-1 and GMP-4 likely occurs along preferential pathways of coarse grained material at depths no greater than 20-30 feet (above historical groundwater averages). To effectively remediate previously noted exceedances in gas monitoring probes GMP-1 and GMP-4 four passive vents, placed outside of waste, were installed on July 11, 2024. The location of the installed passive vents are included in Figure 2 of the Remediation Plan GMP-1 and GMP-4 included in Appendix F as Attachment 1 of the Landfill Gas Management Plan.



5-15-2014
WD Jones
permitting
only



LEGEND	
	Existing Gas Monitoring Probe
	Future Gas Monitoring Probe
	Permit Boundary



MODIFIED FROM MAP PROVIDED BY EVERETT GRIFFITH, JR. & ASSOCIATES, INC., 2007

TBPG Firm No. 50027

Hydrex

ENVIRONMENTAL, INC.
1120 NW Stallings Drive
Nacogdoches, Texas 75964
(936) 568-9451 Fax: (936) 568-9527
TBPE Firm Registration F-13588

Site Map Gas Monitoring System

Angelina County Waste Management Center
Permit No. MSW 2105A
Angelina County, Texas

Figure GMP-A-4

Project No. L-01-874

May 2014

Graphics: MDR



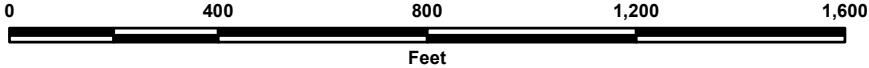
BASEMAP SOURCE: 2020 AERIAL PHOTOGRAPH PROVIDED BY NAPP

Legend

- | | |
|-----------------------|-----------------|
| Western Passive Vents | Permit Boundary |
| Flare | Waste Cell |
| Gas Probe | Pipeline ROW |
| Vent | 2-Ft Contour |
| Leachate Cleanout | |
| Leachate Sump | |

**FIGURE GMP-A-4
GAS MONITORING STYSTEM**

SITE MAP
(CONTOURS FROM HYDREX ENVIRONMENTAL
2024 AERIAL SURVEY)



**Angelina County Waste Management Center
MSW Permit No. 2105A
Angelina County, Texas**

Map Revised: 1/8/2025	Project Number: L-10-159	GIS Analyst: JLD
-----------------------	--------------------------	------------------

**Exhibit GMP-C-1
Tabular Reporting Form**

**Angelina County Waste Management Center
Methane Monitoring**

Name:

Ambient Temperature:

°F

Date: / /

Barometric Pressure:

in Hg.

Probe #	% Methane (by Vol.)	Barometric Pressure	Gas Probe Pressure	Gas Probe Temperature	Time
GMP-1					
GMP-2					
GMP-3					
GMP-4					
GMP-5					
GMP-6					
GMP-7					
GMP-8					
GMP-9					
GMP-10					
GMP-11					
GMP-12					
GMP-13					
GMP-14					
Structure Monitoring					

NA = Not Applicable
Probe Conditions:
Comments:

ND = Not Detected

Barometric Pressure measured in Hg.

Exhibit GMP-C-1 Tabular Reporting Form

Angelina County Waste Management Center Methane Monitoring

Technician Name: _____

Ambient Temperature: _____

Date: _____

Barometric Pressure: _____

Cumulative Rainfall: _____

Equipment Calibration Date/Time: _____

Probe #	% Methane (by Vol.)	Barometric Pressure	Gas Probe Pressure (in. WC)	Gas probe Temperature (°F)	Time	TOC Elevation (ft MSL)	Top of Screen Elevation (ft msl)	DTW (ft bgs)	DTW Elevation (ft msl)
GMP-1									
GMP-2									
GMP-3									
GMP-4									
GMP-5									
GMP-6									
GMP-7									
GMP-8									
GMP-9									
GMP-10									
GMP-11									
GMP-12									
GMP-13									
GMP-14									

Exhibit GMP-C-1 Tabular Reporting Form
Angelina County Waste Management Center Methane Monitoring

Technician Name: _____ Ambient Temperature: _____
 Date: _____ Barometric Pressure: _____
 Cumulative Rainfall: _____ Equipment Calibration Date/Time: _____

Utility Vents					
	% Methane (by Vol.)	Vent Condition	Comments		Time
Phone Line					
Water Meter					
Electric Line					
Structures					
Site Office					
Maint. Shed					
Well House					
Storage Shed					
Wash Room					
Flare Shed					
Tool Room					
Shop Office					
Shop Storage Room					
Breakroom					
Main Office					
Office Storage Room					
NA = Not Applicable G= Good or Functioning Appropriately ND = Not Detected					
Probe Conditions:					
Comments					

**Exhibit GMP-C-1 Tabular Reporting Form
Angelina County Waste Management Center Methane Monitoring**

Technician Name: _____

Ambient Temperature: _____

Date: _____

Barometric Pressure: _____

Cumulative Rainfall: _____

Equipment Calibration Date/Time: _____

ID	% Methane (by Vol.)	Vent Condition	Comments	Time
PV-1				
PV-2				
PV-3				
PV-4				
PV-5				
PV-6				
PV-7				
PV-8				
PV-9				
PV-10				
PV-11				
PV-12				
PV-13				
TV-1				
TV-2				
TV-3				
TV-4				
TV-5				
TV-6				
TV-7				
TV-8				
TV-9				
TV-10				
PV-1W				
PV-2W				
PV-3W				
PV-4W				
NA = Not Applicable G= Good or Functioning Appropriately ND = Not Detected				

APPENDIX F
REMEDIATION PLANS

Attachment 1
Trench Vent Drawings Installed in
Association with Remediation of
MW-13B

Attachment 2
Remediation Plan GMP-1 and GMP-4

APPENDIX G
GCCS FIGURES AND DRAWINGS

Attachment 1
December 2011 GCCS Installation
Construction Drawings

ATTACHMENT 3 – Unmarked/Replacement Pages

**ANGELINA COUNTY WASTE MANAGEMENT CENTER
ANGELINA COUNTY, TEXAS
PERMIT NO. MSW 2105A
LANDFILL GAS MANAGEMENT PLAN**

**PART III-SITE DEVELOPMENT PLAN
ATTACHMENT 14-LANDFILL GAS MANAGEMENT
PLAN**

Prepared for

**Mr. Chuck Brooks
MSW Manager
Angelina County Waste Management Center
7521 FM 58
Lufkin, TX 75901**

**Revised- September 6, 2017
Revised – January 9, 2025**

**Hydrex Environmental
312 Old Tyler Road
Nacogdoches, Texas 75961**

ANGELINA COUNTY WASTE MANAGEMENT CENTER
ANGELINA COUNTY, TEXAS
PERMIT NO. MSW 2015A

LANDFILL GAS MANAGEMENT PLAN



John Q. Hargrove, P.E.
Project Engineer

John Q. Hargrove

9/6/2017

Leonell N. Scarborough, P.G.
Senior Hydrogeologist

Leonell N. Scarborough



John Q. Hargrove
For January 9, 2025
Revisions Only

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Figure GMP-A-5	GCCS Expansion Layout

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Exhibit GMP-B-1	Schematic of Gas Monitoring Probe
Exhibit GMP-B-2	Gas Monitor Probe Data Sheet

APPENDIX C - REPORTING FORMAT

Exhibit GMP-C-1	Tabular Reporting Form
-----------------	------------------------

APPENDIX D - MANUFACTURERS' SPECIFICATIONS FOR INSTRUMENTS

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APPENDIX F – REMEDIATION PLANS

Attachment 1	Trench Vents Drawings Installed in Association with Remediation of MW-13B
Attachment 2	Remediation Plan GMP-1 and GMP-4

APPENDIX G – GCCS FIGURES AND DRAWINGS

Attachment 1	December 2011 GCCS Installation Construction Drawings
--------------	---

Existing Gas Monitoring Probes (GMPs) and Passive Vents (PVs)									
Existing Probes	Approximate Latitude	Approximate Longitude	Surface Elevation	Top-of-casing Elevation	Total Depth (ft)	Depth to Filter Pack	Elevation of Filter Pack	Depth to top of Screen	Elevation of top Screen
GMP-1	31.246873	-94.698476	308	311	30	4	307	5	306
GMP-2	31.247282	-94.695655	308	311	34	4	307	6	305
GMP-3	31-2.50458	-94.695223	293	296	16	4	292	6	290
GMP-4	31.249194	-94.699146	303	306	43	4	302	6	300
GMP-5	31.248113	-94.69493	296.1	300.1	35	3	297.1	4	296.1
GMP-6	31.25118	-94.695287	296.1	299.4	49.5	3	296.4	4	295.4
GMP-7	31.25255	-94.695287	287.3	290.6	39.5	3	287.6	4	286.6
GMP-8	31.254536	-94.697967	274.1	277.4	25.5	3	274.4	5	272.4
GMP-9	31.25214	-94.698651	277	280.3	21.5	3	277.3	6	274.3
GMP-10	31.253968	-94.694791	275	279.04	32	5	274.04	5	274.04
GMP-11	31.253527	-94.671754	267	270.83	24	5	265.83	5	265.83
GMP-12	31.252457	-94.689190	263	266.71	20	5	261.71	5	261.71
GMP-13	31.250129	-94.693855	275	278.98	31	5	273.98	5	273.98
GMP-14	31.250899	-94.691142	285	288.76	42	5	283.76	5	283.76
PV-1	31.247382	-94.69584	308	316	20	4	312	5	311
PV-2	31.247405	-94.695673	308	316	20	4	312	5	311
PV-3	31.247423	-94.695522	308	316	20	4	312	5	311
PV-4	31.247608	-94.695127	305	313	34	12	293	14	291
PV-5	31.247704	-94.695115	305	313	35	13	292	15	290
PV-6	31.247802	-94.695103	305	313	35	13	292	15	290
PV-7	31.247896	-94.695094	305	313	35	13	292	15	290
PV-8	31.247994	-94.695083	304	312	35	13	291	15	289

Existing Gas Monitoring Probes (GMPs) and Passive Vents (PVs)									
Existing Probes	Approximate Latitude	Approximate Longitude	Surface Elevation	Top-of-casing Elevation	Total Depth (ft)	Depth to Filter Pack	Elevation of Filter Pack	Depth to top of Screen	Elevation of top Screen
PV-9	31.248088	-94.695071	303	311	35	13	290	15	288
PV-10	31.248191	-94.695034	302	310	35	13	289	15	287
PV-11	31.248277	-94.695041	301	309	35	13	288	15	286
PV-12	31.248370	-94.695025	301	309	35	13	288	15	286
PV-13	31.248496	-94.695014	300	308	35	13	287	15	285
PV-1W	31.246890	-94.698470	308	314	25	5	303	5	303
PV-2W	31.249083	-94.699083	303	309	25	5	298	5	298
PV-3W	31.249149	-94.699101	303	309	25	5	298	5	298
PV-4W	31.249217	-94.699114	303	309	25	5	298	5	298

Note: Measurements and Elevations are in feet with elevations referring to Mean Sea Level Elevation.

included as part of a remediation plan, the passive landfill gas wells described in Section 6.2.1 will be converted to active landfill gas wells. A piping network, condensate management system, and a blower/flare facility or an energy recovery facility may be used to dispose of collected landfill gas. A voluntary, active landfill gas system became operational in December 2011 for carbon credit offset purposes. The as-built figures for the landfill gas system are attached in Appendix G as Attachment 1.

In 2017, the active landfill gas extraction system was expanded to mitigate observed landfill gas migration beyond the permitted waste footprint. The expansion consisted of six extraction wells with associated header and lateral piping. The expansion connected to the northern limits of the existing system on the east and west sides of Tract 1. The layout of the system is illustrated on the attached Figure GMP-A-5.

Additional collection of landfill gas may be accomplished through connection of the active landfill gas extraction system to the leachate collection and recovery sidewall riser pipes.

6.2.5 Remediation Plan GMP-1 and GMP-4

Exceedances of the regulatory limit for methane have been noted in gas monitoring probes GMP-1 and GMP-4. The estimated depth of landfill gas migration was determined during assessment efforts conducted January 11, 2024. Results from this assessment indicated that methane concentrations coincide with coarser-grained silty sands noted in the vicinity of GMP-1 and GMP-4.

It was determined that methane migration in the vicinity of GMP-1 and GMP-4 likely occurs along preferential pathways of coarse grained material at depths no greater than 20-30 feet (above historical groundwater averages). To effectively remediate previously noted exceedances in gas monitoring probes GMP-1 and GMP-4 four passive vents, placed outside of waste, were installed on July 11, 2024. The location of the installed passive vents are included in Figure 2 of the Remediation Plan GMP-1 and GMP-4 included in Appendix F as Attachment 1 of the Landfill Gas Management Plan.

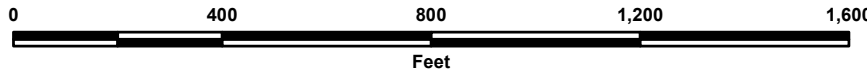


John Q. Hargrove
For January 9, 2025
Revisions Only

	Western Passive Vents		Permit Boundary
	Flare		Waste Cell
	Gas Probe		Pipeline ROW
	Vent		2-Ft Contour
	Leachate Cleanout		
	Leachate Sump		

FIGURE GMP-A-4
GAS MONITORING STYSTEM

SITE MAP
(CONTOURS FROM HYDREX ENVIRONMENTAL
2024 AERIAL SURVEY)



Angelina County Waste Management Center
MSW Permit No. 2105A
Angelina County, Texas

Map Revised: 1/8/2025	Project Number: L-10-159	GIS Analyst: JLD
-----------------------	--------------------------	------------------

BASEMAP SOURCE: 2020 AERIAL PHOTOGRAPH PROVIDED BY NAPP

Exhibit GMP-C-1 Tabular Reporting Form

Angelina County Waste Management Center Methane Monitoring

Technician Name: _____

Ambient Temperature: _____

Date: _____

Barometric Pressure: _____

Cumulative Rainfall: _____

Equipment Calibration Date/Time: _____

Probe #	% Methane (by Vol.)	Barometric Pressure	Gas Probe Pressure (in. WC)	Gas probe Temperature (°F)	Time	TOC Elevation (ft MSL)	Top of Screen Elevation (ft msl)	DTW (ft bgs)	DTW Elevation (ft msl)
GMP-1									
GMP-2									
GMP-3									
GMP-4									
GMP-5									
GMP-6									
GMP-7									
GMP-8									
GMP-9									
GMP-10									
GMP-11									
GMP-12									
GMP-13									
GMP-14									

Exhibit GMP-C-1 Tabular Reporting Form

Angelina County Waste Management Center Methane Monitoring

Technician Name: _____ Ambient Temperature: _____
 Date: _____ Barometric Pressure: _____
 Cumulative Rainfall: _____ Equipment Calibration Date/Time: _____

Utility Vents					
	% Methane (by Vol.)	Vent Condition	Comments		Time
Phone Line					
Water Meter					
Electric Line					
Structures					
Site Office					
Maint. Shed					
Well House					
Storage Shed					
Wash Room					
Flare Shed					
Tool Room					
Shop Office					
Shop Storage Room					
Breakroom					
Main Office					
Office Storage Room					
NA = Not Applicable G= Good or Functioning Appropriately ND = Not Detected					
Probe Conditions:					
Comments					

**Exhibit GMP-C-1 Tabular Reporting Form
Angelina County Waste Management Center Methane Monitoring**

Technician Name: _____

Ambient Temperature: _____

Date: _____

Barometric Pressure: _____

Cumulative Rainfall: _____

Equipment Calibration Date/Time: _____

ID	% Methane (by Vol.)	Vent Condition	Comments	Time
PV-1				
PV-2				
PV-3				
PV-4				
PV-5				
PV-6				
PV-7				
PV-8				
PV-9				
PV-10				
PV-11				
PV-12				
PV-13				
TV-1				
TV-2				
TV-3				
TV-4				
TV-5				
TV-6				
TV-7				
TV-8				
TV-9				
TV-10				
PV-1W				
PV-2W				
PV-3W				
PV-4W				
NA = Not Applicable G= Good or Functioning Appropriately ND = Not Detected				

APPENDIX E
Installed Gas Monitoring Probes (GMP) Logs

GAS MONITORING PROBE DATA SHEET

Permittee or Site Name: Angelina County Waste Management Center

County: Angelina County, Texas

Date of Installation: 01/3/2020

Borehole Diameter: 8.25

Latitude: 31.253968

Longitude: -94.694791

Geologist, Hydrogeologist or Engineer Supervising Probe Installation: John Hargrove

Name of Geologic Formation(s) in which Probe is completed: Yegua

Concrete Pad Dimensions: 4.5'x4.5'x6"

TCEQ MSW Permit No.: 2105A

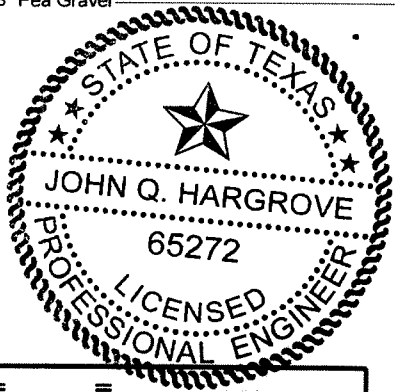
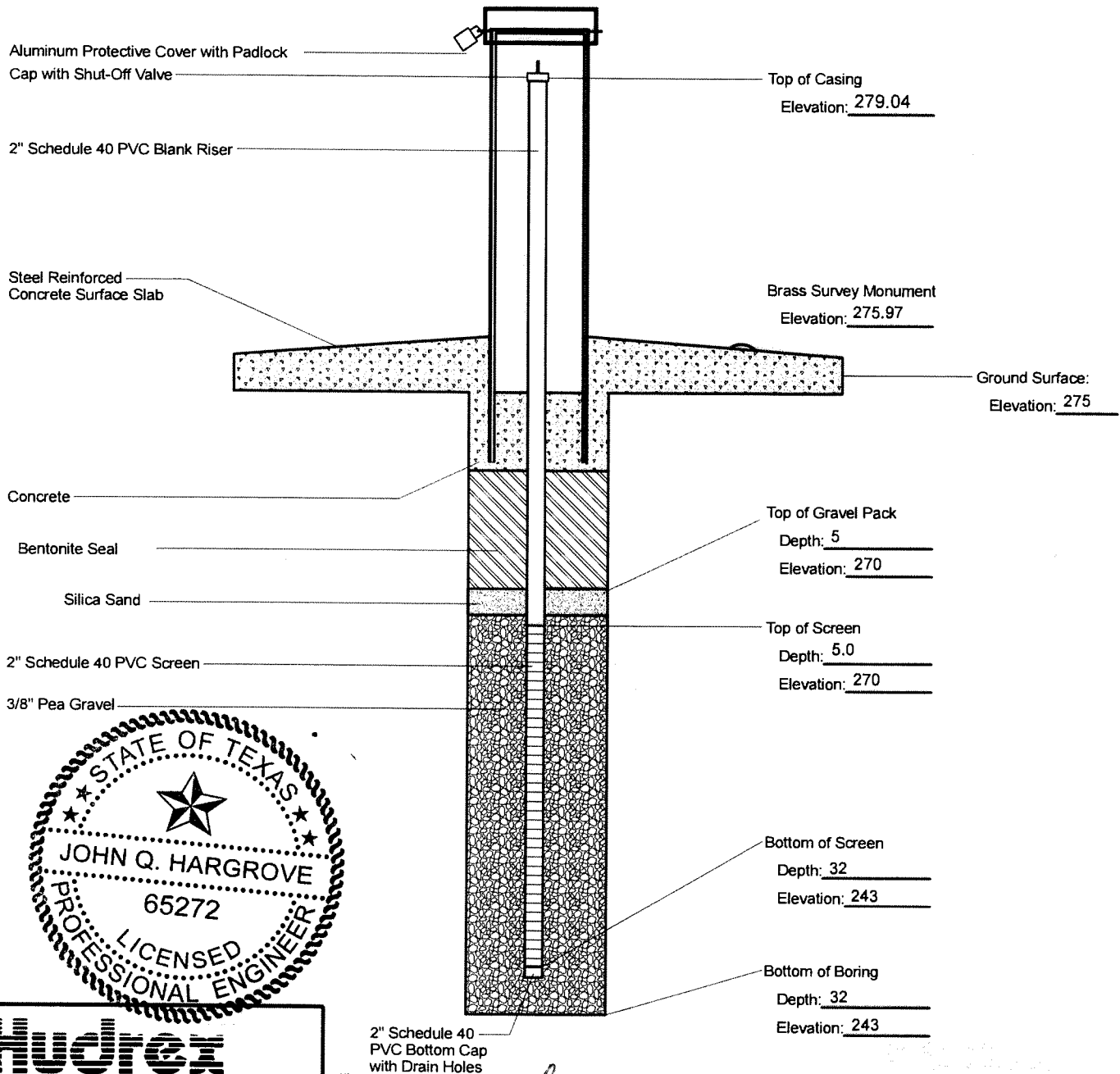
I.D. No.: GMP-10

Date of Completion: 1/3/2020

Driller Name: Donny Smith

License No.: 59361

NOTE: All depths from surface and all elevations are reported relative to Mean Sea Level



Hydrex
ENVIRONMENTAL

1120 NW Stallings Drive
Nacogdoches, Texas 75964
(936) 568-9451 Fax (936) 568-9527

John Q. Hargrove 2/12/2020

Project No.: L-04-109

January 2020

Drawing Not To Scale

GAS MONITORING PROBE DATA SHEET

Permittee or Site Name: Angelina County Waste Management Center

County: Angelina County, Texas

Date of Installation: 01/3/2020

Borehole Diameter: 8.25

Latitude: 31.253527

Longitude: -94.691754

Geologist, Hydrogeologist or Engineer Supervising Probe Installation: John Hargrove

Name of Geologic Formation(s) in which Probe is completed: Yegua

Concrete Pad Dimensions: 4.5'x4.5'x6"

TCEQ MSW Permit No.: 2105A

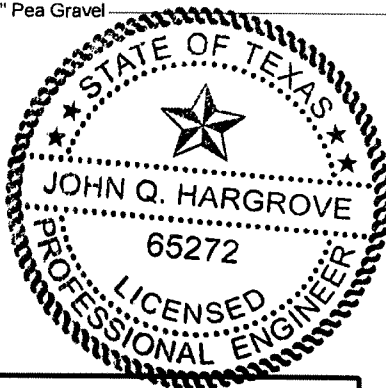
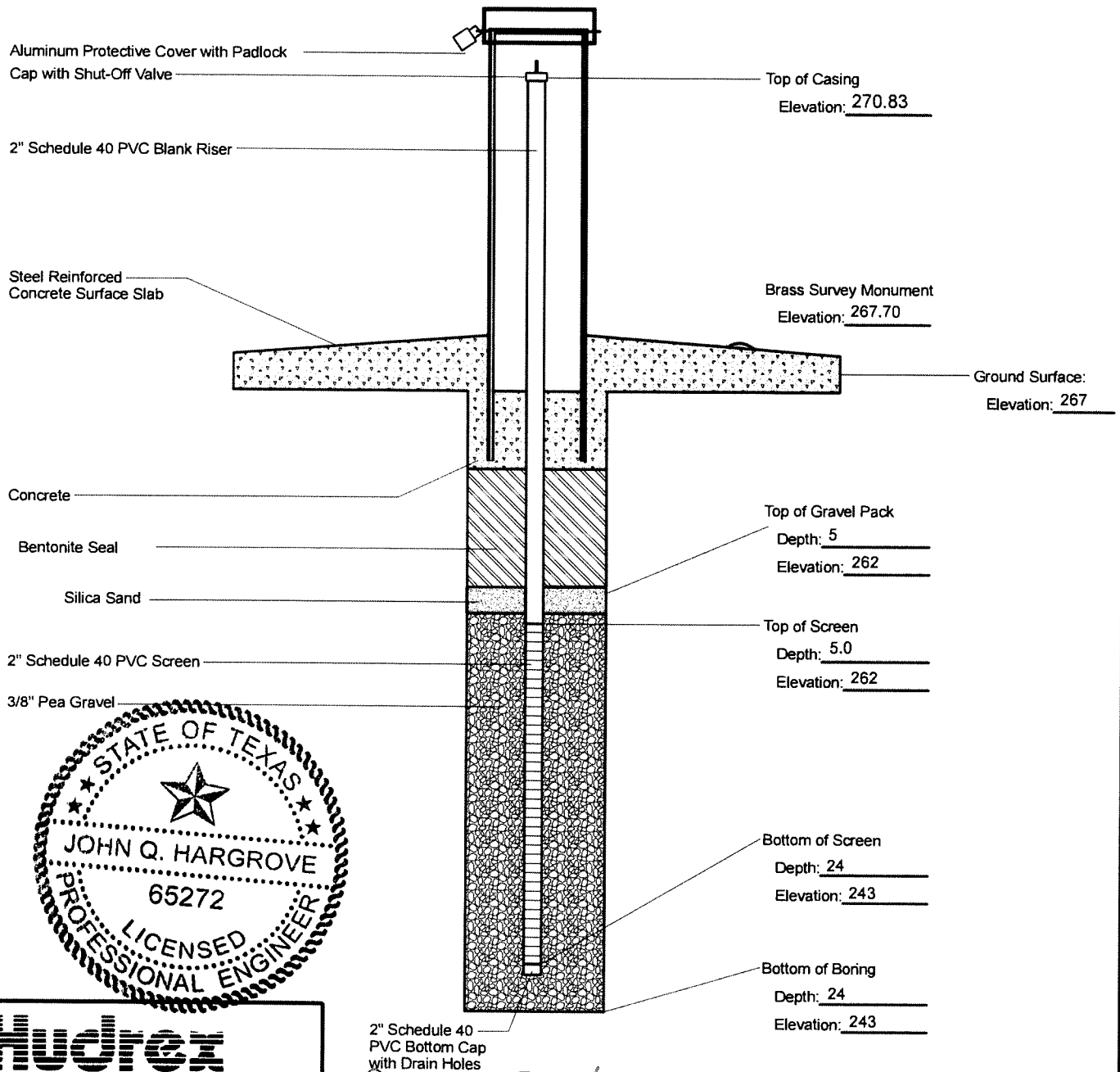
I.D. No.: GMP-11

Date of Completion: 1/3/2020

Driller Name: Donny Smith

License No.: 59361

NOTE: All depths from surface and all elevations are reported relative to Mean Sea Level



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1120 NW Stallings Drive
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(936) 568-9451 Fax (936) 568-9527

John Q. Hargrove 2/12/2020

Project No.: L-04-109

January 2020

Drawing Not To Scale

GAS MONITORING PROBE DATA SHEET

Permittee or Site Name: Angelina County Waste Management Center

County: Angelina County, Texas

Date of Installation: 01/3/2020

Borehole Diameter: 8.25

Latitude: 31.252457

Longitude: -94.689190

TCEQ MSW Permit No.: 2105A

I.D. No.: GMP-12

Date of Completion: 1/3/2020

Driller Name: Donny Smith

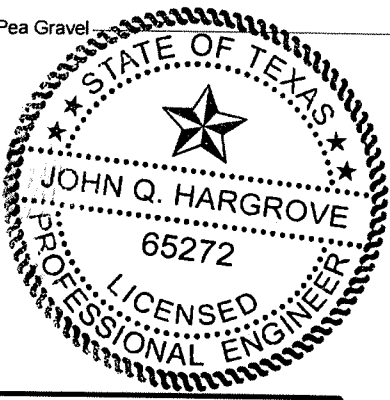
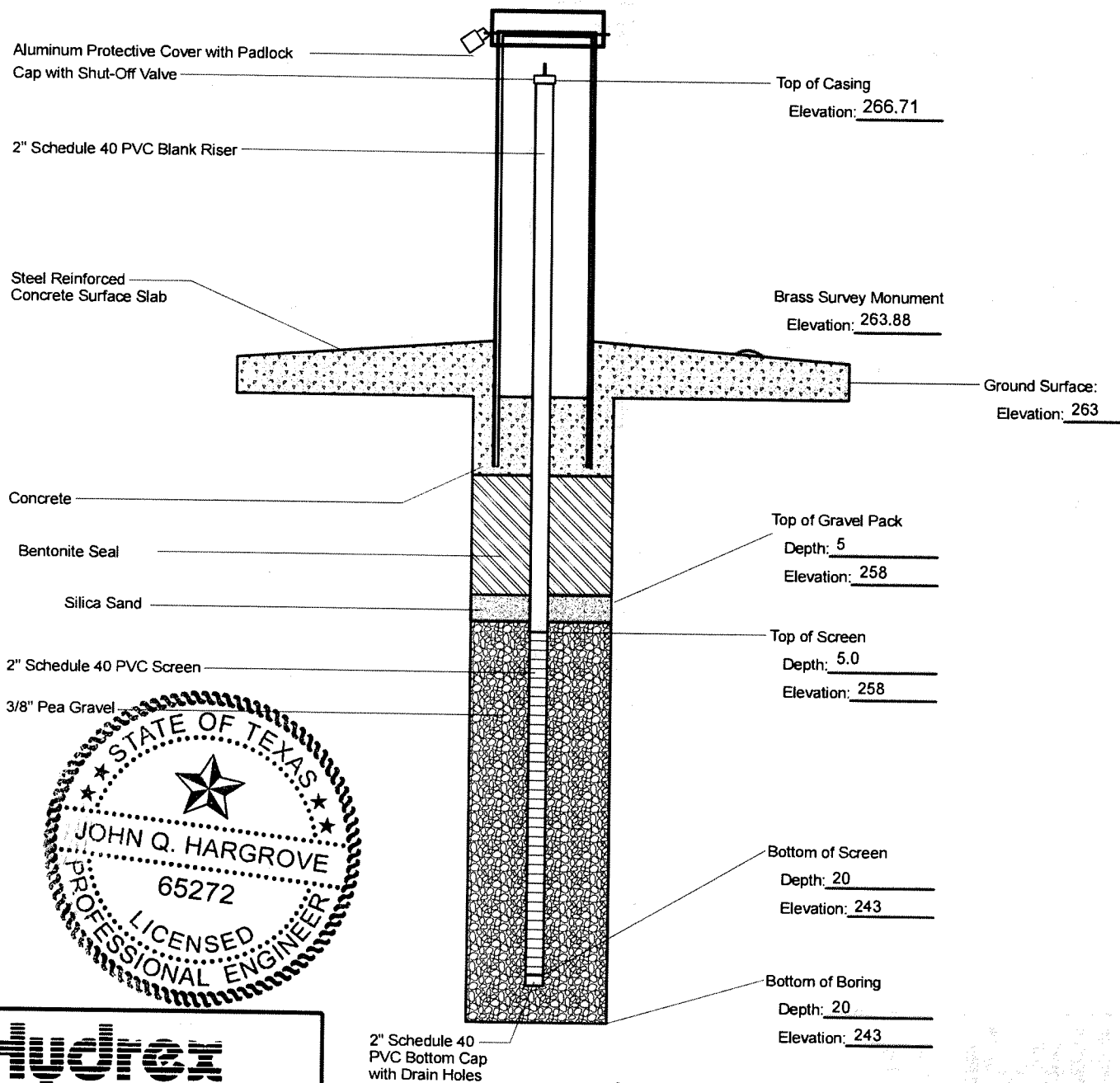
License No.: 59361

Geologist, Hydrogeologist or Engineer Supervising Probe Installation: John Hargrove

Name of Geologic Formation(s) in which Probe is completed: Yegua

Concrete Pad Dimensions: 4.5'x4.5'x6"

NOTE: All depths from surface and all elevations are reported relative to Mean Sea Level



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John Q. Hargrove 2/12/2020
Project No.: L-04-109

January 2020

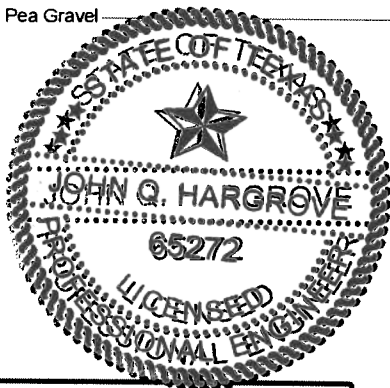
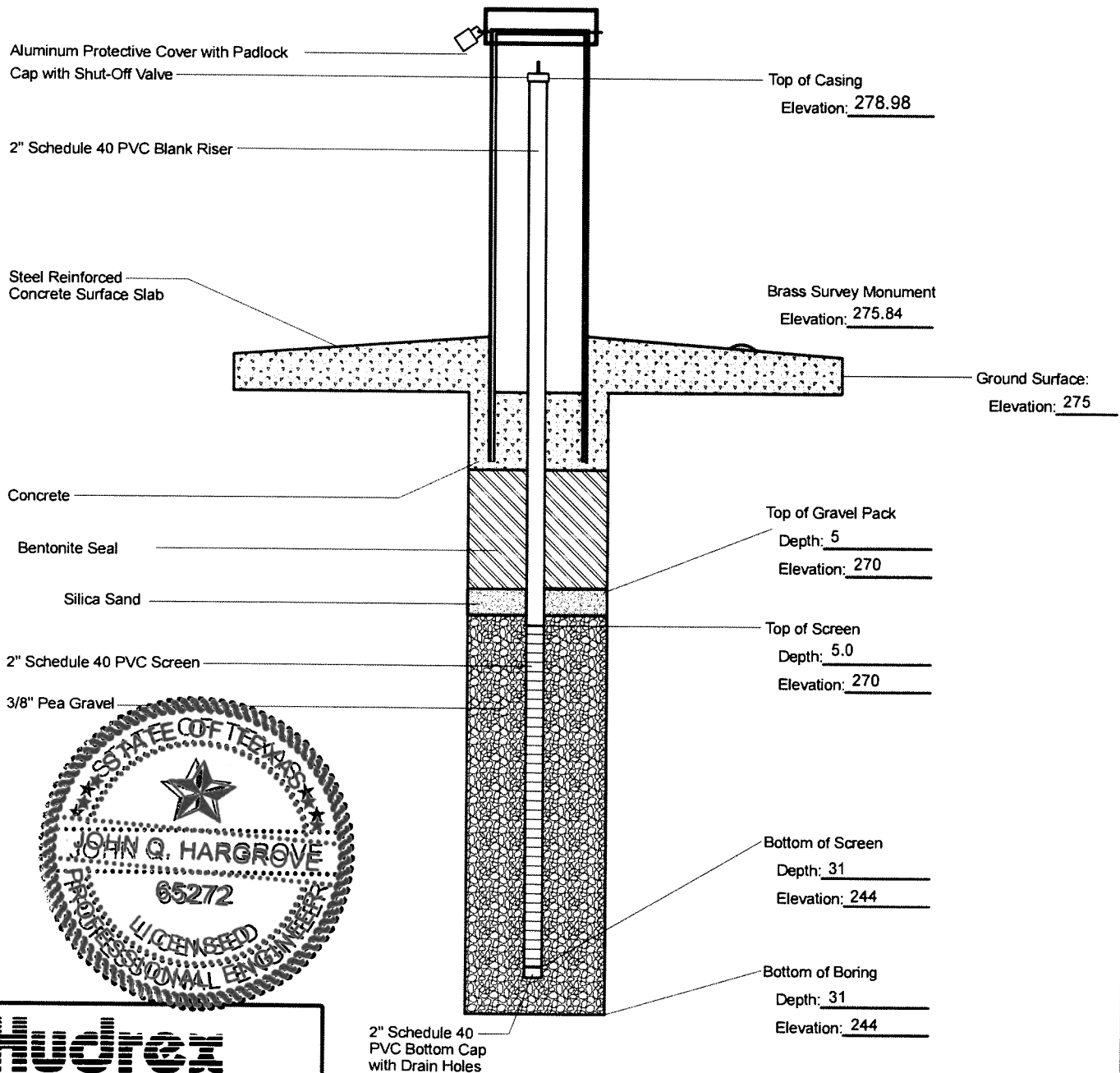
Drawing Not To Scale

GAS MONITORING PROBE DATA SHEET

Permittee or Site Name: Angelina County Waste Management Center
 County: Angelina County, Texas
 Date of Installation: 01/3/2020
 Borehole Diameter: 8.25
 Latitude: 31.250129 Longitude: -94.693855
 Geologist, Hydrogeologist or Engineer Supervising Probe Installation: John Hargrove
 Name of Geologic Formation(s) in which Probe is completed: Yegua
 Concrete Pad Dimensions: 4.5'x4.5'x6"

TCEQ MSW Permit No.: 2105A
 I.D. No.: GMP-13
 Date of Completion: 1/3/2020
 Driller Name: Donny Smith
 License No.: 59361

NOTE: All depths from surface and all elevations are reported relative to Mean Sea Level



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1120 NW Stallings Drive
 Nacogdoches, Texas 75964
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John Q. Hargrove 2/12/2020
 Project No.: L-04-109

January 2020

Drawing Not To Scale

GAS MONITORING PROBE DATA SHEET

Permittee or Site Name: Angelina County Waste Management Center

County: Angelina County, Texas

Date of Installation: 01/3/2020

Borehole Diameter: 8.25

Latitude: 31.250899

Longitude: -94.691142

TCEQ MSW Permit No.: 2105A

I.D. No.: GMP-14

Date of Completion: 1/3/2020

Driller Name: Donny Smith

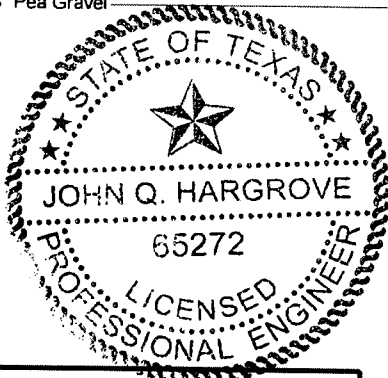
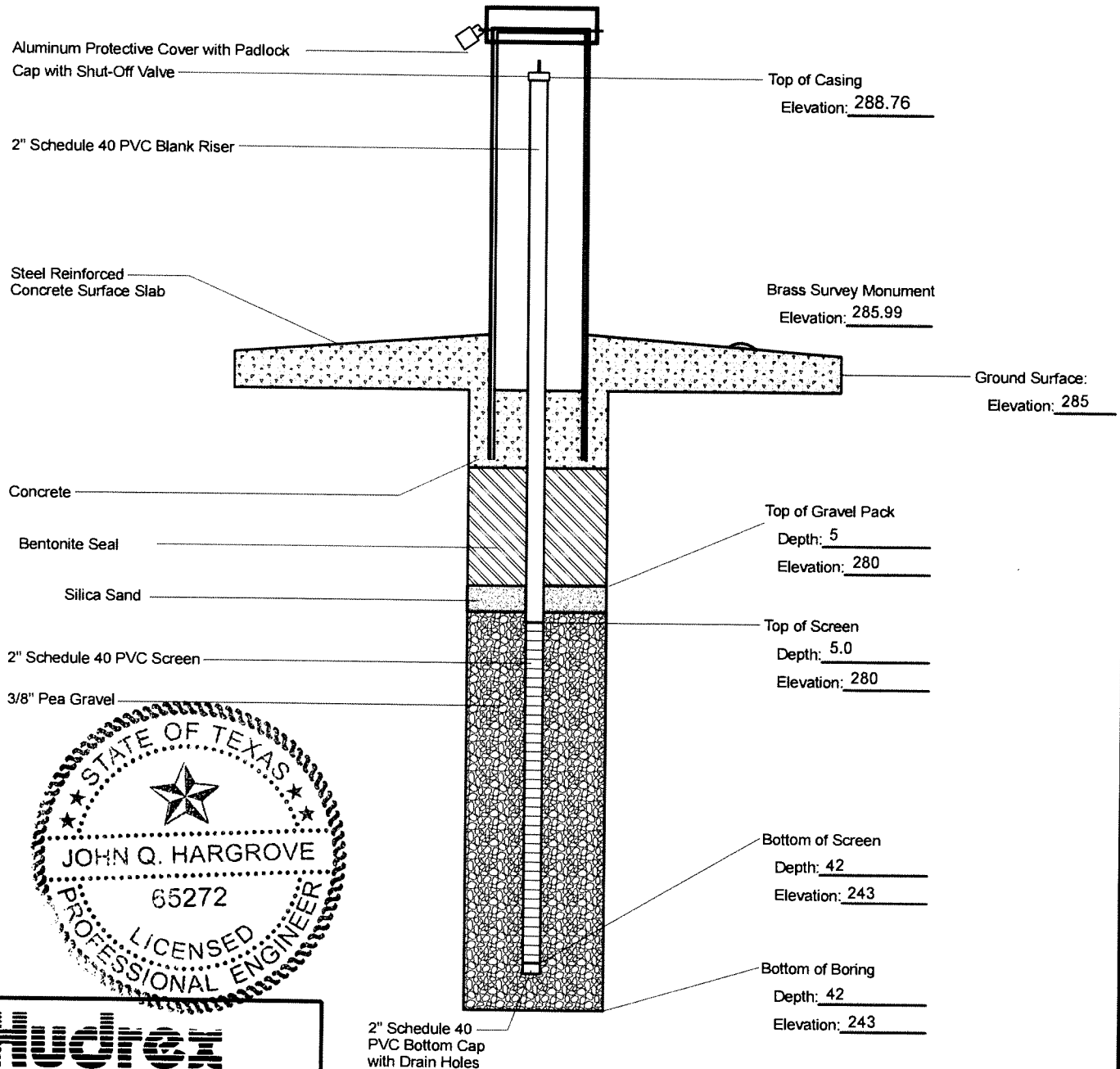
License No.: 59361

Geologist, Hydrogeologist or Engineer Supervising Probe Installation: John Hargrove

Name of Geologic Formation(s) in which Probe is completed: Yegua

Concrete Pad Dimensions: 4.5'x4.5'x6"

NOTE: All depths from surface and all elevations are reported relative to Mean Sea Level



Hydrex
ENVIRONMENTAL

1120 NW Stallings Drive
Nacogdoches, Texas 75964
(936) 568-9451 Fax (936) 568-9527

Project No.: L-04-109

January 2020

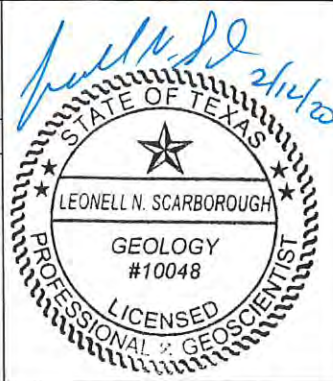
Drawing Not To Scale

2" Schedule 40
PVC Bottom Cap
with Drain Holes

John Q. Hargrove 2/12/2020

Gas Probe

Gas Probe No.: GMP-10



PROJECT INFORMATION

PROJECT: Angelina County WMC
PROJECT NO.: L-04-109
LOGGED BY: Leonell N. Scarborough
SUPERVISING PG: Leonell Scarborough
COMPLETION: 1/3/2020
DEVELOPMENT: N/A
SITE LOCATION: Lufkin, Texas
WELL OWNER: Angelina County

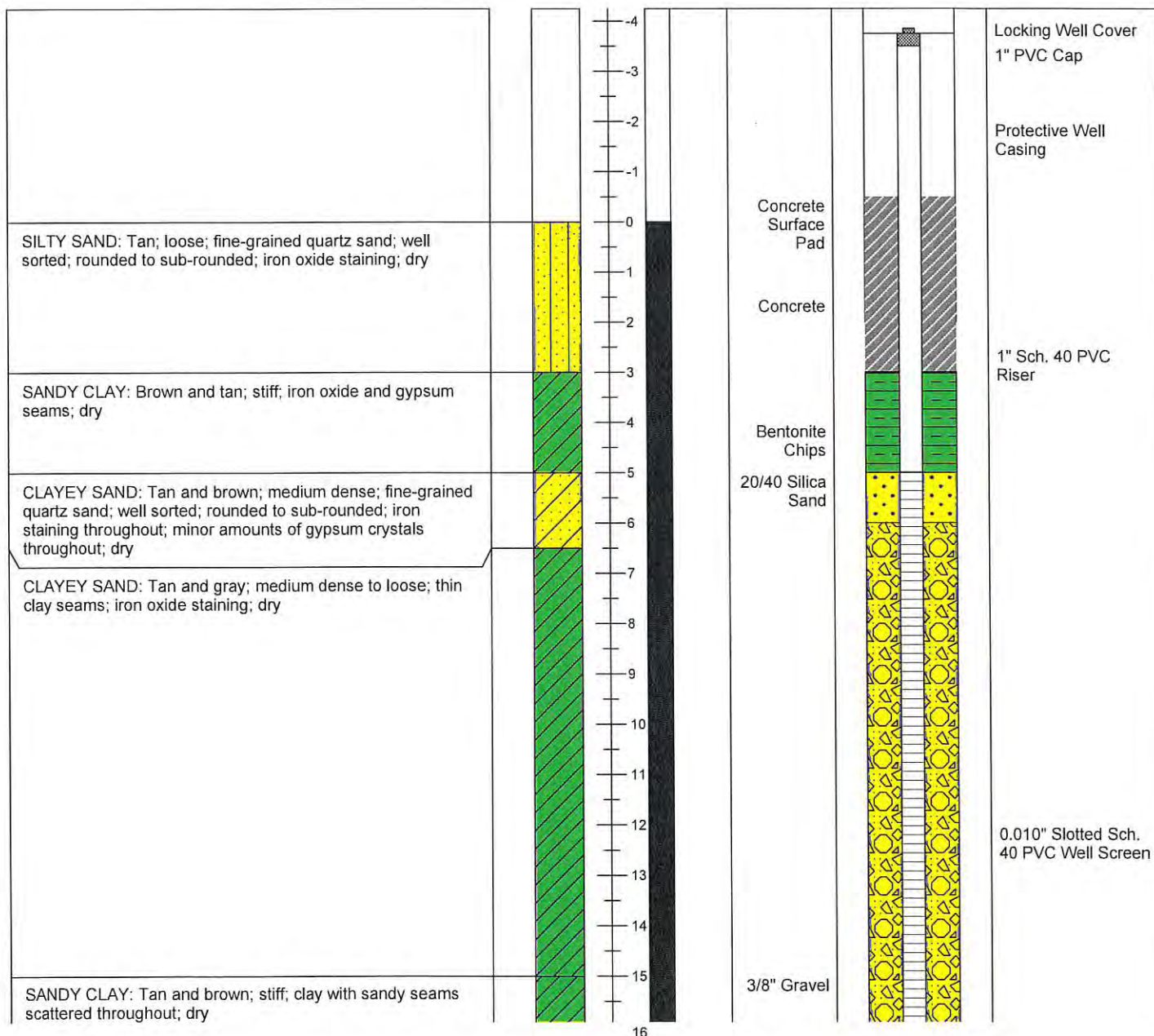
DRILLING INFORMATION

DRILLER: Donny Smith
DRILLER'S LICENSE NO.: 59631M
RIG TYPE: 6620DT
METHOD OF DRILLING: Hollow Stem Auger
SAMPLING METHODS: Split Core Barrel
SURFACE ELEVATION: 275
HOLE DIAMETER: 8.25
LATITUDE: 31.253968 LONGITUDE: -94.694791

Sample Water level while drilling

TBPG No. 50027

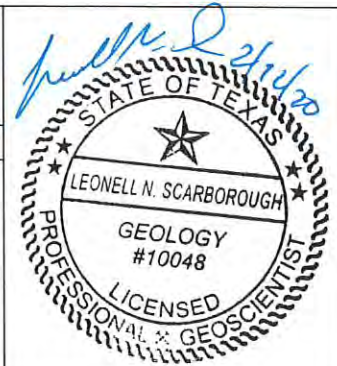
DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
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Gas Probe

Gas Probe No.: GMP-10



PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Angelina County WMC	DRILLER:	Donny Smith
PROJECT NO.:	L-04-109	DRILLER'S LICENSE NO.:	59631M
LOGGED BY:	Leonell N. Scarborough	RIG TYPE:	6620DT
SUPERVISING PG:	Leonell Scarborough	METHOD OF DRILLING:	Hollow Stem Auger
COMPLETION:	1/3/2020	SAMPLING METHODS:	Split Core Barrel
DEVELOPMENT:	N/A	SURFACE ELEVATION:	275
SITE LOCATION:	Lufkin, Texas	HOLE DIAMETER:	8.25
WELL OWNER:	Angelina County	LATITUDE:	31.253968
		LONGITUDE:	-94.694791

☒ Sample
 ☒ Water level while drilling

TBPG No. 50027

DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
-------------	------	--------------	-------	--------	-------------	-------------------

			16			
			17			
SILTY SAND: Gray and brown; dense; thin clay seams; laminated; dry			18			
			19			
SILTY CLAY: Gray and tan; very stiff; laminated with silt and sand; dry			20			
			21			
			22			
			23			
			24			
			25			
SILTY SAND: Gray; dense; fine-grained quartz sand; well sorted; rounded to sub-rounded			26			
			27			
			28			
			29			
SILTY CLAY: Gray and tan; very stiff; thin seams of sand			30			
SILTY SAND: Gray; loose; fine-grained quartz sand; well sorted; rounded to sub-rounded			31			
Bottom of Boring @ 32.0'			32			
			33			

3/8" Gravel

0.010" Slotted Sch. 40 PVC Well Screen

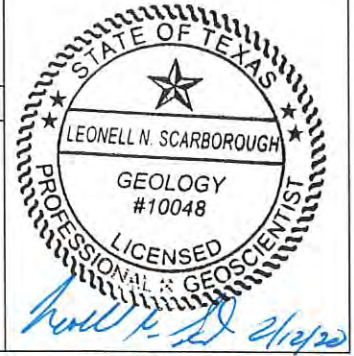
1" PVC Bottom Cap

NOTES: Not to be used separately from original report. USCS descriptors based on field classification not laboratory verified.



