H. L. Zumwalt Quarry Operations, LLC

Aboveground Storage Tank (AST) Plan Application

FM 1283 Ranch Quarry 17511 FM 1283 Mico, Texas 78056 Medina County

Submitted to: TCEQ Region 13, San Antonio

Prepared By:



Boerne, Texas 830-249-8284

Date: May 2024 Project No. 10022-080-007 -AK-



Anchea Ke

Andrea Kidd, P.E. - License No. 132541 TX PE Firm No. 4524 5/23/2024

Aboveground Storage Tank Facility Plan Checklist

- Edwards Aquifer Application Cover Page (TCEQ-20705)

- General Information Form (TCEQ-0587)

Attachment A - Road Map Attachment B - USGS / Edwards Recharge Zone Map Attachment C - Project Description

Geologic Assessment Form (TCEQ-0585)

Attachment A - Geologic Assessment Table (TCEQ-0585-Table) Attachment B - Stratigraphic Column Attachment C - Site Geology Attachment D - Site Geologic Map(s)

- Aboveground Storage Tank Facility Plan (TCEQ-0575)

Attachment A - Alternative Methods of Secondary Containment (if proposed) Attachment B - Scaled Drawing(s) of Containment Structure Attachment C - Exception to the Geologic Assessment (if requested) Attachment D - Spill and Overfill Control Attachment E - Response Actions to Spills Site Plan

- Temporary Stormwater Section (TCEQ-0602)

Attachment A - Spill Response Actions Attachment B - Potential Sources of Contamination Attachment C - Sequence of Major Activities Attachment D - Temporary Best Management Practices and Measures Attachment E - Request to Temporarily Seal a Feature (if requested) Attachment F - Structural Practices Attachment G - Drainage Area Map Attachment H - Temporary Sediment Pond(s) Plans and Calculations Attachment I - Inspection and Maintenance for BMPs Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

- Agent Authorization Form (TCEQ-0599), if application submitted by agent
- Application Fee Form (TCEQ-0574)
- Check Payable to the "Texas Commission on Environmental Quality"
- Core Data Form (TCEQ-10400)

Texas Commission on Environmental Quality Edwards Aquifer Application Cover Page

Our Review of Your Application

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with <u>30 TAC 213</u>.

Administrative Review

1. <u>Edwards Aquifer applications</u> must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: <u>http://www.tceq.texas.gov/field/eapp</u>.

- 2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.
- 3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.
- 4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

- 5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.
- 6. If the geologic assessment was completed before October 1, 2004 and the site contains "possibly sensitive" features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

- 1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.
- 2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

- 3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.
- 4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

1. Regulated Entity Name: FM 1283 Ranch Quarry				2. Regulated Entity No.: 105835375				
3. Customer Name: H.L. Zumwalt Quarry Operations, LLC			4. Cı	4. Customer No.: 606224319				
5. Project Type: (Please circle/check one)	New		Modification		Exter	nsion	Exception	
6. Plan Type: (Please circle/check one)	WPAP	CZP	SCS	UST AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	Residential Non-residential		>	8. Sit	e (acres):	~561		
9. Application Fee:	\$2,600		10. Permanent l		BMP(BMP(s): N/A		
11. SCS (Linear Ft.):	N/A		12. A	ST/UST (N	o. Tar	. Tanks): 4		
13. County:	Medina	Medina 14. Watershed:			San Antonio River Basin		ver Basin	

Application Distribution

Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which cross into multiple jurisdictions, can require additional copies. Refer to the "Texas Groundwater Conservation Districts within the EAPP Boundaries" map found at:

http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf

For more detailed boundaries, please contact the conservation district directly.

Austin Region				
County:	Hays	Travis	Williamson	
Original (1 req.)			_	
Region (1 req.)			_	
County(ies)			_	
Groundwater Conservation District(s)	Edwards Aquifer Authority Barton Springs/ Edwards Aquifer Hays Trinity Plum Creek	Barton Springs/ Edwards Aquifer	NA	
City(ies) Jurisdiction	Austin Buda Dripping Springs Kyle Mountain City San Marcos Wimberley Woodcreek	Austin Bee Cave Pflugerville Rollingwood Round Rock Sunset Valley West Lake Hills	Austin Cedar Park Florence Georgetown Jerrell Leander Liberty Hill Pflugerville Round Rock	

San Antonio Region					
County:	Bexar	Comal	Kinney	Medina	Uvalde
Original (1 req.)		_		<u>_X</u> _	
Region (1 req.)				<u>_X</u> _	
County(ies)				<u>_X</u> _	
Groundwater Conservation District(s)	Edwards Aquifer Authority Trinity-Glen Rose	Edwards Aquifer Authority	Kinney	<u>X</u> EAA <u>X</u> Medina	EAA Uvalde
City(ies) Jurisdiction	Castle Hills Fair Oaks Ranch Helotes Hill Country Village Hollywood Park San Antonio (SAWS) Shavano Park	Bulverde Fair Oaks Ranch Garden Ridge New Braunfels Schertz	NA	San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This	
application is hereby submitted to TCEO for administrative review and technical review.	

Andrea Kidd, P.E. <i>TX License No. 132541 Firm No. 4524</i>		STATE OF TE SOLUTION
Print Name of Customer/Authorized Agent	5/23/2024	ANDREA KIDD
Signature of Customer/Authorized Agent	Date	O

FOR TCEQ INTERNAL USE ONI	.Y			
Date(s)Reviewed:		Date Administratively Complete:		
Received From:		Correct N	Number of Copies:	
Received By:		Distribut	ion Date:	
EAPP File Number:		Complex:		
Admin. Review(s) (No.):		No. AR Rounds:		
Delinquent Fees (Y/N):		Review Time Spent:		
Lat./Long. Verified:		SOS Customer Verification:		
Agent Authorization Complete/Notarized (Y/N):		Бее	Payable to TCEQ (Y	/N):
Core Data Form Complete (Y/N):		Check:	Signed (Y/N):	
Core Data Form Incomplete Nos.:		Less than 90 days old (Y/N):		ld (Y/N):

General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **General Information Form** is hereby submitted for TCEQ review. The application was prepared by:

Print Name of Engineer/Agent: Andrea Kidd, P.E.

