



**CORRESPONDENCE COVER SHEET
WASTE PERMITS DIVISION
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

Date: 9/06/2017
 Facility Name: Angelina County Waste Management Center
 Permit or Registration No.: 2105A

Nature of Correspondence:
 Initial/New
 Response/Revision*

*If Response/Revision, please provide previous TCEQ Tracking No.: 21742115

(Previous TCEQ Tracking No. can be found in the Subject line of the TCEQ's response letter to your original submittal.)

This cover sheet should accompany all correspondences submitted to the Waste Permits Division and should be affixed to the front of your submittal as a cover page. Please check the appropriate box for the type of correspondence being submitted. For questions regarding this form, please contact the Waste Permits Division at (512) 239-2335.

Table 1 - Municipal Solid Waste

APPLICATIONS	REPORTS and RESPONSES
<input type="checkbox"/> New Notification	<input type="checkbox"/> Closure Report
<input type="checkbox"/> New Permit (including Subchapter T)	<input type="checkbox"/> Groundwater Alternate SRC Demonstration
<input type="checkbox"/> New Registration (including Subchapter T)	<input type="checkbox"/> Groundwater Corrective Action
<input type="checkbox"/> Major Amendment	<input type="checkbox"/> Groundwater Monitoring Report
<input type="checkbox"/> Minor Amendment	<input type="checkbox"/> Groundwater Statistical Evaluation
<input type="checkbox"/> Limited Scope Major Amendment	<input type="checkbox"/> Landfill Gas Corrective Action
<input checked="" type="checkbox"/> Notice Modification	<input type="checkbox"/> Landfill Gas Monitoring
<input type="checkbox"/> Non-Notice Modification	<input type="checkbox"/> Liner Evaluation Report
<input type="checkbox"/> Transfer/Name Change Modification	<input type="checkbox"/> Soil Boring Plan
<input type="checkbox"/> Temporary Authorization	<input type="checkbox"/> Special Waste Request
<input type="checkbox"/> Voluntary Revocation	<input type="checkbox"/> Other:
<input type="checkbox"/> Subchapter T Workplan	
<input type="checkbox"/> Other:	

Table 2 - Industrial & Hazardous Waste

APPLICATIONS	REPORTS and RESPONSES
<input type="checkbox"/> New	<input type="checkbox"/> Annual/Biennial Site Activity Report
<input type="checkbox"/> Renewal	<input type="checkbox"/> CfPT 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"/> Class 3 Modification	<input type="checkbox"/> Extension Request
<input type="checkbox"/> Class 2 Modification	<input type="checkbox"/> Groundwater Monitoring Report
<input type="checkbox"/> Class 1 ED Modification	<input type="checkbox"/> Interim Status Change
<input type="checkbox"/> Class 1 Modification	<input type="checkbox"/> Interim Status Closure Plan
<input type="checkbox"/> Endorsement	<input type="checkbox"/> Soil Core Monitoring Report
<input type="checkbox"/> Temporary Authorization	<input type="checkbox"/> Treatability Study
<input type="checkbox"/> Voluntary Revocation	<input type="checkbox"/> Trial Burn Plan/Result
<input type="checkbox"/> 335.6 Notification	<input type="checkbox"/> Unsaturated Zone Monitoring Report
<input type="checkbox"/> Other:	<input type="checkbox"/> Waste Minimization Report
	<input type="checkbox"/> Other:

September 6, 2017

MC-124
Eun Ju Lee, Ph.D., P.E.
Municipal Solid Waste Permits Section
Waste Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

**Re: Responses to Comments
Permit Modification - Landfill Gas Management Plan
Angelina County Waste Management Center - MSW Permit No. 2105A
Technical Notice of Deficiency
Tracking No. 21742115, CN 600833511 / RN 101947323**

Mr. Lee:

On behalf of Angelina County Waste Management Center (ACWMC), please find enclosed one original and two copies of the replacement pages for the above-referenced permit modification. The revised modification has been developed to incorporate your comments included in the August 9, 2017, Texas Commission on Environmental Quality (TCEQ) letter.

A detailed response to each comment is listed below (comments in bold).