Gas Probe

Gas Probe No.: GMP-11

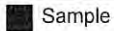


PROJECT INFORMATION

PROJECT: Angelina County WMC
PROJECT NO.: L-04-109
LOGGED BY: Leonell N. Scarborough
SUPERVISING PG: Leonell Scarborough
COMPLETION: 1/3/2020
DEVELOPMENT: N/A
SITE LOCATION: Lufkin, Texas
WELL OWNER: Angelina County

DRILLING INFORMATION

DRILLER: Donny Smith
DRILLER'S LICENSE NO.: 59631M
RIG TYPE: 6620DT
METHOD OF DRILLING: Hollow Stem Auger
SAMPLING METHODS: Split Core Barrel
SURFACE ELEVATION: 267
HOLE DIAMETER: 8.25
LATITUDE: 31.253527 LONGITUDE: -94.691754



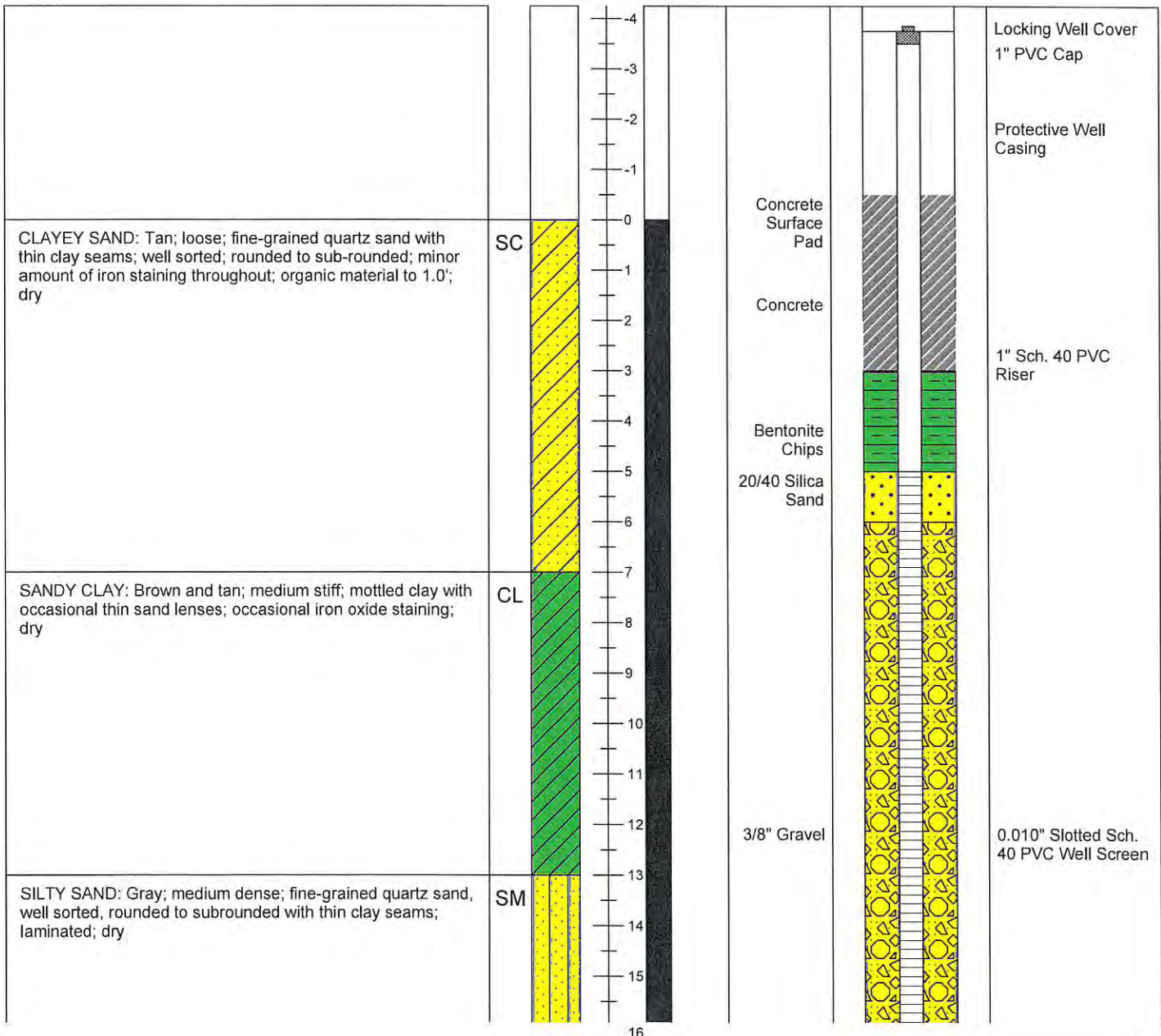
Sample



Water level while drilling

TBPG No. 50027

DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
-------------	------	--------------	-------	--------	-------------	-------------------

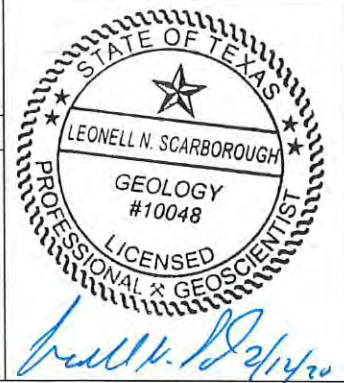


NOTES: Not to be used separately from original report. USCS descriptors based on field classification not laboratory verified.



Gas Probe

Gas Probe No.: GMP-12



PROJECT INFORMATION

PROJECT: Angelina County WMC
 PROJECT NO.: L-04-109
 LOGGED BY: Leonell N. Scarborough
 SUPERVISING PG: Leonell Scarborough
 COMPLETION: 1/3/2020
 DEVELOPMENT: N/A
 SITE LOCATION: Lufkin, Texas
 WELL OWNER: Angelina County

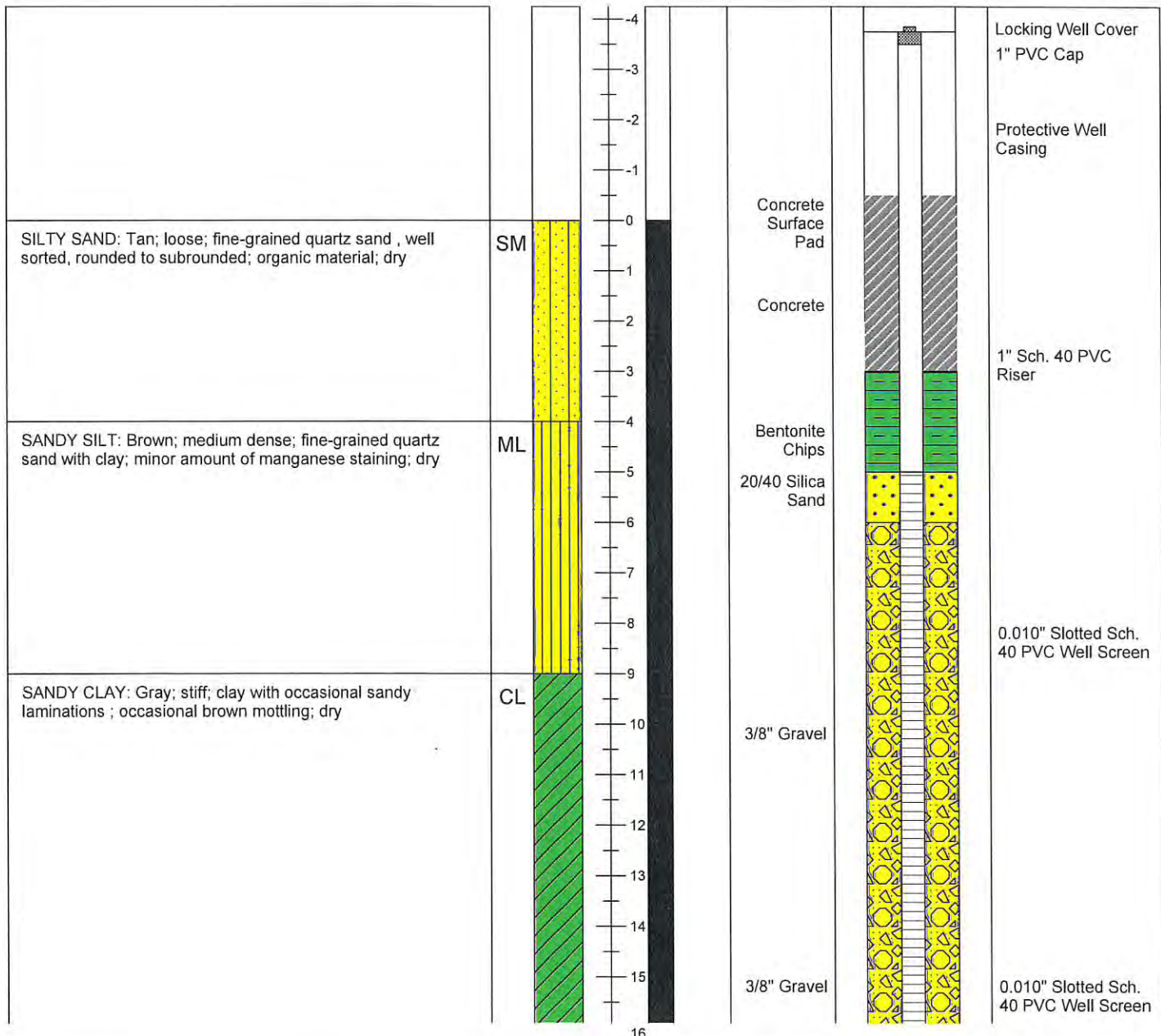
DRILLING INFORMATION

DRILLER: Donny Smith
 DRILLER'S LICENSE NO.: 59631M
 RIG TYPE: 6620DT
 METHOD OF DRILLING: Hollow Stem Auger
 SAMPLING METHODS: Split Core Barrel
 SURFACE ELEVATION: 263
 HOLE DIAMETER: 8.25
 LATITUDE: 31.252457 LONGITUDE: -94.689190

■ Sample ▼ Water level while drilling

TBPG No. 50027

DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
-------------	------	--------------	-------	--------	-------------	-------------------

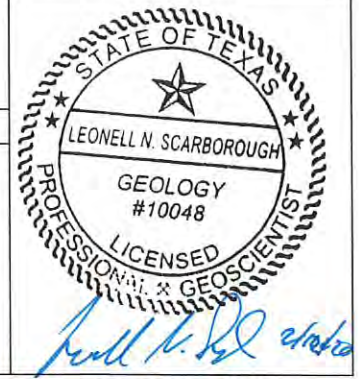


NOTES: Not to be used separately from original report. USCS descriptors based on field classification not laboratory verified.



Gas Probe

Gas Probe No.: GMP-12



PROJECT INFORMATION

PROJECT: Angelina County WMC
 PROJECT NO.: L-04-109
 LOGGED BY: Leonell N. Scarborough
 SUPERVISING PG: Leonell Scarborough
 COMPLETION: 1/3/2020
 DEVELOPMENT: N/A
 SITE LOCATION: Lufkin, Texas
 WELL OWNER: Angelina County

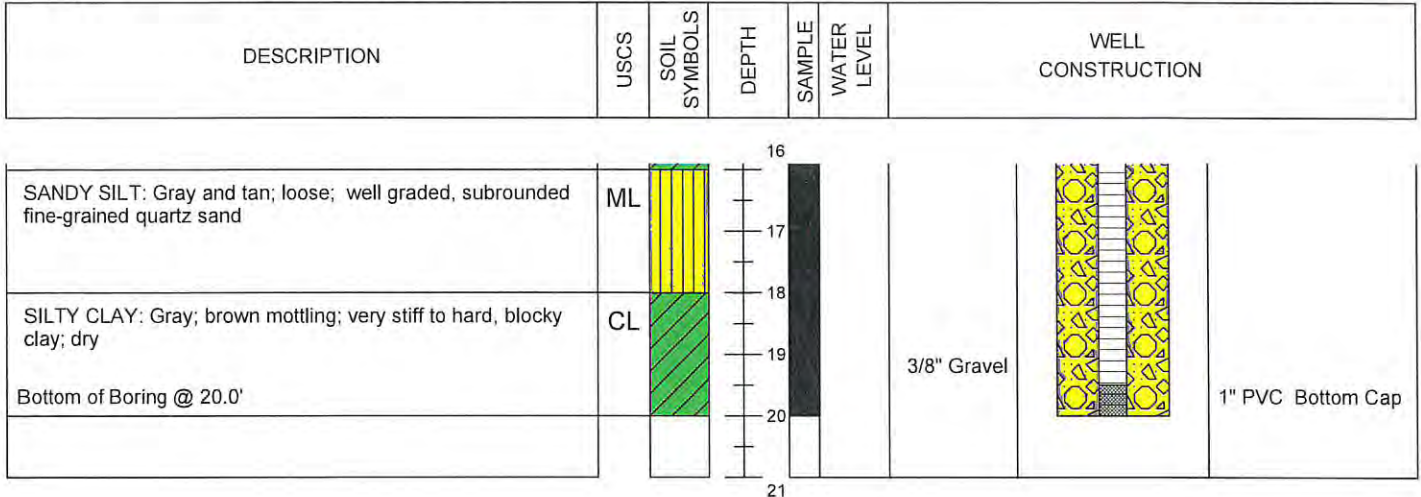
DRILLING INFORMATION

DRILLER: Donny Smith
 DRILLER'S LICENSE NO.: 59631M
 RIG TYPE: 6620DT
 METHOD OF DRILLING: Hollow Stem Auger
 SAMPLING METHODS: Split Core Barrel
 SURFACE ELEVATION: 263
 HOLE DIAMETER: 8.25
 LATITUDE: 31.252457 LONGITUDE: -94.689190

■ Sample

▼ Water level while drilling

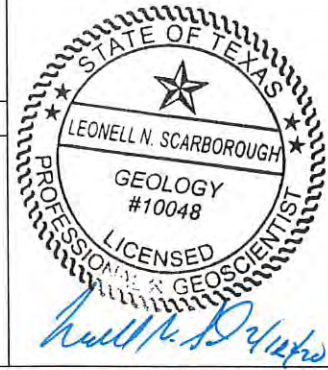
TBPG No. 50027



NOTES: Not to be used separately from original report. USCS descriptors based on field classification not laboratory verified.

Gas Probe

Gas Probe No.: GMP-13



PROJECT INFORMATION

PROJECT: Angelina County WMC
PROJECT NO.: L-04-109
LOGGED BY: Leonell N. Scarborough
SUPERVISING PG: Leonell Scarborough
COMPLETION: 1/3/2020
DEVELOPMENT: N/A
SITE LOCATION: Lufkin, Texas
WELL OWNER: Angelina County

DRILLING INFORMATION

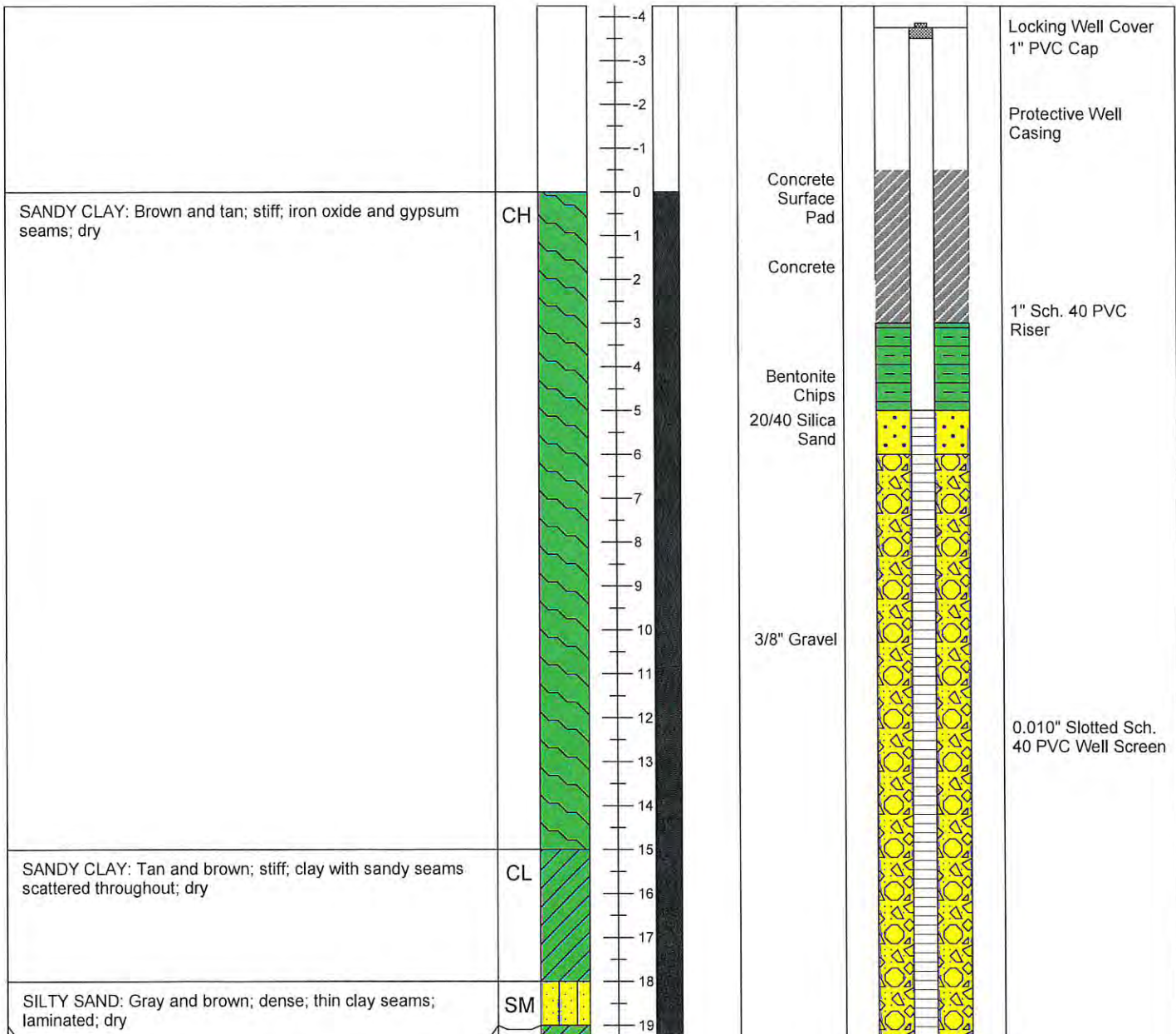
DRILLER: Donny Smith
DRILLER'S LICENSE NO.: 59631M
RIG TYPE: 6620DT
METHOD OF DRILLING: Hollow Stem Auger
SAMPLING METHODS: Split Core Barrel
SURFACE ELEVATION: 275
HOLE DIAMETER: 8.25
LATITUDE: 31.250129 LONGITUDE: -94.693855

Sample

Water level while drilling

TBPG No. 50027

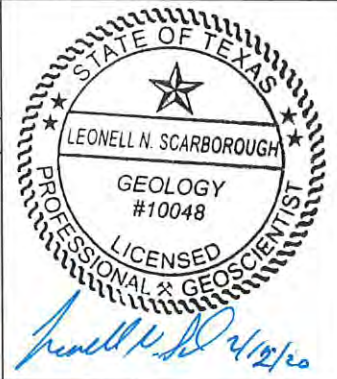
DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
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NOTES: Not to be used separately from original report. USCS descriptors based on field classification not laboratory verified.

Gas Probe

Gas Probe No.: GMP-13



PROJECT INFORMATION

PROJECT: Angelina County WMC
PROJECT NO.: L-04-109
LOGGED BY: Leonell N. Scarborough
SUPERVISING PG: Leonell Scarborough
COMPLETION: 1/3/2020
DEVELOPMENT: N/A
SITE LOCATION: Lufkin, Texas
WELL OWNER: Angelina County


DRILLING INFORMATION

DRILLER: Donny Smith
DRILLER'S LICENSE NO.: 59631M
RIG TYPE: 6620DT
METHOD OF DRILLING: Hollow Stem Auger
SAMPLING METHODS: Split Core Barrel
SURFACE ELEVATION: 275
HOLE DIAMETER: 8.25
LATITUDE: 31.250129 LONGITUDE: -94.693855

Sample

Water level while drilling

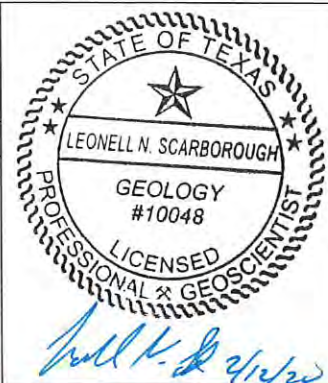
TBPG No. 50027

DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
SILTY CLAY: Gray and tan; very stiff; laminated with silt and sand; dry	CL		20 21 22 23 24 25 26 27 28 29 30 31 32			3/8" Gravel
Bottom of Boring @ 31.0'						0.010" Slotted Sch. 40 PVC Well Screen
						1" PVC Bottom Cap



Gas Probe

Gas Probe No.: GMP-14



PROJECT INFORMATION

PROJECT: Angelina County WMC
 PROJECT NO.: L-04-109
 LOGGED BY: Leonell N. Scarborough
 SUPERVISING PG: Leonell Scarborough
 COMPLETION: 1/3/2020
 DEVELOPMENT: N/A
 SITE LOCATION: Lufkin, Texas
 WELL OWNER: Angelina County

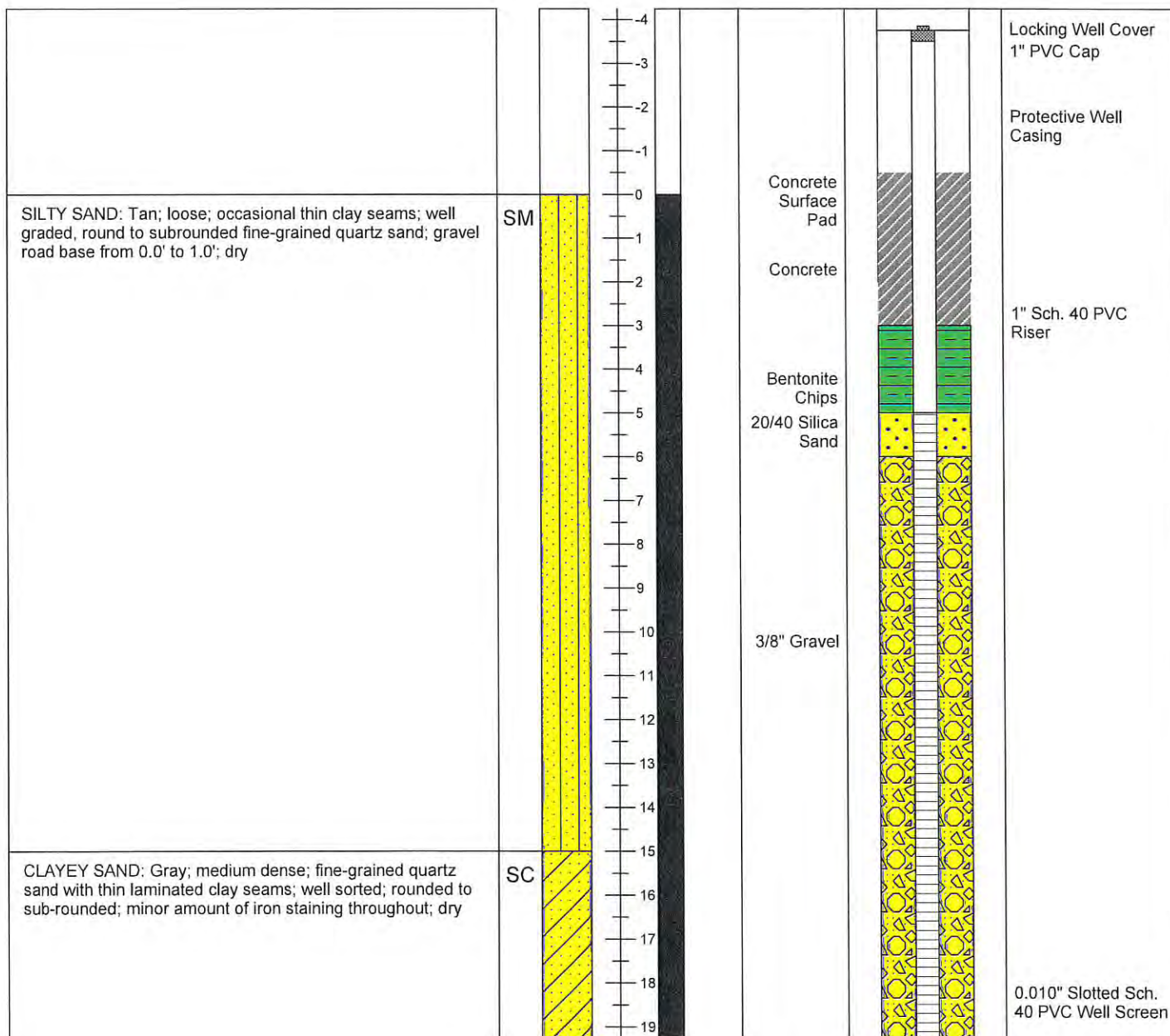
DRILLING INFORMATION

DRILLER: Donny Smith
 DRILLER'S LICENSE NO.: 59631M
 RIG TYPE: 6620DT
 METHOD OF DRILLING: Hollow Stem Auger
 SAMPLING METHODS: Split Core Barrel
 SURFACE ELEVATION: 285
 HOLE DIAMETER: 8.25
 LATITUDE: 31.250899 LONGITUDE: -94.691142

■ Sample ▼ Water level while drilling

TBPG No. 50027

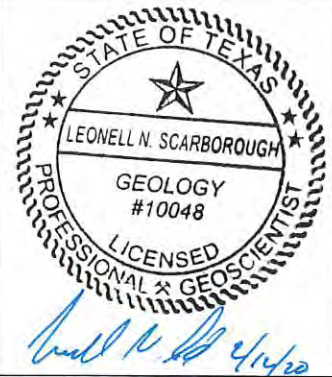
DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
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NOTES: Not to be used separately from original report. USCS descriptors based on field classification not laboratory verified.

Gas Probe

Gas Probe No.: GMP-14



PROJECT INFORMATION

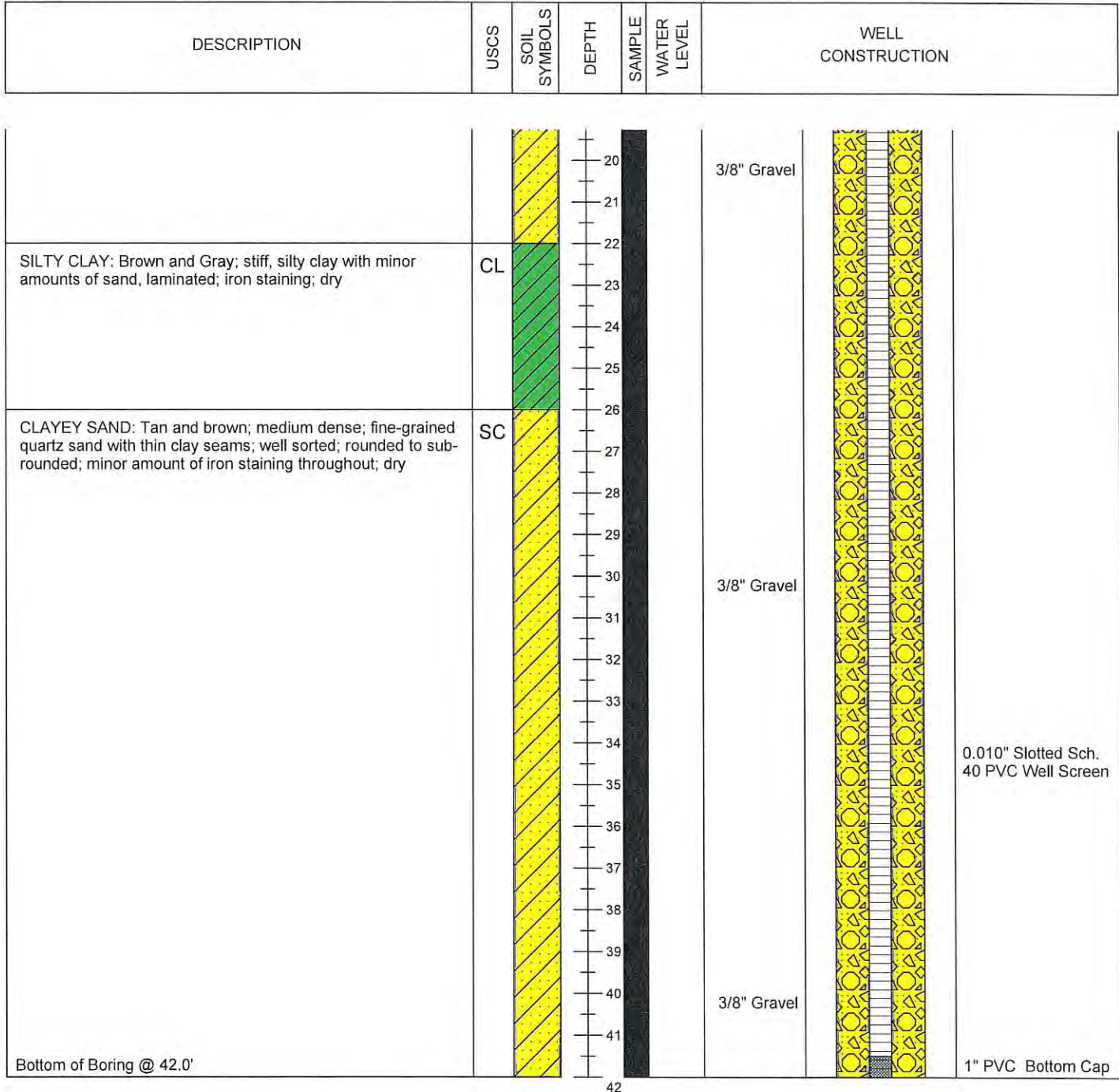
PROJECT: Angelina County WMC
PROJECT NO.: L-04-109
LOGGED BY: Leonell N. Scarborough
SUPERVISING PG: Leonell Scarborough
COMPLETION: 1/3/2020
DEVELOPMENT: N/A
SITE LOCATION: Lufkin, Texas
WELL OWNER: Angelina County

DRILLING INFORMATION

DRILLER: Donny Smith
DRILLER'S LICENSE NO.: 59631M
RIG TYPE: 6620DT
METHOD OF DRILLING: Hollow Stem Auger
SAMPLING METHODS: Split Core Barrel
SURFACE ELEVATION: 285
HOLE DIAMETER: 8.25
LATITUDE: 31.250899 LONGITUDE: -94.691142

Sample Water level while drilling

TBPG No. 50027



PASSIVE VENT (PV) DATA SHEET

Permittee or Site Name: Angelina County Waste Management Center

TNRCC MSW Permit Number: MSW 2105A

County: Angelina County, Texas

I.D. No.: PV-1

Date of Installation: June 9, 1998

Date of Completion: June 9, 1998

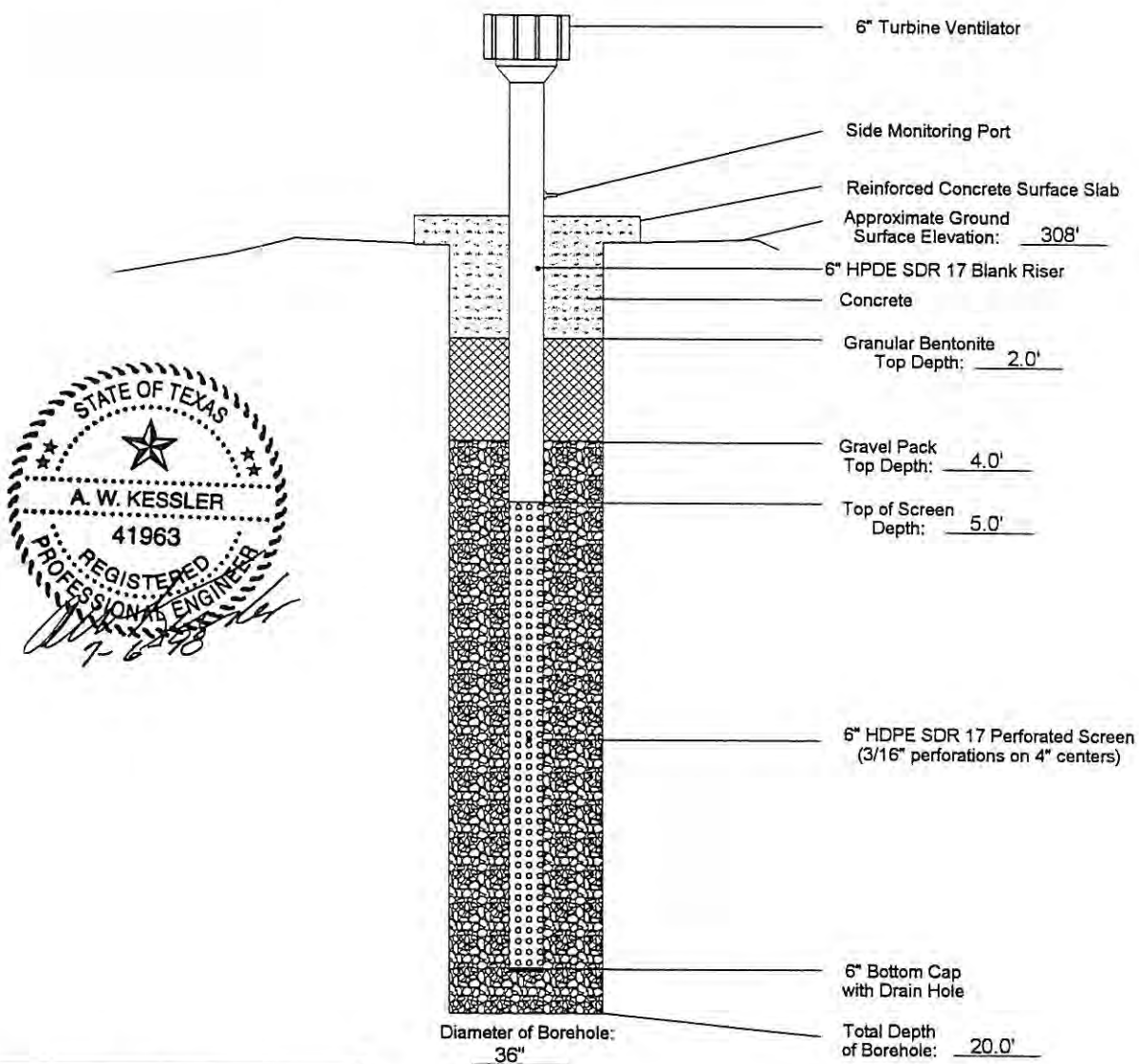
Driller Name: Hydrex Environmental, Inc.

License Number: 50089-M

Geologist, Hydrogeologist, or Engineer Supervising PV Installation: Gary A. Coker

Name of Geologic Formation(s) in which PV is Completed: Eocene Yegua Formation

Reinforced Concrete Surface Pad Dimensions: 5' x 5' x 4"



Hydrex

ENVIRONMENTAL, INC.
1128 NW Stallings Drive
Nacogdoches, Texas 75964-3428
(409) 568-9451 FAX: (409) 568-9527

PASSIVE VENT (PV) DATA SHEET

Permittee or Site Name: Angelina County Waste Management Center

TNRCC MSW Permit Number: MSW 2105A

County: Angelina County, Texas

I.D. No.: PV-2

Date of Installation: June 9, 1998

Date of Completion: June 9, 1998

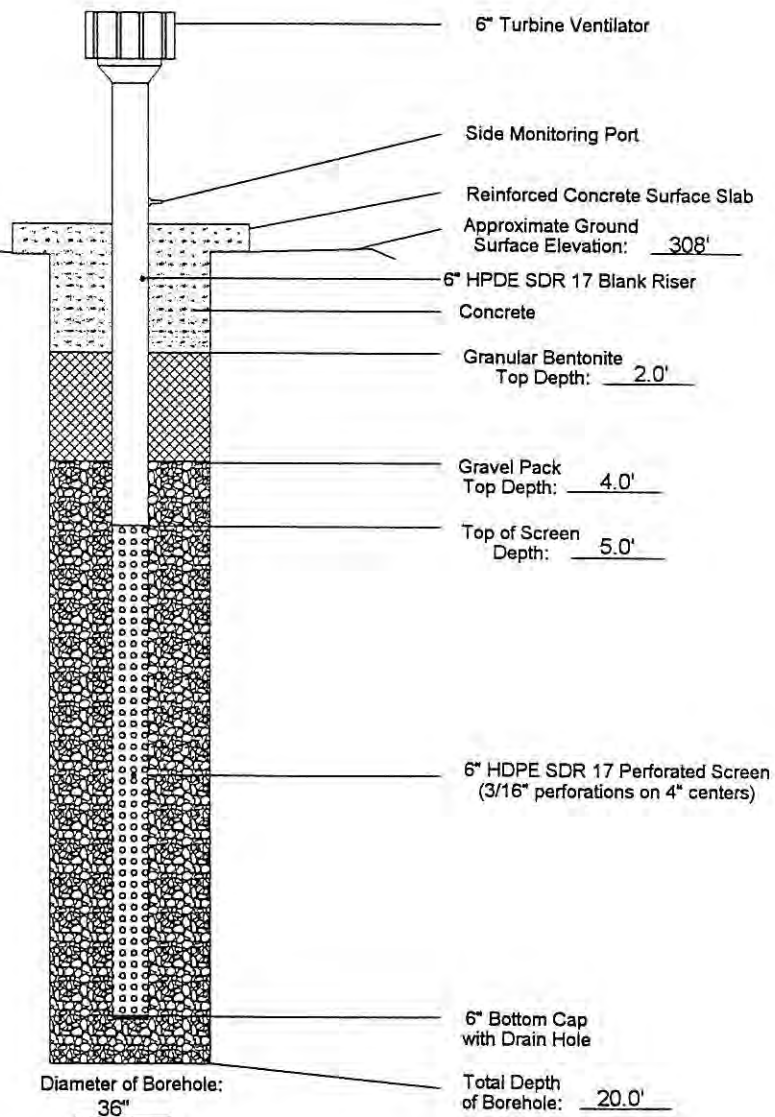
Driller Name: Hydrex Environmental, Inc.