TX License No. 132541 | TX Firm No. 4524

Date: 5/23/2024

Signature of Engineer/Agent:

Project Information

- 1. Regulated Entity Name: FM 1283 Ranch Quarry
- 2. County: Medina
- 3. Stream Basin: San Antonio River Basin
- 4. Groundwater Conservation District (If applicable): Medina County GCD
- 5. Edwards Aquifer Zone:



6. Plan Type:

WPAP
SCS
Modification

\boxtimes	AST
	UST
	Exception Request



7. Customer (Applicant):

Contact Person: <u>Bonnie Zumwalt</u> Entity: <u>H.L. Zumwalt Quarry Operations, LLC</u> Mailing Address: <u>17511 FM 1283</u> City, State: <u>Mico, TX</u>

Zip: <u>78056</u> FAX: _____

Telephone: <u>(210) 695-3541</u>

Email Address: <u>bonnie@hlzumwalt.com</u>

8. Agent/Representative (If any):

Contact Person: <u>Andrea Kidd, P.E.</u> Entity: <u>Westward Environmental, Inc.</u> Mailing Address: <u>P.O. Box 2205</u>

City, State: <u>Boerne, TX</u>

Telephone: <u>(830) 249-8284</u>

Zip: <u>78006</u>

FAX: <u>(830) 249-0221</u>

Email Address: akidd@westwardenv.com

- 9. Project Location:
 - The project site is located inside the city limits _____.

The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.

- \square The project site is not located within any city's limits or ETJ.
- 10. The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

Three and a half (3.5) miles west of FM 471 & FM 1283 on the north side of FM 1283.

- 11. Attachment A Road Map. A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.
- 12. Attachment B USGS / Edwards Recharge Zone Map. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:

Project site boundaries.

USGS Quadrangle Name(s).

Boundaries of the Recharge Zone (and Transition Zone, if applicable).

Drainage path from the project site to the boundary of the Recharge Zone.

13. The TCEQ must be able to inspect the project site or the application will be returned. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

TCEQ-0587 (Rev. 02-11-15)

- Survey staking will be completed by this date: Existing site is clearly defined by fencing.
- 14. Attachment C Project Description. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:
 - Area of the site
 Offsite areas
 Impervious cover
 Permanent BMP(s)
 Proposed site use
 Site history

Previous development

🔀 Area(s) to be demolished

15. Existing project site conditions are noted below:

	Existing commercial site
\boxtimes	Existing industrial site
\boxtimes	Existing residential site
\boxtimes	Existing paved and/or unpaved roads
\boxtimes	Undeveloped (Cleared)
\boxtimes	Undeveloped (Undisturbed/Uncleared)
	Other:

Prohibited Activities

- 16. I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:
 - (1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
 - (2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
 - (3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;
 - (4) The use of sewage holding tanks as parts of organized collection systems; and
 - (5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).
 - (6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.
- 17. I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:
 - (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);

- (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and
- (3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

18. The fee for the plan(s) is based on:

- For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
- For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
- For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.

A request for an exception to any substantive portion of the regulations related to the protection of water quality.

- A request for an extension to a previously approved plan.
- 19. Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

TCEQ cashier ePay

 Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
 San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

- 20. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
- 21. \square No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.







H.L. Zumwalt Quarry Operations, LLC FM 1283 Ranch Quarry

General Information Form (TCEQ-0587) Attachment C

Project Description

This Aboveground Storage Tank (AST) Plan has been prepared on behalf of H. L. Zumwalt Quarry Operations, LLC for who proposes to install four double-walled hydrocarbon storage tanks in support of an existing limestone quarry located at 17511 FM 1283, Mico, Medina County, Texas. This project site encompasses approximately 561-acres of property and is located within the Recharge Zone of the Edwards Aquifer. Quarry operations at this site have been authorized since 2010. Grading activities for this site are covered under the existing Water Pollution Abatement Plan (WPAP) Modification dated April 19, 2024; a copy of that approval letter is attached. Aerial imagery shows that the proposed tank location has already been disturbed/covered with base material.

AST #	Size (gals)	Substance stored	Tank material
1	6,000	Diesel	Double-walled steel
2	275	Maintenance Oil	Double-walled
			nonmetallic UL SU2258
3	275	Maintenance Oil	Double-walled
			nonmetallic UL SU2258
4	275	Used Oil	Double-walled high
			density polyethylene

This AST Plan proposes the following storage tanks:

The storage tanks will be placed on a portion of the site that has already been quarried and there is an existing compacted base pad in this area.

The drainage patterns of the site will not change, and no soil stabilization measures are necessary. Several of the attachments relating to stormwater BMPs (Temporary Stormwater Section Attachments C, D, E, F, G, H, I, and J) are not applicable to this project. There will be no grading activities resulting from this plan that will disturb soils, therefore temporary stormwater BMPs are not necessary. No areas are proposed to be demolished or disturbed as a result of the placement of the proposed tanks.

A geologic assessment (GA), dated November 13, 2023, is included in this report, encompassing the approximately 561-acre site. This GA identified 55 geologic features, seven of which are classified as sensitive. There are a total of eight wells onsite; two water wells classified as sensitive features. Aboveground storage tanks will not be located within 150-foot of existing water wells.



GEOLOGIC ASSESSMENT

FM 1283 RANCH QUARRY 17511 FM 1283 MICO, TEXAS 78056 MEDINA COUNTY

Submitted to: TCEQ Region 13, San Antonio



Article I. Geologic Assessment

Texas Commission on Environmental Quality

For Regulated Activities on The Edwards Aquifer Recharge/transition Zones and Relating to 30 TAC §213.5(b)(3), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Section 1.01 Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist:

Telephone: <u>830-249-8284</u>

Fax: 830-249-0221

John J. Sackrider, P.G. #12654

Date: _11/13/2023

Representing: <u>Westward Environmental, Inc., TBPG Registered Geoscience Firm 50012</u> (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:

Regulated Entity Name: FM 1283 Ranch Quarry

JOHN J. SACKRIDER B GEOLOGY 12654 SOVAL GEOSO

- Section 1.02 Project Information
- 1. Date(s) Geologic Assessment was performed: November 1-4; 28-30, 2022 & May 11, 2023
- 2. Type of Project:

\boxtimes	WPAP
	SCS

AST
UST

3. Location of Project:

Kecharge Zone

Transition Zone

Contributing Zone within the Transition Zone

- 4. X Attachment A Geologic Assessment Table. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.
- 5. Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.

Article II. Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)					
PrB	C	< 4					
TAD	D	< 2					
TAF	D	< 2					

- * Soil Group Definitions (Abbreviated)
 - A. Soils having a high infiltration rate when thoroughly wetted.
 - B. Soils having a moderate infiltration rate when thoroughly wetted.
 - C. Soils having a slow infiltration rate when thoroughly wetted.
 - D. Soils having a very slow infiltration rate when thoroughly wetted.
- 6. Attachment B Stratigraphic Column. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.
- 7. Attachment C Site Geology. A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.
- 8. Attachment D Site Geologic Map(s). The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'

Applicant's Site Plan Scale: 1" = <u>300</u>' Site Geologic Map Scale: 1" = <u>300</u>' Site Soils Map Scale (if more than 1 soil type): 1" = <u>300'</u>

9. Method of collecting positional data:

Global Positioning System (GPS) technology.

- Other method(s). Please describe method of data collection: _____
- 10. The project site and boundaries are clearly shown and labeled on the Site Geologic Map.

- 11. Surface geologic units are shown and labeled on the Site Geologic Map.
- 12. Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

Geologic or manmade features were not discovered on the project site during the field investigation.