- 1. The application is not posted at the URL address listed in Section 5, TCEQ Form 02650. Please provide the correct URL address where the application is posted.**

Response:

The permit modification is now posted at the URL address listed in Section 5 of TCEQ Form 02650.

- 2. Please include all mineral interest ownership under the facility or a statement that there is no mineral interest ownership.**

Response:

There is no mineral interest ownership within the facility property.

- 3. Please included all gas probes in Figure GMP-A-5, Appendix A.**

Response:

Additional landfill gas probes GMP-1, 2, 5, 8, and 9 have been added to Figure GMP-A-5, Appendix A.

- 4. The landfill gas monitoring remediation effectiveness report dated June 18, 2017, indicates methane concentration levels reported in three perimeter gas probes, GMP-1, GMP-4, and GMP-6, were still above the regulatory compliance limit. New extraction wells are proposed to be constructed to further mitigate exceedances at GMP-1, GMP-4, and GMP-6. Please explain how exceedance at GMP-1 will be addressed.**

Response:

The 2017 ACWMC GCCS expansion was designed to mitigate landfill gas migration beyond the waste limits in the central portion of Tract 1. This included the reduction in methane concentrations near gas probes GMP-4 and GMP-6.

The 2017 ACWMC GCCS expansion was not designed to directly address GMP-1. However, significant investigation into the sporadic methane exceedances reported for GMP-1 indicate the concentrations reported for GMP-1 may be, at least in part, derived from migration of the methane gas responsible for exceedances reported in GMP-4. Specifically:

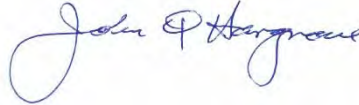
- exceedances at GMP-1 were noted several months after the first reported exceedance at GMP-4,
- data from the temporary probes located along the western edge of the landfill between GMP-4 and GMP-1 consistently indicate significantly higher and more frequent concentrations of methane gas near GMP-4 than near GMP-1,
- the landfill gas extraction well nearest GMP-1 has historically been a low production well indicating minimal gas production in the waste mass near GMP-1.

Additionally, since expansion of the GCCS, GMP-1 has reported a significant reduction in detected methane concentrations to below the regulatory limit for the last seven consecutive weeks (as of the date of this correspondence). In addition to the newly installed gas extraction wells, the GCCS expansion is designed to include extraction of landfill gas from leachate cleanouts. Removal of landfill gas from these additional points should help further the remediation process and expedite the return of GMP1, -4, and -6 to a compliant status. Extraction through the leachate cleanouts will be initiated following your approval of the permit modification request. We request your approval of this permit modification, so that these additional remedial activities may be initiated.

One original and two copies are provided for your use and distribution. As stipulated by Title 30 TAC 305.44 and TAC 305.70(f), a signature page from the Part I Form is included. In compliance with Title 30 TAC 305.70(f), a copy of this submittal was sent to the TCEQ regional office. A copy of this submittal was placed in the site operating record.

If you need additional information or have any questions regarding the above responses and attachments, please contact me at (832) 483-6671.

Sincerely,
Hydrex Environmental



John Q. Hargrove, P.E.
Project Engineer

Attachments:

TCEQ Form 20650
Land Ownership Map
Land Ownership List
Redline-Strikethrough Attachment 14
Clean Copy Attachment 14
Figure GMP-A-5 – Proposed GCCS Expansion Site Plan
Modification Fee Payment Receipt

Distribution:

Original + 2 copies	MC-124 Eun Ju Lee, Ph.D., P.E. Municipal Solid Waste Permits Section Waste Permits Division Texas Commission on Environmental Quality P.O. Box 13087 Austin, Texas 78711-3087
1 copy	Marilyn Gates Waste Section Manager TCEQ Regional Office 10 3870 Eastex Freeway Beaumont, TX 77703-1892
1 copy	The Honorable Wes Suiter Office of the County Judge Angelina County Courthouse P.O. Box 908 Lufkin, TX 75901
1 copy	Mr. Chuck Brooks Angelina County Waste Management Center P.O. Box 1862 Lufkin, TX 75902-1862
1 copy	Hydrex Environmental