License Number: 50089-M

Geologist, Hydrogeologist, or Engineer Supervising PV Installation: Gary A. Coker

Name of Geologic Formation(s) in which PV is Completed: Eocene Yegua Formation

Reinforced Concrete Surface Pad Dimensions: 5' x 5' x 4"



Hydrex

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Nacogdoches, Texas 75964-3428
(409) 568-9451 FAX: (409) 568-9527

PASSIVE VENT (PV) DATA SHEET

Permittee or Site Name: Angelina County Waste Management Center

TNRCC MSW Permit Number: MSW 2105A

County: Angelina County, Texas

I.D. No.: PV-3

Date of Installation: June 9, 1998

Date of Completion: June 9, 1998

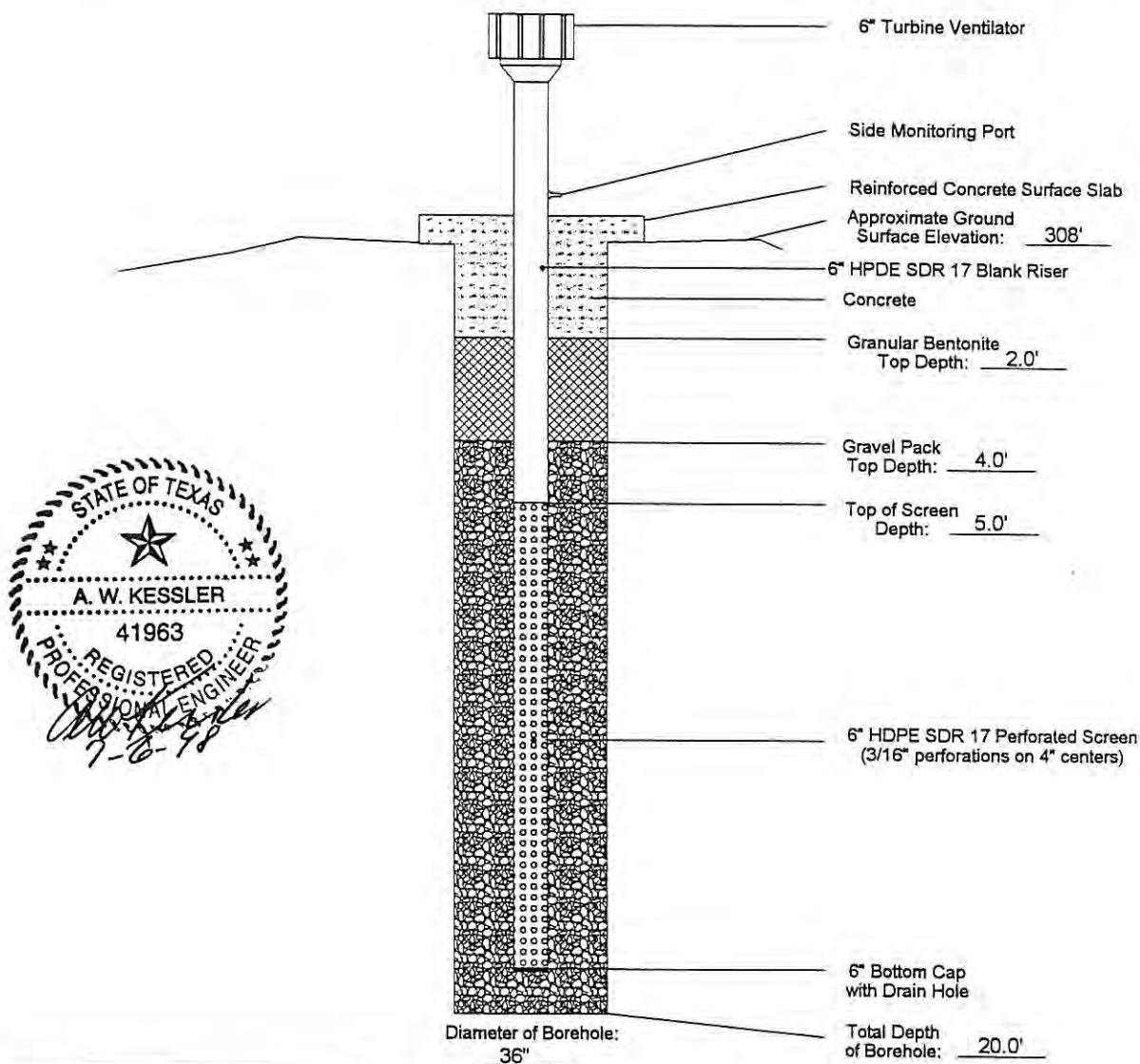
Driller Name: Hydrex Environmental, Inc.

License Number: 50089-M

Geologist, Hydrogeologist, or Engineer Supervising PV Installation: Gary A. Coker

Name of Geologic Formation(s) in which PV is Completed: Eocene Yegua Formation

Reinforced Concrete Surface Pad Dimensions: 5' x 5' x 4"



Hydrex

ENVIRONMENTAL, INC.

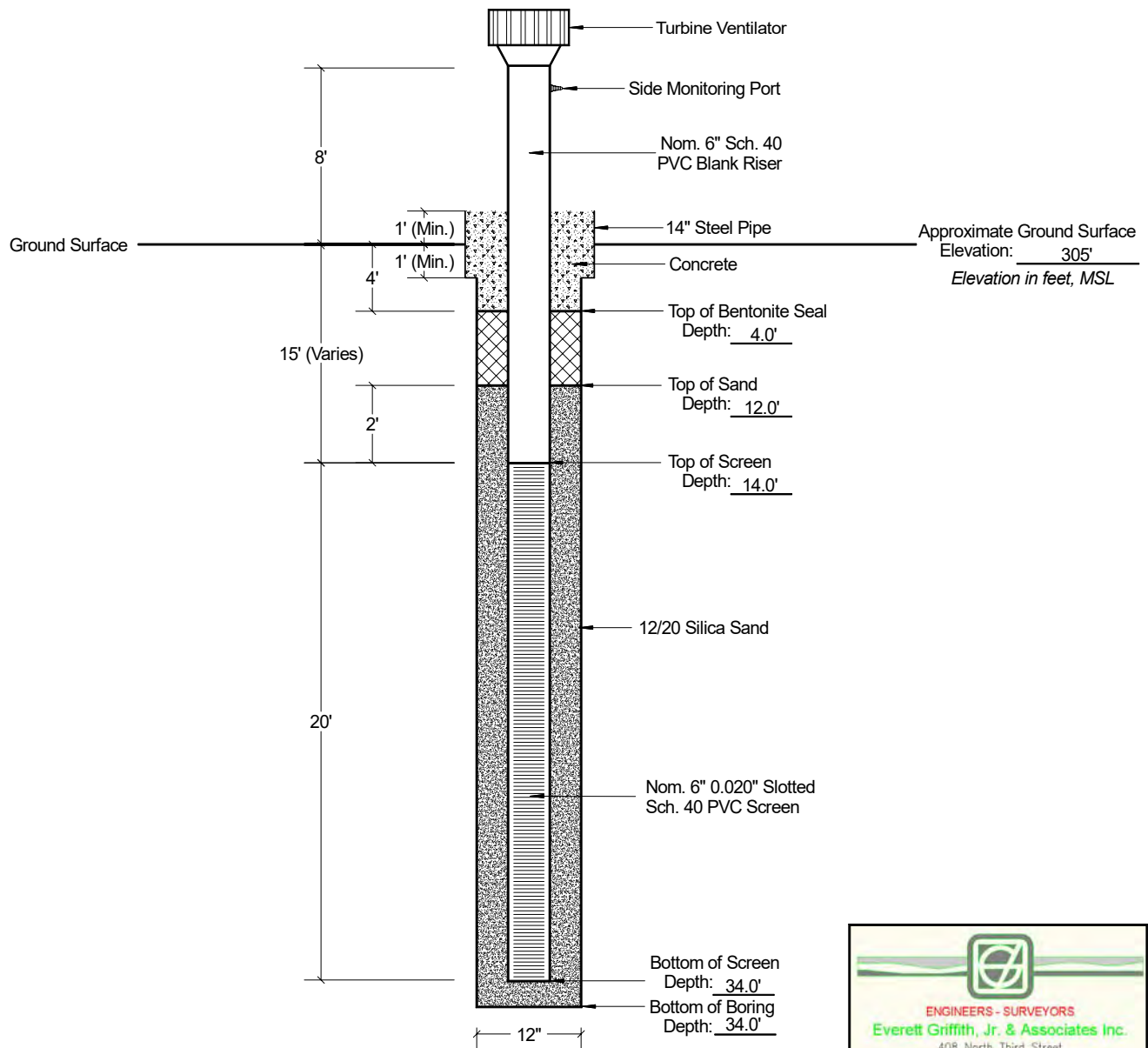
1128 NW Stallings Drive
Nacogdoches, Texas 75964-3428
(409) 568-9451 FAX: (409) 568-9527

Gas Vent Construction Details

Permittee or Site Name: Angelina County Waste Management Center
County: Angelina County, Texas
Date of Installation: April 23, 2009
Borehole Diameter: 12 inches
Latitude: 31° 14' 51.3888" Longitude: -94° 41' 42.4572"
Name of Geologic Formation(s) in which Gas Vent is completed: Yegua

TCEQ MSW Permit No.: 2105A
I.D. No.: PV-4
Date of Completion: April 23, 2009
Driller Name: Lawrence H. Tobola
License No.: 3026 M
Engineer Supervising Gas Vent Installation: Bob Staehs, P.E.

NOTE: All depths reported in feet below ground surface.



Drawing Not to Scale, All Dimensions Approximate



ENVIRONMENTAL, INC.

1120 NW Stallings Drive
Nacogdoches, Texas 75964
(936) 568-9451 Fax (936) 568-9527

Gas Vent Construction Details

Gas Vent PV-4

Job No. L-07-484

Angelina County Waste Management Center
Permit No. MSW 2105A
Angelina County, Texas

April 2009

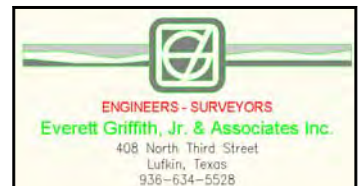
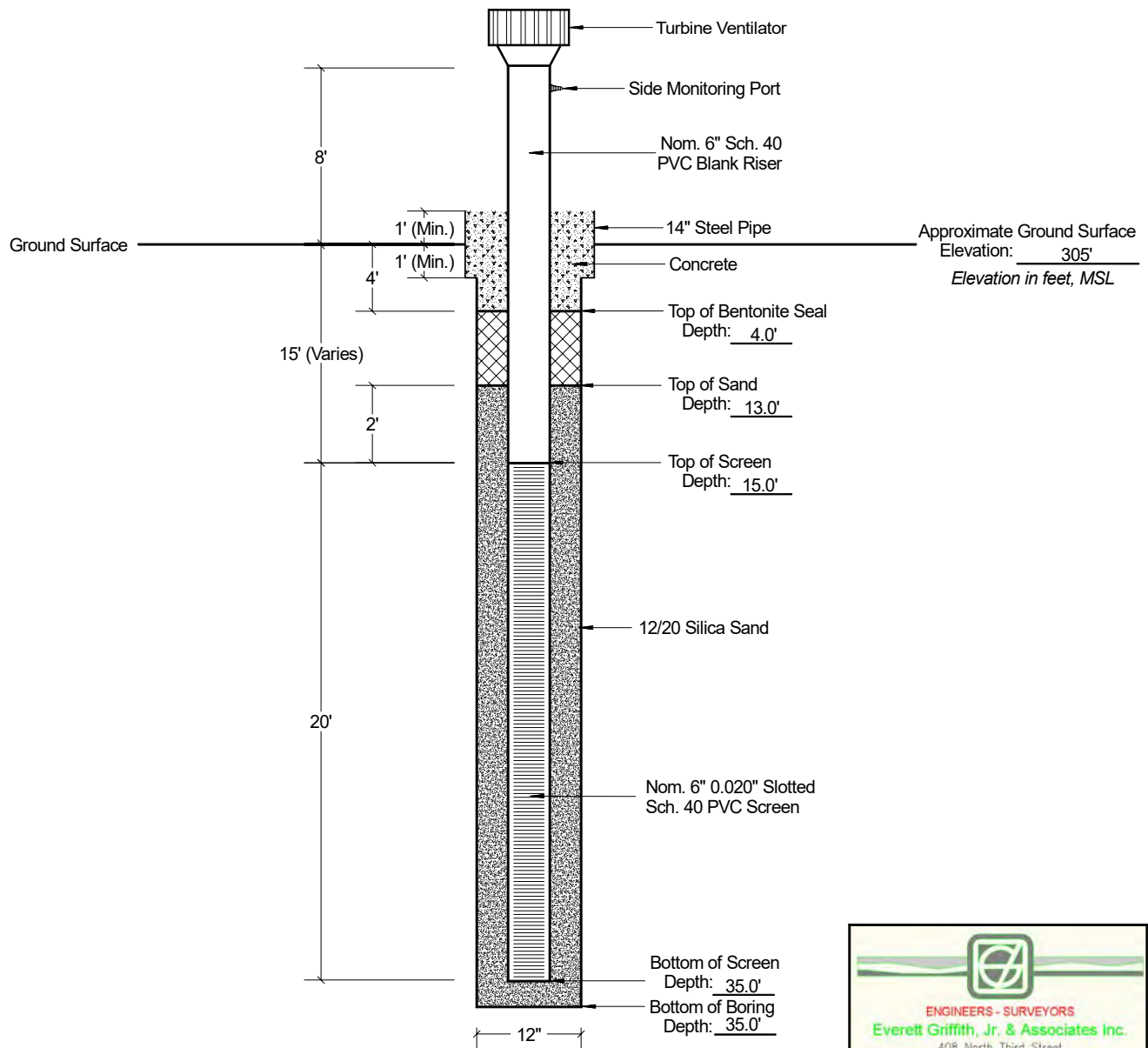
Draftsman: JCC

Gas Vent Construction Details

Permittee or Site Name: Angelina County Waste Management Center
 County: Angelina County, Texas
 Date of Installation: April 23, 2009
 Borehole Diameter: 12 inches
 Latitude: 31° 14' 51.7344" Longitude: -94° 41' 42.4140"
 Name of Geologic Formation(s) in which Gas Vent is completed: Yegua

TCEQ MSW Permit No.: 2105A
 I.D. No.: PV-5
 Date of Completion: April 23, 2009
 Driller Name: Lawrence H. Tobola
 License No.: 3026 M
 Engineer Supervising Gas Vent Installation: Bob Staehs, P.E.

NOTE: All depths reported in feet below ground surface.



Drawing Not to Scale, All Dimensions Approximate



ENVIRONMENTAL, INC.

1120 NW Stallings Drive
 Nacogdoches, Texas 75964
 (936) 568-9451 Fax (936) 568-9527

Gas Vent Construction Details

Gas Vent PV-5

Job No. L-07-484

Angelina County Waste Management Center
 Permit No. MSW 2105A
 Angelina County, Texas

April 2009

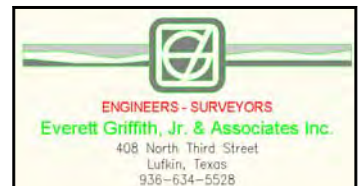
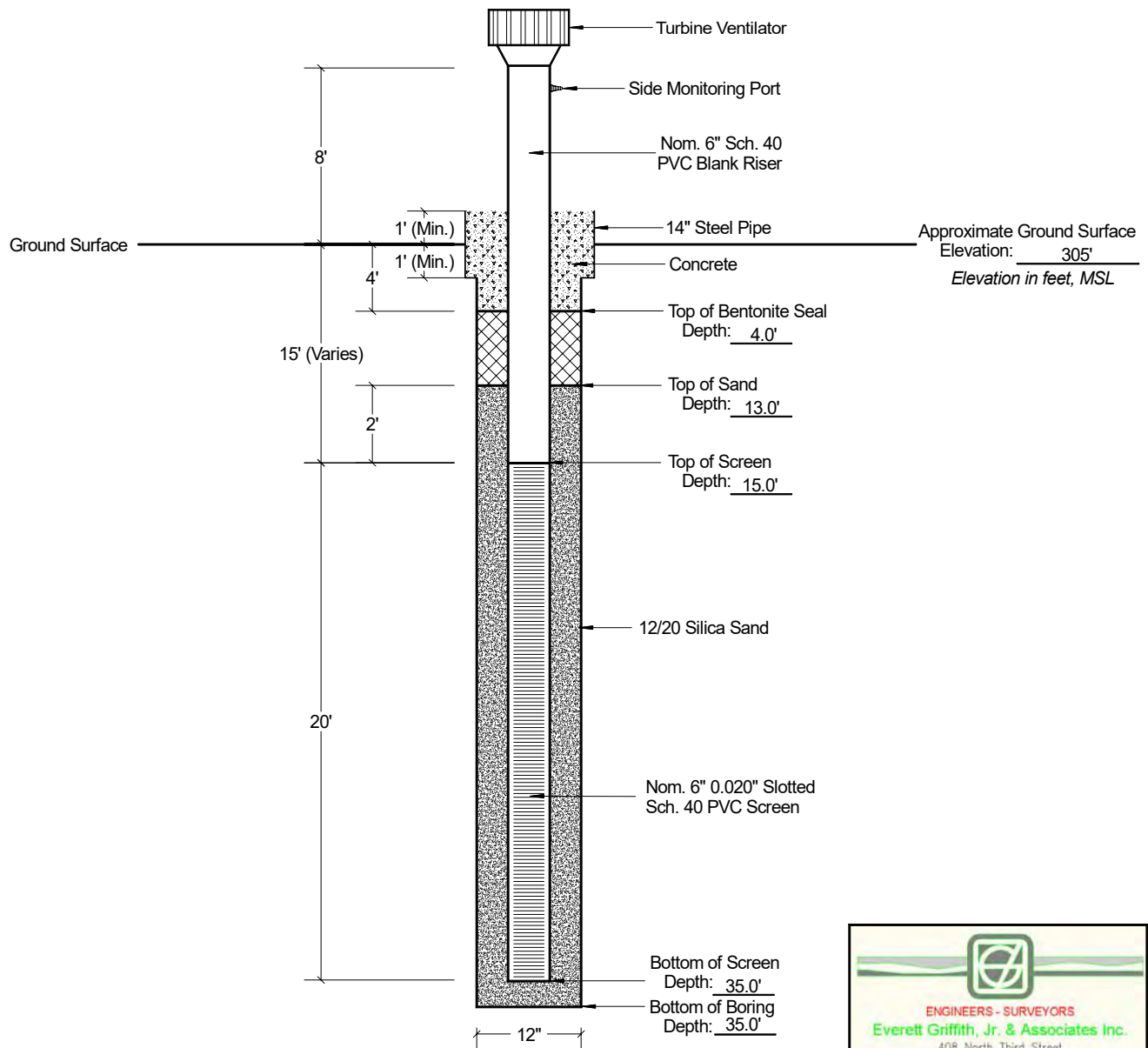
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Gas Vent Construction Details

Permittee or Site Name: Angelina County Waste Management Center
 County: Angelina County, Texas
 Date of Installation: April 28, 2009
 Borehole Diameter: 12 inches
 Latitude: 31° 14' 52.0872" Longitude: -94° 41' 42.3708"
 Name of Geologic Formation(s) in which Gas Vent is completed: Yegua

TCEQ MSW Permit No.: 2105A
 I.D. No.: PV-6
 Date of Completion: April 28, 2009
 Driller Name: Lawrence H. Tobola
 License No.: 3026 M
 Engineer Supervising Gas Vent Installation: Bob Staehs, P.E.

NOTE: All depths reported in feet below ground surface.



Drawing Not to Scale, All Dimensions Approximate



ENVIRONMENTAL, INC.

1120 NW Stallings Drive
 Nacogdoches, Texas 75964
 (936) 568-9451 Fax (936) 568-9527

Gas Vent Construction Details

Gas Vent PV-6

Job No. L-07-484

Angelina County Waste Management Center
 Permit No. MSW 2105A
 Angelina County, Texas

April 2009

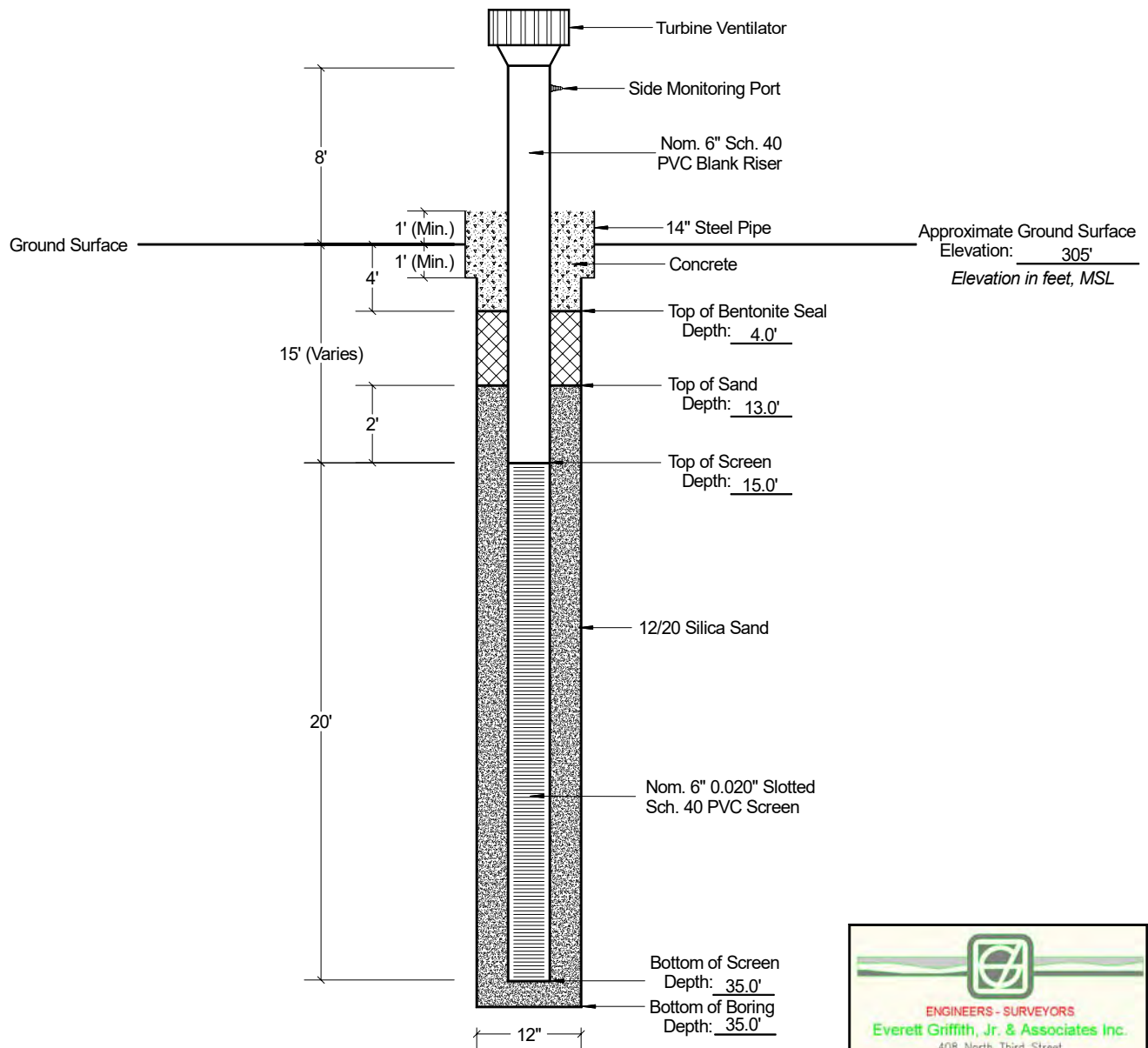
Draftsman: JCC

Gas Vent Construction Details

Permittee or Site Name: Angelina County Waste Management Center
 County: Angelina County, Texas
 Date of Installation: April 27, 2009
 Borehole Diameter: 12 inches
 Latitude: 31° 14' 52.4256" Longitude: -94° 41' 42.3384"
 Name of Geologic Formation(s) in which Gas Vent is completed: Yegua

TCEQ MSW Permit No.: 2105A
 I.D. No.: PV-7
 Date of Completion: April 27, 2009
 Driller Name: Lawrence H. Tobola
 License No.: 3026 M
 Engineer Supervising Gas Vent Installation: Bob Staehs, P.E.

NOTE: All depths reported in feet below ground surface.



Drawing Not to Scale, All Dimensions Approximate



ENVIRONMENTAL, INC.

1120 NW Stallings Drive
 Nacogdoches, Texas 75964
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Gas Vent Construction Details

Gas Vent PV-7

Job No. L-07-484

Angelina County Waste Management Center
 Permit No. MSW 2105A
 Angelina County, Texas

April 2009

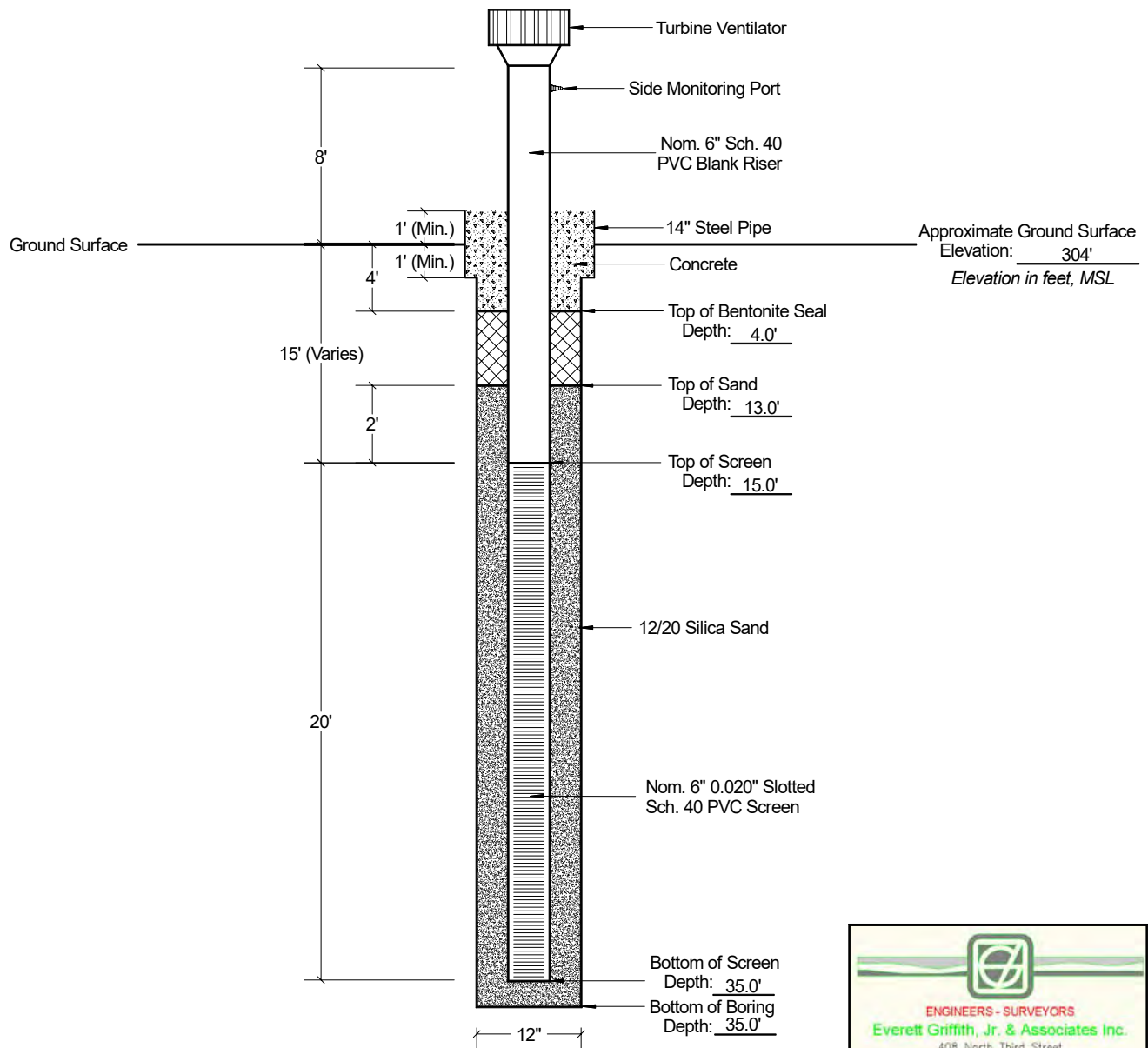
Draftsman: JCC

Gas Vent Construction Details

Permittee or Site Name: Angelina County Waste Management Center
 County: Angelina County, Texas
 Date of Installation: April 24, 2009
 Borehole Diameter: 12 inches
 Latitude: 31° 14' 52.7784" Longitude: -94° 41' 42.2988"
 Name of Geologic Formation(s) in which Gas Vent is completed: Yegua

TCEQ MSW Permit No.: 2105A
 I.D. No.: PV-8
 Date of Completion: April 24, 2009
 Driller Name: Lawrence H. Tobola
 License No.: 3026 M
 Engineer Supervising Gas Vent Installation: Bob Staehs, P.E.

NOTE: All depths reported in feet below ground surface.



Drawing Not to Scale, All Dimensions Approximate



ENVIRONMENTAL, INC.

1120 NW Stallings Drive
 Nacogdoches, Texas 75964
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Gas Vent Construction Details

Gas Vent PV-8

Job No. L-07-484

Angelina County Waste Management Center
 Permit No. MSW 2105A
 Angelina County, Texas

April 2009

Draftsman: JCC

Gas Vent Construction Details

Permittee or Site Name: Angelina County Waste Management Center

County: Angelina County, Texas

Date of Installation: April 24, 2009

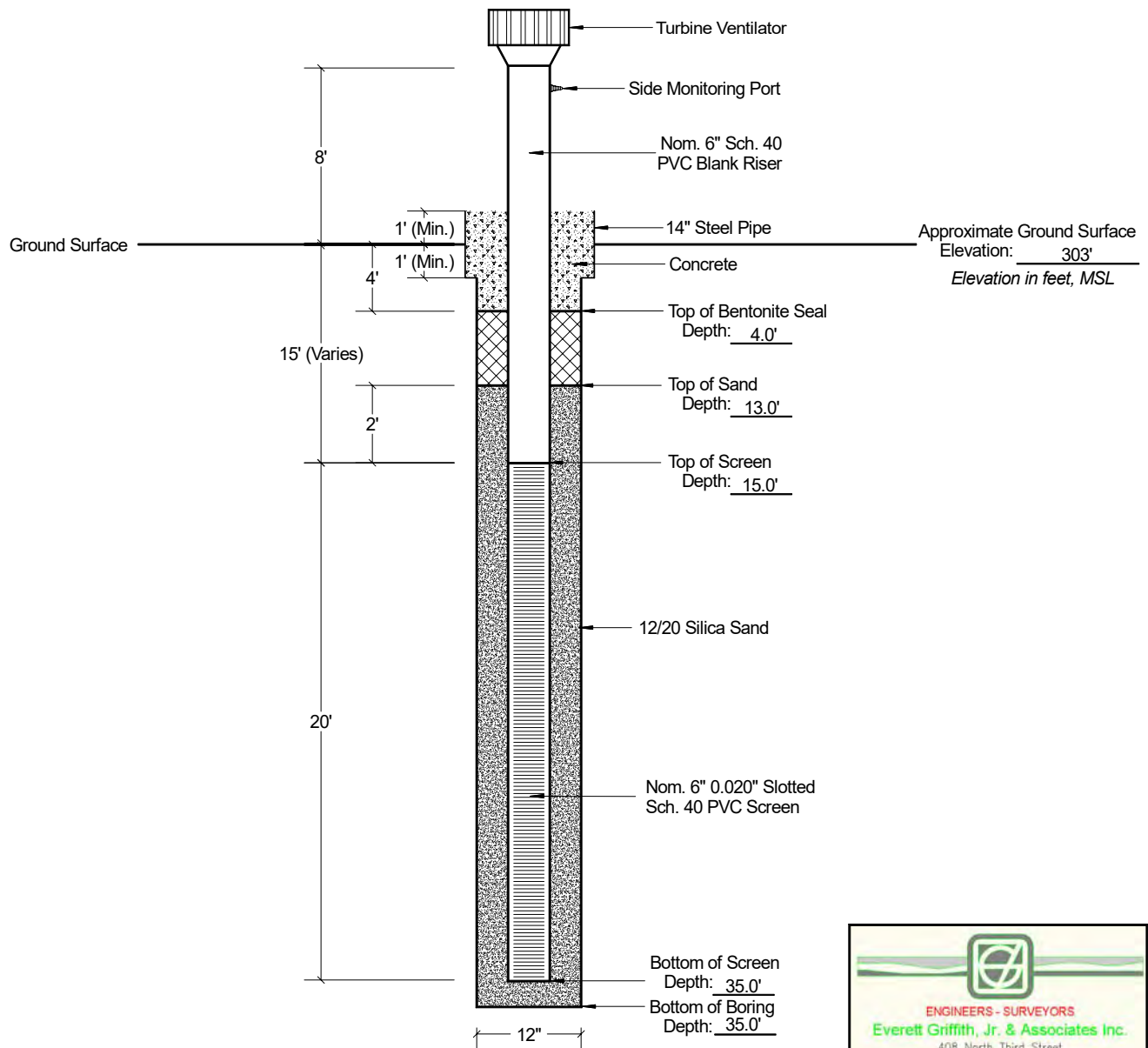
Borehole Diameter: 12 inches

Latitude: 31° 14' 53.1168" Longitude: -94° 41' 42.2556"

Name of Geologic Formation(s) in which Gas Vent is completed: Yegua

TCEQ MSW Permit No.: 2105A
I.D. No.: PV-9
Date of Completion: April 24, 2009
Driller Name: Lawrence H. Tobola
License No.: 3026 M
Engineer Supervising Gas Vent Installation: Bob Staehe, P.E.

NOTE: All depths reported in feet below ground surface.



Drawing Not to Scale, All Dimensions Approximate



ENVIRONMENTAL, INC.

1120 NW Stallings Drive
Nacogdoches, Texas 75964
(936) 568-9451 Fax (936) 568-9527

Gas Vent Construction Details

Gas Vent PV-9

Job No. L-07-484

Angelina County Waste Management Center
Permit No. MSW 2105A
Angelina County, Texas

April 2009

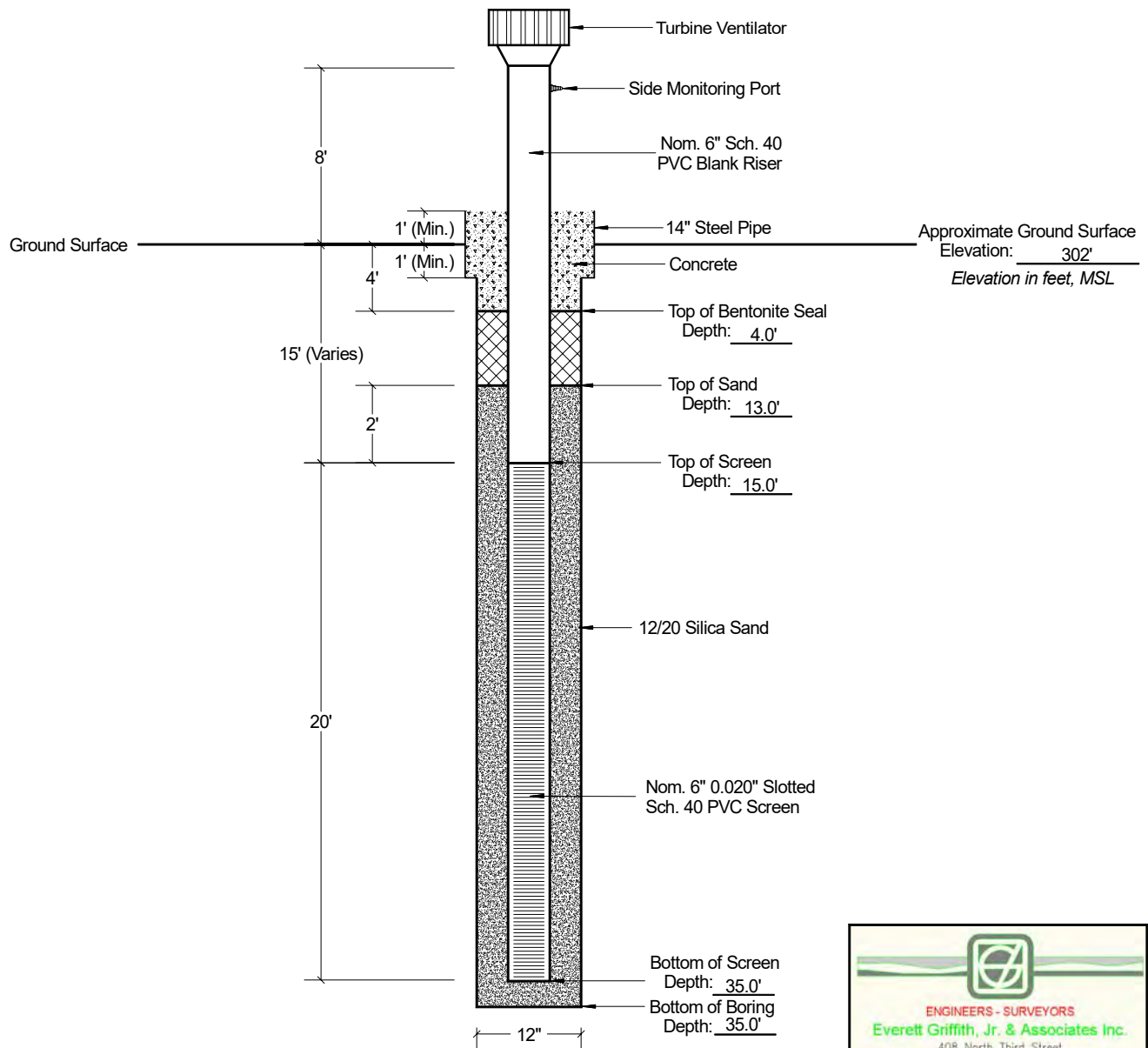
Draftsman: JCC

Gas Vent Construction Details

Permittee or Site Name: Angelina County Waste Management Center
 County: Angelina County, Texas
 Date of Installation: April 24, 2009
 Borehole Diameter: 12 inches
 Latitude: 31° 14' 53.4876" Longitude: -94° 41' 42.1240"
 Name of Geologic Formation(s) in which Gas Vent is completed: Yegua

TCEQ MSW Permit No.: 2105A
 I.D. No.: PV-10
 Date of Completion: April 24, 2009
 Driller Name: Lawrence H. Tobola
 License No.: 3026 M
 Engineer Supervising Gas Vent Installation: Bob Staehs, P.E.

NOTE: All depths reported in feet below ground surface.



Drawing Not to Scale, All Dimensions Approximate



ENVIRONMENTAL, INC.

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 Nacogdoches, Texas 75964
 (936) 568-9451 Fax (936) 568-9527

Gas Vent Construction Details

Gas Vent PV-10

Job No. L-07-484

Angelina County Waste Management Center
 Permit No. MSW 2105A
 Angelina County, Texas

April 2009

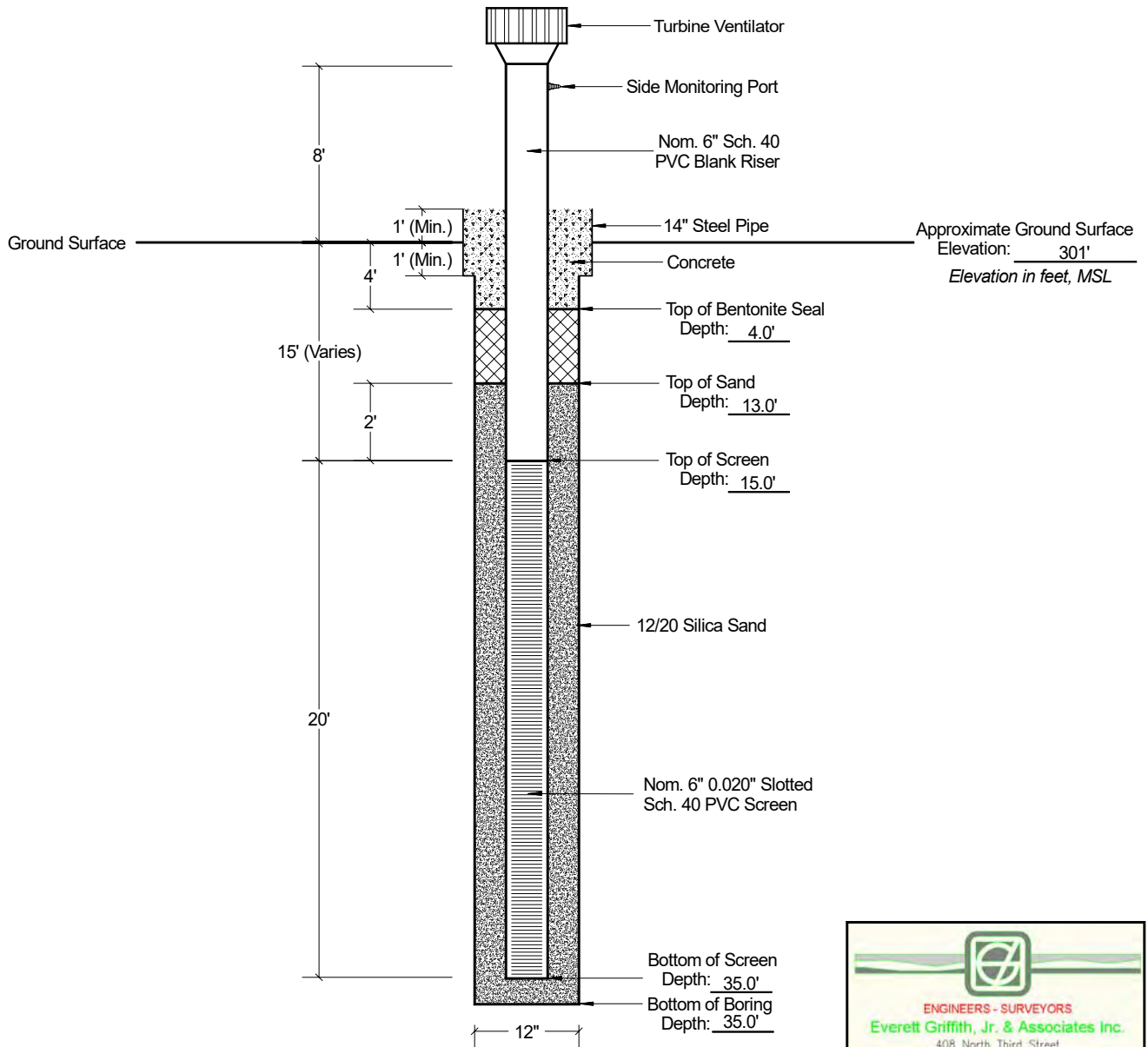
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Gas Vent Construction Details

Permittee or Site Name: Angelina County Waste Management Center
 County: Angelina County, Texas
 Date of Installation: April 27, 2009
 Borehole Diameter: 12 inches
 Latitude: 31° 14' 53.7972" Longitude: -94° 41' 42.1476"
 Name of Geologic Formation(s) in which Gas Vent is completed: Yegua

TCEQ MSW Permit No.: 2105A
I.D. No.: PV-11
Date of Completion: April 27, 2009
Driller Name: Lawrence H. Tobola
License No.: 3026 M
Engineer Supervising Gas Vent Installation: Bob Staehs, P.E.

NOTE: All depths reported in feet below ground surface.



Drawing Not to Scale, All Dimensions Approximate



ENVIRONMENTAL, INC.