- 13. The Recharge Zone boundary is shown and labeled, if appropriate.
- 14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

There are <u>8</u> (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)

] The wells are not in use and have been properly abandoned.

 \boxtimes The wells are not in use and will be properly abandoned.

 \boxtimes The wells are in use and comply with 16 TAC Chapter 76.

There are no wells or test holes of any kind known to exist on the project site.

Section 2.01 Administrative Information

15. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

Attachment A

Geologic Assessment Table (Form TCEQ-0585)

GEOLOG	IC ASSES	SMENT TA	BLE			PRO	JECT NAI	NE:	FΜ	1283 F	RANCH	I QUARF	RY							
	LOCATION						FEAT	URE CHAF	ACTERIST	ICS					EV	ALUAT	ION	P	HYSIC	CAL SETTING
1A	1B *	1C*	2A	2B	3		4	5	5A	6	7	8A	8B	9	10		1	1	12	
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	GEO UNIT	DIN	IENSIONS (FI	EET)	TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENS	ITIVITY	CATCHM (AC	ENT AREA RES)	TOPOGRAPHY
						х	Y	Z		10					10	<40	>40	<1.6	<u>>1.6</u>	
S-1	29.562387	-98.864806	SC	20	Kkbn	0.33	0.17	3+	140				Ν	5	25	Х		Х		Hillside
S-2	29.560772	-98.864077	SC	20	Kkbn	2.17	3.33	0.75	80				Ν	5	25	Х		Х		Hillside
S-3	29.560715	-98.864860	MB	30	Kkbn	0	.5	unknown	N/A				N, X	10	40		Х	Х		Hillside
S-4	29.560650	-98.864897	MB	30	Kkbn	0.	75	760	N/A				Х	5	35	Х		Х		Hillside
S-5	29.560650	-98.863739	SC	20	Kkd	0.25	0.25	0.92	None				0	5	25	Х		Х		Hillside
S-6	29.558076	-98.863507	Z-SC	30	Kkd	20	8	2.67	108				O,V	5	35	Х		Х		Hillside
S-7	29.557330	-98.863687	SC	20	Kkbn	0.33	0.25	1.83	None				Ν	5	25	Х		Х		Hillside
S-8	29.559172	-98.864116	С	30	Kkbn	10	8.33	2.3	75	10			N	5	45		Х	Х		Hillside
S-9	29.560456	-98.864617	CD	5	Kkbn	30	15	1.5	N/A				F,V	5	10	Х		Х		Hillside
S-10	29.560252	-98.864686	CD	5	Kkbn	27	11	1	N/A				F,V	5	10	Х		Х		Hillside
S-11	29.557465	-98.866352	С	20	Kkd	3	3	6	140				Ν	20	40		Х	Х		Hilltop
S-12	29.555424	-98.867654	С	30	Kkbn	4.5	6	7.5	None				N	5	35	Х		Х		Hillside
S-13	29.553690	-98.870579	Z-SC	30	Kkd	12	1	3	30				Ν	5	35	Х		Х		Hillside
S-14	29.553915	-98.864013	SC	20	Kkbn	5	4	0.5	104				N	5	25	Х		Х		Floodplain
S-15	29.553536	-98.865020	SC	20	Kgrc	2.42	3.67	4	90				Ν	5	25	Х		Х		Hillside
S-16	29.552977	-98.871493	SC	20	Kkd	2	3.33	1	110				Ν	5	25	Х		Х		Hillside
S-17	29.552366	-98.871654	SC	20	Kkd	4.58	3.58	1	None				N	5	25	Х		Х		Hillside
S-18	29.551190	-98.863095	Z-SC	30	Kkbn	2.5	2	0.83	None				Ν	5	35	Х		Х		Hillside
S-19	29.550636	-98.862650	SC	20	Kkd	1.67	2	0.58	155				N	5	25	Х		Х		Hillside
S-20	29.546450	-98.866031	SC	20	Kkd	0.83	2.67	0.58	136				Ν	5	25	Х		Х		Hillside
S-21	29.546110	-98.862843	Z-SC	20	Kkd	1	2.5	0.75	110				N	5	25	Х		Х		Hillside
S-22	29.551190	-98.871274	MB	30	Kkd	0.	67	unknown	N/A				Х	5	35	Х		Х		Hilltop

* DATUM: NAD 83

D/ (TOIM. T	1 (B) 00						
2A TYPE	TYPE	2B POINTS		8A INFILLING			
С	Cave	30	N	None, exposed bedrock			
SC	Solution cavity	20	С	Coarse - cobbles, breakdown, sand, gravel			
SF	Solution-enlarged fracture(s)	20	0	Loose or soft mud or soil, organics, leaves, sticks, dark colors			
F	Fault	20	F	Fines, compacted clay-rich sediment, soil profile, gray or red colors			
0	Other natural bedrock features	5	V	Vegetation. Give details in narrative description			
MB	Manmade feature in bedrock	30	FS	Flowstone, cements, cave deposits			
SW	Swallow hole	30	х	Other materials			
SH	Sinkhole	20					
CD	Non-karst closed depression	5		12 TOPOGRAPHY			
Z	Zone, clustered or aligned features	30	Cliff, Hillstop, Hillside, Drainage, Floodplain, Streambed				

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information presented here complies with that document and is a true representation of the conditions observed in the field.

My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

TCEQ-0585-Table (Rev. 10-01-04)