Facility Name: Angelina County Waste Management Center
Permittee/Registrant Name: Angelina County
MSW Authorization #: 2105A
Initial Submittal Date: July 5, 2017
Revision Date: September 6, 2017



Texas Commission on Environmental Quality

Permit/Registration Modification and Temporary Authorization Application Form for an MSW Facility

1. Reason for Submittal
<input type="checkbox"/> Initial Submittal <input checked="" type="checkbox"/> Notice of Deficiency (NOD) Response
2. Authorization Type
<input checked="" type="checkbox"/> Permit <input type="checkbox"/> Registration
3. Application Type
<input checked="" type="checkbox"/> Modification with Public Notice <input type="checkbox"/> Modification without Public Notice <input type="checkbox"/> Temporary Authorization (TA) <input type="checkbox"/> Modification for Name Change/Transfer
4. Application Fees
<input type="checkbox"/> Pay by Check <input checked="" type="checkbox"/> Online Payment If paid online, e-Pay Confirmation Number: 582EA000263109
5. Application URL
Is the application submitted for a permit/registration modification with public notice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If the answer is "Yes", enter the URL address of a publicly accessible internet web site where the application and all revisions to that application will be posted in the space provided: http://angelinacounty.net/departments/waste/notices
6. Confidential Documents
Does the application contain confidential documents? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", cross-reference the confidential documents throughout the application and submit as a separate attachment in a binder clearly marked "CONFIDENTIAL."

Facility Name: Angelina County Waste Management Center
2017

Initial Submittal Date: July 5,

MSW Authorization #: 2105A

Revision Date: September 6, 2017

7. General Facility Information

Facility Name: **Angelina County Waste Management Center**

MSW Authorization No.: **2105A**

Regulated Entity Reference No.: **101947323**

Physical or Street Address (if available): **7521 FM 58**

City: **Lufkin** County: **Angelina** State: **Texas** Zip Code: **75901**

(Area code) Telephone Number: **936-632-7168**

Latitude: **31.2465 N** Longitude: **94.7056 W**

8. Facility Type(s)

Type I

Type IV

Type V

Type I AE

Type IV AE

Type VI

9. Description of the Revisions to the Facility

Provide a brief description of all revisions to the permit/registration conditions and supporting documents referred by the permit/registration, and a reference to the specific provisions under which the modification/temporary authorization application is being made. Also, provide an explanation of why the modification/temporary authorization is requested: **Expansion of the active landfill gas collection system requiring a public notice modification in accordance with 30 TAC 305.70(k)(3) to address observed landfill gas migration beyond the permitted waste limits.**

This section is intentionally left blank; please continue to the next page.

10. Facility Contact Information

Site Operator (Permittee/Registrant) Name: Angelina County Waste Management Center

Customer Reference No. (if issued)*: **CN60083351**

Mailing Address: **PO Box 1862**

City: **Lufkin** County: **Angelina** State: **Texas** Zip Code: **75902-1862**

(Area Code) Telephone Number: **936-632-7168**

Email Address: **pstrickland@angelinacounty.net**

TX Secretary of State (SOS) Filing Number:

*If the Site Operator (Permittee/Registrant) does not have this number, complete a TCEQ Core Data Form (TCEQ-10400) and submit it with this application. List the Site Operator (Permittee/Registrant) as the Customer.

Operator Name¹: Angelina County

Customer Reference No. (if issued)*: **60083351**

Mailing Address: **PO Box 908**

City: **Lufkin** County: **Angelina** State: **Texas** Zip Code: **75902**

(Area Code) Telephone Number: **936-671-4064**

Email Address: **wsuiter@angelinacounty.net**

Charter Number:

¹If the Operator is the same as Site Operator/Permittee type "Same as "Site Operator (Permittee/Registrant)".

*If the Operator does not have this number, complete a TCEQ Core Data Form (TCEQ-10400) and submit it with this application. List the Operator as the customer.