1120 NW Stallings Drive
Nacogdoches, Texas 75964
(936) 568-9451 Fax (936) 568-9527

Gas Vent Construction Details

Gas Vent PV-11

Job No. L-07-484

Angelina County Waste Management Center
Permit No. MSW 2105A
Angelina County, Texas

April 2009

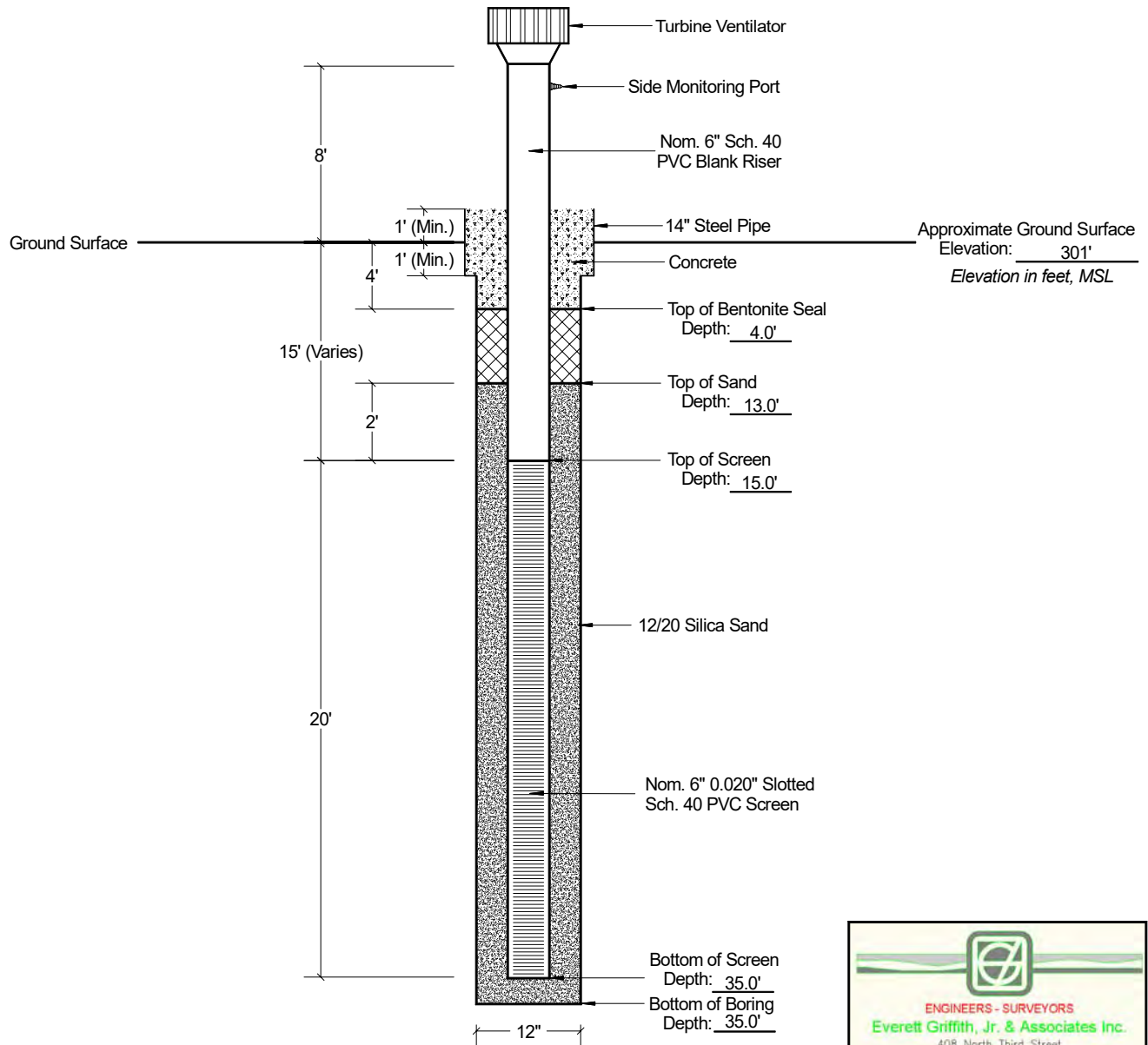
Draftsman: JCC

Gas Vent Construction Details

Permittee or Site Name: Angelina County Waste Management Center
County: Angelina County, Texas
Date of Installation: April 27, 2009
Borehole Diameter: 12 inches
Latitude: 31° 14' 54.1320" Longitude: -94° 41' 42.0900"
Name of Geologic Formation(s) in which Gas Vent is completed: Yegua

TCEQ MSW Permit No.: 2105A
I.D. No.: PV-12
Date of Completion: April 27, 2009
Driller Name: Lawrence H. Tobola
License No.: 3026 M
Engineer Supervising Gas Vent Installation: Bob Staehs, P.E.

NOTE: All depths reported in feet below ground surface.



Drawing Not to Scale, All Dimensions Approximate



ENVIRONMENTAL, INC.

1120 NW Stallings Drive
Nacogdoches, Texas 75964
(936) 568-9451 Fax (936) 568-9527

Gas Vent Construction Details

Gas Vent PV-12

Job No. L-07-484

Angelina County Waste Management Center
Permit No. MSW 2105A
Angelina County, Texas

April 2009

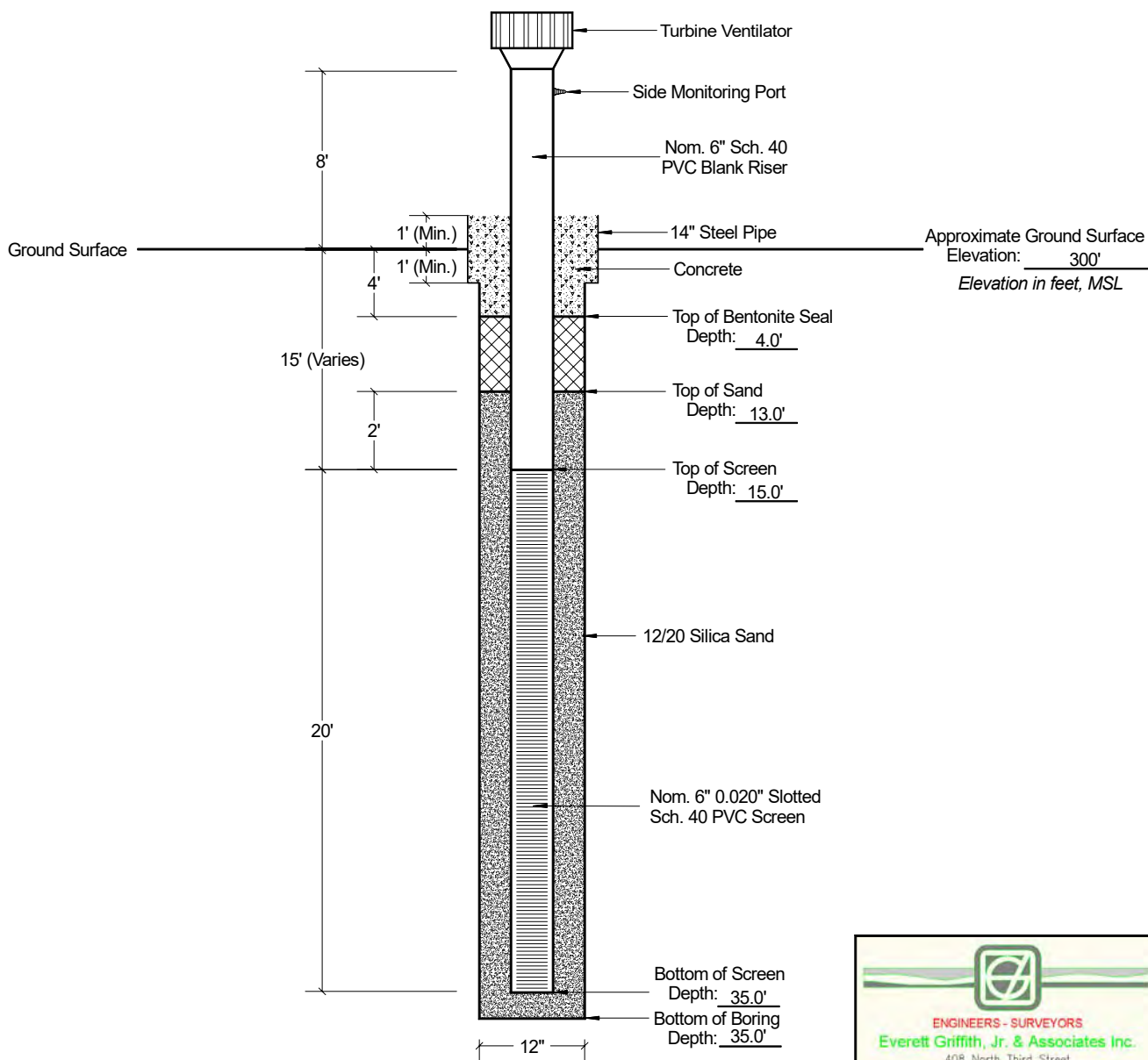
Draftsman: JCC

Gas Vent Construction Details

Permittee or Site Name: Angelina County Waste Management Center
 County: Angelina County, Texas
 Date of Installation: April 23, 2009
 Borehole Diameter: 12 inches
 Latitude: 31° 14' 54.5856" Longitude: -94° 41' 42.0504"
 Name of Geologic Formation(s) in which Gas Vent is completed: Yegua

TCEQ MSW Permit No.: 2105A
 I.D. No.: PV-13
 Date of Completion: April 23, 2009
 Driller Name: Lawrence H. Tobola
 License No.: 3026 M
 Engineer Supervising Gas Vent Installation: Bob Staehs, P.E.

NOTE: All depths reported in feet below ground surface.



Drawing Not to Scale, All Dimensions Approximate



ENVIRONMENTAL, INC.

1120 NW Stallings Drive
 Nacogdoches, Texas 75964
 (936) 568-9451 Fax (936) 568-9527

Gas Vent Construction Details

Gas Vent PV-13

Job No. L-07-484

Angelina County Waste Management Center
 Permit No. MSW 2105A
 Angelina County, Texas

April 2009

Draftsman: JCC

Passive Vent Construction Details

Permittee or Site Name: Angelina County Waste Management Center

County: Angelina County, Texas

Date of Installation: 7/11/24

Borehole Diameter: 8.25"

Latitude: 31.246890 Longitude: -94.698470

Name of Geologic Formations(s) in which Gas Vent is completed: Eocene Yegua Formation

TCEQ MSW Permit No.: MSW 2105A

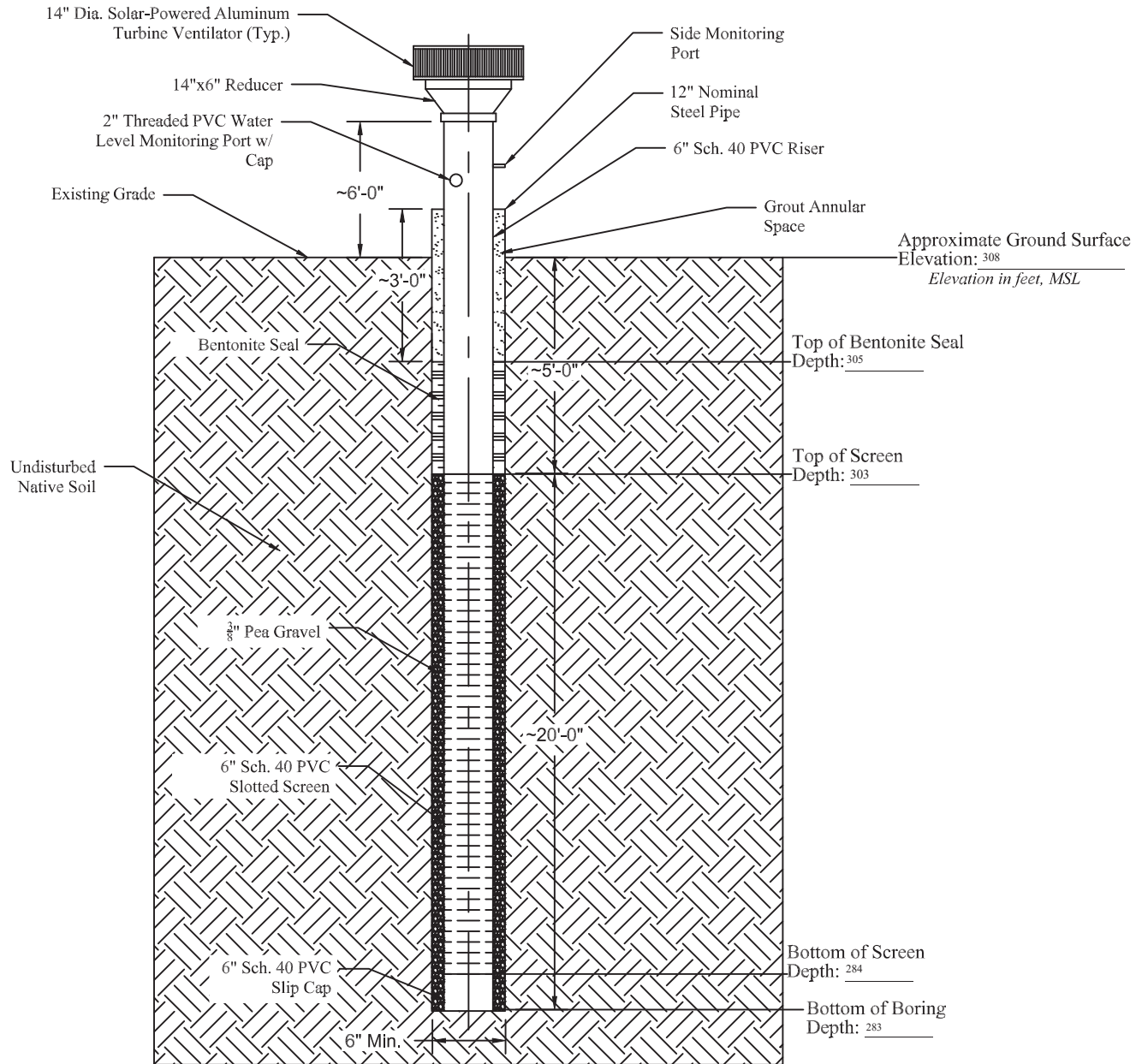
I.D. No.: PV-1W

Date of Completion: 7/11/24

Driller Name: Donny Smith

License No.: 59631M

Engineer Supervising Gas Vent Installation: John Q. Hargrove P.E.



Passive Vent Detail

Scale: N.T.S



TBP/ELS ENG. FIRM NO. F-13588 TBP/PG FIRM NO. F-50027
312 OLD TYLER ROAD NACOGDOCHES, TX 75961 (936) 568-9457

PASSIVE VENT CONSTRUCTION DETAILS

ANGELINA COUNTY WASTE MANAGEMENT CENTER
PERMIT NO. MSW 2105A
ANGELINA COUNTY, TEXAS

DSN. LQH

JOB NO.: L-10-159

DWN. CT

DATE: 7/11/2024

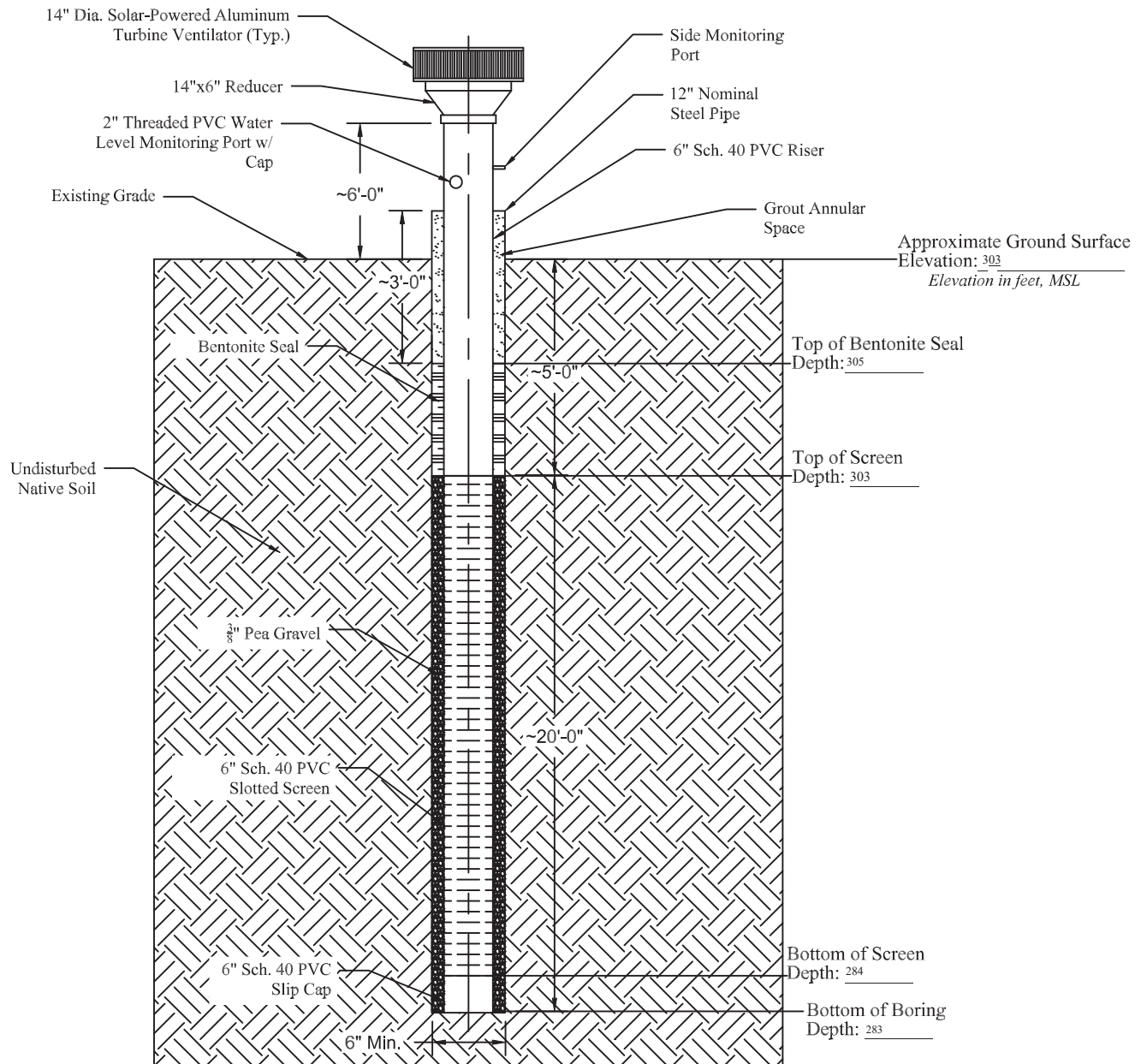
CHK. CT

SCALE: NOT TO SCALE

Passive Vent Construction Details

Permittee or Site Name: Angelina County Waste Management Center
County: Angelina County, Texas
Date of Installation: 7/11/24
Borehole Diameter: 8.25"
Latitude: 31.249083 Longitude: -94.699083
Name of Geologic Formations(s) in which Gas Vent is completed: Eocene Yegua Formation

TCEQ MSW Permit No.: MSW 2105A
I.D. No.: PV-2W
Date of Completion: 7/11/24
Driller Name: Donny Smith
License No.: 59631M
Engineer Supervising Gas Vent Installation: John Q. Hargrove P.E.



Passive Vent Detail

Scale: N.T.S



TBP/ELS ENG. FIRM NO. F-13588 TBP/PG FIRM NO. F-50027
312 OLD TYLER ROAD NACOGDOCHES, TX 75961 (936) 568-9457

PASSIVE VENT CONSTRUCTION DETAILS

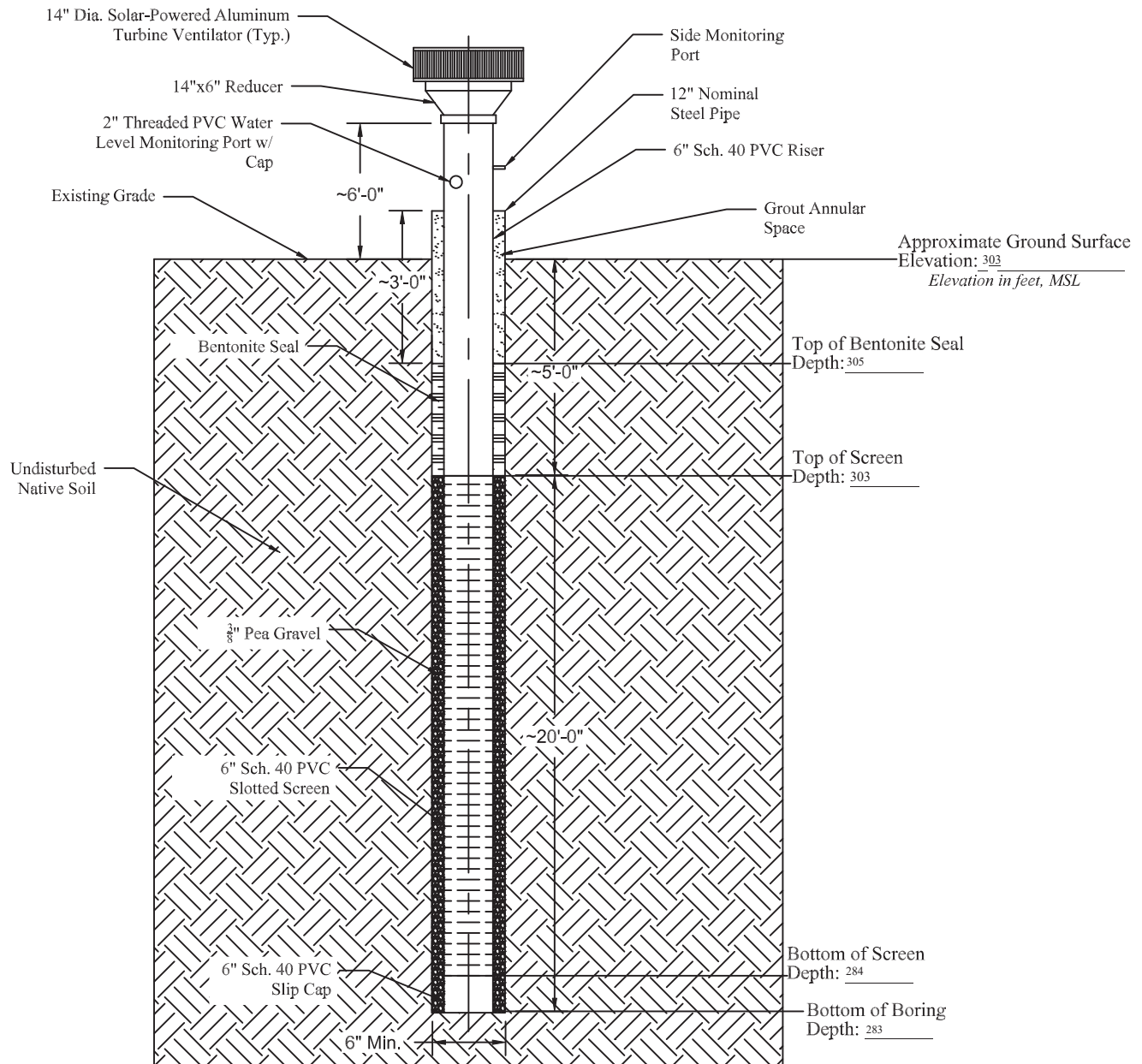
ANGELINA COUNTY WASTE MANAGEMENT CENTER
PERMIT NO. MSW 2105A
ANGELINA COUNTY, TEXAS

DSN. LQH	JOB NO.: L-10-159
DWN. CT	DATE: 7/11/2024
CHK. CT	SCALE: NOT TO SCALE

Passive Vent Construction Details

Permittee or Site Name: Angelina County Waste Management Center
County: Angelina County, Texas
Date of Installation: 7/11/24
Borehole Diameter: 8.25"
Latitude: 31.249149 Longitude: -94.699101
Name of Geologic Formations(s) in which Gas Vent is completed: Eocene Yegua Formation

TCEQ MSW Permit No.: MSW 2105A
I.D. No.: PV-3W
Date of Completion: 7/11/24
Driller Name: Donny Smith
License No.: 59631M
Engineer Supervising Gas Vent Installation: John Q. Hargrove P.E.



Passive Vent Detail

Scale: N.T.S



TBP/ELS ENG. FIRM NO. F-13588 TBP/PG FIRM NO. F-50027
312 OLD TYLER ROAD NACOGDOCHES, TX 75961 (936) 568-9457

PASSIVE VENT CONSTRUCTION DETAILS

ANGELINA COUNTY WASTE MANAGEMENT CENTER
PERMIT NO. MSW 2105A
ANGELINA COUNTY, TEXAS

DSN. LQH JOB NO.: L-10-159

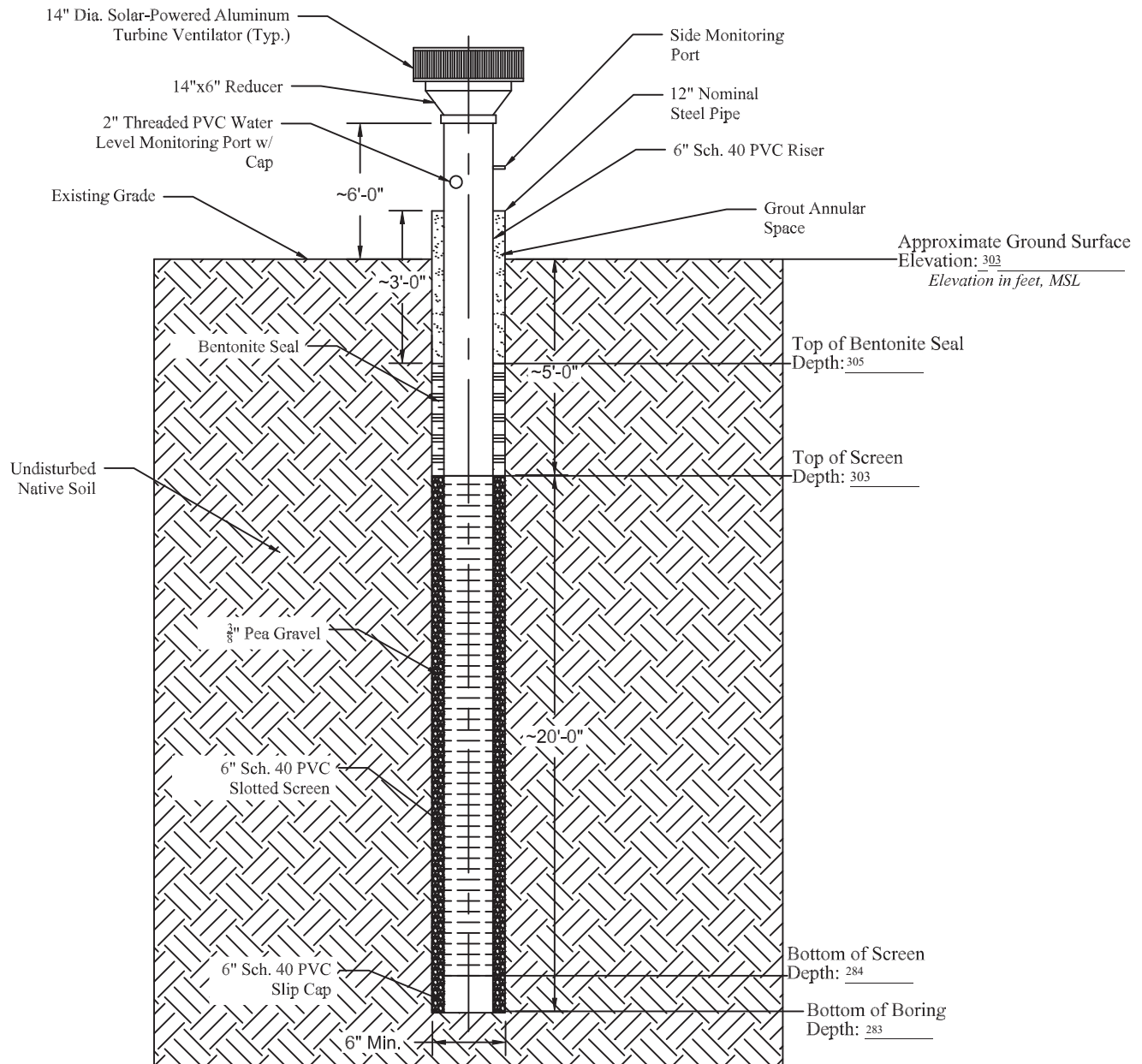
DWN. CT DATE: 7/11/2024

CHK. CT SCALE: NOT TO SCALE

Passive Vent Construction Details

Permittee or Site Name: Angelina County Waste Management Center
County: Angelina County, Texas
Date of Installation: 7/11/24
Borehole Diameter: 8.25"
Latitude: 31.249217 Longitude: -94.699114
Name of Geologic Formations(s) in which Gas Vent is completed: Eocene Yegua Formation

TCEQ MSW Permit No.: MSW 2105A
I.D. No.: PV-4W
Date of Completion: 7/11/24
Driller Name: Donny Smith
License No.: 59631M
Engineer Supervising Gas Vent Installation: John Q. Hargrove P.E.



Passive Vent Detail

Scale: N.T.S



TBP/ELS ENG. FIRM NO. F-13588 TBP/PG FIRM NO. F-50027
312 OLD TYLER ROAD NACOGDOCHES, TX 75961 (936) 568-9457

PASSIVE VENT CONSTRUCTION DETAILS

ANGELINA COUNTY WASTE MANAGEMENT CENTER
PERMIT NO. MSW 2105A
ANGELINA COUNTY, TEXAS

DSN. LQH	JOB NO.: L-10-159
DWN. CT	DATE: 7/11/2024
CHK. CT	SCALE: NOT TO SCALE

Passive Vent No. Pv-1

PROJECT: Angelina County Waste Management Center

DATE: 06-09-98

GEOLOGIST: Gary A. Coker

DRILL RIG: Foundation Rig

HOLE DIA.: 36" in.

SAMPLER: Gary A. Coker

INITIAL GW DEPTH: dry ft.

FINAL GW: dry ft.

HOLE ELEV.: 308 ft. MSL

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH	SAMPLE	Water Level	WELL CONSTRUCTION DETAIL
<p>Silty Sand: Loose, light gray, fine- to very fine-grained, slightly oxidized @ 0.5' to 1.0', dry</p> <p>- 1" to 3" thick lean clay interbeds @ 1.0' and 3.2'</p> <p>- color changes to mottled light and dark gray @ 6.0' to 8.0', slight increase in clay content, dry</p>	SM		0			<p>Riser with turbine ventilator</p> <p>Concrete</p> <p>6" Ø HDPE SDR 17 Blank Riser</p> <p>Bentonite Seal</p>
<p>Lean Clay: very stiff, mottled light gray and tan, dry</p> <p>- very thin zone of oxidation @ 11.0', dry</p> <p>- 6" thick fat clay layer @ 13.0' to 13.5', slightly oxidized</p>	CL		10			<p>Gravel Pack</p>
<p>Silty Sand: Loose, light gray, fine- to very fine-grained, dry</p> <p>- slight increase in clay content and slightly oxidized @ 15.5'</p> <p>- 6" thick lean clay interbed @ 18.0' to 18.5' and 19.5' to 20.0', dry</p> <p>- heavily oxidized @ 19.5' to 20.0'</p>	SM		15			<p>6" Ø Perforated HDPE SDR 17 Screen (3/16" perforations)</p>
Bottom of Boring @ 20.0'			20			<p>6" Ø Bottom Cap with Drain Hole</p>
			25			

Hydrex Environmental, Inc.

1128 NW Stallings Drive
Nacogdoches, Texas 75964

Notes:

Elevation in feet relative to mean sea level; estimated from site topographic map

Project No.
L-09-159

Page 1 of 1

Passive Vent No. Pv-2

PROJECT: Angelina County Waste Management Center
 DRILL RIG: Foundation Rig
 INITIAL GW DEPTH: dry ft.

DATE: 06-09-98
 HOLE DIA.: 36" in.
 FINAL GW: dry ft.

GEOLOGIST: Gary A. Coker
 SAMPLER: Gary A. Coker
 HOLE ELEV.: 308 ft. MSL

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH	SAMPLE	Water Level	WELL CONSTRUCTION DETAIL
<p>Silty Sand: Loose, light gray, fine- to very fine-grained, slightly oxidized @ 0.5' to 1.0', dry</p> <p>- 1" to 3" thick lean clay interbeds @ 1.0' and 3.2'</p> <p>- color changes to mottled light and dark gray @ 6.0' to 8.0', slight increase in clay content, dry</p>	SM		0			<p>Riser with turbine ventilator</p> <p>Concrete</p> <p>6" Ø HDPE SDR 17 Blank Riser</p> <p>Bentonite Seal</p>
<p>Lean Clay: Very stiff, mottled light gray and tan, dry</p> <p>- 6" thick fat clay layer @ 13.0' to 13.5', slightly oxidized</p>	CL		10			<p>Gravel Pack</p>
<p>Silty Sand: Loose, light gray, fine- to very fine-grained, dry</p> <p>- slight increase in clay content and slightly oxidized @ 15.5'</p> <p>- 6" thick lean clay interbed @ 18.0' to 18.5' and 19.5' to 20.0', dry</p> <p>- heavily oxidized @ 19.5' to 20.0'</p>	SM		15			<p>6" Ø Perforated HDPE SDR 17 Screen (3/16" perforations)</p> <p>6" Ø Bottom Cap with Drain Hole</p>
Bottom of Boring @ 20.0'			20			
			25			

Hydrex Environmental, Inc.

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 Nacogdoches, Texas 75964

Notes:

Elevation in feet relative to mean sea level; estimated from site topographic map

Project No.
 L-09-159

Page 1 of 1

Passive Vent No. P.-3

PROJECT: Angelina County Waste Management Center
DRILL RIG: Foundation Rig
INITIAL GW DEPTH: dry ft.

DATE: 06-09-98
HOLE DIA.: 36" in.
FINAL GW: dry ft.

GEOLOGIST: Gary A. Coker
SAMPLER: Gary A. Coker
HOLE ELEV.: 308 ft. MSL

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH	SAMPLE	Water Level	WELL CONSTRUCTION DETAIL
<p>Silty Sand: Loose, light gray, fine- to very fine-grained, slightly oxidized @ 0.5' to 1.0', dry</p> <p>- 1" to 3" thick lean clay interbeds @ 1.0' and 3.2'</p> <p>- color changes to mottled light and dark gray @ 6.0' to 8.0', slight increase in clay content, dry</p>	SM		0			<p>Riser with turbine ventilator</p> <p>Concrete</p> <p>6" Ø HDPE SDR 17 Blank Riser</p> <p>Bentonite Seal</p>
<p>Lean Clay: Very stiff, mottled light gray and tan, dry</p> <p>- 6" thick fat clay layer @ 13.0' to 13.5', slightly oxidized</p>	CL		10			<p>Gravel Pack</p>
<p>Silty Sand: Loose, light gray, fine- to very fine-grained, dry</p> <p>- 6" thick lean clay interbed @ 18.0' to 18.5' and 19.5' to 20.0', dry</p> <p>- heavily oxidized @ 19.5' to 20.0'</p>	SM		15			<p>6" Ø Perforated HDPE SDR 17 Screen (3/16" perforations)</p>
Bottom of Boring @ 20.0'			20			<p>6" Ø Bottom Cap with Drain Hole</p>
			25			

Hydrex Environmental, Inc.

1128 NW Stallings Drive
Nacogdoches, Texas 75964

Notes:

Elevation in feet relative to mean sea level; estimated from site topographic map

Project No.
L-09-159

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Passive Vent

Passive Vent No. PV-4

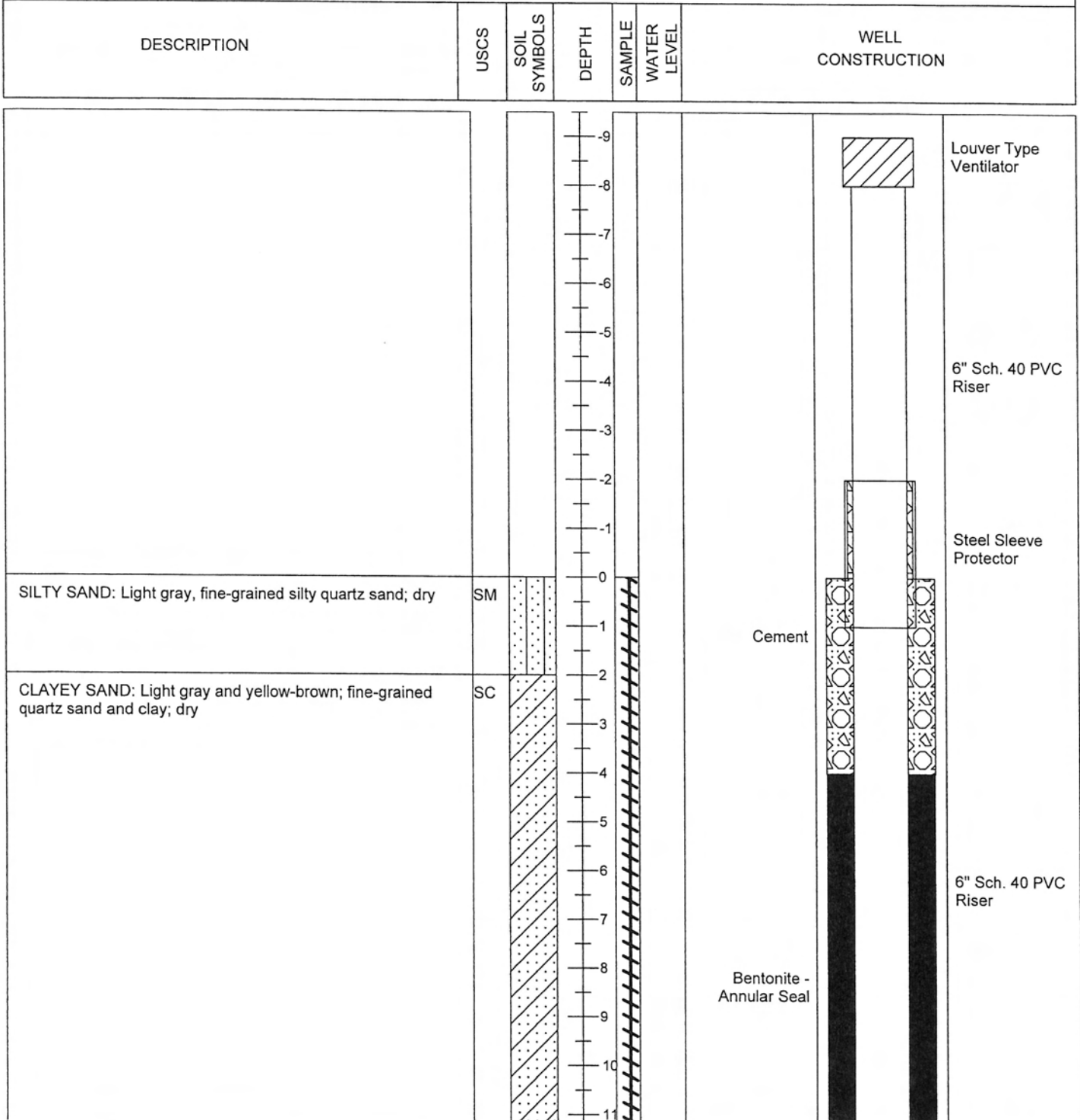
PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
 PROJECT NO.: L-07-484
 LOGGED BY: Greg Flynn
 COMPLETION DATE: 04/23/09
 DRILL START DATE: 04/23/09
 SITE LOCATION: Angelina County, Texas
 WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
 DRILLER'S LICENSE NO.: 3026 M
 RIG TYPE: CME-75 Drill Rig
 METHOD OF DRILLING: Hollow Stem Auger
 SURFACE ELEVATION: ~ 305'
 HOLE DIAMETER: 12.0"
 LATITUDE: 31 14' 51.3888" LONGITUDE: 94 41' 42.4572"

☒ Water level during drilling
 ☒ Water level in completed well
 ☐ Split Spoon Core
 ☐ No Recovery
 ☒ Auger



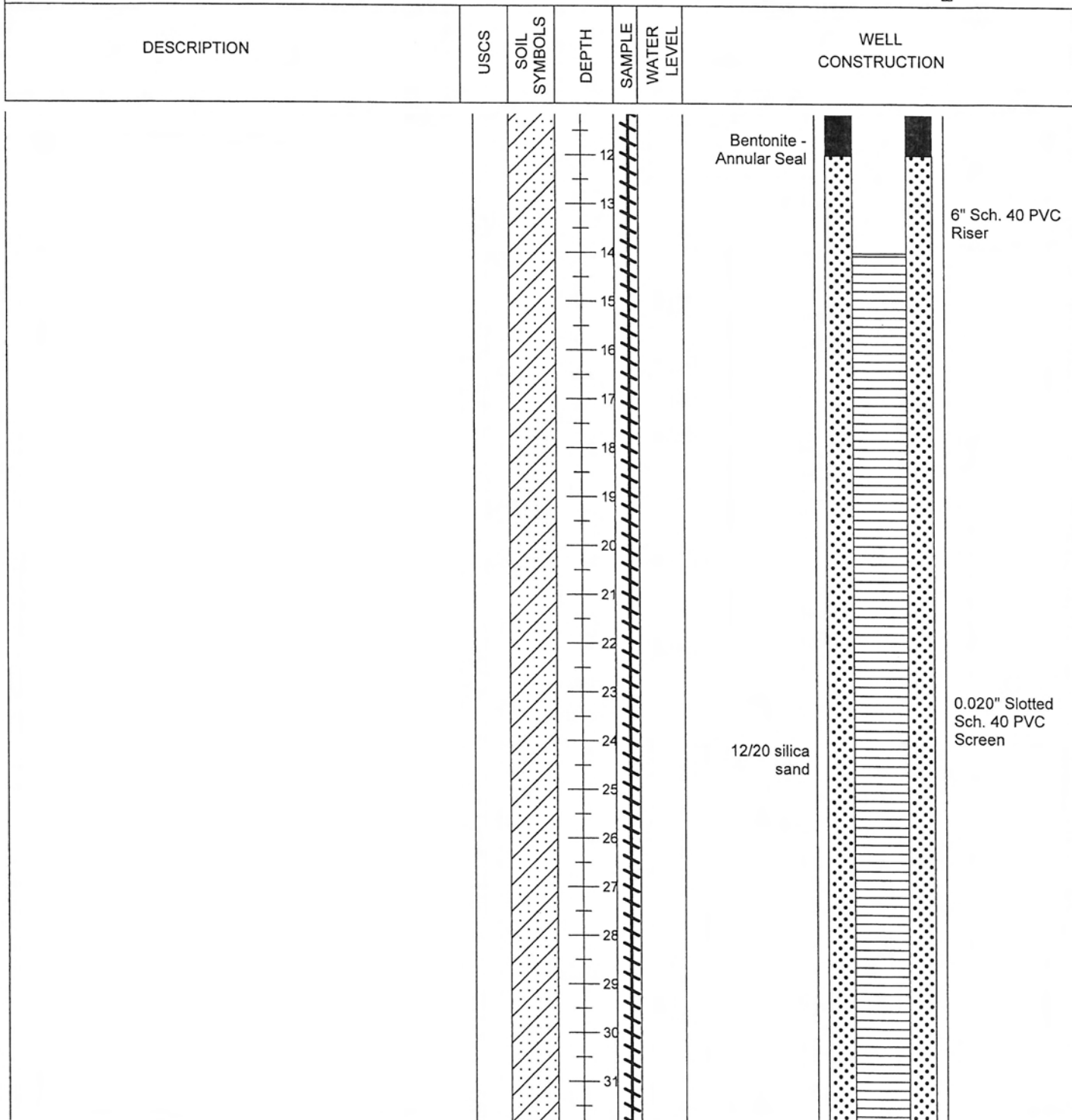
PROJECT INFORMATION


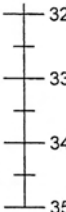
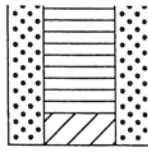
PROJECT: Angelina County Waste Management Center
PROJECT NO.: L-07-484
LOGGED BY: Greg Flynn
COMPLETION DATE: 04/23/09
DRILL START DATE: 04/23/09
SITE LOCATION: Angelina County, Texas
WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
DRILLER'S LICENSE NO.: 3026 M
RIG TYPE: CME-75 Drill Rig
METHOD OF DRILLING: Hollow Stem Auger
SURFACE ELEVATION: ~ 305'
HOLE DIAMETER: 12.0"
LATITUDE: 31 14' 51.3888" LONGITUDE: 94 41' 42.4572"