Date 11/13/2023

GEOLOG	GIC ASSES	SMENT TA			PRO	JECT NA	FM													
	LOCATION						FEAT	URE CHAF	RACTERIST	ICS					EVAL	UATIC	DN	P	HYSI	CAL SETTING
1A	1B *	1C*	2A	2B	3		4		5	5A	6	7	8A	8B	9		10		11	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION/ MEMBER	DIM	ENSIONS (FI	EET)	TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENS	ITIVITY	CATCHM (AC	ENT AREA RES)	TOPOGRAPHY
						х	Y	Z		10						<40	>40	<1.6	<u>>1.6</u>	
S-23	29.549192	-98.872180	SC	20	Kkbn	1.17	1.08	7.5	None				Ν	20	40		Х	Х		Hillside
S-24	29.549370	-98.847332	SC	20	Kkbn	0.33	0.42	2.42	155				Ν	35	55		Х		Х	Streambed
S-25	29.540433	-98.872464	SC	20	Kkd	0.5	0.33	0.33	140				0	5	25	Х		Х		Hillside
S-26	29.538417	-98.868746	SC	20	Kkbn	1.33	1.17	7.08	75	10			Ν	20	50		Х	Х		Hillside
S-27	29.543791	-98.863220	CD	5	Kkbn	10	12	3	N/A				C,O	5	10	Х		Х		Streambed
S-28	29.537834	-98.864369	MB	30	Kkd	0.	83	709	N/A				Х	5	35	Х		Х		Hillside
S-29	29.537776	-98.864291	MB	30	Kkd	0.	67	740	N/A				Х	5	35	Х		Х		Hillside
S-30	29.540890	-98.865947	MB	30	Kkd	0.	83	892	N/A				Х	5	35	Х		Х		Hillside
S-31	29.538370	-98.867893	CD	5	Kgrc	210	65	3	N/A				Х	5	10	Х			Х	Floodplain
S-32	29.537561	-98.866362	CD	5	Kgrc	175	50	20	N/A				Х	5	10	Х			Х	Floodplain
S-33	29.538044	-98.865503	CD	5	Kkbn	300	70	10	N/A				Х	5	10	Х			Х	Floodplain
S-34	29.539891	-98.868267	CD	5	Kgrc	295	70	6	N/A				F,V	5	10	Х			Х	Floodplain
S-35	29.544349	-98.868640	MB	30	Kkbn	0.	33	500	N/A				Х	35	65		Х	Х		Hillside
S-36	29.545216	-98.868152	MB	30	Kkbn	0.	75	700	N/A				Х	5	35	Х		Х		Hillside
S-37	29.546220	-98.869555	CD	5	Kkbn	250	175	unknown	N/A				Х	5	10	Х			Х	Hillside
S-38	29.546728	-98.869645	CD	5	Kkbn	185	55	6	N/A				F,V	5	10	Х			Х	Streambed
S-39	29.550535	-98.867577	CD	5	Kgrc	255	85	4	N/A				Х	5	10	Х			Х	Streambed
S-40	29.549140	-98.866526	CD	5	Kkbn	230	60	4	N/A				Х	5	10	Х			Х	Hillside
S-41	29.556922	-98.863728	CD	5	Kkbn	130	15	4	N/A				F,V	5	10	Х			Х	Streambed
S-42	29.560922	-98.864267	CD	5	Kkbn	320	150	4	N/A				F,V	5	10	Х			Х	Hillside
S-43	29.556086	-98.866191	CD	5	Kkbn	40	15	2	N/A				F,V	5	10	Х			Х	Hillside/Streambed
S-44	29.556184	-98.866434	CD	5	Kkbn	150	100	2	N/A				Х	5	10	Х			Х	Hillside

* DATUM: NAD 83

2A TYPE	TYPE	2B POINTS		11 A8
С	Cave	30	N	None, exposed bedrock
SC	Solution cavity	20	С	Coarse - cobbles, breakdown, sand, gravel
SF	Solution-enlarged fracture(s)	20	0	Loose or soft mud or soil, organics, leaves, sti
F	Fault	20	F	Fines, compacted clay-rich sediment, soil profi
0	Other natural bedrock features	5	V	Vegetation. Give details in narrative description
MB	Manmade feature in bedrock	30	FS	Flowstone, cements, cave deposits
SW	Swallow hole	30	х	Other materials
SH	Sinkhole	20	-	
CD	Non-karst closed depression	5		12 TOPOGRAPHY
Z	Zone, clustered or aligned features	30	Cliff,	Hilltop, Hillside, Drainage, Floodplain, Streambed

	8A INFILLING
N	None, exposed bedrock
С	Coarse - cobbles, breakdown, sand, gravel
0	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
х	Other materials

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information presented here complies with that document and is a true representation of the conditions observed in the field.

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TCEQ-0585-Table (Rev. 10-01-04)



Date 11/13/2023

<u>2 of 3</u>

GEOLOG	SIC ASSES	SMENT TA	BLE			PROJECT NAME: FM 1283 RANCH QUARRY														
	LOCATION					FE	EATUR	E CHARAC	TERISTICS						EVALU	ATION			PHYS	ICAL SETTING
1A	1B *	1C*	2A	2B	3		4		5	5A	6	7	8A	8B	9		10		1	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DI	MENSIONS (FI	EET)	TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENS	BITIVITY	CATCHM (AC	ENT AREA RES)	TOPOGRAPHY
						х	Y	z		10						<40	>40	<1.6	<u>>1.6</u>	
S-45	29.545474	-98.866969	CD	5	Kkbn	165	70	6	N/A				Х	5	10	Х			Х	Hillside
S-46	29.538910	-98.865448	F	20	Kkbn/Kgrc	2,3	350	unknown	67	10			N,X	5	15	Х			Х	Hillside
S-47	29.539816	-98.863990	CD	5	Kkbn	135	60	2	N/A				Х	5	10	Х		Х		Hillside
S-48	29.543706	-98.866013	MB	30	Kkd	530	230	85	N/A				N	5	35	Х			Х	Hillside
S-49	29.539803	-98.866815	MB	30	Kkbn	415	245	10	N/A				F,X	5	35	Х			Х	Hillside
S-50	29.538511	-98.866919	MB	30	Kkbn	700	200	35	N/A				F	5	35	Х			Х	Hillside
S-51	29.562623	-98.863435	F	20	Kkbn/Kgrc/Kkd	7	90	unknown	64	10			Х	5	35	Х			Х	Hillside
S-52	29.556431	-98.864210	F	20	Kkbn/Kgrc	4,8	850	unknown	10				Х	5	25	Х			Х	Streambed/Floodplain
S-53	29.548812	-98.868169	F	20	Kkbn/Kgrc/Kkd	3,	785	unknown	75	10			Х	5	35	Х			Х	Hillside
S-54	29.542677	-98.864303	F	20	Kkbn/Kgrc/Kkd	3,	750	unknown	45				Х	5	25	Х			Х	Hillside
S-55	29.551958	-98.868807	F	20	Kkbn/Kgrc/Kkd	4,	116	unknown	138				Х	5	25	Х			Х	Hillside
															0					
															0					
															0					
															0					
															0					
															0					
															0					
															0					
															0					
															0					
															0					

* DATUM: NAD 83

2A TYPE	TYPE	2B POINTS
С	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
0	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
z	Zone, clustered or aligned features	30

	8A INFILLING
1	None, exposed bedrock
)	Coarse - cobbles, breakdown, sand, gravel
)	Loose or soft mud or soil, organics, leaves, sticks, dark colors
:	Fines, compacted clay-rich sediment, soil profile, gray or red colors
/	Vegetation. Give details in narrative description
s	Flowstone, cements, cave deposits
(Other materials
	12 TOPOGRAPHY

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The

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TCEQ-0585-Table (Rev. 10-01-04)



Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

Date _____3/2023

<u>3 of 3</u>

Attachment B

Stratigraphic Column

Generalized Stratigraphic Column – Medina County, Texas

[Hydrogeologic subdivisions modified from Maclay and Small (1976); groups, formations, and members modified from Holt (1956), Stricklin and others (1971), Rose (1972), and Ashworth (1983); lithology modified from Dunham (1962); and porosity type modified from Choquette and Pray (1970). CU, confining unit; *, not exposed in the study area; AQ, aquifer]