Consultant Name (if applicable): Hydrex Environmental

Texas Board of Professional Engineers Firm Registration Number: **F-13588**

Mailing Address: **1120 NW Stallings Drive**

City: **Nacogdoches** County: **Nacogdoches** State: **Texas** Zip Code: **75964-3428**

(Area Code) Telephone Number: **936-568-9451**

E-Mail Address: **jhargrove@hydrex-inc.com**

Agent in Service Name (required only for out-of-state):

Mailing Address:

City: County: State: Zip Code:

(Area Code) Telephone Number:

E-Mail Address:

11. Ownership Status of the Facility

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

Yes No

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

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

Yes No

If "No", provide the information requested below for any additional ownership.

Owner Name:

Street or P.O. Box:

City: County: State: Zip Code:

(Area Code) Telephone Number:

Email Address (optional):

Charter Number:

Facility Name: Angelina County Waste Management Center Initial Submittal Date: July 5, 2017

MSW Authorization #: 2105A

Revision Date: September 6, 2017

Signature Page

I, Wes Suiter, Angelina County Judge,
(Site Operator (Permittee/Registrant)'s Authorized Signatory) (Title)

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.

Signature: [Handwritten Signature]

Date: 9/5/17

TO BE COMPLETED BY THE OPERATOR IF THE APPLICATION IS SIGNED BY AN AUTHORIZED REPRESENTATIVE FOR THE OPERATOR

I, _____, hereby designate _____
(Print or Type Operator Name) (Print or Type Representative Name)

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.

Printed or Typed Name of Operator or Principal Executive Officer

Signature

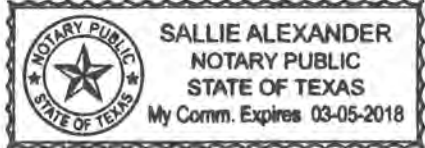
SUBSCRIBED AND SWORN to before me by the said Wes Suiter

On this 5 day of September, 2017

My commission expires on the 3 day of May, 2018

[Handwritten Signature]
Notary Public in and for

Angelina County, Texas
(Note: Application Must Bear Signature & Seal of Notary Public)



Facility Name: Angelina County Waste Management Center Initial Submittal Date: July 5, 2017

MSW Authorization #: 2105A

Revision Date: September 6, 2017

Permit/Registration Modification with Public Notice

(See Instructions for P.E. seal requirements.)

Required Attachments

Attachment No.

Land Ownership Map	1
Land Ownership List	2
Marked (Redline/Strikeout) Pages	3
Unmarked Revised Pages	4

Additional Attachments as Applicable- Select all those apply and add as necessary

- Signatory Authority
- Fee Payment Receipt 5
- Confidential Documents

Facility Name: Angelina County Waste Management Center
2017

Initial Submittal Date: July 5,

MSW Authorization #: 2105A

Revision Date: September 6, 2017

Permit/Registration Modification without Public Notice or TA

(See Instructions for P.E. seal requirements.)

Required Attachments (for Modifications only)

Attachment No.

Marked (Redline/Strikeout) Pages

Unmarked Revised Pages

Additional Attachments as Applicable- Select all those apply and add as necessary

- Signatory Authority
- Fee Payment Receipt
- Confidential Documents

Facility Name: Angelina County Waste Management Center
2017

Initial Submittal Date: July 5,

MSW Authorization #: 2105A

Revision Date: September 6, 2017

Permit/Registration Name Change/Transfer Modification

(See Instructions for P.E. seal requirements.)

Required Attachments

Attachment No.

TCEQ Core Data Form(s)