☒ Water level during drilling ☒ Water level in completed well ☒ Split Spoon Core ☐ No Recovery ☒ Auger



PROJECT INFORMATION		DRILLING INFORMATION					
PROJECT:	Angelina County Waste Management Center	DRILLER:	Best Drilling Services / Lawrence Tobola				
PROJECT NO.:	L-07-484	DRILLER'S LICENSE NO.:	3026 M				
LOGGED BY:	Greg Flynn	RIG TYPE:	CME-75 Drill Rig				
COMPLETION DATE:	04/23/09	METHOD OF DRILLING:	Hollow Stem Auger				
DRILL START DATE:	04/23/09	SURFACE ELEVATION:	~ 305'				
SITE LOCATION:	Angelina County, Texas	HOLE DIAMETER:	12.0"				
WELL OWNER:	Angelina County Waste Management Center	LATITUDE: 31 14' 51.3888"	LONGITUDE: 94 41' 42.4572"				
<input checked="" type="checkbox"/> Water level during drilling <input checked="" type="checkbox"/> Water level in completed well <input type="checkbox"/> Split Spoon Core <input type="checkbox"/> No Recovery <input checked="" type="checkbox"/> Auger							
DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION	
Bottom of Boring @ 34.0'						12/20 silica sand	 0.020" Slotted Sch. 40 PVC Screen PVC Bottom Cap

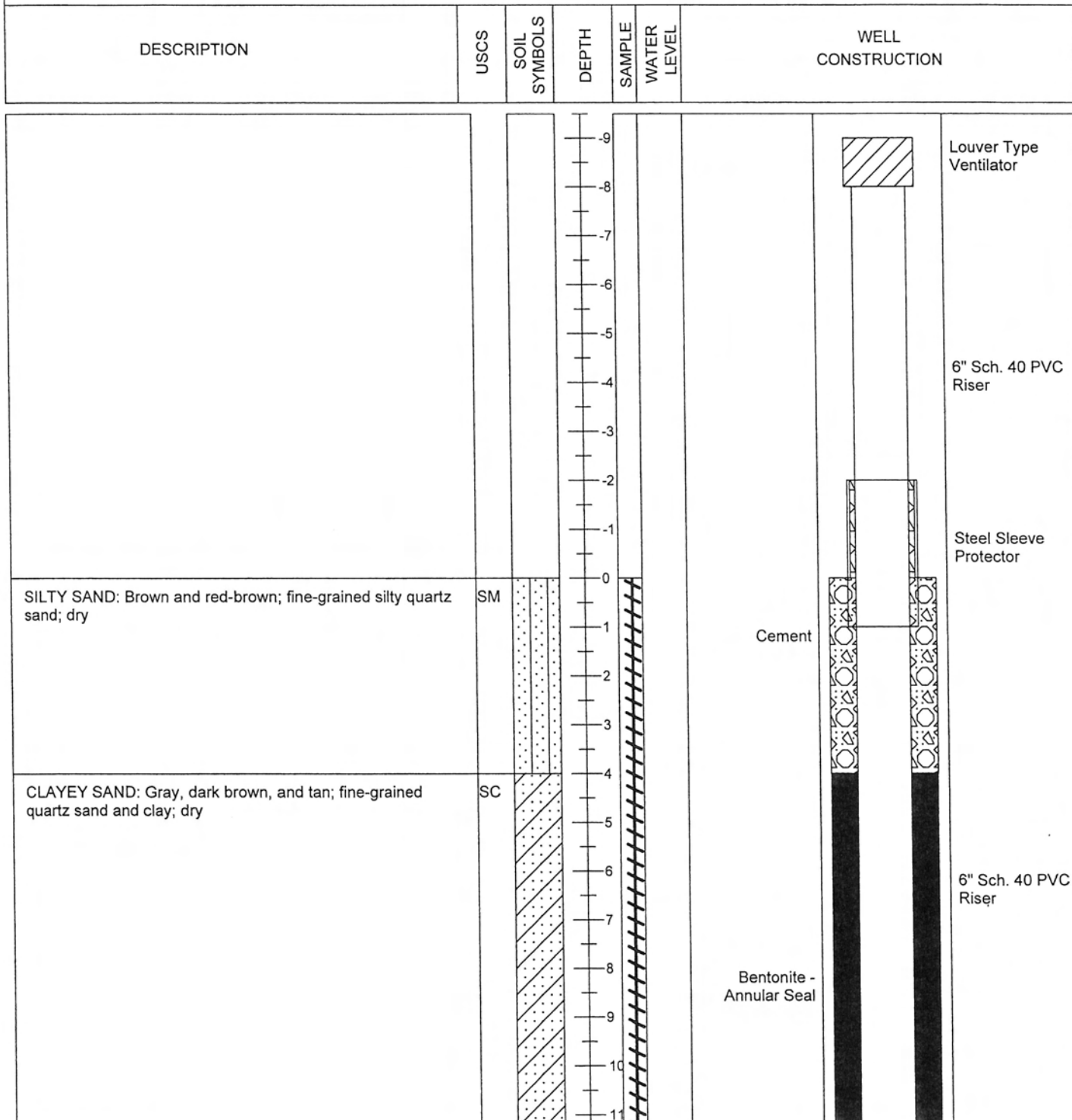
PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
PROJECT NO.: L-07-484
LOGGED BY: Greg Flynn
COMPLETION DATE: 04/23/09
DRILL START DATE: 04/23/09
SITE LOCATION: Angelina County, Texas
WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
DRILLER'S LICENSE NO.: 3026 M
RIG TYPE: CME-75 Drill Rig
METHOD OF DRILLING: Hollow Stem Auger
SURFACE ELEVATION: ~ 305'
HOLE DIAMETER: 12.0"
LATITUDE: 31 14' 51.7344" LONGITUDE: 94 41' 42.4140"

☒ Water level during drilling ☒ Water level in completed well ☒ Split Spoon Core ☐ No Recovery ☒ Auger



Passive Vent

Passive Vent No. PV-5

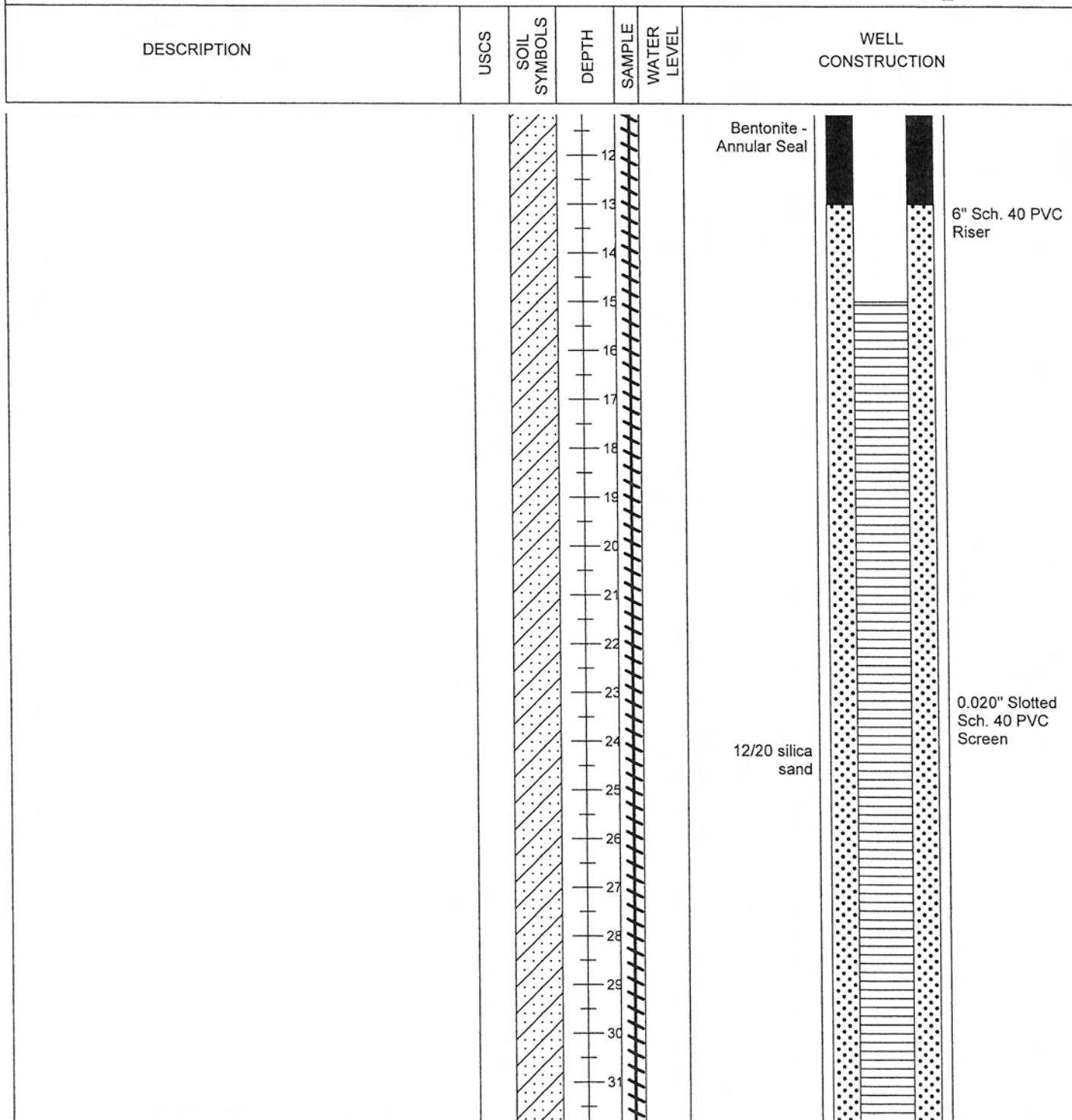
PROJECT INFORMATION

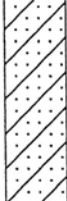
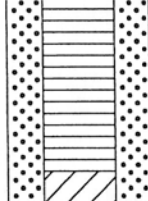
PROJECT: Angelina County Waste Management Center
PROJECT NO.: L-07-484
LOGGED BY: Greg Flynn
COMPLETION DATE: 04/23/09
DRILL START DATE: 04/23/09
SITE LOCATION: Angelina County, Texas
WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
DRILLER'S LICENSE NO.: 3026 M
RIG TYPE: CME-75 Drill Rig
METHOD OF DRILLING: Hollow Stem Auger
SURFACE ELEVATION: ~ 305'
HOLE DIAMETER: 12.0"
LATITUDE: 31 14' 51.7344" LONGITUDE: 94 41' 42.4140"

☒ Water level during drilling ☒ Water level in completed well ☐ Split Spoon Core ☐ No Recovery ☒ Auger



PROJECT INFORMATION				DRILLING INFORMATION			
PROJECT:	Angelina County Waste Management Center			DRILLER:	Best Drilling Services / Lawrence Tobola		
PROJECT NO.:	L-07-484			DRILLER'S LICENSE NO.:	3026 M		
LOGGED BY:	Greg Flynn			RIG TYPE:	CME-75 Drill Rig		
COMPLETION DATE:	04/23/09			METHOD OF DRILLING:	Hollow Stem Auger		
DRILL START DATE:	04/23/09			SURFACE ELEVATION:	~ 305'		
SITE LOCATION:	Angelina County, Texas			HOLE DIAMETER:	12.0"		
WELL OWNER:	Angelina County Waste Management Center			LATITUDE:	31 14' 51.7344"	LONGITUDE:	94 41' 42.4140"
<input checked="" type="checkbox"/> Water level during drilling <input checked="" type="checkbox"/> Water level in completed well <input type="checkbox"/> Split Spoon Core <input type="checkbox"/> No Recovery <input checked="" type="checkbox"/> Auger							
DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION	
			32 33 34 35 36			12/20 silica sand	 0.020" Slotted Sch. 40 PVC Screen PVC Bottom Cap
Bottom of Boring @ 35.0'							

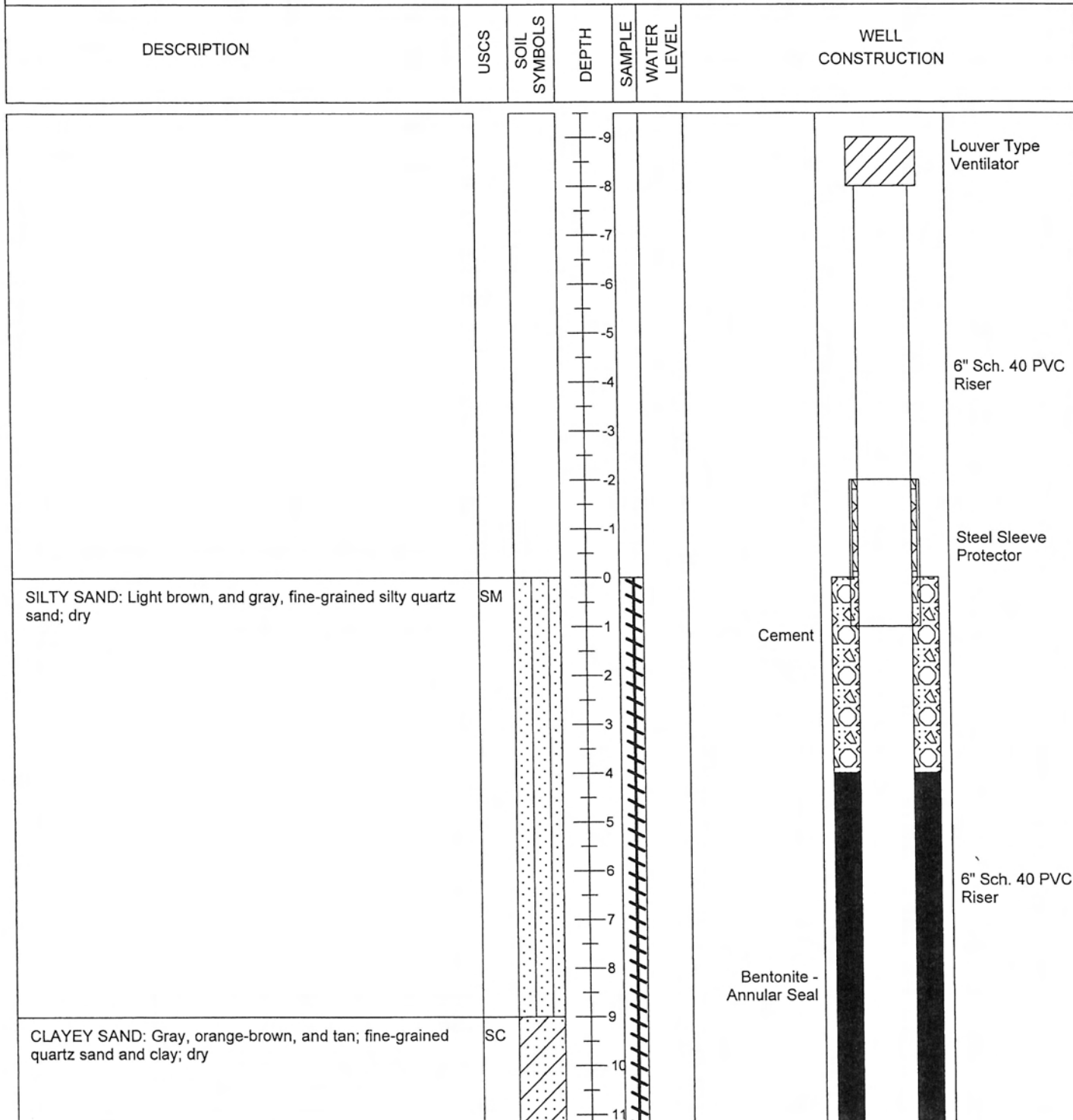
PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
PROJECT NO.: L-07-484
LOGGED BY: Greg Flynn
COMPLETION DATE: 04/28/09
DRILL START DATE: 04/28/09
SITE LOCATION: Angelina County, Texas
WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
DRILLER'S LICENSE NO.: 3026 M
RIG TYPE: CME-75 Drill Rig
METHOD OF DRILLING: Hollow Stem Auger
SURFACE ELEVATION: ~ 305'
HOLE DIAMETER: 12.0"
LATITUDE: 31 14' 52..0973" LONGITUDE: 94 41' 42.3708"

☒ Water level during drilling ☒ Water level in completed well ☐ Split Spoon Core ☐ No Recovery ☒ Auger



Passive Vent

Passive Vent No.PV-6

PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
PROJECT NO.: L-07-484
LOGGED BY: Greg Flynn
COMPLETION DATE: 04/28/09
DRILL START DATE: 04/28/09
SITE LOCATION: Angelina County, Texas
WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
DRILLER'S LICENSE NO.: 3026 M
RIG TYPE: CME-75 Drill Rig
METHOD OF DRILLING: Hollow Stem Auger
SURFACE ELEVATION: ~ 305'
HOLE DIAMETER: 12.0"
LATITUDE: 31 14' 52..0973" LONGITUDE: 94 41' 42.3708"

☒ Water level during drilling ☒ Water level in completed well ☐ Split Spoon Core ☐ No Recovery ☒ Auger

DESCRIPTION

USCS

SOIL
SYMBOLS

DEPTH

SAMPLE

WATER
LEVEL

WELL
CONSTRUCTION

Bentonite -
Annular Seal

12/20 silica
sand

6" Sch. 40 PVC
Riser

0.020" Slotted
Sch. 40 PVC
Screen

Passive Vent

Passive Vent No. PV-6


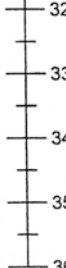
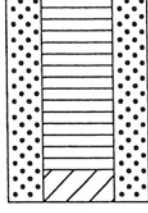
PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
 PROJECT NO.: L-07-484
 LOGGED BY: Greg Flynn
 COMPLETION DATE: 04/28/09
 DRILL START DATE: 04/28/09
 SITE LOCATION: Angelina County, Texas
 WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
 DRILLER'S LICENSE NO.: 3026 M
 RIG TYPE: CME-75 Drill Rig
 METHOD OF DRILLING: Hollow Stem Auger
 SURFACE ELEVATION: ~ 305'
 HOLE DIAMETER: 12.0"
 LATITUDE: 31 14' 52..0973" LONGITUDE: 94 41' 42.3708"

☒ Water level during drilling ☒ Water level in completed well ☒ Split Spoon Core ☐ No Recovery ☒ Auger

DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
Bottom of Boring @ 35.0'						 <p>0.020" Slotted Sch. 40 PVC Screen</p> <p>PVC Bottom Cap</p>

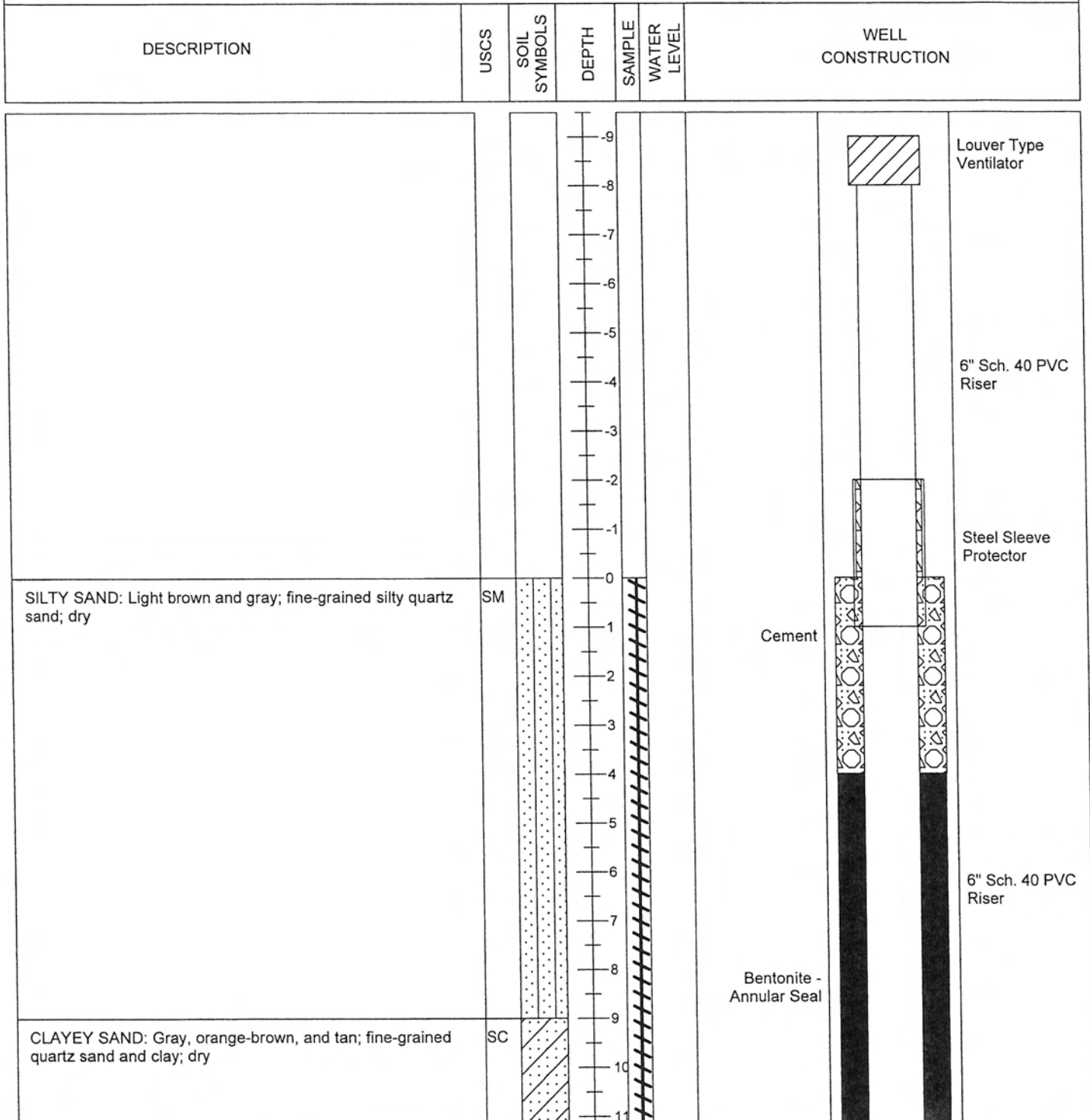
PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
 PROJECT NO.: L-07-484
 LOGGED BY: Greg Flynn
 COMPLETION DATE: 04/27/09
 DRILL START DATE: 04/27/09
 SITE LOCATION: Angelina County, Texas
 WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
 DRILLER'S LICENSE NO.: 3026 M
 RIG TYPE: CME-75 Drill Rig
 METHOD OF DRILLING: Hollow Stem Auger
 SURFACE ELEVATION: ~ 305'
 HOLE DIAMETER: 12.0"
 LATITUDE: 31 14' 52.4256" LONGITUDE: 94 41' 42.3384"

☒ Water level during drilling
 ☒ Water level in completed well
 ☒ Split Spoon Core
 ☐ No Recovery
 ☒ Auger





ENVIRONMENTAL, INC.

Passive Vent

Passive Vent No.PV-7

PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
PROJECT NO.: L-07-484
LOGGED BY: Greg Flynn
COMPLETION DATE: 04/27/09
DRILL START DATE: 04/27/09
SITE LOCATION: Angelina County, Texas
WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
DRILLER'S LICENSE NO.: 3026 M
RIG TYPE: CME-75 Drill Rig
METHOD OF DRILLING: Hollow Stem Auger
SURFACE ELEVATION: ~ 305'
HOLE DIAMETER: 12.0"
LATITUDE: 31 14' 52.4256" LONGITUDE: 94 41' 42.3384"

☒ Water level during drilling ☒ Water level in completed well ☒ Split Spoon Core ☐ No Recovery ☒ Auger

DESCRIPTION

USCS

SOIL
SYMBOLS

DEPTH

SAMPLE

WATER
LEVELWELL
CONSTRUCTIONBentonite -
Annular Seal12/20 silica
sand6" Sch. 40 PVC
Riser0.020" Slotted
Sch. 40 PVC
Screen

NOTES: Not to be used separately from original report. USCS descriptors based on field classification not laboratory verified.

Page 2 of 3

Passive Vent

Passive Vent No.PV-7

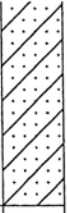
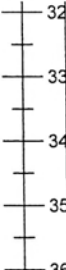
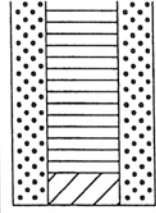
PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
 PROJECT NO.: L-07-484
 LOGGED BY: Greg Flynn
 COMPLETION DATE: 04/27/09
 DRILL START DATE: 04/27/09
 SITE LOCATION: Angelina County, Texas
 WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
 DRILLER'S LICENSE NO.: 3026 M
 RIG TYPE: CME-75 Drill Rig
 METHOD OF DRILLING: Hollow Stem Auger
 SURFACE ELEVATION: ~ 305'
 HOLE DIAMETER: 12.0"
 LATITUDE: 31 14' 52.4256" LONGITUDE: 94 41' 42.3384"

☒ Water level during drilling
 ☒ Water level in completed well
 ☒ Split Spoon Core
 ☐ No Recovery
 ☒ Auger

DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
Bottom of Boring @ 35.0'						 0.020" Slotted Sch. 40 PVC Screen PVC Bottom Cap

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Angelina County Waste Management Center	DRILLER:	Best Drilling Services / Lawrence Tobola
PROJECT NO.:	L-07-484	DRILLER'S LICENSE NO.:	3026 M
LOGGED BY:	Greg Flynn	RIG TYPE:	CME-75 Drill Rig
COMPLETION DATE:	04/24/09	METHOD OF DRILLING:	Hollow Stem Auger
DRILL START DATE:	04/24/09	SURFACE ELEVATION:	~ 304'
SITE LOCATION:	Angelina County, Texas	HOLE DIAMETER:	12.0"
WELL OWNER:	Angelina County Waste Management Center	LATITUDE: 31 14' 52.7784"	LONGITUDE: 94 41' 42.2988"

☒ Water level during drilling
 ☒ Water level in completed well
 ☒ Split Spoon Core
 ☐ No Recovery
 ☒ Auger

DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
			-9			Louver Type Ventilator
			-8			
			-7			
			-6			
			-5			
			-4			6" Sch. 40 PVC Riser
			-3			
			-2			
			-1			Steel Sleeve Protector
			0			
SILTY SAND: Light brown and gray, fine-grained silty quartz sand; dry	SM		1			Cement
			2			
			3			
			4			
			5			
			6			
CLAYEY SAND: Gray, light gray, red-brown, tan, and dark gray; fine-grained quartz sand and clay; dry	SC		7			6" Sch. 40 PVC Riser
			8			
			9			Bentonite - Annular Seal
			10			
			11			

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Angelina County Waste Management Center	DRILLER:	Best Drilling Services / Lawrence Tobola
PROJECT NO.:	L-07-484	DRILLER'S LICENSE NO.:	3026 M
LOGGED BY:	Greg Flynn	RIG TYPE:	CME-75 Drill Rig
COMPLETION DATE:	04/24/09	METHOD OF DRILLING:	Hollow Stem Auger
DRILL START DATE:	04/24/09	SURFACE ELEVATION:	~ 304'
SITE LOCATION:	Angelina County, Texas	HOLE DIAMETER:	12.0"
WELL OWNER:	Angelina County Waste Management Center	LATITUDE: 31 14' 52.7784"	LONGITUDE: 94 41' 42.2988"

☒ Water level during drilling
 ☒ Water level in completed well
 ☒ Split Spoon Core
 ☐ No Recovery
 ☒ Auger

DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
			12			Bentonite - Annular Seal
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			
			21			
			22			
			23			
			24			
			25			12/20 silica sand
			26			
			27			
			28			
			29			
			30			
			31			

6" Sch. 40 PVC Riser

0.020" Slotted Sch. 40 PVC Screen


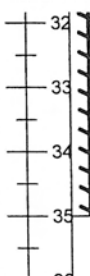
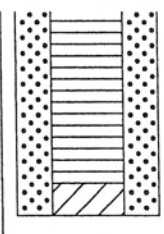
PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
 PROJECT NO.: L-07-484
 LOGGED BY: Greg Flynn
 COMPLETION DATE: 04/24/09
 DRILL START DATE: 04/24/09
 SITE LOCATION: Angelina County, Texas
 WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
 DRILLER'S LICENSE NO.: 3026 M
 RIG TYPE: CME-75 Drill Rig
 METHOD OF DRILLING: Hollow Stem Auger
 SURFACE ELEVATION: ~ 304'
 HOLE DIAMETER: 12.0"
 LATITUDE: 31 14' 52.7784" LONGITUDE: 94 41' 42.2988"

☒ Water level during drilling ☒ Water level in completed well ☒ Split Spoon Core ☐ No Recovery ☒ Auger

DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
Bottom of Boring @ 35.0'						 0.020" Slotted Sch. 40 PVC Screen PVC Bottom Cap

Passive Vent

Passive Vent No. PV-9

PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
PROJECT NO.: L-07-484
LOGGED BY: Greg Flynn
COMPLETION DATE: 04/24/09
DRILL START DATE: 04/24/09
SITE LOCATION: Angelina County, Texas
WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
DRILLER'S LICENSE NO.: 3026 M
RIG TYPE: CME-75 Drill Rig
METHOD OF DRILLING: Hollow Stem Auger
SURFACE ELEVATION: ~ 303'
HOLE DIAMETER: 12.0"
LATITUDE: 31 14' 53.1168" LONGITUDE: 94 41' 42.2556"

☒ Water level during drilling ☒ Water level in completed well ☒ Split Spoon Core ☐ No Recovery ☒ Auger

DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
			-9			Louver Type Ventilator
			-8			
			-7			
			-6			
			-5			
			-4			6" Sch. 40 PVC Riser
			-3			
			-2			
			-1			Steel Sleeve Protector
			0			
SILTY SAND: Brown, dark brown, and gray, fine-grained silty quartz sand; dry	SM		1			Cement
			2			
			3			
			4			
			5			
			6			
			7			
			8			6" Sch. 40 PVC Riser
			9			
CLAYEY SAND: Gray, tan, and brown; fine-grained quartz sand and clay; dry	SC		10			Bentonite - Annular Seal
			11			



ENVIRONMENTAL, INC.

Passive Vent

Passive Vent No.PV-9

PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
PROJECT NO.: L-07-484
LOGGED BY: Greg Flynn
COMPLETION DATE: 04/24/09
DRILL START DATE: 04/24/09
SITE LOCATION: Angelina County, Texas
WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
DRILLER'S LICENSE NO.: 3026 M
RIG TYPE: CME-75 Drill Rig
METHOD OF DRILLING: Hollow Stem Auger
SURFACE ELEVATION: ~ 303'
HOLE DIAMETER: 12.0"
LATITUDE: 31 14' 53.1168" LONGITUDE: 94 41' 42.2556"

☒ Water level during drilling ☒ Water level in completed well ☒ Split Spoon Core ☐ No Recovery ☒ Auger

DESCRIPTION

USCS

SOIL
SYMBOLS

DEPTH


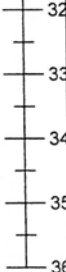
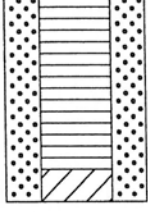
SAMPLE
WATER
LEVELWELL
CONSTRUCTIONBentonite -
Annular Seal12/20 silica
sand6" Sch. 40 PVC
Riser0.020" Slotted
Sch. 40 PVC
Screen

NOTES: Not to be used separately from original report. USCS descriptors based on field classification not laboratory verified.

Page 2 of 3

Passive Vent

Passive Vent No. PV-9

PROJECT INFORMATION			DRILLING INFORMATION			
PROJECT:	Angelina County Waste Management Center		DRILLER:	Best Drilling Services / Lawrence Tobola		
PROJECT NO.:	L-07-484		DRILLER'S LICENSE NO.:	3026 M		
LOGGED BY:	Greg Flynn		RIG TYPE:	CME-75 Drill Rig		
COMPLETION DATE:	04/24/09		METHOD OF DRILLING:	Hollow Stem Auger		
DRILL START DATE:	04/24/09		SURFACE ELEVATION:	~ 303'		
SITE LOCATION:	Angelina County, Texas		HOLE DIAMETER:	12.0"		
WELL OWNER:	Angelina County Waste Management Center		LATITUDE: 31 14' 53.1168"	LONGITUDE: 94 41' 42.2556"		
<input checked="" type="checkbox"/> Water level during drilling <input checked="" type="checkbox"/> Water level in completed well <input type="checkbox"/> Split Spoon Core <input type="checkbox"/> No Recovery <input checked="" type="checkbox"/> Auger						
DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
Bottom of Boring @ 35.0'						 0.020" Slotted Sch. 40 PVC Screen PVC Bottom Cap

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Angelina County Waste Management Center	DRILLER:	Best Drilling Services / Lawrence Tobola
PROJECT NO.:	L-07-484	DRILLER'S LICENSE NO.:	3026 M
LOGGED BY:	Greg Flynn	RIG TYPE:	CME-75 Drill Rig
COMPLETION DATE:	04/24/09	METHOD OF DRILLING:	Hollow Stem Auger
DRILL START DATE:	04/24/09	SURFACE ELEVATION:	~ 302'
SITE LOCATION:	Angelina County, Texas	HOLE DIAMETER:	12.0"
WELL OWNER:	Angelina County Waste Management Center	LATITUDE: 31 14' 53.4876"	LONGITUDE: 94 41' 42.1240"

☒ Water level during drilling
 ☒ Water level in completed well
 ☐ Split Spoon Core
 ☐ No Recovery
 ☒ Auger

DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
			-9			
			-8			
			-7			
			-6			
			-5			
			-4			
			-3			
			-2			
			-1			
			0			
SILTY SAND: Light brown; fine-grained silty quartz sand; dry	SM		1			
			2			
			3			
CLAYEY SAND: Light gray, brown, and gray; fine-grained quartz sand and clay; dry	SC		4			
			5			
			6			
			7			
			8			
			9			
			10			
			11			

Louver Type Ventilator

6" Sch. 40 PVC Riser

Steel Sleeve Protector

Cement


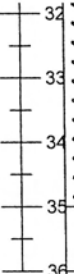
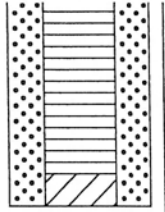
6" Sch. 40 PVC Riser

Bentonite - Annular Seal

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Angelina County Waste Management Center	DRILLER:	Best Drilling Services / Lawrence Tobola
PROJECT NO.:	L-07-484	DRILLER'S LICENSE NO.:	3026 M
LOGGED BY:	Greg Flynn	RIG TYPE:	CME-75 Drill Rig
COMPLETION DATE:	04/24/09	METHOD OF DRILLING:	Hollow Stem Auger
DRILL START DATE:	04/24/09	SURFACE ELEVATION:	~ 302'
SITE LOCATION:	Angelina County, Texas	SOLE DIAMETER:	12.0"
WELL OWNER:	Angelina County Waste Management Center	LATITUDE: 31 14' 53.4876"	LONGITUDE: 94 41' 42.1240"

☒ Water level during drilling
 ☒ Water level in completed well
 ☐ Split Spoon Core
 ☐ No Recovery
 ☒ Auger

DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
			12			Bentonite - Annular Seal
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			
			21			
			22			
			23			
			24			
			25			12/20 silica sand
			26			
			27			
			28			
			29			
			30			
			31			
						6" Sch. 40 PVC Riser
						0.020" Slotted Sch. 40 PVC Screen

PROJECT INFORMATION		DRILLING INFORMATION				
PROJECT:	Angelina County Waste Management Center	DRILLER:	Best Drilling Services / Lawrence Tobola			
PROJECT NO.:	L-07-484	DRILLER'S LICENSE NO.:	3026 M			
LOGGED BY:	Greg Flynn	RIG TYPE:	CME-75 Drill Rig			
COMPLETION DATE:	04/24/09	METHOD OF DRILLING:	Hollow Stem Auger			
DRILL START DATE:	04/24/09	SURFACE ELEVATION:	~ 302'			
SITE LOCATION:	Angelina County, Texas	HOLE DIAMETER:	12.0"			
WELL OWNER:	Angelina County Waste Management Center	LATITUDE: 31 14' 53.4876"	LONGITUDE: 94 41' 42.1240"			
<input checked="" type="checkbox"/> Water level during drilling <input checked="" type="checkbox"/> Water level in completed well <input type="checkbox"/> Split Spoon Core <input type="checkbox"/> No Recovery <input checked="" type="checkbox"/> Auger						
DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
						 <p>12/20 silica sand</p> <p>0.020" Slotted Sch. 40 PVC Screen</p> <p>PVC Bottom Cap</p>
Bottom of Boring @ 35.0'						

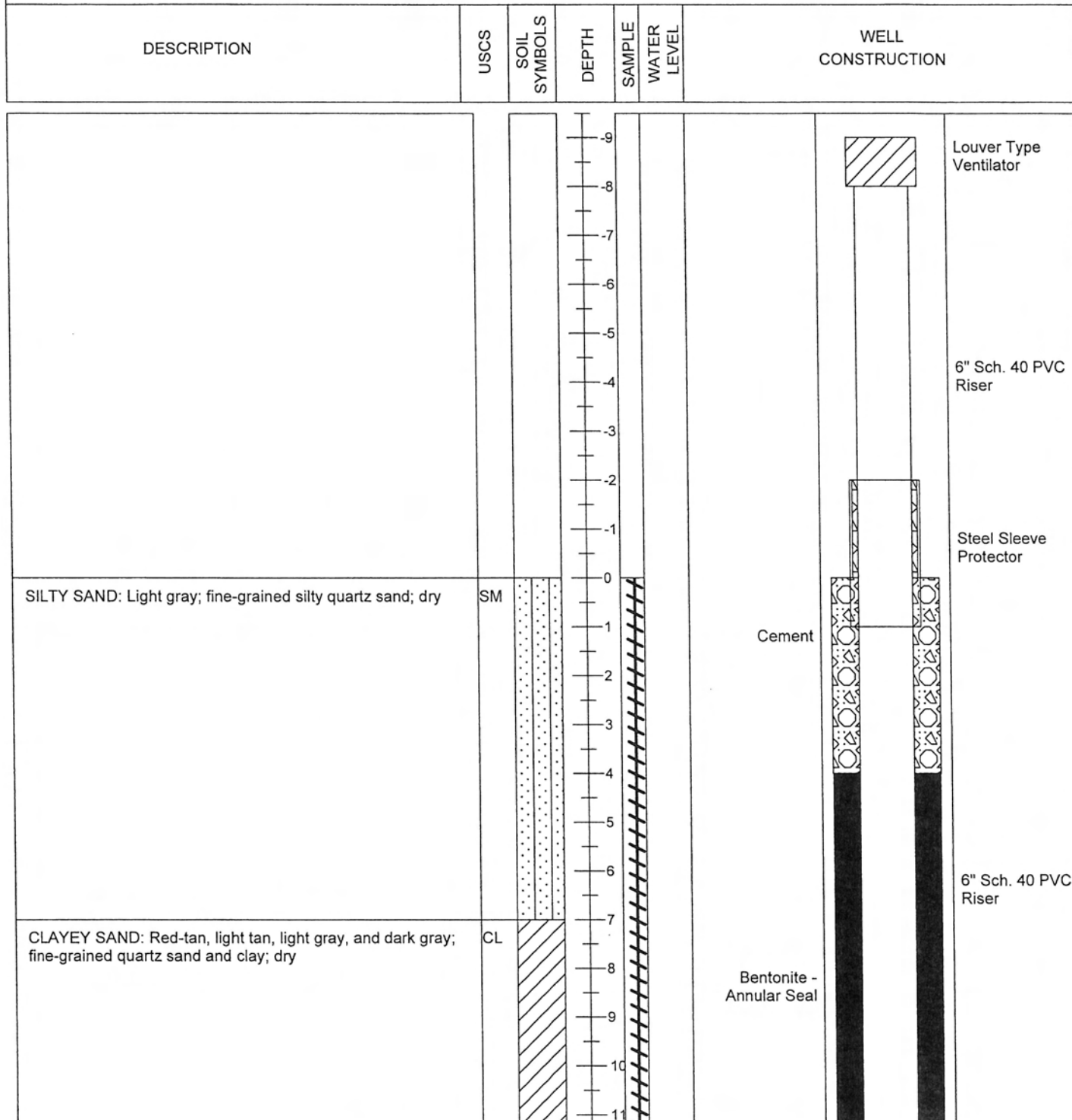
PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
PROJECT NO.: L-07-484
LOGGED BY: Greg Flynn
COMPLETION DATE: 04/27/09
DRILL START DATE: 04/27/09
SITE LOCATION: Angelina County, Texas
WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
DRILLER'S LICENSE NO.: 3026 M
RIG TYPE: CME-75 Drill Rig
METHOD OF DRILLING: Hollow Stem Auger
SURFACE ELEVATION: ~ 301'
HOLE DIAMETER: 12.0"
LATITUDE: 31 14' 53.7972" LONGITUDE: 94 41' 42.1476"

☒ Water level during drilling ☒ Water level in completed well ☐ Split Spoon Core ☐ No Recovery ☒ Auger



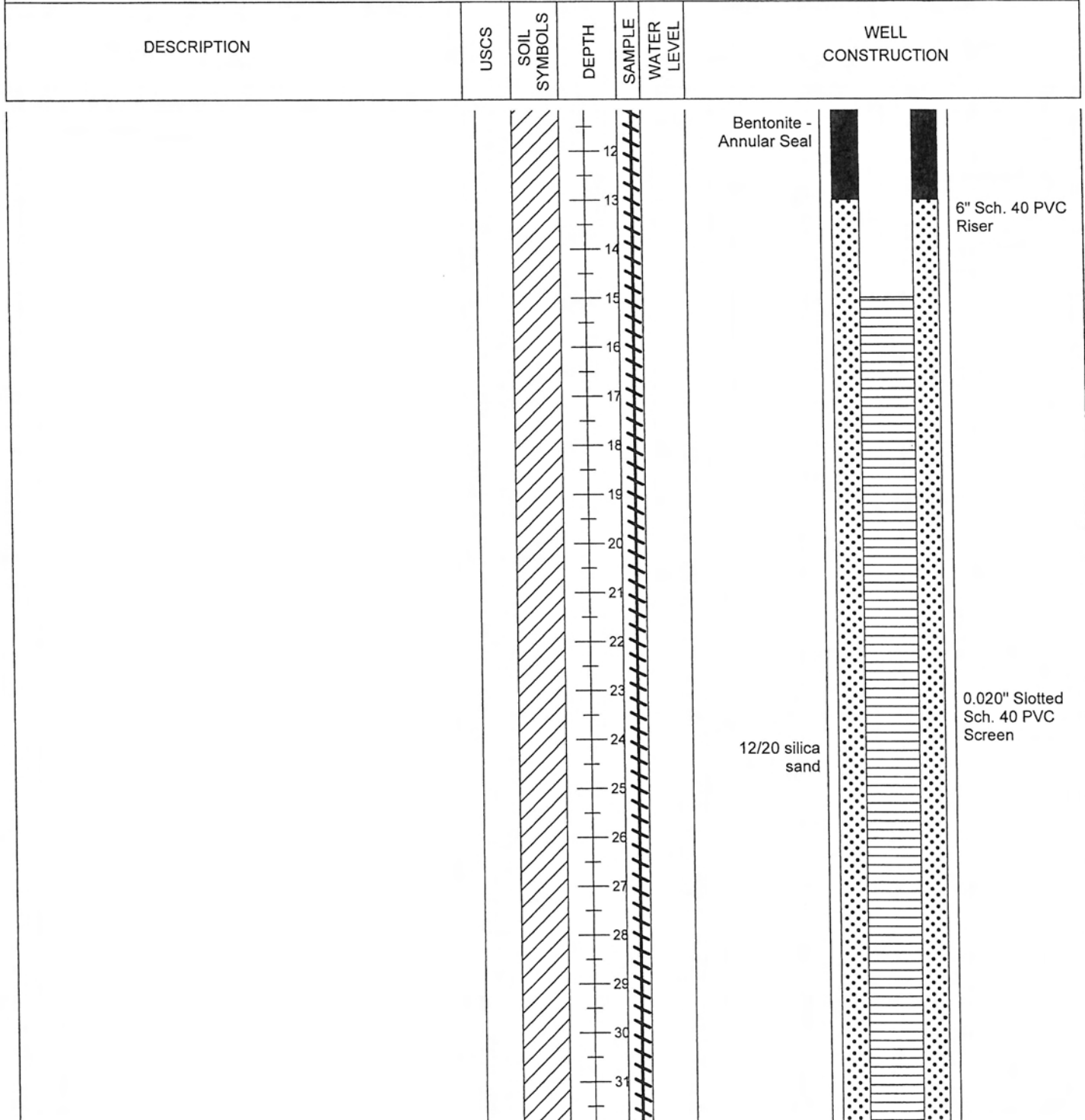
PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
PROJECT NO.: L-07-484
LOGGED BY: Greg Flynn
COMPLETION DATE: 04/27/09
DRILL START DATE: 04/27/09
SITE LOCATION: Angelina County, Texas
WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