Hy	drogeol ubdivisi	ogic ion			G for or r	irouj mati nem	P, on, ber	Hydro- logic function	Thickness (feet)	Lithology	Field identification	Cavern development	Porosity/ permeability type
mary			Alluv	ium				AQ	0-30	Siltstone to sandstone	Sandstone and silt	None	High porosity/high permeability
Quinte			Leoni	í Fór	məti	on	(AQ	0-65	Sand, gravel, silt, and clay	Chert and limestone	Rare to none	Low to high porosity/ low permeability
	-	1	Escon	ndiđe	For	mati	on	AQ	300	Shale, sandstone, and limestone	Gray sandstone and shale	Rare to none	Low to high porosity/ low permeability
			Anaca	acho	Lim	esto	ne	CU	240-400	Fossiliferous limestone and mart	Red-brown to light-gray limestone; marl	Rare	Low to high porosity/ low permeability
ceous	Upp	er	Austin Group					CU	225-350	Buff to white chalk; limestone and marl	White, light-gray limestone	Rare	Low porosity/bow permeability
er Creta	confir uni	ning. it	Eagle	For	l Gr	oup		cu	30-50	Brown, flaggy shale and argiflaceous limestone	Dark-brown shale; petroliferous odor	None	Low porosity/low permeability
5			Buda	Lim	estor	ie		CU	4050	Buff, light-gray, dense mudstone	White, dense limestone	None	Low porosity/low permeability
			Del R	io C	lay			CU	4050	Blue-green to yellow-brown clay	Blue-green to medium- brown shale; Rymatogyra arietina	None	Low porosity/low permeability
	1	Γ	Georg	petov	vn Fe	srma	ition	Karst AQ; not karst CU	0-20	Reddish-brown, gray to light-tan, marly limestone	Red-brown to gray marly limestone; Waxonella waxoensis	None	Low porosity/low permeability
	ш						Cyclic and marine members, undivided	AQ	0-10	Mudstone to packstone; miliolid grainstone; chert	*	Many subsurface; might be associated with earlier karst development	Laterally extensive; both fabric and not fabric/water-yielding
					Segovia Formatio	Person Formation	Leached and collapsed members, undivided	AQ	70-90	Crystalline limestone; mudstone to grainstone; chert: collapsed breccia	Bioturbuted iron-stained beds separated by massive limestone beds; stromatolitic limestone	Extensive lateral development; large rooms	Majority not fabric/one of the most porous and permeable
	IV	is aquifer	mation	Group			Regional dense member	cu	16-20	Dense, argillaceous mudstone	Wispy iron-oxide stains	Very few; only vertical fracture enlargement	Not fabric/low permeability; vertical barrier
Cretaceous	v	Edward	s River For	Edwards (Grainstone member	AQ	5060	Milholid grainstone; mudstone to wackestone; chert	White crossbedded grainstone	Few	Not fabric/ recrystallization reduces permeability
Lower	V1	1	Devi	-	mation	ation	Kirschberg evaporite member	AQ	50-60	Highly altered crystalline limestone; chalky mudstone; chert	Boxwork voids, with neospar and travertine frame	Probably extensive cave development	Majority fabric/one of the most porous and permeable
	VШ	1			Terren For	ainer Form	Dolomitic member	AQ.	110-140	Mudstone to grainstone; crystalline limestone; chert	Massively bedded, light gray; Toucasia abundant	Caves related to structure or bedding planes	Mostly not fabric; some bedding-plane fabric/water-yielding
	vш				For	×	Basal nodular member	Karst AQ: not karst CU	50-60	Shaly, nodular limestone; mudstone and miliolid grainstone	Massive, nodular and mottled; abordant gastropods and Exogyra terano	Large lateral caves at surface; a few caves near Koenig Creek (see plate 1)	Fabric: stratigraphically controlled/large con- duit flow at surface: no permeability in subsurface
	Trin aqui	Trinity aquifer		Tower Trawer Glen		per member of ilen Rose Limestone		CU; evaporite beds AQ	350-500	Yellowish tan, thinly bedded limestone and marl	Stair-step topography; alternating limestone and mark; Orbitolina minuta	Some surface cave development	Some water production at evaporite beds/relatively impermeable

Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Outcrop, Medina County, Texas

Indicates surface unit mapped onsite.

Note: CU = confining unit; AQ = Aquifer

Attachment C

Site Geology (Geologic Narrative)

Geologic Narrative

1.0 PURPOSE

Westward Environmental, Inc. (WESTWARD) was retained by H. L. Zumwalt Quarry Operations, LLC (Client) to prepare a Geologic Assessment (GA) on a ~561-acre tract (Site). This GA was prepared as a required attachment to a Water Pollution Abatement Plan (WPAP) modification for the Site as required by the Texas Commission on Environmental Quality (TCEQ).

2.0 **REGULATORY GUIDANCE**

Title 30, Chapter 213 of the Texas Administrative Code

This report was prepared in accordance with *Instructions for Geologists for Geologic Assessments* on the Edwards Aquifer Recharge/Transition Zones (TCEQ-0585 (Rev. 10-01-04)) and will be reviewed pursuant to Title 30, Chapter 213 of the Texas Administrative Code.

3.0 PROJECT LOCATION

The Site is located approximately 2.7 miles west of the FM 1283 and CR 371/Red Wing Rd. intersection in Mico, Medina County, Texas. The address is listed as 17511 FM 1283, Mico, Texas. The entire Site is located over the Edwards Aquifer Recharge Zone (EARZ).

4.0 METHODOLOGY

As part of the GA, WESTWARD performed a desktop review of selected published information. WESTWARD also conducted a field investigation in accordance with *TCEQ-0585 (Rev. 10-01-04)*.

4.1 Desktop Review

WESTWARD conducted a review of aerial imagery, the University of Texas Bureau of Economic Geology (BEG) Geologic Atlas of Texas (GAT) San Antonio Sheet, applicable U.S. Geological Survey (USGS) Topographic quadrangle(s) and geospatial dataset(s), the Texas Natural Resources Information System (TNRIS), the Texas Water Development Board's Water Data Interactive Groundwater Data Viewer (TWDB Viewer), the Railroad Commission of Texas (RRC), and the U.S. Department of Agriculture (USDA) National Resource Conservation Service (NRCS) Web Soil Survey prior to the field investigation.

4.2 Field Investigation

A field investigation was performed in the Assessment Area by WESTWARD staff under the direction of John J. Sackrider, P.G. (TBPG Lic. No. 12654) from November 1-4 and 28-30, 2022 and on May 11, 2023. Field transects of the Assessment Area were walked in accordance with TCEQ-0585 (rev. 10-01-04).

5.0 **DESKTOP REVIEW**

The desktop review was utilized for preliminary planning of the field investigation. The accuracy of the desktop review was limited by the accessibility, scale, and age of the data available.

5.1 Published Surface Geology

A review of published geologic maps revealed early Cretaceous-aged geologic formations mapped at the surface of the Site. These include the Kainer Formation of the Edwards Group and the Upper Glen Rose Formation (Kgrc) of the Trinity Group.