Property Legal Description

Property Metes and Bounds Description

Metes and Bounds Drawings

On-Site Easements Drawing

Land Ownership List

Land Ownership Map

Property Owner Affidavit

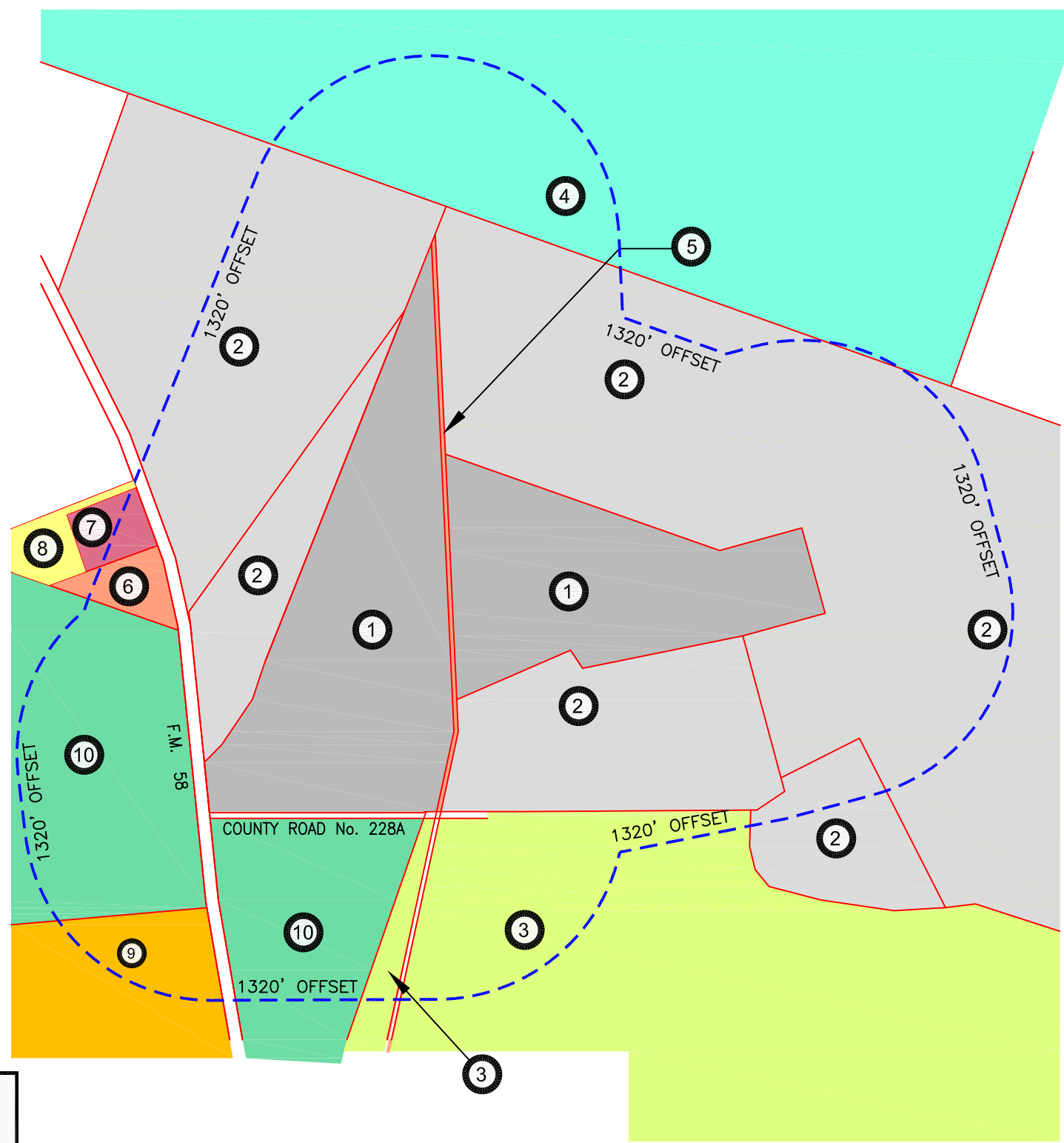
Verification of Legal Status

Evidence of Competency

Additional Attachments as Applicable- Select all those apply and add as necessary

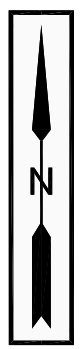
- Signatory Authority
- Fee Payment Receipt
- Confidential Documents
- Final Plat Record of Property, if platted
- Assumed Name Certificate

Attachment 1



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
DRAWN BY:	DKF	APPROVED BY:	RFF	DATE:	4/29/15	OF
						1

Attachment 2

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

Attachment 3

**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 2017**

**Hydrex Environmental, Inc.
1120 NW Stallings Drive
Nacogdoches, Texas 75964-3428**

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

LANDFILL GAS MANAGEMENT PLAN

~~William D. Jones, P.E.~~
~~John Q. Hargrove, P.E.~~
Project Engineer

~~Glen A. Collier, P.G.~~
~~Leonell N. Scarborough, P.G.~~
Senior Hydrogeologist

TABLE OF CONTENTS (continued)

APPENDICES

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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
<u>Figure GMP-A-5</u>	<u>GCCS Expansion Layout</u>

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

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.