DRILLER: Best Drilling Services / Lawrence Tobola
DRILLER'S LICENSE NO.: 3026 M
RIG TYPE: CME-75 Drill Rig
METHOD OF DRILLING: Hollow Stem Auger
SURFACE ELEVATION: ~ 301'
HOLE DIAMETER: 12.0"
LATITUDE: 31 14' 53.7972" LONGITUDE: 94 41' 42.1476"

☒ Water level during drilling ☒ Water level in completed well ☐ Split Spoon Core ☐ No Recovery ☒ Auger





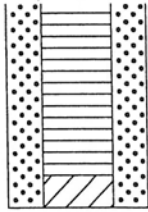
PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
 PROJECT NO.: L-07-484
 LOGGED BY: Greg Flynn
 COMPLETION DATE: 04/27/09
 DRILL START DATE: 04/27/09
 SITE LOCATION: Angelina County, Texas
 WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION

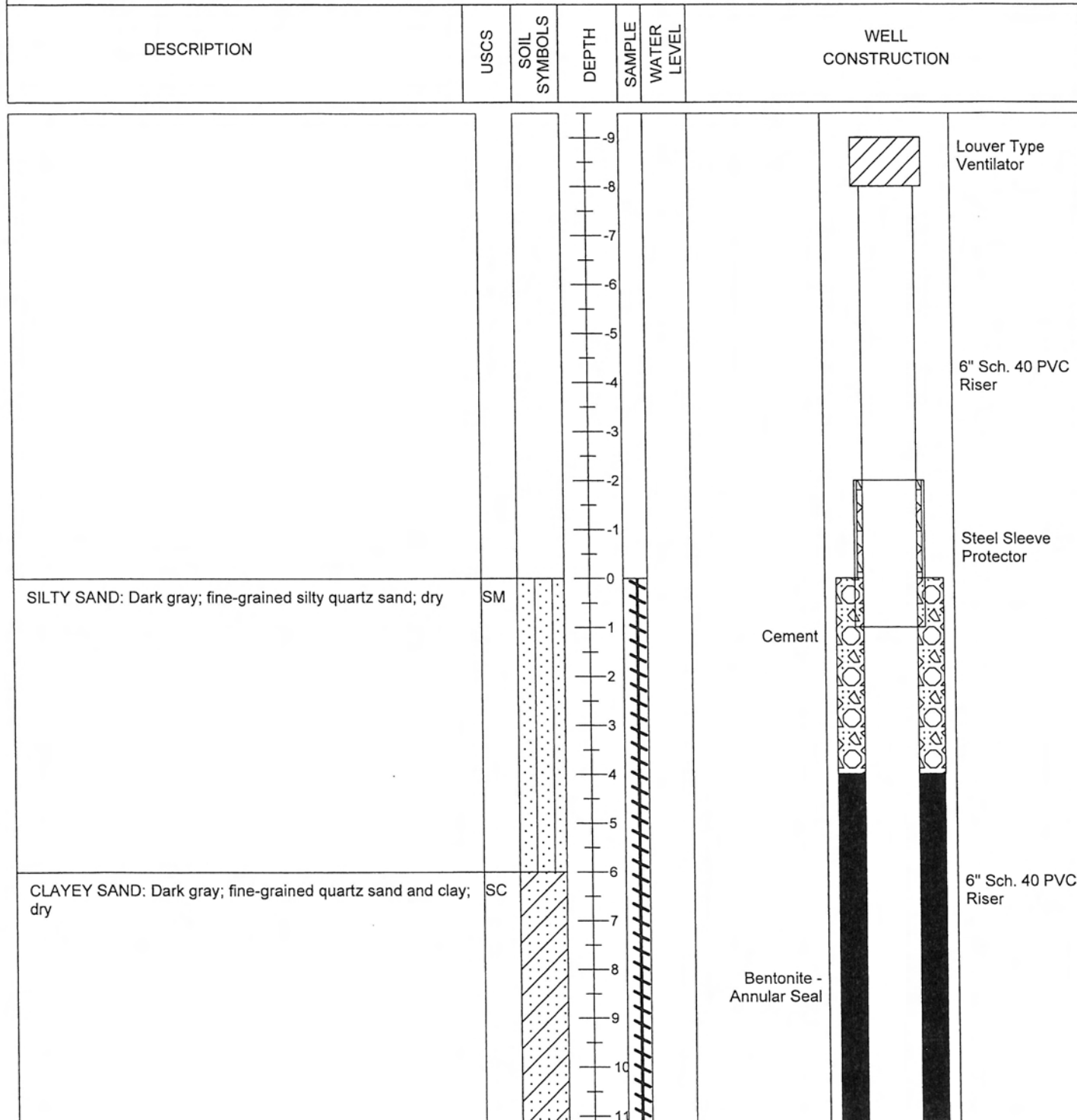
DRILLER: Best Drilling Services / Lawrence Tobola
 DRILLER'S LICENSE NO.: 3026 M
 RIG TYPE: CME-75 Drill Rig
 METHOD OF DRILLING: Hollow Stem Auger
 SURFACE ELEVATION: ~ 301'
 HOLE DIAMETER: 12.0"
 LATITUDE: 31 14' 53.7972" LONGITUDE: 94 41' 42.1476"

☒ Water level during drilling
 ☒ Water level in completed well
 ☒ Split Spoon Core
 ☐ No Recovery
 ☒ Auger

DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
			32 33 34 35 36			12/20 silica sand
Bottom of Boring @ 35.0'						 0.020" Slotted Sch. 40 PVC Screen PVC Bottom Cap

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Angelina County Waste Management Center	DRILLER:	Best Drilling Services / Lawrence Tobola
PROJECT NO.:	L-07-484	DRILLER'S LICENSE NO.:	3026 M
LOGGED BY:	Greg Flynn	RIG TYPE:	CME-75 Drill Rig
COMPLETION DATE:	04/27/09	METHOD OF DRILLING:	Hollow Stem Auger
DRILL START DATE:	04/27/09	SURFACE ELEVATION:	~ 301'
SITE LOCATION:	Angelina County, Texas	HOLE DIAMETER:	12.0"
WELL OWNER:	Angelina County Waste Management Center	LATITUDE: 31 14' 54.1320"	LONGITUDE: 94 41' 42.0900"

☒ Water level during drilling
 ☒ Water level in completed well
 ☐ Split Spoon Core
 ☐ No Recovery
 ☒ Auger



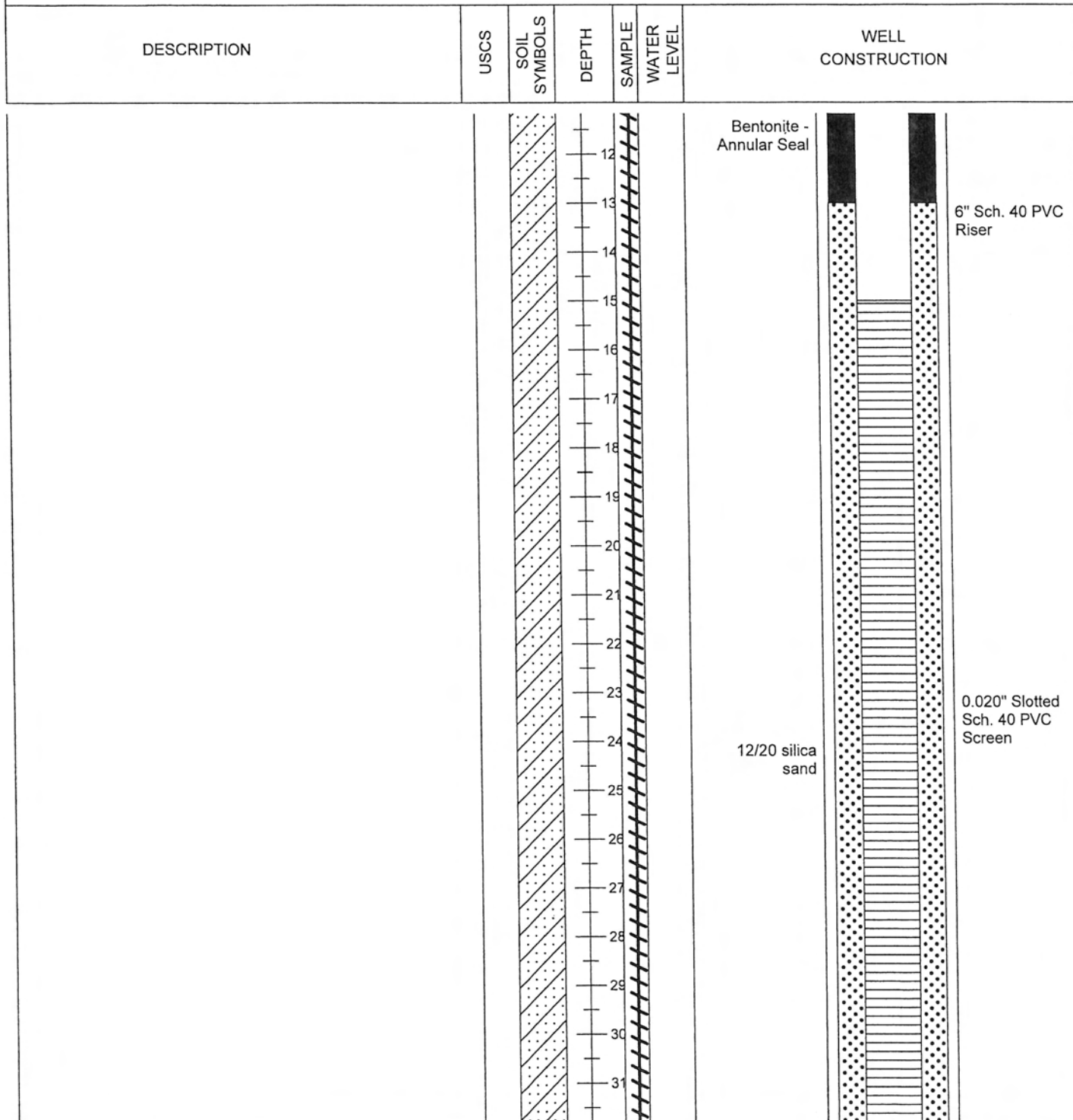
PROJECT INFORMATION

PROJECT: Angelina County Waste Management Center
PROJECT NO.: L-07-484
LOGGED BY: Greg Flynn
COMPLETION DATE: 04/27/09
DRILL START DATE: 04/27/09
SITE LOCATION: Angelina County, Texas
WELL OWNER: Angelina County Waste Management Center

DRILLING INFORMATION


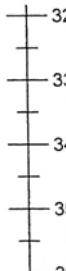
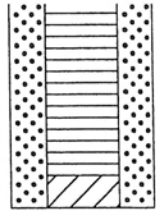
DRILLER: Best Drilling Services / Lawrence Tobola
DRILLER'S LICENSE NO.: 3026 M
RIG TYPE: CME-75 Drill Rig
METHOD OF DRILLING: Hollow Stem Auger
SURFACE ELEVATION: ~ 301'
HOLE DIAMETER: 12.0"
LATITUDE: 31 14' 54.1320" LONGITUDE: 94 41' 42.0900"

☒ Water level during drilling ☒ Water level in completed well ☐ Split Spoon Core ☐ No Recovery ☒ Auger



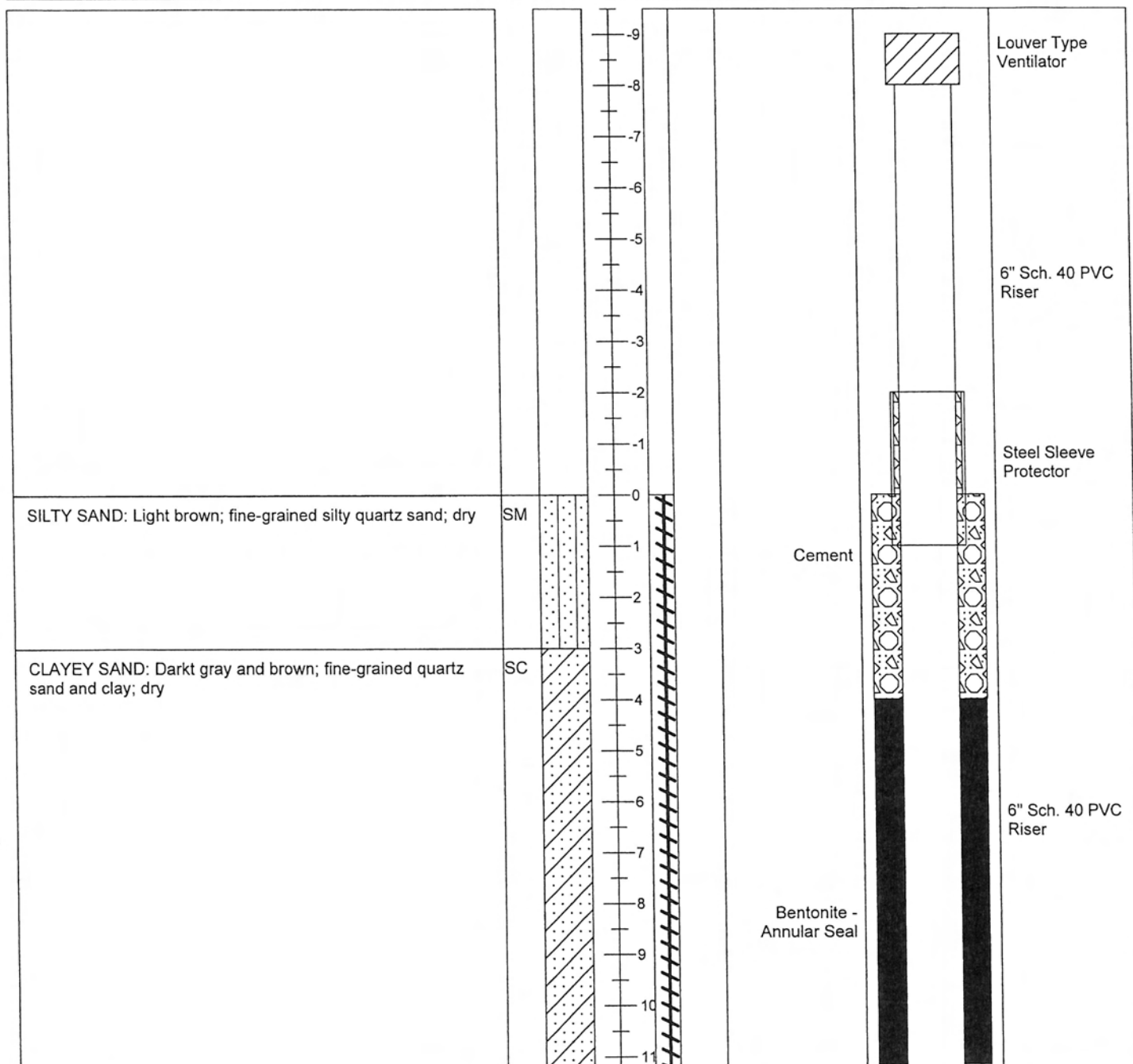
PROJECT INFORMATION		DRILLING INFORMATION			
PROJECT:	Angelina County Waste Management Center	DRILLER:	Best Drilling Services / Lawrence Tobola		
PROJECT NO.:	L-07-484	DRILLER'S LICENSE NO.:	3026 M		
LOGGED BY:	Greg Flynn	RIG TYPE:	CME-75 Drill Rig		
COMPLETION DATE:	04/27/09	METHOD OF DRILLING:	Hollow Stem Auger		
DRILL START DATE:	04/27/09	SURFACE ELEVATION:	~ 301'		
SITE LOCATION:	Angelina County, Texas	HOLE DIAMETER:	12.0"		
WELL OWNER:	Angelina County Waste Management Center	LATITUDE:	31 14' 54.1320"	LONGITUDE:	94 41' 42.0900"

☒ Water level during drilling
 ☒ Water level in completed well
 ☐ Split Spoon Core
 ☐ No Recovery
 ☒ Auger

DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
Bottom of Boring @ 35.0'						<div style="text-align: center;">12/20 silica sand</div> <div style="text-align: center;">  </div> <div style="font-size: small;"> 0.020" Slotted Sch. 40 PVC Screen PVC Bottom Cap </div>

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Angelina County Waste Management Center	DRILLER:	Best Drilling Services / Lawrence Tobola
PROJECT NO.:	L-07-484	DRILLER'S LICENSE NO.:	3026 M
LOGGED BY:	Greg Flynn	RIG TYPE:	CME-75 Drill Rig
COMPLETION DATE:	04/23/09	METHOD OF DRILLING:	Hollow Stem Auger
DRILL START DATE:	04/23/09	SURFACE ELEVATION:	~ 300'
SITE LOCATION:	Angelina County, Texas	HOLE DIAMETER:	12.0"
WELL OWNER:	Angelina County Waste Management Center	LATITUDE: 31 14' 54.5856"	LONGITUDE: 94 41' 42.0504"


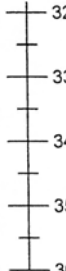
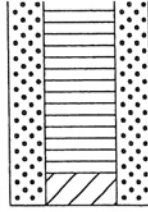
☒ Water level during drilling
 ☒ Water level in completed well
 ☒ Split Spoon Core
 ☐ No Recovery
 ☒ Auger



PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Angelina County Waste Management Center	DRILLER:	Best Drilling Services / Lawrence Tobola
PROJECT NO.:	L-07-484	DRILLER'S LICENSE NO.:	3026 M
LOGGED BY:	Greg Flynn	RIG TYPE:	CME-75 Drill Rig
COMPLETION DATE:	04/23/09	METHOD OF DRILLING:	Hollow Stem Auger
DRILL START DATE:	04/23/09	SURFACE ELEVATION:	~ 300'
SITE LOCATION:	Angelina County, Texas	HOLE DIAMETER:	12.0"
WELL OWNER:	Angelina County Waste Management Center	LATITUDE: 31 14' 54.5856"	LONGITUDE: 94 41' 42.0504"

☒ Water level during drilling
 ☒ Water level in completed well
 ☐ Split Spoon Core
 ☐ No Recovery
 ☒ Auger

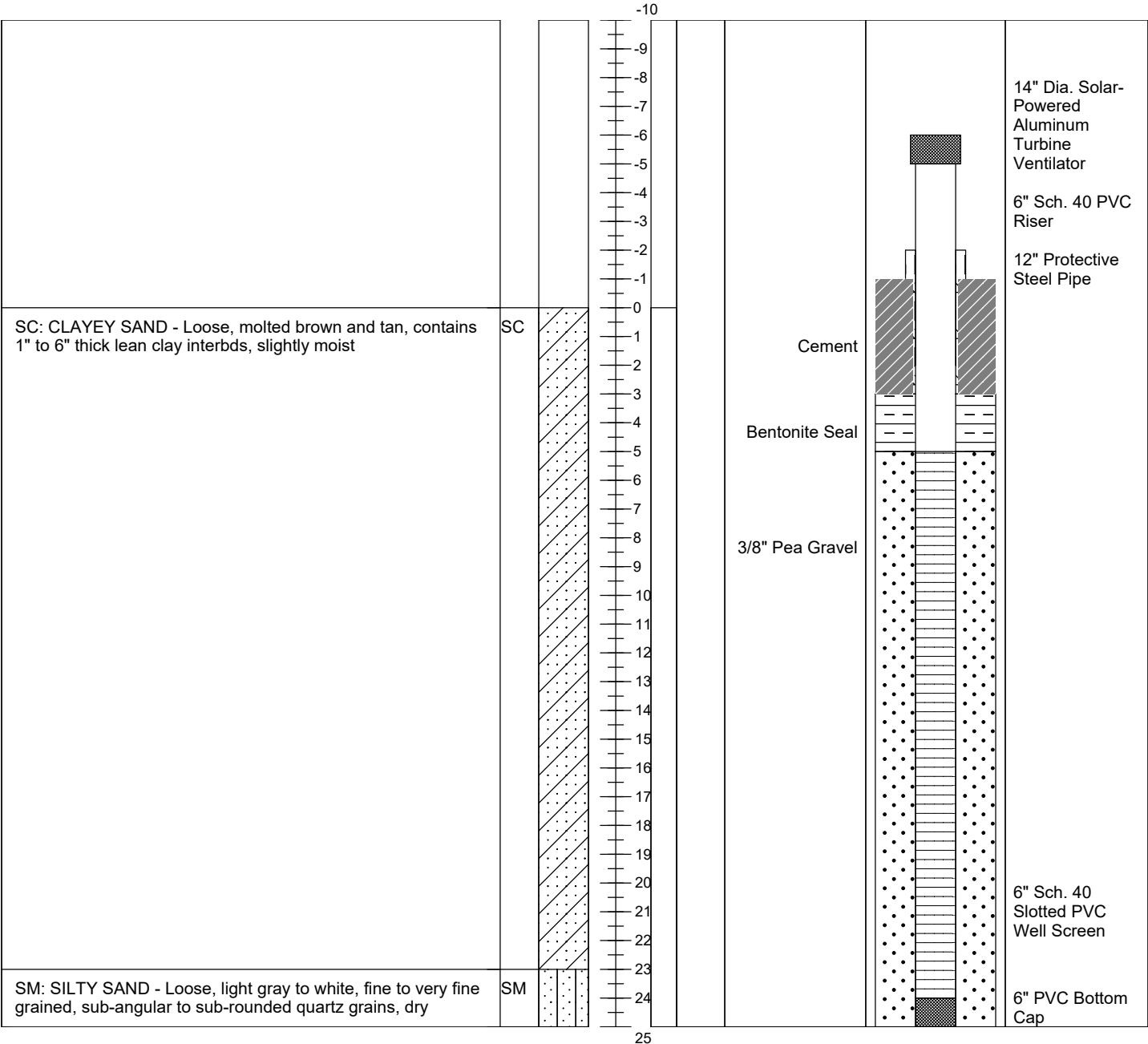
DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION
			12			Bentonite - Annular Seal
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			
			21			
			22			
			23			
			24			
			25			12/20 silica sand
			26			
			27			
			28			
			29			
			30			
			31			
						6" Sch. 40 PVC Riser
						0.020" Slotted Sch. 40 PVC Screen

PROJECT INFORMATION				DRILLING INFORMATION			
PROJECT:	Angelina County Waste Management Center			DRILLER:	Best Drilling Services / Lawrence Tobola		
PROJECT NO.:	L-07-484			DRILLER'S LICENSE NO.:	3026 M		
LOGGED BY:	Greg Flynn			RIG TYPE:	CME-75 Drill Rig		
COMPLETION DATE:	04/23/09			METHOD OF DRILLING:	Hollow Stem Auger		
DRILL START DATE:	04/23/09			SURFACE ELEVATION:	~ 300'		
SITE LOCATION:	Angelina County, Texas			HOLE DIAMETER:	12.0"		
WELL OWNER:	Angelina County Waste Management Center			LATITUDE: 31 14' 54.5856"	LONGITUDE: 94 41' 42.0504"		
<input checked="" type="checkbox"/> Water level during drilling <input checked="" type="checkbox"/> Water level in completed well <input type="checkbox"/> Split Spoon Core <input type="checkbox"/> No Recovery <input checked="" type="checkbox"/> Auger							
DESCRIPTION	USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION	
Bottom of Boring @ 35.0'						12/20 silica sand	 <div style="display: flex; flex-direction: column; justify-content: space-around;"> <div>0.020" Slotted Sch. 40 PVC Screen</div> <div>PVC Bottom Cap</div> </div>



Passive Vent
Passive Vent No. PV-1W

PROJECT INFORMATION				DRILLING INFORMATION			
PROJECT:		ACWMC		DRILLER:		Donny Smith	
PROJECT NO.:		L-10-159		DRILLER'S LICENSE NO.:		59631M	
LOGGED BY:		Jordan DiMezzo		RIG TYPE:		Geoprobe	
COMPLETION DATE:		7/11/24		METHOD OF DRILLING:		HSA	
DRILL START DATE:		7/11/24		SURFACE ELEVATION:		308 ft MSL	
SITE LOCATION:		7521 FM 58, Lufkin, TX 75901		HOLE DIAMETER:		8.25"	
WELL OWNER:		Angelina County		LATITUDE: 31.246890		LONGITUDE: -94.698470	
<div><div><div><div></div></div></div><div>Water level during drilling</div></div> <div><div><div></div></div></div> <div>Water level in completed well</div>				<div><div><div></div></div></div> <div>Split Spoon Core</div> <div><div><div></div></div></div> <div>No Recovery</div> <div><div><div></div></div></div> <div>Auger</div>			
DESCRIPTION		USCS	SOIL SYMBOLS	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTRUCTION



NOTES:



Passive Vent

Passive Vent No. **PV-2W**

PROJECT INFORMATION

PROJECT: **ACWMC**
PROJECT NO.: **L-10-159**
LOGGED BY: **Jordan DiMezzo**
COMPLETION DATE: **7/11/24**
DRILL START DATE: **7/11/24**
SITE LOCATION: **7521 FM 58, Lufkin, TX 75901**
WELL OWNER: **Angelina County**

DRILLING INFORMATION

DRILLER: **Donny Smith**
DRILLER'S LICENSE NO.: **59631M**
RIG TYPE: **Geoprobe**
METHOD OF DRILLING: **HSA**
SURFACE ELEVATION: **303 ft MSL**
HOLE DIAMETER: **8.25"**
LATITUDE: **31.249083** LONGITUDE: **-94.699083**

☒ Water level during drilling ☒ Water level in completed well Split Spoon Core No Recovery Auger

DESCRIPTION

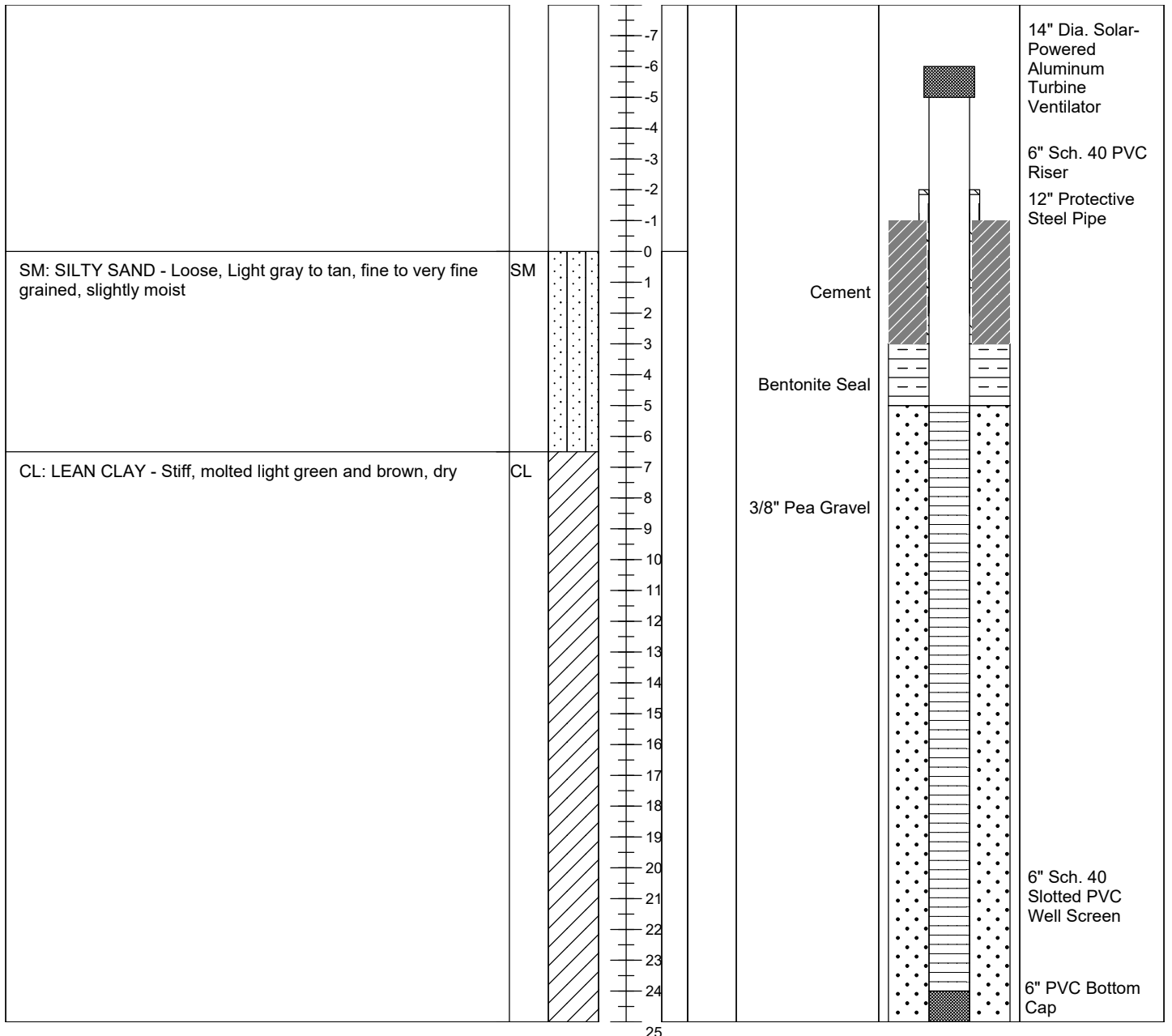
USCS

SOIL
SYMBOLS

DEPTH

SAMPLE
WATER
LEVEL

WELL
CONSTRUCTION



NOTES:



Passive Vent

Passive Vent No. **PV-3W**

PROJECT INFORMATION

PROJECT: **ACWMC**
PROJECT NO.: **L-10-159**
LOGGED BY: **Jordan DiMezzo**
COMPLETION DATE: **7/11/24**
DRILL START DATE: **7/11/24**
SITE LOCATION: **7521 FM 58, Lufkin, TX 75901**
WELL OWNER: **Angelina County**

DRILLING INFORMATION

DRILLER: **Donny Smith**
DRILLER'S LICENSE NO.: **59631M**
RIG TYPE: **Geoprobe**
METHOD OF DRILLING: **HSA**
SURFACE ELEVATION: **303 ft MSL**
HOLE DIAMETER: **8.25"**
LATITUDE: **31.249149** LONGITUDE: **-94.699101**

☒ Water level during drilling ☒ Water level in completed well Split Spoon Core No Recovery Auger

DESCRIPTION

USCS

SOIL
SYMBOLS

DEPTH

SAMPLE
WATER
LEVEL

WELL
CONSTRUCTION

SM: SILTY SAND - Loose, Light gray to tan, fine to very fine grained, slightly moist

SM

CL: LEAN CLAY - Stiff, molted light green and brown, dry

CL

-8
-7
-6
-5
-4
-3
-2
-1
0
1
2
3
4
5
6
7
8
9
10
11
12
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14
15
16
17
18
19
20
21
22
23
24
25

Cement

Bentonite Seal

3/8" Pea Gravel

14" Dia. Solar-Powered Aluminum Turbine Ventilator

6" Sch. 40 PVC Riser

12" Protective Steel Pipe

6" Sch. 40 Slotted PVC Well Screen

6" PVC Bottom Cap

NOTES:



Passive Vent

Passive Vent No. **PV-4W**

PROJECT INFORMATION

PROJECT: **ACWMC**
PROJECT NO.: **L-10-159**
LOGGED BY: **Jordan DiMezzo**
COMPLETION DATE: **7/11/24**
DRILL START DATE: **7/11/24**
SITE LOCATION: **7521 FM 58, Lufkin, TX 75901**
WELL OWNER: **Angelina County**

DRILLING INFORMATION

DRILLER: **Donny Smith**
DRILLER'S LICENSE NO.: **59631M**
RIG TYPE: **Geoprobe**
METHOD OF DRILLING: **HSA**
SURFACE ELEVATION: **303 ft MSL**
HOLE DIAMETER: **8.25"**
LATITUDE: **31.249217** LONGITUDE: **94.699114**

☒ Water level during drilling ☒ Water level in completed well Split Spoon Core No Recovery Auger

DESCRIPTION

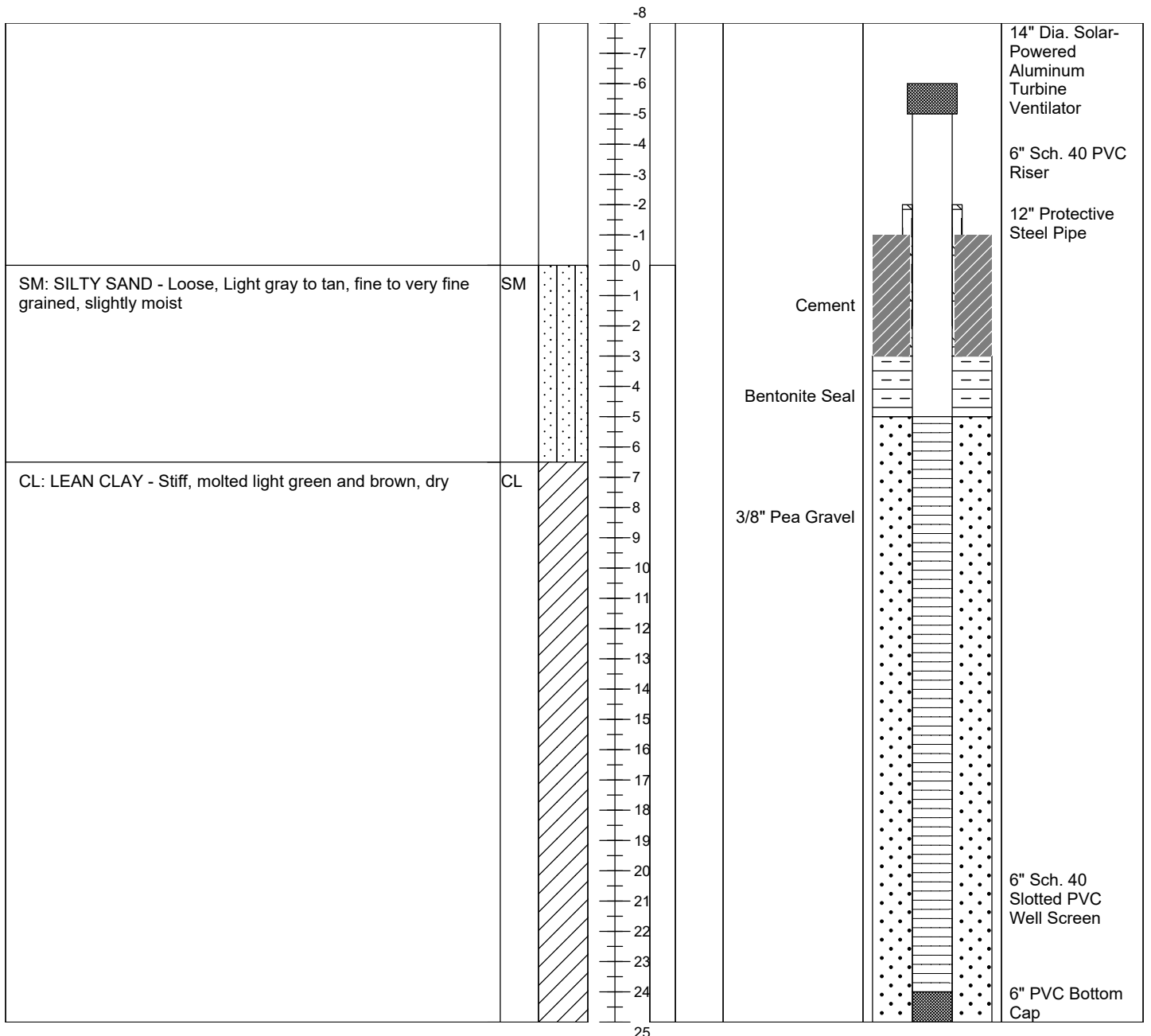
USCS

SOIL
SYMBOLS

DEPTH

SAMPLE
WATER
LEVEL

WELL
CONSTRUCTION

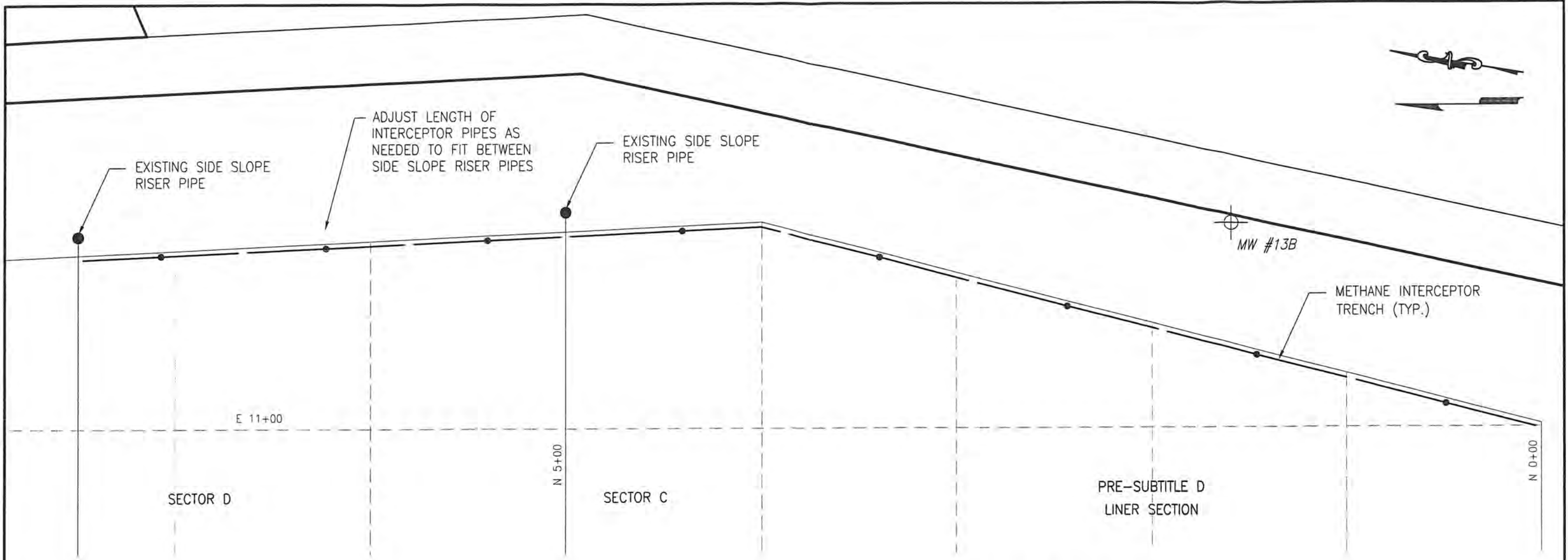


NOTES:

APPENDIX F

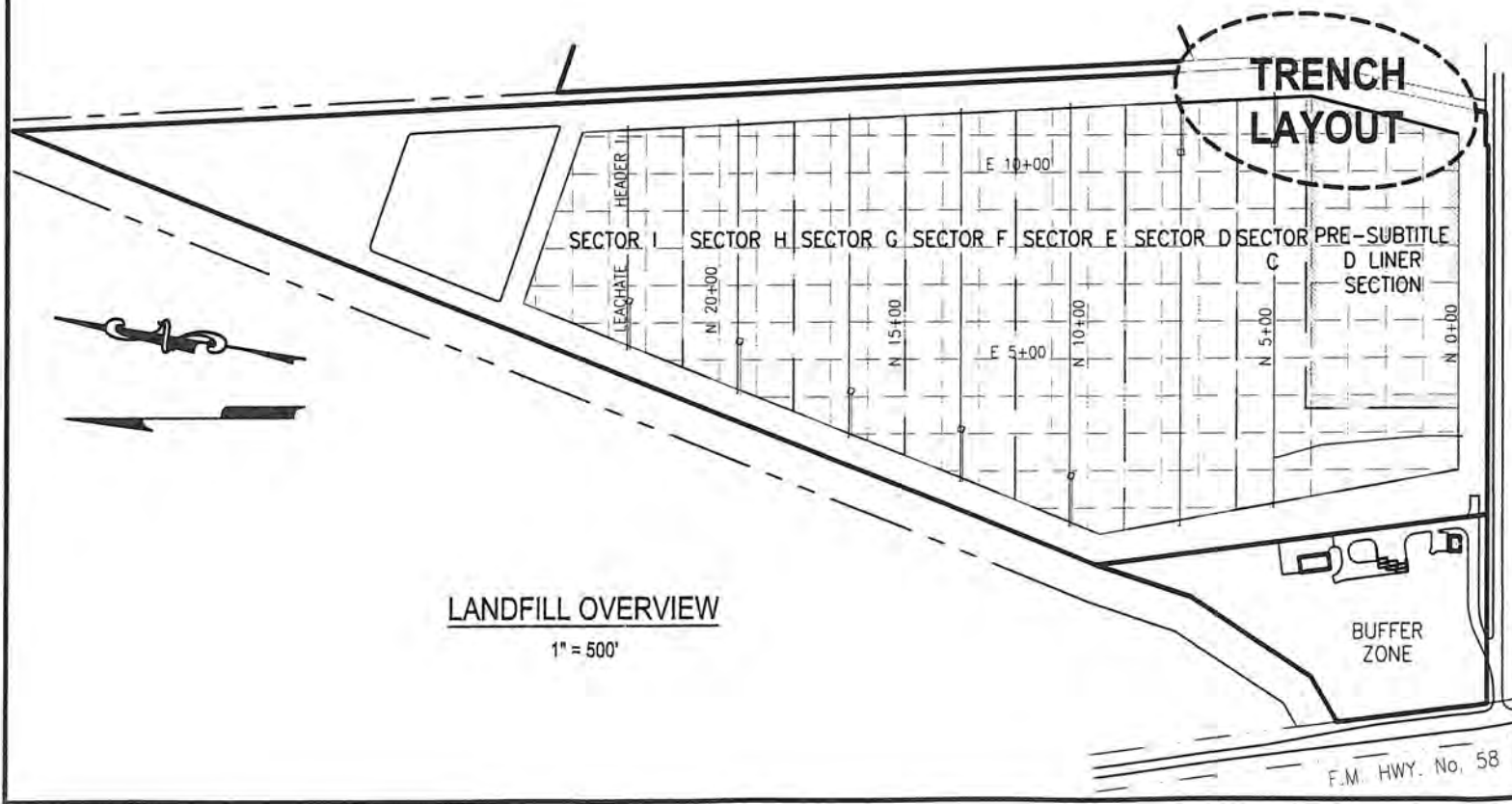
Remediation Plans

Attachment 1
Trench Vent Drawings Installed in
Association with Remedation of
MW-13B