The Kainer Formation of the Edwards Group is further divided by hydraulic characteristics into hydrostratigraphic units which include (from youngest to oldest) the Grainstone (Kkg), Kirschberg evaporite (Kkke), Dolomitic (Kkd), and the Basal nodular (Kkbn) members. A Site Geologic Map is included in Attachment D.

5.2 Published Structure

The Site is located within the Balcones Fault Zone (BFZ). The desktop review revealed three (3) published certain faults and two (2) published inferred faults mapped at the Site. The faults are shown on the Site Geologic Map (Attachment D). The published certain faults trend from southwest to northeast with an average approximate bearing of 64° . This average was used to set the dominant fault trend range of the Site for the purposes of this GA and is approximated to be between 49° and 79° .

5.3 Karst Features

The desktop review did not reveal karst features within the Site.

5.4 Non-karst & Manmade Features

The desktop review of aerial imagery revealed pits associated with active mining activities on the southern portion of the site and three (3) stock ponds in the open areas north of the active quarry.

A review of the TWDB WDIGDV revealed six (6) onsite groundwater wells (Well Report Tracking #77807, #408650, #416867, #87171, #77799 from the TWDB Submitted Driller's Reports Database and State Well #6826403 from the TWDB Groundwater Database). Well reports are included in Attachment E.

5.5 Soils

Three (3) soil units were identified on the Site through the NRCS Web Soil Survey. They are detailed below as well as included on the Geologic Assessment Form TCEQ-0585 (Rev. 02-11-15). A Site Soils Map is included in Attachment D.

Pub	Published Soil Unit Descriptions											
Soil Name	Group	Thickness (Feet)	Description									
Pratley clay (PrB), 0 to 3 percent slopes	С	< 4	Up to 46 inches to paralithic bedrock, well drained, moderately low to moderately high (0.06 to 0.57 in/hr) Ksat capacity									
Eckrant-Rock outcrop association (TAD), 1 to 10 percent slopes	D	< 2	Up to 20 inches to lithic bedrock, well drained, moderately low to moderately high (0.06 to 0.57 in/hr) Ksat capacity									
Eckrant-Rock outcrop association (TAF), 8 to 30 percent slopes	D	< 2	Up to 20 inches to lithic bedrock, well drained, moderately low to moderately high (0.06 to 0.57 in/hr) Ksat capacity									

6.0 FIELD INVESTIGATION

The field investigation was performed on November 1-4 and 28-30, 2022 and on May 11, 2023 by WESTWARD staff under the direction of John J. Sackrider, P.G. to verify the presence or absence of recharge features identified in the desktop review and to identify recharge features not found during the desktop review. Field reconnaissance was performed in accordance with the *TCEQ-0585-Instructions (Rev. 10-1-04)*.

6.1 Surface Geology

The published surface geology was confirmed in a few places where bedrock was exposed across the Site. However, many areas were covered with thick vegetation and tree litter, making it difficult to distinguish the surface geology in those places.

WESTWARD performed subsurface exploration on the Site from July 8-11, 2023 and created cross sections correlating the units across the Site which resulted in some changes in the published contacts between the Dolomitic (Kkd), Basal nodular (Kkbn), and the Glen Rose (Kgrc) members. The Grainstone (Kkg) and Kirschberg evaporite (Kkke) were not observed at the surface. The attached Site Geologic Map reflects the interpreted surface geology based on this field investigation in conjunction with the recent subsurface exploration.

6.2 Structure

Feature S-46 was the only structural feature observed as direct evidence of a mapped fault and recorded at the Site during the field investigation. Features S-51 through S-54 are faults that are included in this report because they are published in the geologic literature. However, they were not observed during the field investigation. Feature S-55 was added after the drilling effort revealed an additional fault at the Site.

6.3 Karst Features

Fourteen (14) solution cavities, four (4) zones of solution cavities, and three (3) caves were identified and recorded during the field investigation. Five (5) of these karst features (S-8, S-11, S-23, S-24, and S-26) are rated sensitive.

6.4 Non-karst & Manmade Features

Seventeen (17) non-karst closed depressions and eleven (11) manmade features in bedrock were identified and recorded during the field investigation. The manmade features in bedrock consist of eight (8) water wells and three (3) pits associated with mining activities. Two (2) of the wells (S-3 and S-35) are rated sensitive.

6.5 Feature Descriptions

S-1 (SC)

Feature S-1 is a solution cavity located on the northern part of the Site that measures approximately 0.33 ft. x 0.17 ft and has an approximate depth of at least 3 ft. Broken rock and tree litter surrounded the feature which revealed exposed bedrock after some excavating by hand. The approximate trend of the feature is 140°. There did not appear to be a direct drainage path to the feature at the time of field investigation and the catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-2 (SC)

Feature S-2 is a solution cavity located on the hillside along the Deep Creek drainage area on the eastern part of the Site. The feature measures approximately 2.17 ft. x 3.33 ft and has an approximate depth of 0.75 ft. that extends up into the slope with an approximate trend of 80°. It appeared that any flow of water would likely come out of the feature rather than go into it. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-3 (MB)

Feature S-3 is a water well that is classified as a manmade feature in bedrock. At the time of the field investigation, the well was uncapped and the concrete pad was broken and degraded. The diameter of the well measures approximately 0.5 ft. and the depth is unknown. The concrete pad measures approximately 0.83 ft. and the steel well collar also extended 0.83 ft. above the ground surface. The well was not found on any database for public wells during the desktop review or during further research after the field investigation and did not appear to be in use at the time of field investigation. The catchment area is less than 1.6 acres. Due to the small catchment area, the height above the ground surface, and the fact that there was no degradation of the well collar at the time of field investigation, the interpreted probability of rapid infiltration is low. However, it is recommended that this well be plugged. This feature is rated sensitive.