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.

Attachment 4

**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 2017

**Hydrex Environmental, Inc.
1120 NW Stallings Drive
Nacogdoches, Texas 75964-3428**

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



TABLE OF CONTENTS (continued)

APPENDICES

APPENDIX A - FIGURES

Figure GMP-A-1	Location Map
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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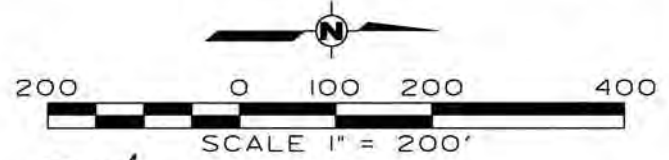
APPENDIX D - MANUFACTURERS' SPECIFICATIONS FOR INSTRUMENTS

APPENDIX E - INSTALLED GAS MONITORING PROBE (GMP) LOGS

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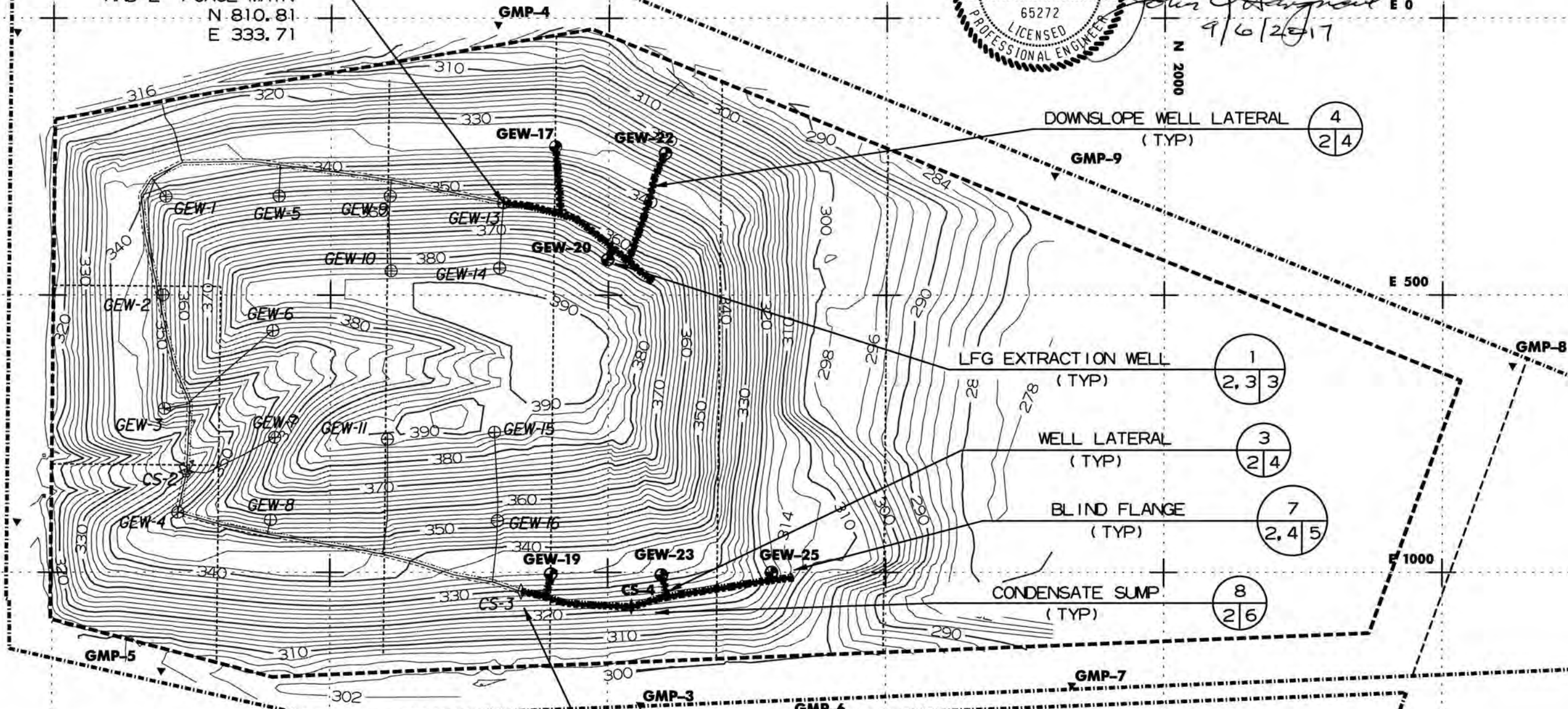
In 2017, the active landfill gas extraction system was expanded to mitigate observed landfill gas migration beyond the permitted waste footprint. The expansion consisted of six extraction wells with associated header and lateral piping. The expansion connected to the northern limits of the existing system 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.