TRENCH LAYOUT

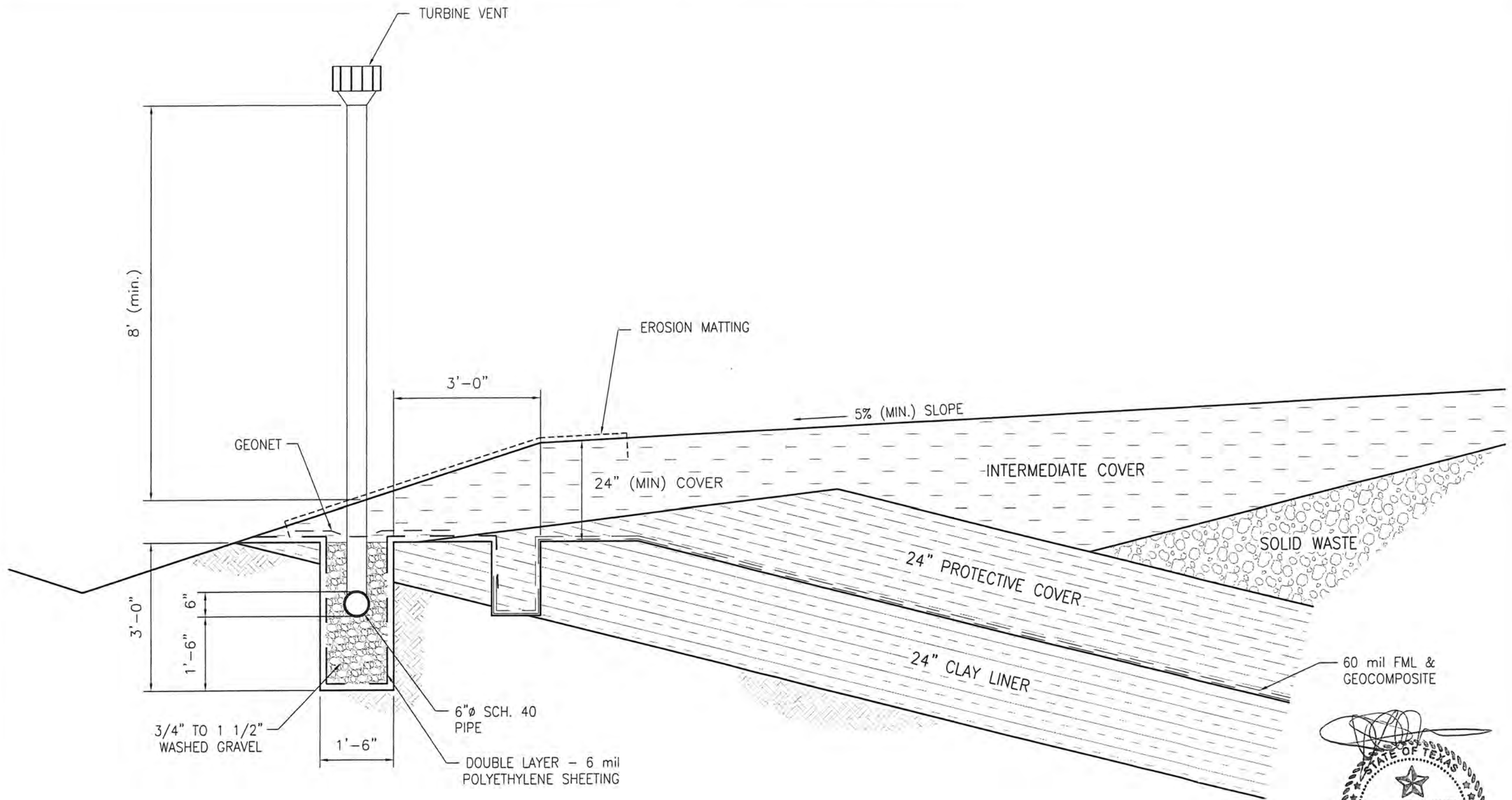
1" = 50'



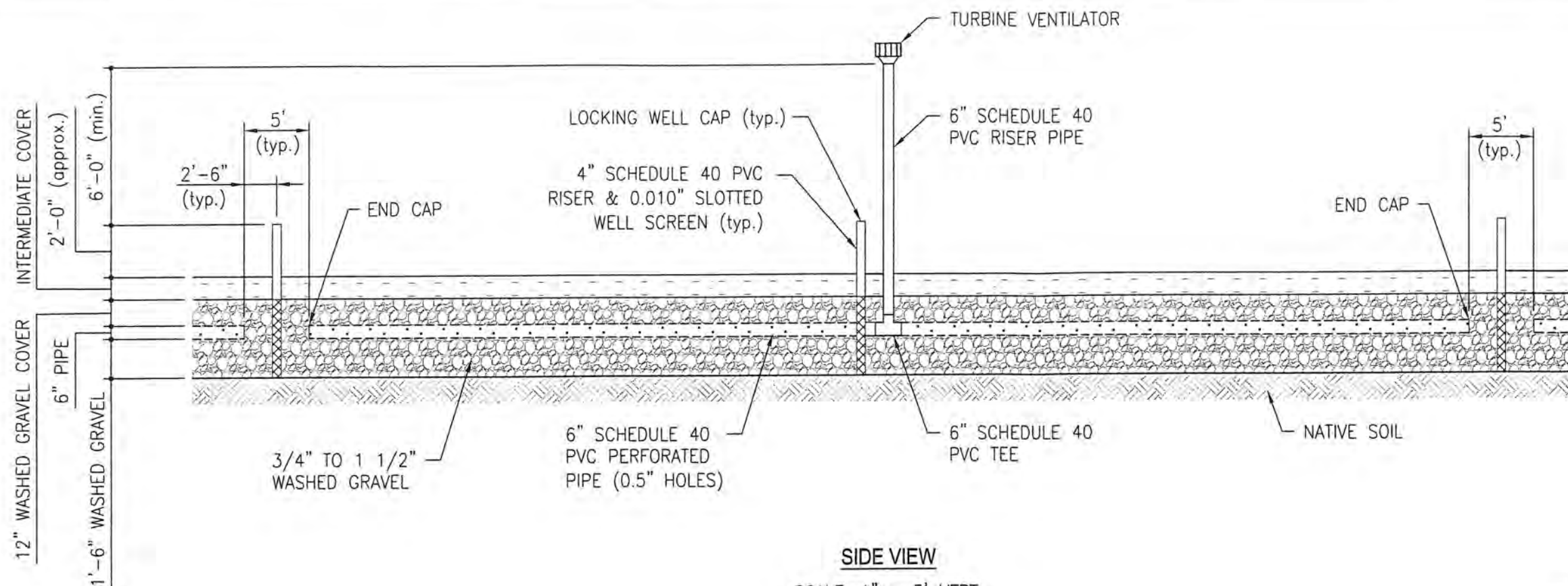
LANDFILL OVERVIEW
1" = 500'



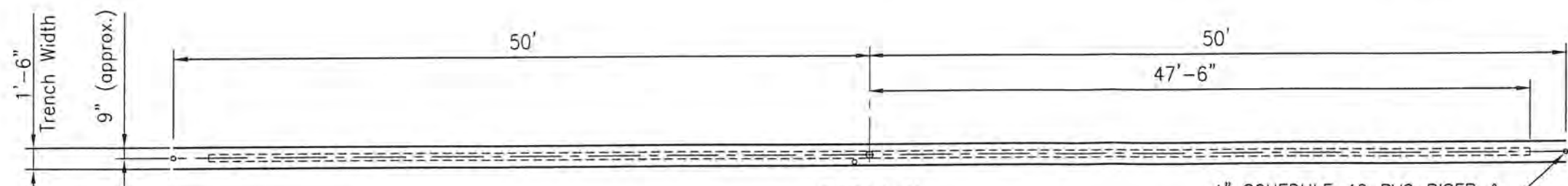
No. Description By Date			ENGINEERS - SURVEYORS Everett Griffith, Jr. & Associates Inc. 408 North Third Street Lufkin, Texas 936-634-5528		ANGELINA COUNTY W.M.C. FIGURE III Methane Interceptor Trench Layout		Drawing of Job No. E A-101 Sheet 1 of 3
Designed By: RFF Surveyed By: EGA Calculated By: RFF			Drawn By: MLP Checked By: RFF Date: 03/21/05		Scale: 1" = 50' F.B. No.: Save Name: Meth Layout		



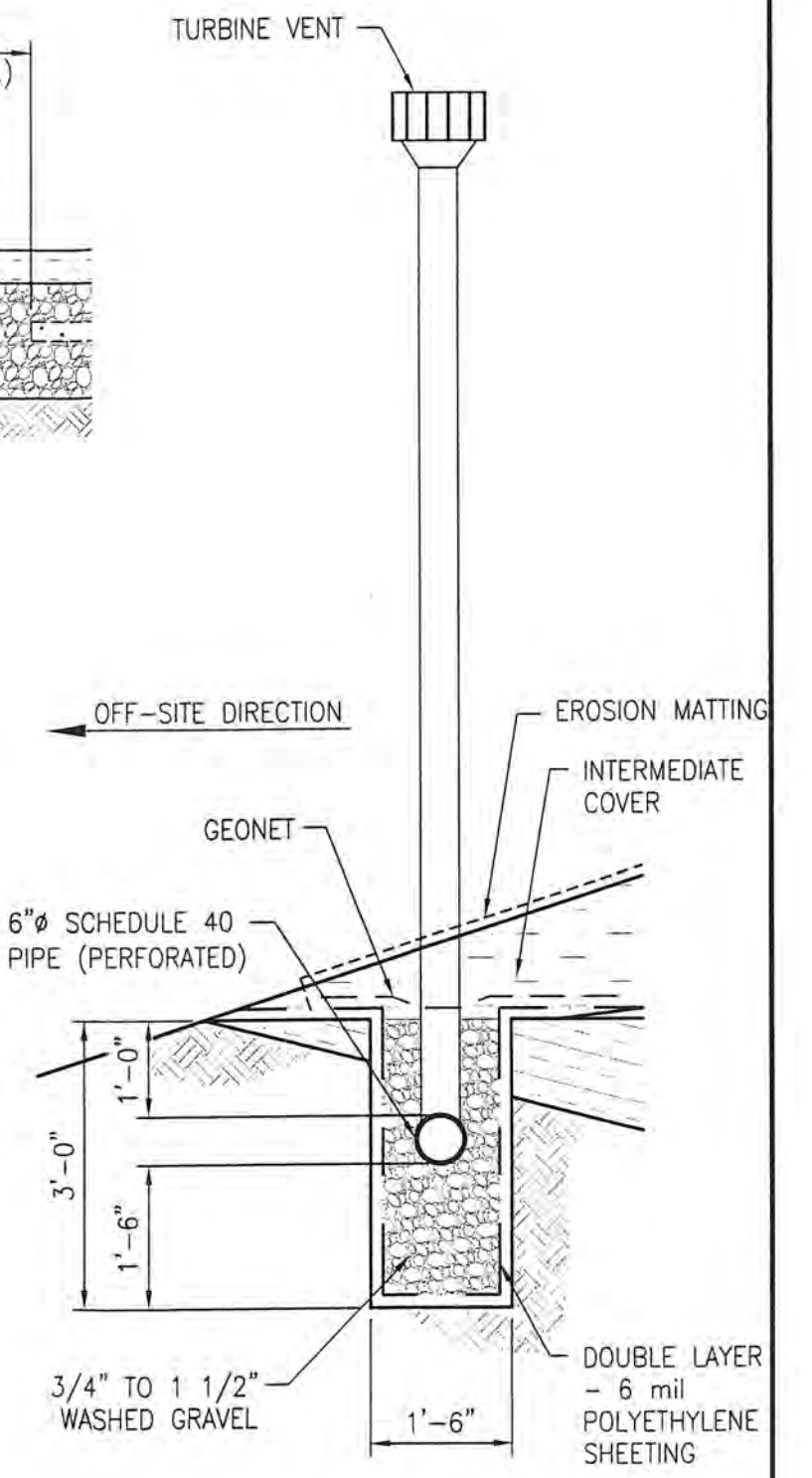
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SIDE VIEW
SCALE: 1" = 5' VERT.
NONE HORIZ.



TOP VIEW
SCALE: 1" = 10'



END VIEW
SCALE: 1" = 2'

No. Description By Date		ENGINEERS - SURVEYORS Everett Griffith, Jr. & Associates Inc. 408 North Third Street Lufkin, Texas 936-634-5528		ANGELINA COUNTY W.M.C. FIGURE V Methane Interceptor Trench Details		Drawing or Job No. E A-101
Designed By: RTF Drawn By: MLP Surveyed By: EGA Checked By: RTF Calculated By: RTF Date: 03/21/05		Scale: AS NOTED F.B. No.		Sheet 3 of 3		

Attachment 2
Remediation Plan GMP-1 and GMP-4

December 1, 2023

MC 124
Ms. Megan Henson, Manager
MSW Permits Section
Waste Permits Division
Texas Commission on Environmental Quality (TCEQ)
P. O. Box 13087
Austin, TX 78711-3087

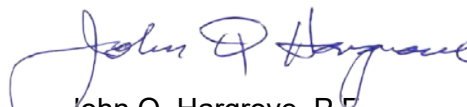
**Re: Angelina County Waste Management Center
Remediation Plan for GMP-1 and GMP-4
Permit No. MSW 2105A
Angelina County, Texas
RN101947323; CN600833511**

Dear Ms. Henson:

Submitted herein is the Remediation Plan for Landfill Gas (LFG) probes GMP-1 and GMP-4 for the above-referenced site as requested in correspondences dated September 14 and October 2, 2023. Following the implementation of the attached remediation plan, a permit modification will be provided. If you have any questions or comments concerning this submittal or the information presented, please contact us at (936) 568-9451.

Sincerely,
Hydrex Environmental
TBPG Firm No. 50027
TBPELS Eng. Firm No. F-13588


Jordan L. DiMezzo
Geologist


John Q. Hargrove, P.E.
Project Engineer

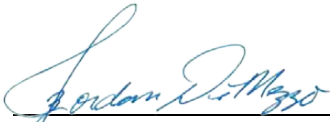
Distribution:

Original + 1	MC 124 Ms. Megan Henson, Manager MSW Permits Section Permits Division TCEQ P. O. Box 13087 Austin, TX 78711-3087
(1)	Ms. Marily Gates Waste Section Manager TCEQ Regional Office 10 3871 Eastex Freeway Beaumont, TX 77703-1892
(1)	Honorable Keith Wright Office of the County Judge Angelina County Courthouse P.O. Box 908 Lufkin, TX 75902
(1)	Mr. Chuck Brooks Landfill Manager Angelina County Waste Management Center P.O. Box 1862 Lufkin, TX 75902-1862
(1)	Hydrex Environmental E-Copy

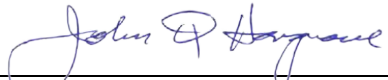
**REMEDIATION PLAN
GMP-1 AND GMP-4**

**ANGELINA COUNTY WASTE MANAGEMENT CENTER
PERMIT NO. MSW 2105A
ANGELINA COUNTY, TEXAS**

DECEMBER 1, 2023



Jordan L. DiMezzo
Geologist



John Q. Hargrove, P.E.
Project Engineer



Prepared by
Hydrex Environmental
312 Old Tyler Road
Nacogdoches, Texas 75961

TBPG Firm No. 50027
TBPELS Eng. Firm No. F-13588

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INTRODUCTION.....	1
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REMEDIATION PLAN	2
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Monitoring Program.....	3
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	Figure 2 – Proposed Passive Vent Location
APPENDIX B	Tables and Graphs
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	Graph 1 – GMP-1 Concentration Trend
	Graph 2 – GMP-4 Concentration Trend
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INTRODUCTION

This remediation plan summarizes the recommended remediation activities in response to methane gas exceedances in Landfill Gas (LFG) probes GMP-1 and GMP-4 at Angelina County Waste Management Center (ACWMC). This report includes relevant information on the initial exceedance, evaluation activities, investigations to date, and the proposed remedy for the exceedances. This report was prepared on behalf of ACWMC.

EXCEEDANCE BACKGROUND

Methane concentrations greater than the Lower Explosive Limit (LEL) of 5% have been detected in probes GMP-1 and GMP-4 at ACWMC since 2015. Efforts to correct these exceedances have been ongoing since the initial exceedances were observed. Following the methane concentration exceedances in probes GMP-1 and GMP-4, adjustments to the existing Gas Collection and Control System (GCCS) were made to remediate the probes. To determine the effectiveness of these adjustments, weekly monitoring of these probes was initiated. Additional methane migration evaluation in the vicinity of probes GMP-1 and GMP-4 began with the installation of 19 temporary probes on May 23 and 24, 2016. Methane concentrations in seven (7) of the temporary probes were noted to be above 5 percent by volume. Weekly monitoring of these temporary probes was initiated following methane detections.

Further corrective measures have included expansion of the GCCS with the addition of six extraction wells in 2017, the connection of the GCCS to three leachate sidewall riser pipes near GMP-1 and GMP-4 in 2018, and the continuous bimonthly adjustment of the LFG extraction rate from each of the 21 existing gas extraction wells and the three leachate sidewall riser connections. The methane concentration exceedances in GMP-1 and GMP-4 have been monitored on a weekly basis. A summary of methane concentrations in GMP-1 and GMP-4 are included in a graphical and tabular format in Appendix B. As presented, methane concentrations for GMP-1 and GMP-4 have shown an overall reduction from initial exceedances in 2015. These reductions demonstrate partial effectiveness of the corrective actions performed to date.

EXISTING SITE CONDITONS

Landfill Gas Monitoring System

Fourteen (14) perimeter Gas Monitoring Probes (GMPs), three Utility Vents (UVs), and 21 Gas Extraction Wells (GEWs) comprise the landfill gas monitoring system at ACWMC. Gas probes GMP-1 and GMP-4 are located along the permit boundary on the southwest and west sides of the landfill, respectively. A map showing locations of the GMPs, GEWs, UVs, structures, and groundwater monitoring wells is included as Figure 1 (Appendix A).

Site Geology

The site is in south-central Angelina County, Texas and is situated within the Texas Gulf Coastal Plain physiographic region. The geographic region in which this site is located is on the outcrop of the Yegua Formation. The Yegua, a continental deposit which is the product of a marine regression over the previously deposited Cook Mountain Formation. The Yegua Formation is a heterogeneous complex of layers of sand, clay, lignite, sandy clay, and carbonaceous clay lenses.

The geology at the site, as characterized by Attachment 4, is characterized by surficial veneer of silty sand (SM) underlain by deposits of mostly organic rich fat clay (CH), lean clay (CL), and clayey sand (SC). Lobes and channels of silty sand and clayey sand occur scattered through the section. In general, the near surface (zero to 25 feet below ground surface (bgs)) stratigraphy can be characterized as a series of channel sands or sand lobes and associated organic rich deltaic silty clays and lignite beds.

REMEDIATION PLAN

Passive Vent Installation

The remediation plan has been developed based on the results of previous landfill gas migration assessments and subsurface stratigraphy. The coarser-grained materials noted near GMP-1 and GMP-4 act as conduits for migrating landfill gas. The depth of the gas migration and the coarse-grained nature of the geology near these gas probes indicate passive vents placed in native soils (outside the waste footprint) parallel to the permit boundary may be an effective remedy to the landfill gas migration near GMP-1 and GMP-4.

The estimated porosity of the subsurface materials was used to determine an approximate effective radius and spacing for each vent. The purpose of the passive vents (PVs) is to intercept and passively vent landfill gas prior to migration outside of the permit boundary. Based on this information, the installation of four (4) PVs are proposed in the vicinity of GMP-1 and GMP-4. One (1) PV will be installed in the vicinity of GMP-1 and three (3) PVs will be installed at 50-ft spacings in the vicinity of GMP-4, as shown in Figure 2 (Appendix A).

The proposed PV installations will consist of four 6-inch passive vents with solar-powered turbine ventilators and other components as shown in the Passive Vent Construction Detail (Appendix C). The passive vents will be installed to a minimum depth 20 feet bgs to intercept the lowest portion of the landfill gas plume. The PVs are scheduled to be installed in early January 2024.

Monitoring Program

To monitor the effectiveness of the passive vents, the following monitoring program is proposed. Weekly monitoring of gas probes and temporary probes will continue until the installation of the passive vents is completed. Following installation of the PVs, methane concentrations will be monitored in the PVs, in gas probes GMP-1 and GMP-4, and in adjacent gas probes GMP-2 and GMP-9 on a weekly basis until six consecutive months of compliance have been achieved. Evaluation of remedy progress will be submitted to TCEQ along with regular Landfill Gas Remediation Effectiveness Reports every twelve weeks along with quarterly monitoring reports. The progress evaluation will include data collected during the preceding monitoring period and any necessary recommendations for continued monitoring or additional remedial activities.

The remedy will be considered complete once six months of continuous methane concentrations of less than 5 percent by volume in GMP-1 and GMP-4 have been achieved. Following remedy completion, a report detailing remediation activities will be developed and provided to the TCEQ for review. After remedy completion, weekly monitoring of the probes and passive vents will cease. Thereafter, monitoring of the probes and passive vents will return to a quarterly schedule.

APPENDIX A

Figures



BASEMAP SOURCE: 2020 AERIAL PHOTOGRAPH PROVIDED BY NAPP

Legend

- | | | | |
|-----------------------|-------------------|---------------------|-------------------|
| Western Passive Vents | Piezometers | Leachate Sump | Waste Cell |
| Flare | Damaged GEW | 12" Pipeline | Property Boundary |
| Gas Probe | Existing GEW | 10" Pipeline | |
| Vent | Proposed GEW | 6" Lateral Pipeline | |
| Monitor Well | Leachate Cleanout | 2" Pipeline | |

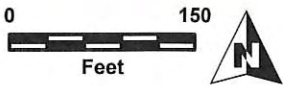
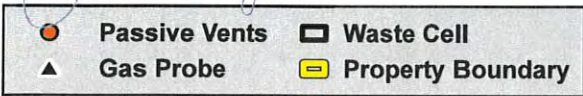
ANGELINA COUNTY
WASTE MANAGEMENT
CENTER
SITE MAP
(2020 AERIAL PHOTOGRAPH)



Angelina County Waste Management Center
MSW Permit No. 2105A
Angelina County, Texas

Map Revised: 11/18/2024 Project Number: L-10-159 GIS Analyst: JLD

BASE MAP SOURCE: 2022 AERIAL PHOTOGRAPH PROVIDED BY NAIIP



ANGELINA COUNTY WASTE MANAGEMENT CENTER

FIGURE 2 - PASSIVE VENT LOCATIONS

APPENDIX B
Table and Graphs

Angelina County Waste Managemnet Center

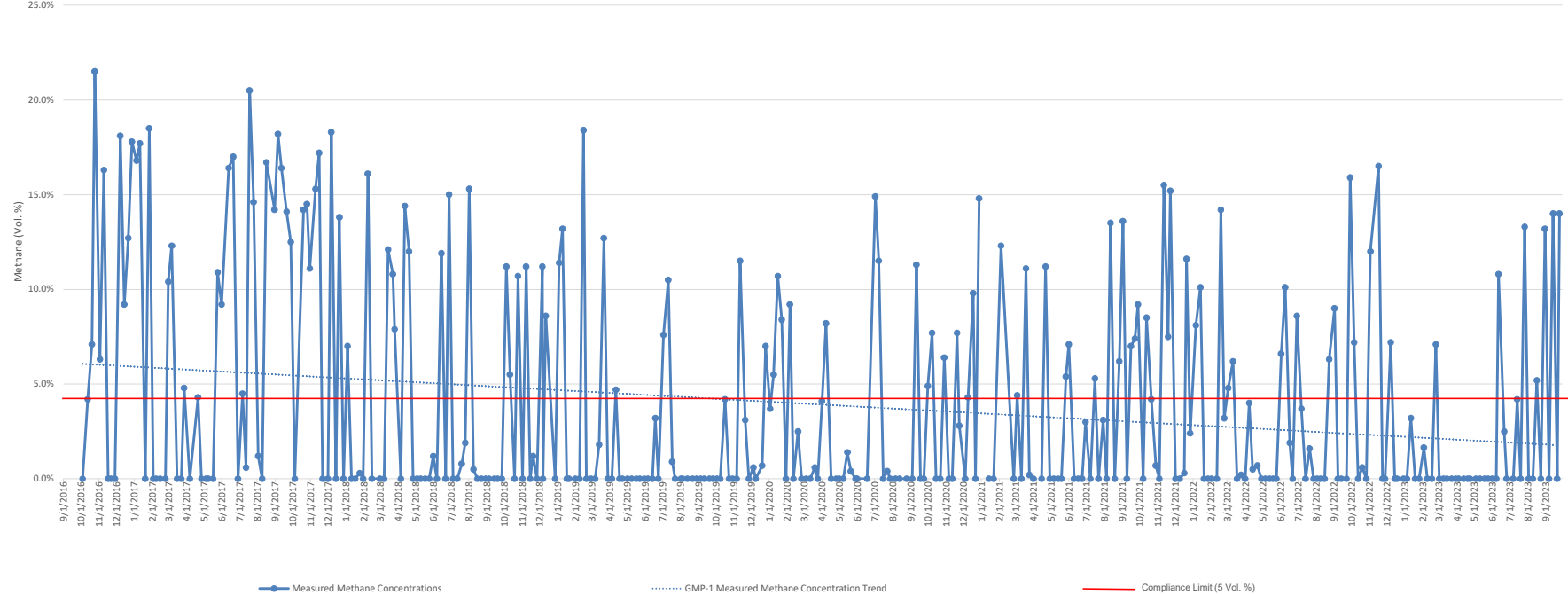
Angelina County, Texas

MSW Permit No. 2105A

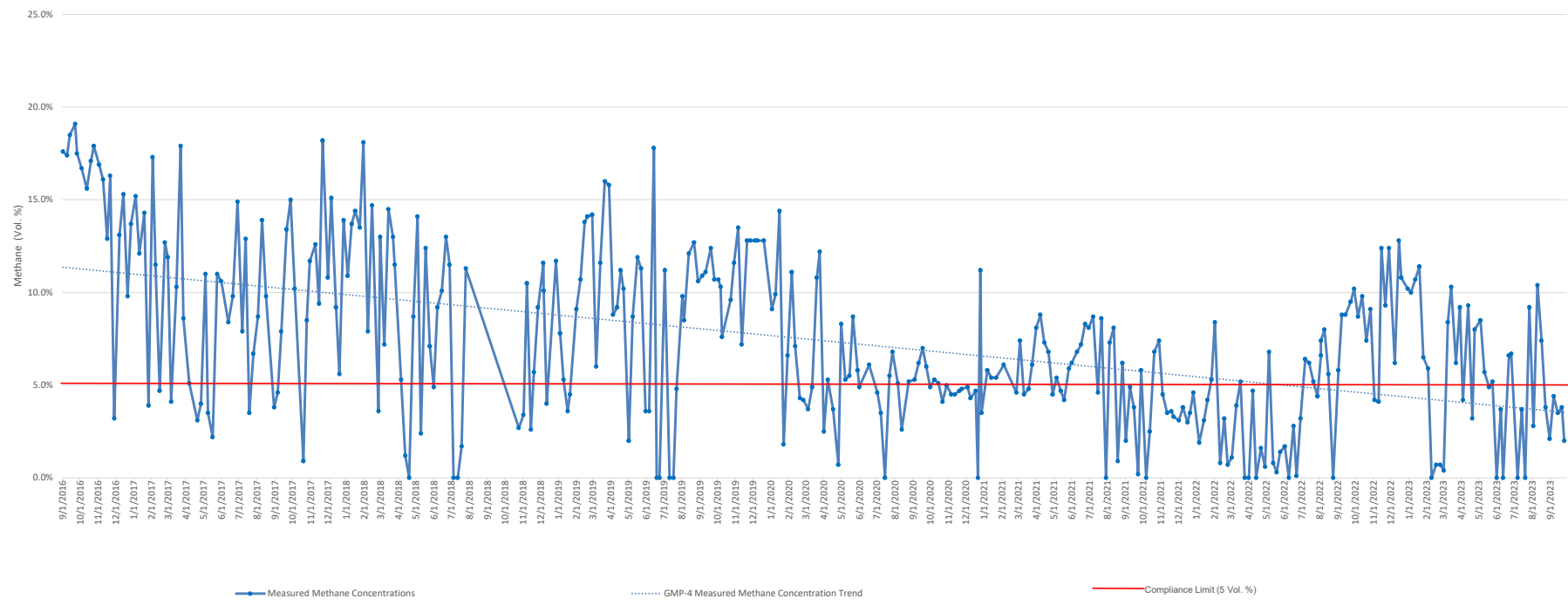
Weekly Methane Monitoring 2023 For GMP-1 and GMP-4

GMP-1		GMP-4	
Date	Percent Volume Methane	Date	Percent Volume Methane
1/5/2023	4.5%	1/5/2023	2.3%
1/12/2023	11.8%	1/12/2023	2.1%
1/19/2023	2.4%	1/19/2023	2.4%
1/26/2023	0.0%	1/26/2023	1.3%
2/3/2023	0.0%	2/3/2023	5.4%
2/9/2023	0.0%	2/9/2023	6.5%
2/17/2023	0.0%	2/17/2023	8.9%
2/24/2023	0.0%	2/24/2023	9.5%
3/2/2023	0.0%	3/2/2023	0.6%
3/9/2023	0.0%	3/9/2023	8.4%
3/15/2023	0.0%	3/15/2023	3.6%
3/23/2023	12.5%	3/23/2023	8.9%
3/30/2023	1.5%	3/30/2023	9.6%
4/4/2023	14.9%	4/4/2023	9.7%
4/13/2023	6.3%	4/13/2023	3.2%
4/20/2023	3.7%	4/20/2023	9.5%
4/24/2023	0.0%	4/24/2023	10.2%
5/4/2023	0.0%	5/4/2023	9.6%
5/11/2023	13.5%	5/11/2023	9.9%
5/19/2023	0.0%	5/19/2023	8.8%
5/25/2023	1.6%	5/25/2023	9.8%
6/1/2023	0.0%	6/1/2023	4.4%
6/8/2023	0.9%	6/8/2023	10.5%
6/12/2023	0.0%	6/12/2023	10.4%
6/22/2023	0.0%	6/22/2023	10.9%
6/26/2023	0.0%	6/26/2023	10.2%
7/7/2023	0.4%	7/7/2023	10.6%
7/14/2023	0.0%	7/14/2023	9.7%
7/20/2023	0.0%	7/20/2023	9.9%
7/27/2023	0.0%	7/27/2023	10.0%
8/3/2023	0.4%	8/3/2023	9.6%
8/10/2023	2.4%	8/10/2023	9.2%
8/17/2023	9.9%	8/17/2023	9.1%
8/24/2023	0.9%	8/24/2023	8.3%
8/31/2023	0.0%	8/31/2023	10.0%
9/7/2023	0.4%	9/7/2023	9.6%
9/14/2023	10.4%	9/14/2023	9.5%
9/21/2023	0.0%	9/21/2023	8.5%
9/25/2023	0.0%	9/25/2023	8.4%
10/5/2023	Rained Out	10/5/2023	Rained Out
10/12/2023	14.4%	10/12/2023	6.7%
10/16/2023	0.0%	10/16/2023	7.4%
10/26/2023	0.0%	10/26/2023	9.6%
11/3/2023	7.3%	11/3/2023	5.0%
11/9/2023	10.8%	11/9/2023	7.6%

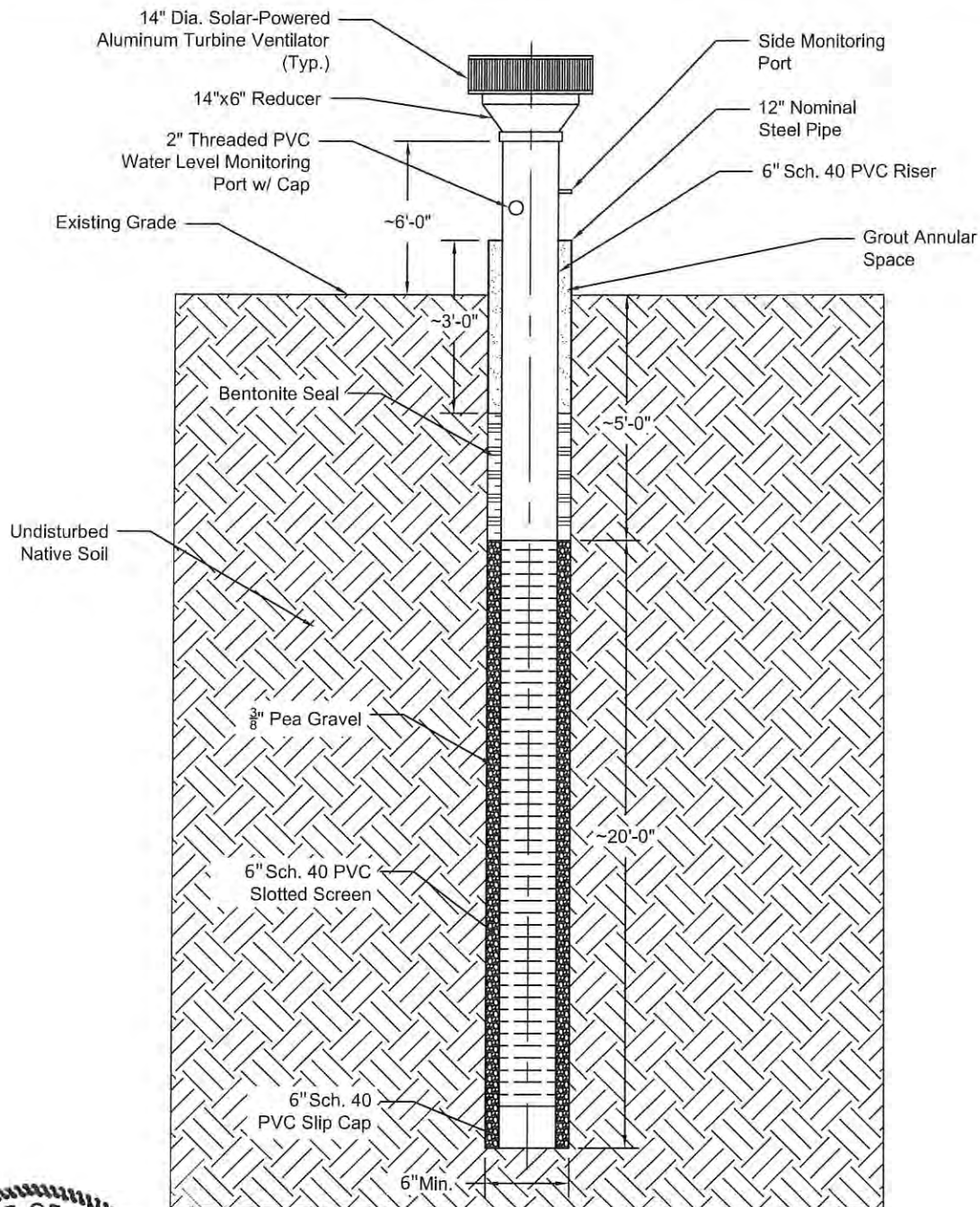
Methane Concentrations in GMP-1



Methane Concentrations in GMP-4



APPENDIX C
Passive Vent Construction Detail



PASSIVE VENT DETAIL

SCALE: N.T.S.



John Q. Hargrove

Hydrex
ENVIRONMENTAL

TBP ELS ENG. FIRM NO. F-13588 • TBP G FIRM NO. F-50027
312 OLD TYLER ROAD • NACOGDOCHES, TX 75961 • (936) 568-9457

**PASSIVE VENT
CONSTRUCTION DETAIL**
Angelina County Waste
Management Center
Angelina County, Texas

DSN. JLD	JOB NO.: L-10-159
DWN. CT	DATE: 8/5/2024
CHK. CT	SCALE: AS SHOWN

APPENDIX G
GCCS FIGURES AND DRAWINGS

**Attachment 1
December 2011 GCCS
Installation Construction
Drawings**

ANGELINA COUNTY LANDFILL LANDFILL GAS COLLECTION & CONTROL SYSTEM 2011 AS-BUILT DRAWINGS

LUFKIN, TEXAS
JANUARY, 2012

PREPARED FOR

INDEX TO DRAWINGS

<u>DRAWING NO</u>	<u>DRAWING TITLE</u>	<u>REVISION NO</u>	<u>DATE</u>
1	SITE PLAN	0	01-2012
2	EXTRACTION WELL DETAILS	0	01-2012
3	CONDENSATE SUMP DETAILS	0	01-2012
4	TRENCH DETAILS	0	01-2012
5	MISCELLANEOUS CONNECTION DETAILS	0	01-2012
6	DUAL-CONTAINED SUMP DETAILS	0	01-2012
7	BLOWER/FLARE DETAILS	0	01-2012

ELEMENT MARKETS



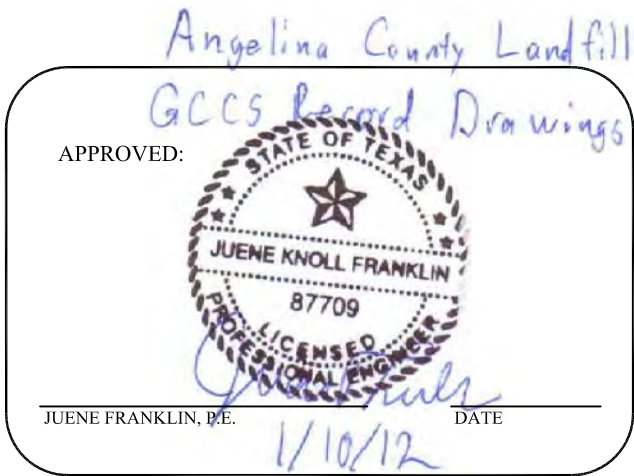
ELEMENT MARKETS

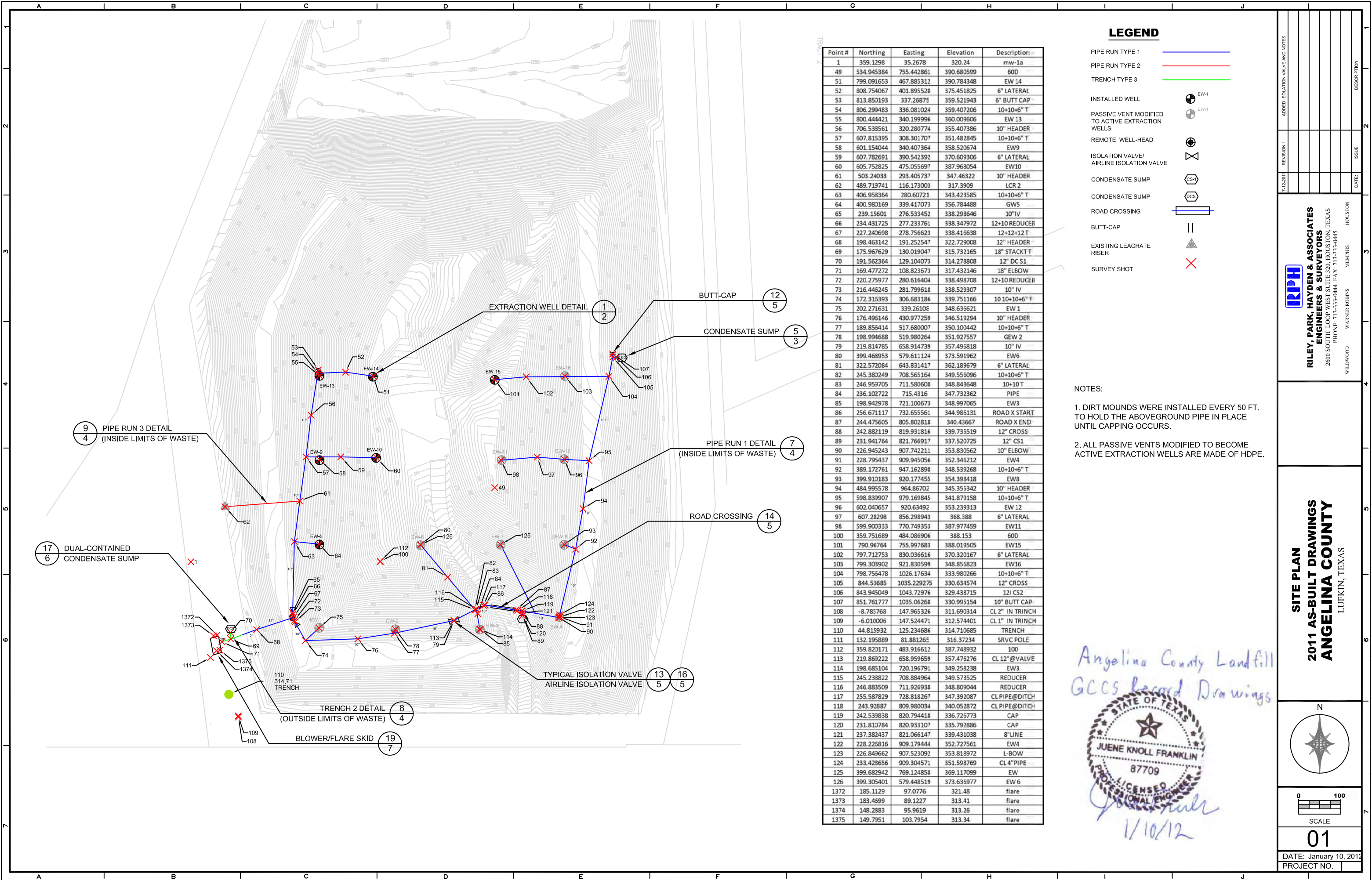
PREPARED BY



RILEY PARK HAYDEN AND ASSOCIATES, INC.
2600 SOUTH LOOP WEST, SUITE 320
HOUSTON, TEXAS 77054

PROJECT NO: 8075





Point #	Northing	Easting	Elevation	Description
1	359.1298	35.2678	320.24	mw-1a
49	534.945384	755.442861	390.680599	60D
51	799.091653	467.885312	390.784348	EW 14
52	808.754067	401.895528	375.451825	6" LATERAL
53	813.850193	337.26875	359.521943	6" BUTT CAP
54	806.299483	336.081024	359.407206	10+10+6" T
55	800.444421	340.199996	360.009606	EW 13
56	706.539561	320.280774	355.407386	10" HEADER
57	607.815395	308.301707	351.482845	10+10+6" T
58	601.154044	340.407364	358.520674	EW9
59	607.782691	390.542392	370.609306	6" LATERAL
60	605.752825	475.055697	387.968054	EW10
61	503.24033	293.405737	347.46322	10" HEADER
62	489.713741	116.173003	317.3909	LCR 2
63	406.958364	280.60721	343.423585	10+10+6" T
64	400.980169	339.417073	356.784488	GW5
65	239.15601	276.533452	338.298646	10" IV
66	234.431725	277.233761	338.347972	12+10 REDUCER
67	227.240698	278.756623	338.416638	12+12+12 T
68	198.463142	191.252547	322.729008	12" HEADER
69	175.967629	130.019047	315.732165	18" STACK T
70	191.562364	129.104073	314.278808	12" DC S1
71	169.477272	108.823673	317.432146	18" ELBOW
72	220.275977	280.616404	338.498708	12+10 REDUCER
73	216.445245	281.799618	338.529307	10" IV
74	172.315393	306.683186	339.751166	10 10+10+6" T
75	202.271631	339.26108	348.636621	EW 1
76	176.495146	430.977259	346.519294	10" HEADER
77	189.859414	517.680007	350.100442	10+10+6" T
78	198.994688	519.980264	351.927557	GEW 2
79	219.814785	658.914739	357.496818	10" IV
80	399.468953	579.611124	373.591962	EW6
81	322.572084	643.831417	362.189679	6" LATERAL
82	245.380249	708.565164	349.556096	10+10+6" T
83	246.959705	711.580608	348.843648	10+10 T
84	236.102722	715.4316	347.732362	PIPE
85	198.942978	721.100673	348.997065	EW3
86	256.671117	732.655561	344.985131	ROAD X START
87	244.475605	805.802818	340.43667	ROAD X END
88	242.882119	819.931816	339.735519	12" CROSS
89	231.941764	821.766917	337.520725	12" CS1
90	226.945243	907.742211	353.830562	10" ELBOW
91	228.795437	909.945056	352.345212	EW4
92	389.172761	947.162898	348.539268	10+10+6" T
93	399.910183	920.177455	354.398418	EW8
94	484.995578	964.86702	345.355342	10" HEADER
95	598.839907	979.169845	341.879158	10+10+6" T
96	602.040657	920.63492	353.239313	EW 12
97	607.28298	856.298943	368.388	6" LATERAL
98	599.900333	770.749353	387.977459	EW11
100	359.751689	484.086906	388.153	60D
101	790.96764	755.997683	388.019505	EW15
102	797.712753	830.036616	370.320167	6" LATERAL
103	799.303902	921.830599	348.856823	EW16
104	798.755478	1026.17634	333.980266	10+10+6" T
105	844.53685	1035.229275	330.634574	12" CROSS
106	843.945049	1043.72976	329.438715	12I CS2
107	851.761777	1035.06268	330.995154	10" BUTT CAP
108	-8.785768	147.965326	311.690314	CL 2" IN TRINCH
109	-6.010006	147.524471	312.574401	CL 1" IN TRINCH
110	44.815932	125.234686	314.710685	TRENCH
111	132.195889	81.881265	316.37234	SRVC POLE
112	359.823171	483.916612	387.748932	100
113	219.869222	658.959659	357.476276	CL 12" @ VALVE
114	198.685104	720.196791	349.258238	EW3
115	245.238822	708.884964	349.573525	REDUCER
116	246.883509	711.926938	348.809044	REDUCER
117	255.587829	728.818267	347.392087	CL PIPE @ DITCH
118	243.92887	809.980034	340.052872	CL PIPE @ DITCH
119	242.539838	820.794418	336.726773	CAP
120	231.810784	820.933107	335.792886	CAP
121	237.382437	821.066147	339.431038	8" LINE
122	228.225816	909.179444	352.727561	EW4
123	226.843662	907.523092	353.818972	L-BOW
124	233.429656	909.304571	351.598769	CL 4" PIPE
125	399.682942	769.124858	369.117099	EW
126	399.305401	579.448519	373.636977	EW 6
1372	185.1129	97.0776	321.48	flare
1373	183.4599	89.1227	313.41	flare
1374	148.2383	95.9619	313.26	flare
1375	149.7951	103.7954	313.34	flare