S-4 (MB)

Feature S-4 is a water well (Tracking #77799) that is classified as a manmade feature in bedrock. According to the TWDB WDIGDV, the borehole diameter for this well is 0.75 ft. This feature was drilled in 2006 as a stock well. It has a 0.35 ft. PVC casing surrounded by an 0.67 ft. steel sleeve that extends 2.08 ft. above the ground surface. The PVC casing

Not Sensitive

Not Sensitive

Sensitive

Project No. 10022-080 November 2023

Not Sensitive

Not Sensitive

extends 4" from a steel plate that caps the sleeve. The depth of the well is recorded to be 760 ft. The well appeared to be in use and in compliance at the time of the field investigation and the 4" tall concrete pad was in good condition. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-5 (SC)

Feature S-5 is a small round solution cavity measuring approximately 0.25 ft. in diameter and was plugged with dark soil at a depth of 0.92 ft. Loose dark soil, dried twigs, and broken limestone rocks surrounded the feature at the time of field investigation. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-6 (Z-SC)

Feature S-6 is a zone of three solution cavities located along the vegetated hillside east of Deep Creek on the northern part of the Site. The zone measures approximately 20 ft. x 8 ft. with an approximate trend of 108° . The largest solution cavity measures 2.25 ft. x 0.83 ft. x 2.67 ft. and a smaller, possibly connected solution cavity measures 0.5 ft. x 1 ft. x 2.33 ft. The floor was covered with tree litter and due to excessive debris infill, the connectivity could not be confirmed at the time of the field investigation. The third solution cavity had a persimmon tree growing out of it. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-7 (SC)

Feature S-7 is a small, nearly round solution cavity located along the hillside of a drainage to the east of Deep Creek. The feature measures approximately 0.33 ft. x 0.25 ft x 1.83 ft. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-8 (C)

Feature S-8 is a horizontal cave located along the hillside to the east of Deep Creek. The feature measures approximately 10 ft. x 8.33 ft x 2.3 ft. with an approximate trend of 75°. The feature is surrounded by a few solution cavities and all voids go into the hillside horizontal to the ground surface. The catchment area is greater than 1.6 acres and the interpreted probability of rapid infiltration is low. However, because the trend of this feature is within the dominant fault trend range of this Site, this feature is rated sensitive.

S-9 (CD)

Feature S-9 is a non-karst closed depression located in the low relief area just west of Deep Creek on the northern part of the Site. The feature measures approximately 30 ft. x 15 ft. x 1.5 ft. and was floored with fine-grained sediment and new growth vegetation at the time of the field investigation. The catchment area is less than 1.6 acres, and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-10 (CD)

Feature S-10 is a non-karst closed depression located adjacent to the south of S-9. The feature measures approximately 27 ft. x 11 ft. x 1 ft. and was floored with fine-grained

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sediment and new growth vegetation at the time of the field investigation. The catchment area for this feature is greater than 1.6 acres and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-11 (C)

Feature S-11 is a cave located on a hilltop to the west of the main road that runs north to south across the Site and near the Site boundary on the northwestern part of the Site. The opening measures approximately 1 ft x 1.5 ft. and extends 6 ft. down along an approximate trend of 140° into a larger circular cave that measures approximately 3 ft. x 3 ft. There was no airflow observed at the time of the field investigation. The catchment area is less than 1.6 acres. Due to the low likelihood of drainage into the cave system from the hilltop, the interpreted probability of rapid infiltration is intermediate. The feature is rated sensitive.

S-12 (C)

Feature S-12 is a small cave located near a small streambed in a heavily vegetated area on the north-central part of the Site. The feature measures approximately 4.5 ft. x 6 ft x 7.5 ft. and extends straight into the ground with no apparent trend. The feature was plugged at the bottom with soil, organic debris, and broken blocky limestone at the time of field investigation. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-13 (Z-SC)

Feature S-13 is a zone of three solution cavities located in a heavily vegetated area near the western Site boundary. The zone measures approximately 12 ft. x 1 ft. x 3 ft. and has an approximate trend of 30° . The solution cavities were filled in with soil and organic debris at the time of field investigation. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-14 (SC)

Feature S-14 is a solution cavity located within the floodplain along the streambed of Deep Creek on the central-eastern part of the Site. The feature measures approximately 5 ft. x 4 ft. x 0.5 ft. and opens into the hillside horizontally with an approximate trend of 104° . Due to the orientation of the feature, the catchment area is less than 1.6 acres, and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-15 (SC)

Feature S-15 is a solution cavity located on the rocky hillside just outside the floodplain on the west side of Deep Creek. The feature measures approximately 2.42 ft. x 3.67 ft. x 4 ft. and opens into the hillside horizontally with an approximate trend of 90°. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-16 (SC)

Feature S-16 is a solution cavity located in a heavily vegetated area on the western part of the Site. The feature measures approximately 2 ft. x 3.33 ft. x 1 ft. and has an approximate trend of 110° . It was infilled with soil and organic debris at the time of the field

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investigation. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-17 (SC)

Feature S-17 is a solution cavity located in a small streambed in a heavily vegetated area on the western part of the Site. The feature measures approximately 4.58 ft. x 3.58 ft x 1 ft. The feature was infilled with organic debris and the surrounding bedrock appeared to be partially covered in moss at the time of field investigation. The catchment area is less than 1.6 acres, and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-18 (Z-SC)

Feature S-18 is a zone of multiple small solution cavities located along a streambed bank in a heavily vegetated area on the eastern part of the Site. The feature measures approximately 2.5 ft. x 2 ft. x 0.83 ft. and is filled with organic debris. The catchment area is less than 1.6 acres, and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-19 (SC)

Feature S-19 is a solution cavity located near the eastern Site boundary. The feature measures approximately 1.67 ft. x 2 ft x 0.58 ft and has an approximate trend of 155° . It was infilled with dark soil and organic debris at the time of the field investigation. The catchment area is less than 1.6 acres, and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-20 (SC)

Feature S-20 is a solution cavity that measures approximately 0.83 ft. x 2.67 ft x 0.58 ft with an approximate trend of 136° that extends into the hillside and then down towards the ground. The feature is infilled with loose soil and organic debris. The catchment area is less than 1.6 acres, and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-21 (SC)

Feature S-21 is a solution cavity located near the eastern Site boundary. The feature measures approximately 1 ft. x 2.5 ft x 0.75 ft with an approximate trend of 110° . It was floored with soil and organic debris at the time of the field investigation. The catchment area is less than 1.6 acres, and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-22 (MB)

Feature S-22 is a water well that is classified as a manmade feature in bedrock. It is located on a hilltop clearing on the western part of the Site. The well was surrounded by a 0.34 ft. tall concrete pad that was in good condition at the time of field investigation and extended to a height of 2.08 ft. above the concrete. The casing measured 0.67 ft. and was surrounded by a metal sleeve wrapped in insulating material and secured. The depth of the well is unknown as it was not found on any database for public wells during the desktop review or during further research after the field investigation. The well appeared to be in use and

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in compliance at the time of the field investigation. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-23 (SC)

Feature S-23 is a circular-shaped solution cavity located in the vegetated area on the westcentral part of the Site. The feature measures approximately 1.17 ft. x 1.08 ft x 7.5 ft. and was floored with dark soil. It could not be determined whether the feature continued laterally. There was no airflow observed at the time of the field investigation. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is medium. This feature is rated sensitive.

S-24 (SC)

Feature S-24 is a solution cavity located near the western Site boundary in a streambed that flows into Deep Creek. The feature measures approximately 0.33 ft. x 0.42 ft x 2.42 ft and has an approximate trend of 155°. The feature had some leaves at the base but was mostly clear of debris at the time of the field investigation. The catchment area is greater than 1.6 acres. The interpreted probability of rapid infiltration is high. This feature is rated sensitive.