CONNECT TO EXISTING
10" HEADER, 2" AIRLINE,
AND 2" FORCE MAIN
N 810.81
E 333.71

CONNECT TO EXISTING
10" HEADER, 2" AIRLINE,
AND 2" FORCE MAIN
N 844.07
E 1,034.63



LEGEND	
⊕	EXISTING EXTRACTION WELL
⊙	2017 EXTRACTION WELL
◇	EXISTING CONDENSATE SUMP
◆	2017 CONDENSATE SUMP
—	GCCS HEADER / LATERAL
----	2" AIR PIPE
----	2" FORCE MAIN
	BLIND FLANGE



1120 NW Stallings Drive
Nacogdoches, Texas 75964 / Ph (936) 568-9451
TBPE Firm Registration No. F-13588

2017 LANDFILL GAS SYSTEM EXPANSION GCCS EXPANSION LAYOUT	GMP-A-5 Job No. L-23-1085
	ANGELINA COUNTY WASTE MANAGEMENT CENTER MSW PERMIT NO. 2105A ANGELINA COUNTY, TEXAS September 2017 Draftsman: BDSI

Attachment 5

John Hargrove

From: steers@tceq.texas.gov
Sent: Wednesday, June 28, 2017 1:08 PM
To: jhargrove@hydrex-inc.com
Subject: TCEQ ePay Receipt for 582EA000263109

This is an automated message from the TCEQ ePay system. Please do not reply.
Trace Number: 582EA000263109
Date: 06/28/2017 01:07 PM
Payment Method: CC - Authorization 000002331G Amount Paid: \$150.00

Actor: John Q Hargrove
Email: jhargrove@hydrex-inc.com

Payment Contact: John Hargrove
Phone: 832-483-6671
Company: Hydrex Environmental
Address: 1120 Nw Stallings Drive, Nacogdoches, TX 75964

Fees Paid:

Fee Description	AR Number	Amount
NONHAZARDOUS WASTE PERMIT - NEW, AMENDMENTS & MODIFICATIONS		\$100.00
30 TAC 305.53B HWP NOTIFICATION FEE		\$50.00

Total Fees For Transaction: \$150.00

=====

Voucher: 327038

Trace Number: 582EA000263109

Date: 06/28/2017 01:07 PM

Payment Method: CC - Authorization 000002331G Amount Paid: \$100.00 Fee Paid: NONHAZARDOUS WASTE PERMIT - NEW, AMENDMENTS & MODIFICATIONS RN Number: RN101947323 Site Name: ANGELINA COUNTY WASTE MANAGEMENT CENTER Site Address: 7521 FM 58, LUFKIN, TX 75901 Site Location: 5 MILES SOUTH OF LOOP 287 ON FM 58 Customer Name: ANGELINA COUNTY WASTE MANAGEMENT CENTER Customer Address: 7521 FM 58, LUFKIN, TX 75901 Program Area ID: 2105A

Voucher: 327039

Trace Number: 582EA000263109

Date: 06/28/2017 01:07 PM

Payment Method: CC - Authorization 000002331G Amount Paid: \$50.00 Fee Paid: 30 TAC 305.53B HWP NOTIFICATION FEE

To print out a copy of the receipt and vouchers for this transaction either click on or copy and paste the following url into your browser:

https://www3.tceq.texas.gov/epay/index.cfm?fuseaction=cor.search&trace_num_txt=582EA000263109.