LEGEND

PIPE RUN TYPE 1 —

PIPE RUN TYPE 2 —

TRENCH TYPE 3 —

INSTALLED WELL + EW-1

PASSIVE VENT MODIFIED TO ACTIVE EXTRACTION WELLS + EW-1

REMOTE WELL-HEAD +

ISOLATION VALVE/ AIRLINE ISOLATION VALVE X

CONDENSATE SUMP CS

CONDENSATE SUMP CS

ROAD CROSSING ||

BUTT-CAP ||

EXISTING LEACHATE RISER X

SURVEY SHOT X

NOTES:

1. DIRT MOUNDS WERE INSTALLED EVERY 50 FT. TO HOLD THE ABOVEGROUND PIPE IN PLACE UNTIL CAPPING OCCURS.

2. ALL PASSIVE VENTS MODIFIED TO BECOME ACTIVE EXTRACTION WELLS ARE MADE OF HDPE.

Angelina County Landfill
GCCS Record Drawings

STATE OF TEXAS
JUENE KNOLL FRANKLIN
87709
PROFESSIONAL ENGINEER
1/10/12

RP

**RILEY, PARK, HAYDEN & ASSOCIATES
ENGINEERS & SURVEYORS**
2600 SOUTH LOOP WEST SUITE 320, HOUSTON, TEXAS
PHONE: 713-333-0444 FAX: 713-333-0445
WILLOW WOOD WARNER ROBINS MEMPHIS HOUSTON

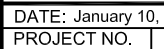
SITE PLAN

**2011 AS-BUILT DRAWINGS
ANGELINA COUNTY
LUFKIN, TEXAS**

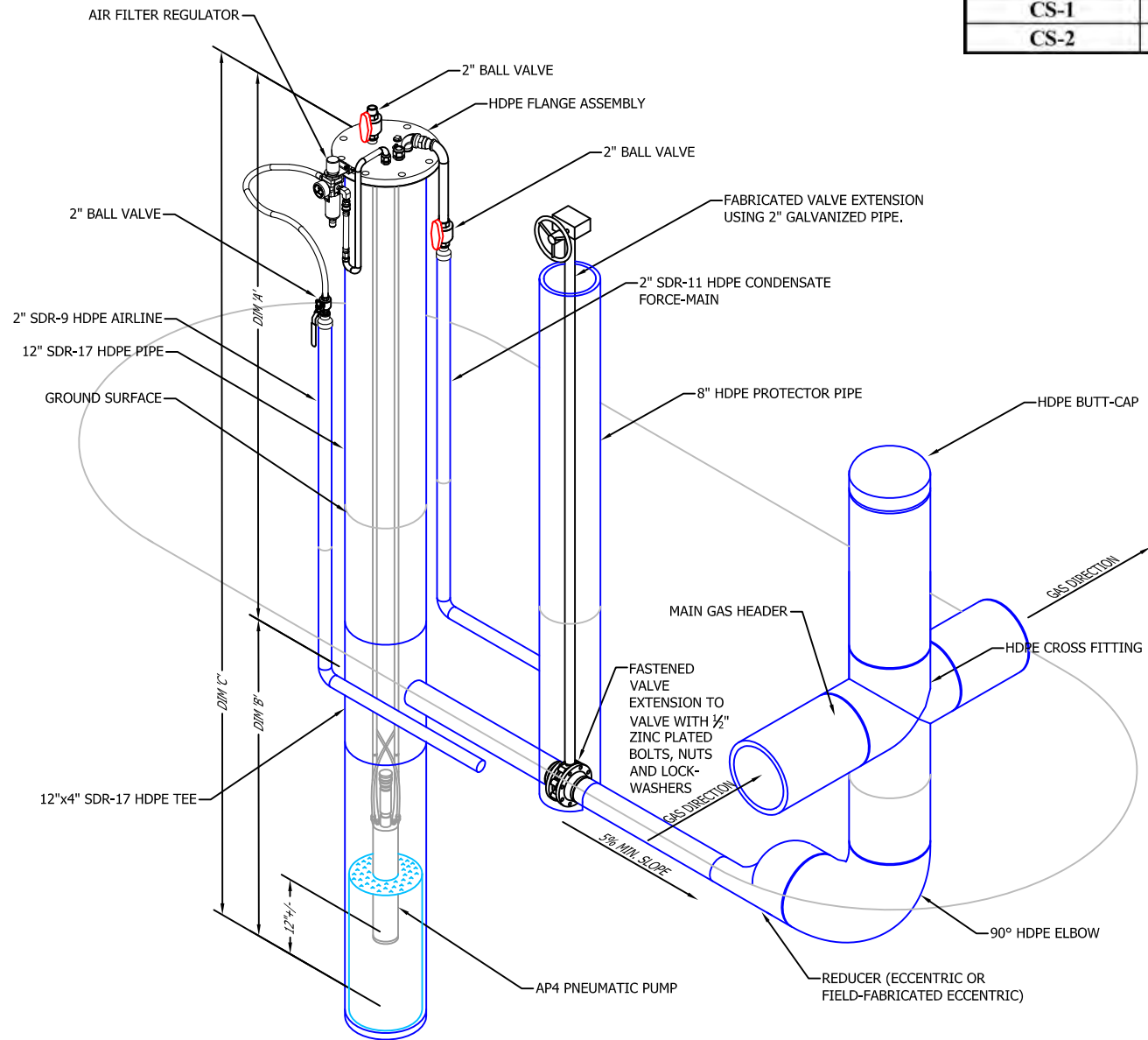
DATE: January 10, 2012
PROJECT NO.



VERTICAL WELL PUMP ASSEMBLY 2
2

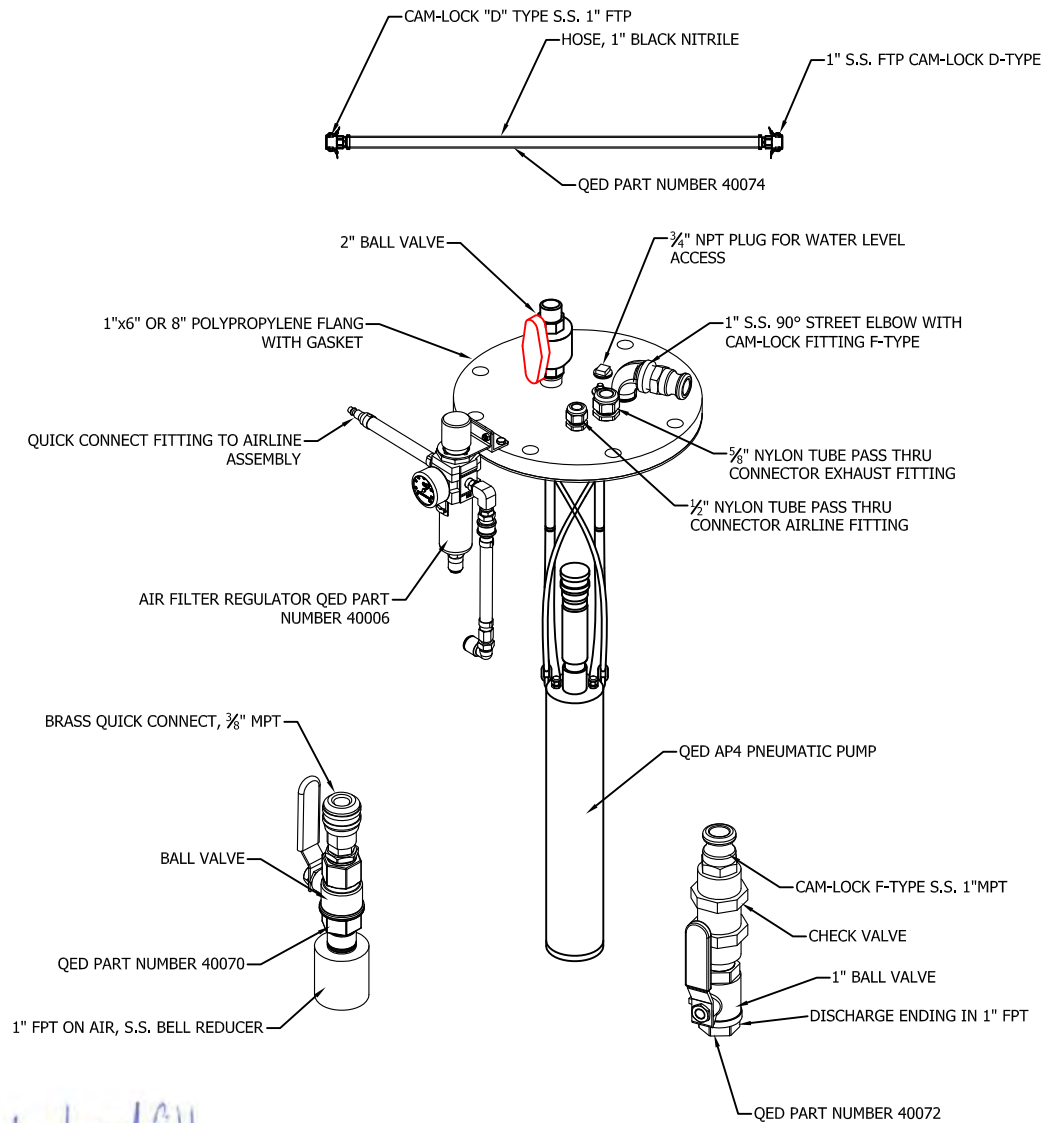


Angelina County Landfill Condensate Sump Dimensions			
Sump Name	Dimension 'A' (ft)	Dimension 'B' (ft)	Dimension 'C' (ft)
CS-1	5	8	13
CS-2	5.5	8	13.5



TYPICAL CONDENSATE PUMP STATION
(NTS)

5
3



TYPICAL CONDENSATE PUMP ASSEMBLY
(NTS)

6
3

Angelina County Landfill
GCCS Record Drawings

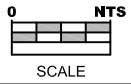
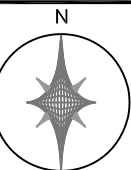
STATE OF TEXAS
JUENE KNOLL FRANKLIN
87709
LICENSED PROFESSIONAL ENGINEER
1/10/12



RILEY, PARK, HAYDEN & ASSOCIATES
ENGINEERS & SURVEYORS
2600 SOUTH LOOP WEST SUITE 320, HOUSTON, TEXAS
PHONE: 713-333-0444 FAX: 713-333-0445

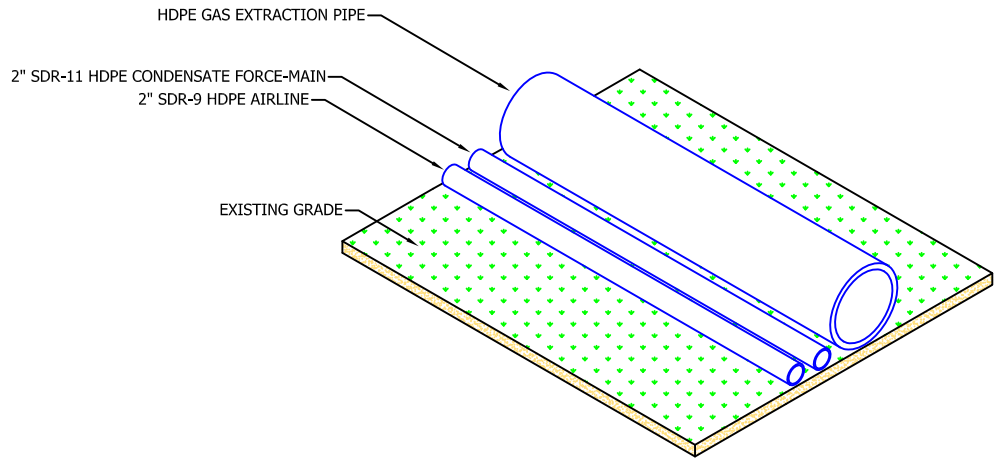
WILLOWOOD WARNER ROBINS MEMPHIS HOUSTON

CONDENSATE SUMP DETAILS
2011 AS-BUILT DRAWINGS
ANGELINA COUNTY
LUFKIN, TEXAS



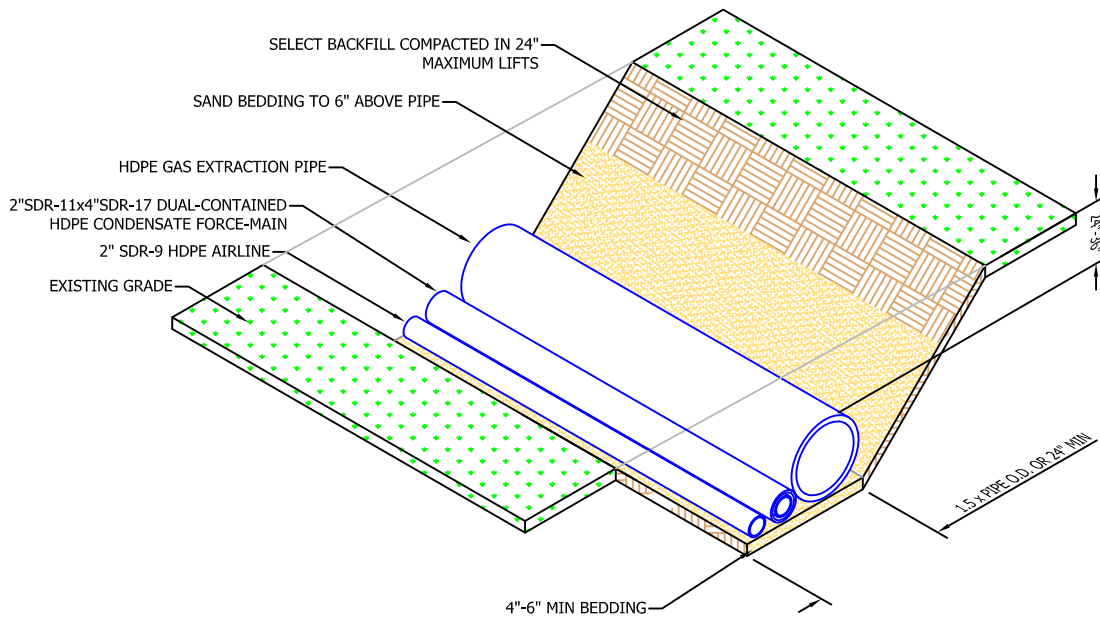
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DATE: January 10, 2012
PROJECT NO.



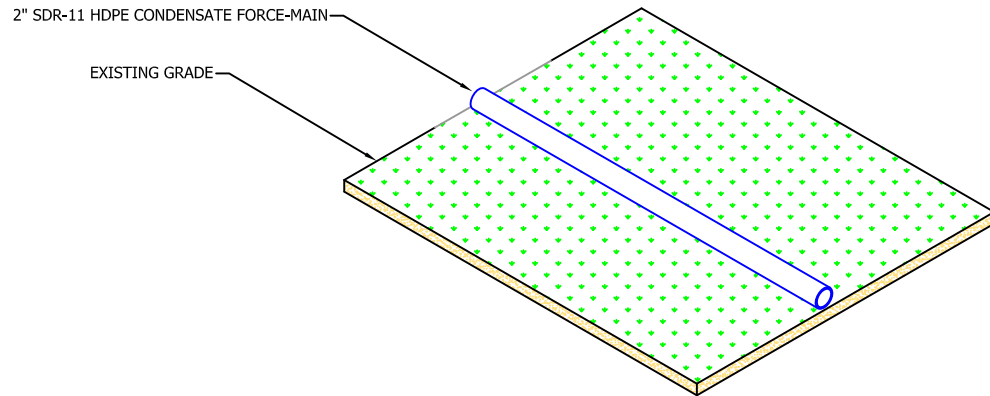
PIPE RUN TYPE 1
(INSIDE LIMITS OF WASTE)

7
4



GCCS TRENCH TYPE 2
(OUTSIDE LIMITS OF WASTE)

8
4



PIPE RUN TYPE 3
(INSIDE LIMITS OF WASTE)

9
4

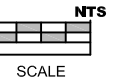
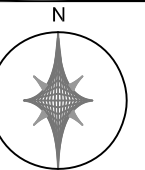
Angelina County Landfill
GCCS Record Drawings

STATE OF TEXAS
JUENE KNOLL FRANKLIN
87709
PROFESSIONAL ENGINEER
1/10/12



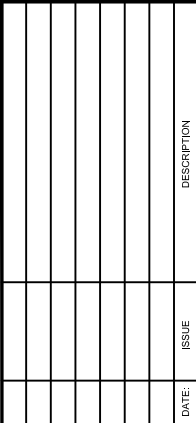
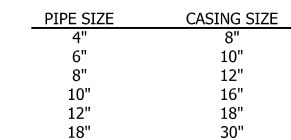
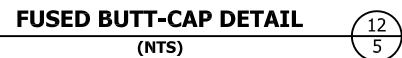
**RILEY, PARK, HAYDEN & ASSOCIATES
ENGINEERS & SURVEYORS**
2600 SOUTH LOOP WEST SUITE 320, HOUSTON, TEXAS
PHONE: 713-333-0444 FAX: 713-333-0445
WILLOW WOOD WARNER ROBINS MEMPHIS HOUSTON

TRENCH DETAILS
2011 AS-BUILT DRAWINGS
ANGELINA COUNTY
LUFKIN, TEXAS



04

DATE: January 10, 2012
PROJECT NO.



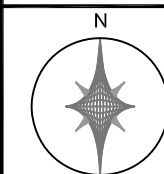
RPH

**RILEY, PARK, HAYDEN & ASSOCIATES
ENGINEERS & SURVEYORS**

2600 SOUTH LOOP WEST SUITE 320, HOUSTON, TEXAS
PHONE: 713-333-0444 FAX: 713-333-0445

THE FELLOWSHIP OF THE RING

MISCELLANEOUS PIPE DETAILS
2011 AS-BUILT DRAWINGS
ANGELINA COUNTY
LUFKIN, TEXAS

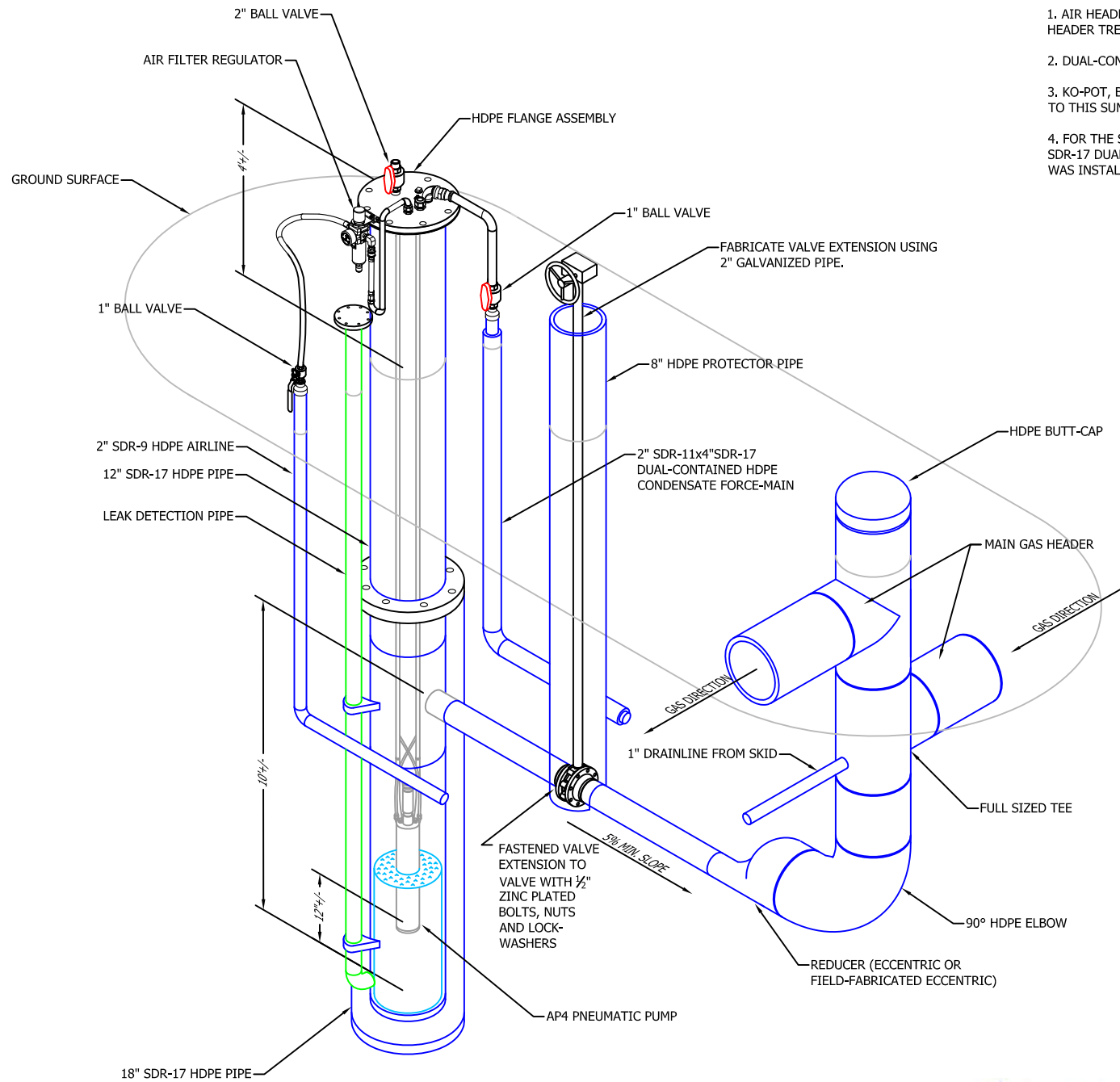


0 NTS

SCALE

05

DATE: January 10,	
PROJECT NO.	

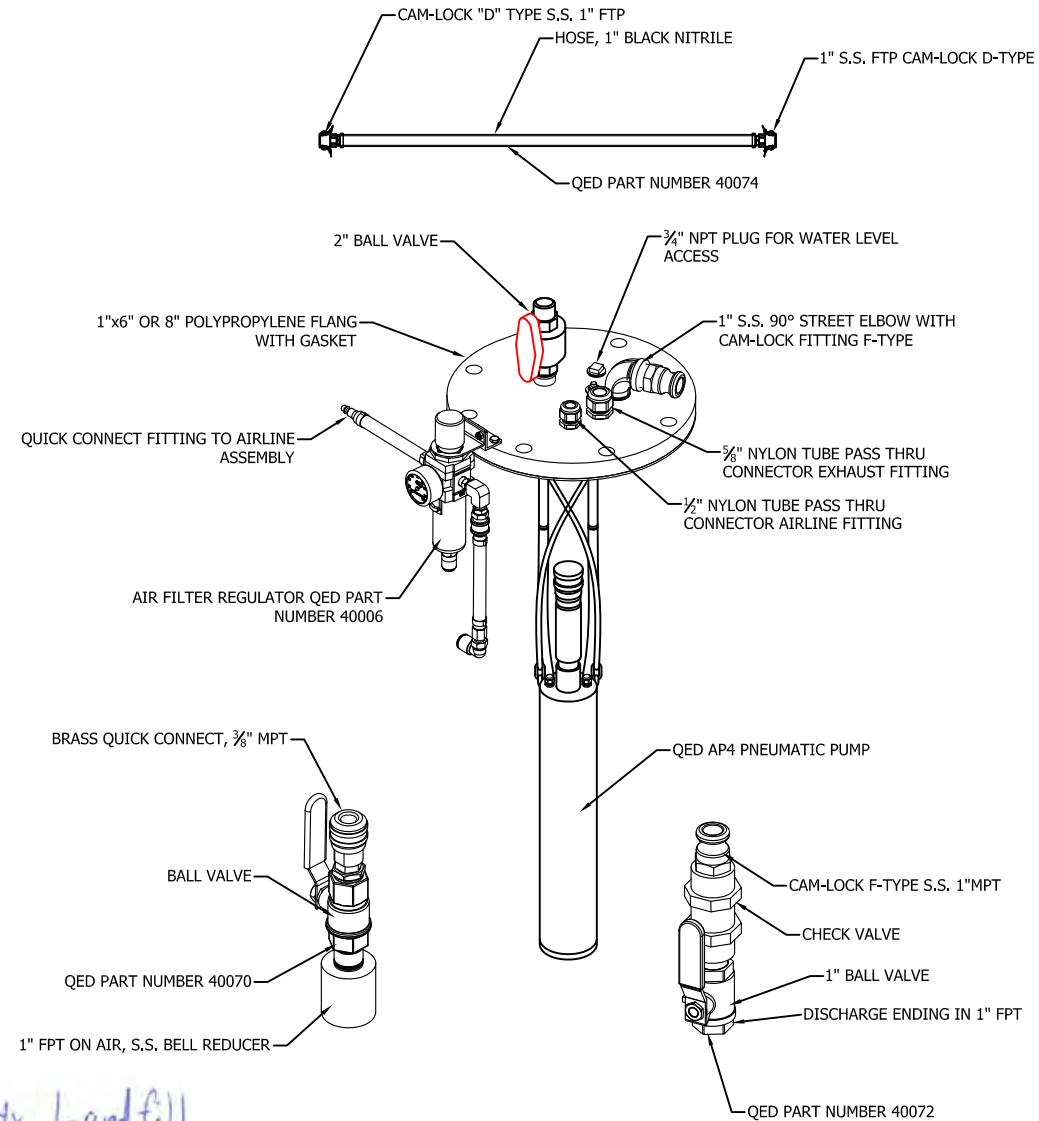


DUAL-CONTAINED CONDENSATE PUMP STATION
(OUTSIDE LIMITS OF WASTE)

17
6

NOTES:

1. AIR HEADER AND CONDENSATE FORCE-MAIN WAS LOCATED IN HEADER TRENCH WHENEVER POSSIBLE.
2. DUAL-CONTAINED PIPE CONTAINED LEAK DETECTION
3. KO-POT, BLOWER, AND FLARE DRAIN LINES GRAVITY FLOWED TO THIS SUMP.
4. FOR THE SUMP INSTALLED OUTSIDE OF WASTE 2" SDR-11 x 4" SDR-17 DUAL-CONTAINED HDPE CONDENSATE FORCE-MAIN LINE WAS INSTALLED.



TYPICAL CONDENSATE PUMP ASSEMBLY
(NTS)

18
6

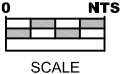
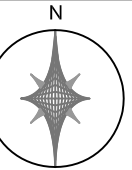
Angelina County Landfill
GCCS Record Drawings

STATE OF TEXAS
JUENE KNOLL FRANKLIN
87709
LICENSED PROFESSIONAL ENGINEER
1/10/12



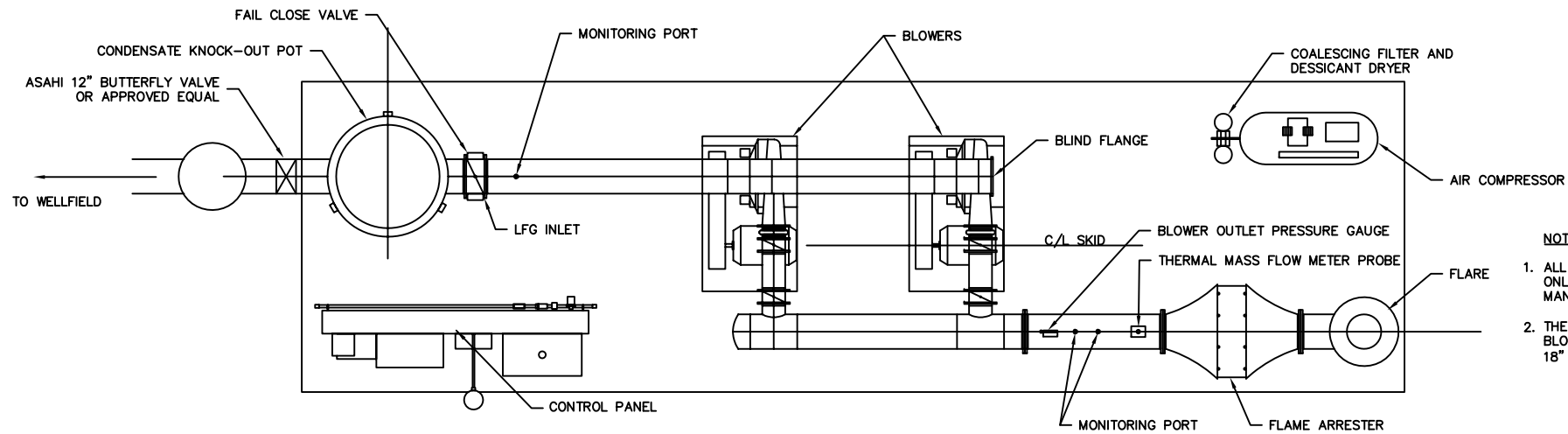
RILEY, PARK, HAYDEN & ASSOCIATES
ENGINEERS & SURVEYORS
2600 SOUTH LOOP WEST SUITE 320, HOUSTON, TEXAS
PHONE: 713-333-0444 FAX: 713-333-0445
WILLOW WOOD MEMPHIS HOUSTON

DUAL-CONTAINED SUMP DETAIL
2011 AS-BUILT DRAWINGS
ANGELINA COUNTY
LUFKIN, TEXAS



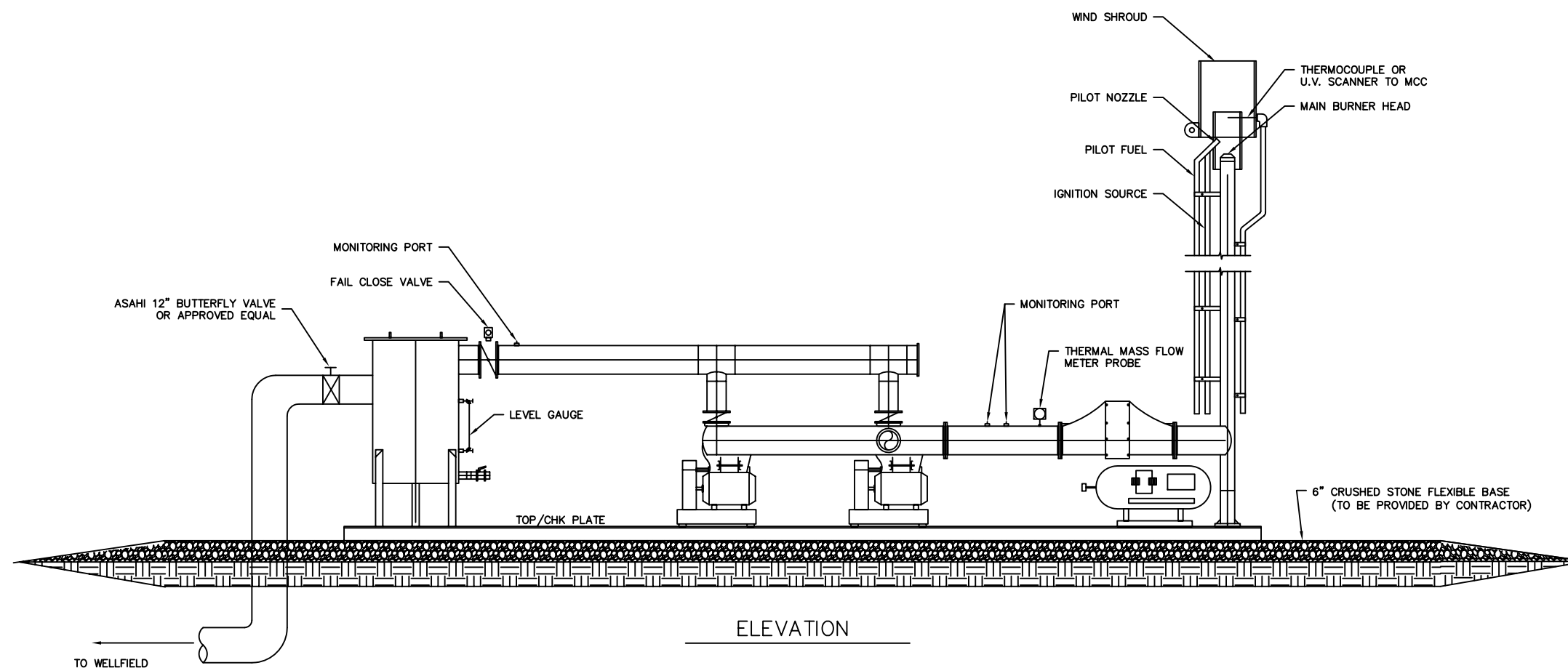
06

DATE: January 10, 2012
PROJECT NO.



- NOTE:**
1. ALL DETAILS CONTAINED ON THIS DRAWING ARE FOR EXAMPLE ONLY. THE EXACT FLARE CONFIGURATION IS LOCATED IN THE O&M MANUAL PROVIDED BY SHAW LFG.
 2. THE 1" DRAIN LINE INSTALLED TO REMOVE CONDENSATE FROM THE BLOWERS, FLARE TIP, AND FLAME ARRESTOR WAS FUSED TO THE 18" PIPE UNDERGROUND NEAR THE KO-POT INLET.

PLAN



ELEVATION

TYPICAL CONDENSATE PUMP ASSEMBLY
(NTS)

Angelina County Landfill
GCCS Record Drawings

STATE OF TEXAS
JUENE KNOLL FRANKLIN
87709
LICENSED PROFESSIONAL ENGINEER

1/10/12

DESCRIPTION		DATE	ISSUE

RILEY, PARK, HAYDEN & ASSOCIATES
ENGINEERS & SURVEYORS
2600 SOUTH LOOP WEST SUITE 320, HOUSTON, TEXAS
PHONE: 713-333-0444 FAX: 713-333-0445

WILLOWOOD WARNER ROBINS MEMPHIS HOUSTON

BLOWER/FLARE DETAILS
2011 AS-BUILT DRAWINGS
ANGELINA COUNTY
LUFKIN, TEXAS

0 1 2 3 4 5 6 7 8 9 10 NTS
SCALE

07
DATE: January 10, 2012
PROJECT NO.

ATTACHMENT 4 – Fee Payment Receipt

Your transaction is complete. Thank you for using TCEQ ePay.

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt and the vouchers for your records. An email receipt has also been sent.

Transaction Information

Trace Number:

Date:

08/29/2024 11:40 AM

Payment Method:

CC - Authorization

ePay Actor:

JORDAN DIMEZZO

Actor Email:

IP:

66.76.63.105

TCEQ Amount:

\$150.00

Texas.gov Price:

\$153.63*

* This service is provided by Texas.gov, the official website of Texas. The price of this service includes funds that support the ongoing operations and enhancements of Texas.gov, which is provided by a third party in partnership with the State.

Payment Contact Information

Name:

JORDAN DIMEZZO

Company:

HYDREX ENVIRONMENTAL

Address:

312 OLD TYLER ROAD, NACOGDOCHES, TX 75961

Phone:

936-568-9451

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
719344	MSW PERMIT/REGISTRATION/AMEND/MOD/TEMP AUTHORIZATIONS APPLICATION FEE		\$100.00
719345	30 TAC 305.53B MWP NOTIFICATION FEE		\$50.00
		TCEQ Amount:	\$150.00

ePay Again

Exit ePay

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt for your records.

ATTACHMENT 5 – Land Ownership Map

LANDOWNER ID

1

ANGELINA COUNTY WASTE
MANAGEMENT CENTER

2

ANGELINA COUNTY
P.O. BOX 908
LUFKIN, TX 75902-0908

3

HSH FM 58 LLC
2915 ATKINSON DRIVE
LUFKIN, TX 75902-1365

4

CROWN PINE TIMBER 1 LP
ATTN: CAMPBELL/TIMBER, LLC
1 SW COLUMBIA ST.
SUITE 1700
PORTLAND, OR 97258-2039

5

MILLENNIUM MIDSTREAM ENERGY
% K E ANDREWS & COMPANY
P.O. BOX 870849
MESQUITE, TX 75187-0849

6

MICHAEL AND MELISSA HARPER
7198 FM 58
LUFKIN, TX 75901-2816

7

DORIS JEAN McKINNEY
7074 FM 58
LUFKIN, TX 75901-2641

8

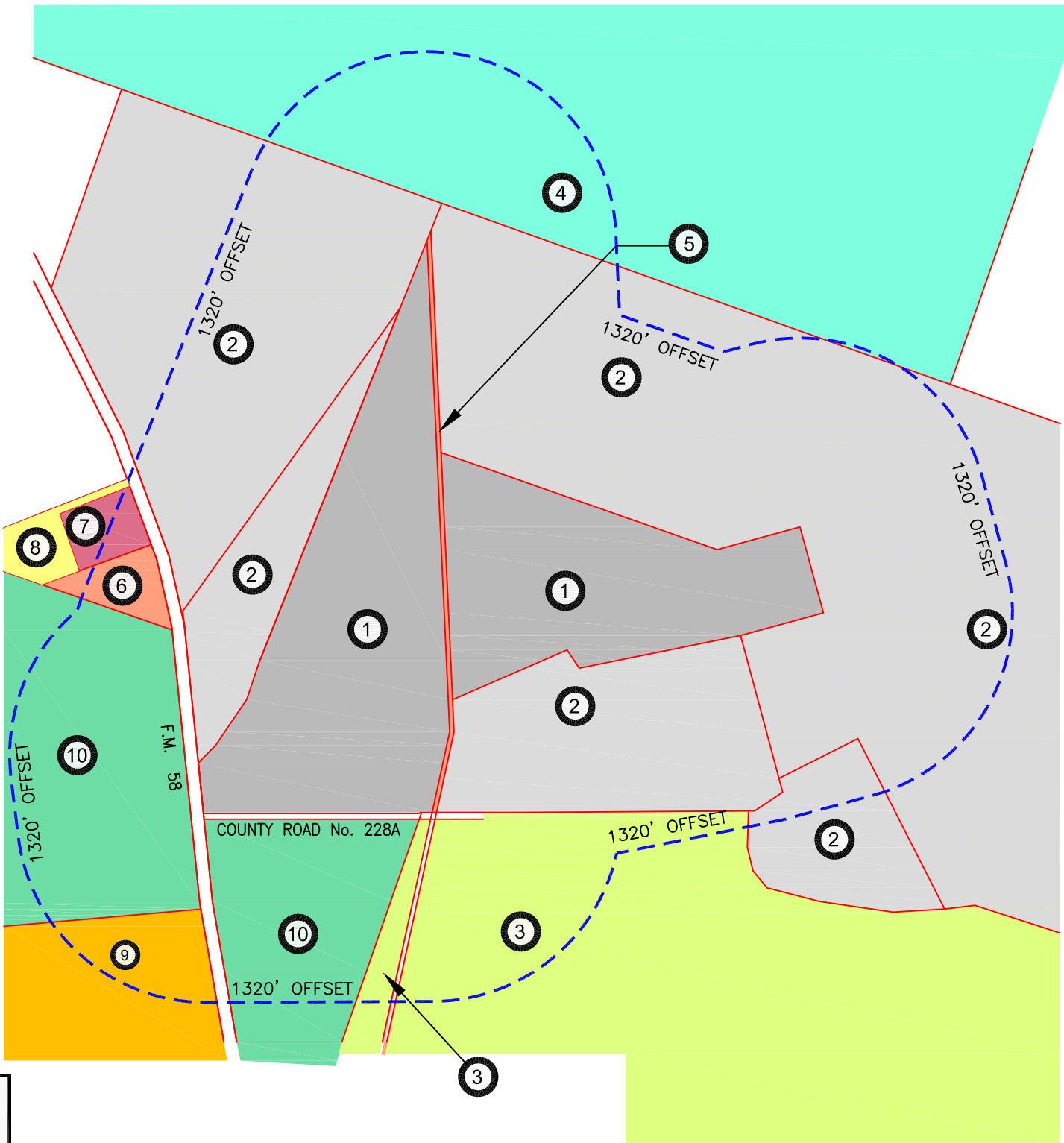
HENRY AND TIFFANIE BOYKIN
7068 FM 58
LUFKIN, TX 75901-2641

9

NATURAL GAS PIPELINE COMPANY
ATTN: PROPERTY TAX DEPT.
500 DALLAS STREET
SUITE 1000
HOUSTON, TX 77002

10

FORESTAR USA REAL ESTATE GROUP, INC.
ATTN: DENISE ORSBORN
6300 BEE CAVE RD., BLDG TWO STE 500
AUSTIN, TX 78746-5149



NOTE:
PROPERTY OWNERSHIP INFORMATION IS BASED
ON DATA OBTAINED FROM THE ANGELINA COUNTY
APPRAISAL DISTRICT.

ANGELINA COUNTY WASTE
MANAGEMENT CENTER
LAND OWNERSHIP MAP
ALL PROPERTY OWNERS WITHIN 1320 FT OF FACILITY

ENGINEERS - SURVEYORS
Everett Griffith, Jr. & Associates Inc.
408 NORTH THIRD STREET, LUFKIN, TEXAS 75901
936-634-5528
TX ENGINEERING FIRM NO. F-1156
TX SURVEYING FIRM NO. 100291-00

DESIGNED BY:	n/a	CHECKED BY:	RFF	SCALE:	1"=1000'	1 OF
DRAWN BY:	DKF	APPROVED BY:	RFF	DATE:	4/29/15	1

ATTACHMENT 6 – Land Ownership List

ANGELINA COUNTY
P.O. BOX 908
LUFKIN, TX 75902-0908

ANGELINA COUNTY WASTE MANAGEMENT
CENTER
7521 FM 58
LUFKIN, TX 75901-2816

BOYKIN, HENRY AND TIFFANIE
7068 FM 58
LUFKIN, TX 75901-2641

CROWN PINE TIMBER LP 1
ATTN: CAMPBELL/TIMBER, LLC
1 SW COLUMBIA ST.
SUITE 1700
PORTLAND, OR 97258-2039

FORESTAR USA REAL ESTATE GROUP, INC.
ATTN: DENISE ORSBORN
6300 BEE CAVE RD., BLDG TWO STE 500
AUSTIN, TX 78746-5149

HARPER, MICHAEL AND MELISSA
7198 FM 58
LUFKIN, TX 75901-2816

HSH FM 58 LLC
2915 ATKINSON DRIVE
LUFKIN, TX 75902-1365

MCKINNEY, DORIS JEAN
7074 FM 58
LUFKIN, TX 75901-2641

MILLENIUM MIDSTREAM ENERGY
c/o K.E. ANDREWS & COMPANY
P.O. BOX 870849
MESQUITE, TX 75187-0849

NATURAL GAS PIPELINE COMPANY
ATTN.: PROPERTY TAX DEPT.
500 DALLAS STREET
SUITE 1000
HOUSTON, TX 77002