S-25 (SC)

Feature S-25 is a solution cavity located along the south-central Site boundary. The feature measures approximately 0.5 ft. x 0.33 ft x 0.33 ft and has an approximate trend of 140°. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-26 (SC)

Feature S-26 is a solution cavity located on the southern part of the Site near Deep Creek. The feature measures approximately 1.33 ft. x 1.17 ft x 7.08 ft with an approximate trend of 75°. The feature has a narrow opening that opens into a larger cavity. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is medium to high. This feature is rated sensitive.

S-27 (CD)

Feature S-27 is a non-karst closed depression located in a streambed near the eastern Site boundary and to the east of the active pit. The feature measures approximately 10 ft. x 12 ft. x 3 ft. and was floored with soil and gravel. It appears that it may have been an old borrow pit and similar features were identified nearby at the time of the field investigation. The feature was bermed so the catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-28 (MB)

Feature S-28 is a water well (Tracking #416867) that is classified as a manmade feature in bedrock. It is located on the southeastern part of the Site near the main office. According to the TWDB WDIGDV, the borehole diameter for this well is 0.83 ft. This feature was drilled in 2015 as a domestic well. It has a 0.5 ft. diameter PVC casing surrounded by a steel sleeve that extends 0.67' above the ground surface and is capped with a metal plate. The PVC casing extends 1.25' from the steel plate that caps the sleeve. The depth of the

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well is recorded to be 709 ft. The well appeared to be in use and in compliance at the time of the field investigation and the 4" concrete pad was in good condition. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-29 (MB)

Feature S-29 is a water well (Tracking #87171) that is classified as a manmade feature in bedrock. It is located in a well house approximately 30 ft. from S-28. According to the TWDB WDIGDV, the borehole diameter for this well is 0.75 ft. This feature was drilled in 2006 as a domestic well with a 0.38 ft. PVC casing. However, only a 0.67 ft. diameter open well was observed at the time of the field investigation. The top of the well extended 0.5 ft. above a concrete pad that is 0.67 ft. high. The depth of the well is recorded to be 740 ft. The catchment area is less than 1.6 acres. This feature is rated not sensitive.

S-30 (MB)

Feature S-30 is a water well (Tracking #408650) that is classified as a manmade feature in bedrock. It is located between the plant and the main pit of the Site. According to the TWDB WDIGDV, the borehole diameter for this well is 0.83 ft. This feature was drilled in 2015 as an industrial well with a 0.5 ft. PVC casing that extends 3.17 ft above a concrete pad that is 0.25 ft. high. The depth of the well is recorded to be 892 ft. The well appeared to be in use and in compliance at the time of the field investigation and the concrete pad was in good condition. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-31 (CD)

Feature S-31 is a non-karst closed depression located in the floodplain on the southern part of the Site. The feature measures approximately 210 ft. x 65 ft. x 3 ft. The feature was holding some water and was surrounded with fine-grained sediment and short, new growth vegetation at the time of the field investigation. The catchment area is greater than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-32 (CD)

Feature S-32 is a non-karst closed depression located in the floodplain along the southern Site boundary. The feature measures approximately 175 ft. x 50 ft. x 20 ft. and is floored with fine-grained sediment and short, new growth vegetation. The feature was holding water at the time of the field investigation. The catchment area is greater than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-33 (CD)

Feature S-33 is a non-karst closed depression located in the floodplain across the main haul road from S-32. The feature measures approximately 300 ft. x 70 ft. x 10 ft. and is floored with fine-grained sediment and short, new growth vegetation. The feature was holding some water at the time of the field investigation. The catchment area is greater than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

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S-34 (CD)

Feature S-34 is a non-karst closed depression located in the floodplain to the west of Deep Creek on the south-central part of the Site. The feature measures approximately 295 ft. x 70 ft. x 6 ft. and is floored with fine-grained sediment and short, new growth vegetation. Broken cobble and pebble-sized limestone were also observed scattered on the floor of the feature at the time of the field investigation. The catchment area is greater than 1.6 acres. The interpreted probability of rapid infiltration is low.

S-35 (MB)

Feature S-35 is a windmill water well (State Well ##6826403) that is classified as a manmade feature in bedrock. There is no drill date on record with the TWDB WDIGDV, but the first water level was recorded on 01/08/1934 by the USGS. At that time, it was identified as Well D-7-17. The well is recorded as a historical observation well and not in use for the withdrawal of water. The depth of the well is recorded to be 500 ft. The well measured approximately 0.33 ft. in diameter and was open and flush with the ground surface at the time of the field investigation. The concrete pad around it was broken and in very poor condition. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is high. This feature is rated sensitive.

S-36 (MB)

Feature S-36 is a water well (Tracking #77807) that is classified as a manmade feature in bedrock. It is located behind the residence just west of the main pit. According to the TWDB WDIGDV, the borehole diameter for this well is 0.75 ft. This feature was drilled in 2006 as a domestic well. It has a 0.38 ft. PVC casing surrounded by a 0.67 ft. diameter steel sleeve that extends 2 ft. above the ground surface. The PVC casing extends 1 ft. from the plate that caps the sleeve. The concrete pad surrounding the well measures approximately 2 ft. x 2 ft. and is approximately 0.17 ft. high. The depth of the well is recorded to be 700 ft. The well appeared to be in use and in compliance at the time of the field investigation. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-37 (CD)

Feature S-37 is a non-karst closed depression located in the central part of the Site that appears to have been created by an agricultural dam that was formed by the road where a stream flows into Dry Creek from the west side. The feature measures approximately 250 ft. x 175 ft. with an unknown depth. The feature was holding water at the time of field reconnaissance. The catchment area for this feature is greater than 1.6 acres and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-38 (CD)

Feature S-38 is a non-karst closed depression located along the streambed across the road from S-37. The feature measures approximately 185 ft. x 55 ft. x 6 ft. and is floored with fine-grained sediment and some short growth vegetation. There was also an abundance of broken limestone cobbles concentrated at the edges of the feature at the time of field reconnaissance. The catchment area for this feature is greater than 1.6 acres and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

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S-39 (CD)

Feature S-39 is a non-karst closed depression located along a stream that flows into Deep Creek from the west side and appears to have been created by an agricultural dam that was formed by the road where a stream flows into Dry Creek from the west side. The feature measures approximately 255 ft. x 85 ft. x 4 ft. The feature was holding water at the time of field reconnaissance. The catchment area for this feature is greater than 1.6 acres and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-40 (CD)

Feature S-40 is a non-karst closed depression located within the floodplain of Deep Creek and appears to have been created by an agricultural dam. The feature measures approximately 230 ft. x 60 ft. x 4 ft. The feature was holding water at the time of the field investigation. The catchment area for this feature is greater than 1.6 acres and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-41 (CD)

Feature S-41 is a non-karst closed depression located along a stream that flows into Deep Creek from the east side. The feature measures approximately 130 ft. x 15 ft. x 4 ft. Large trees surrounded the feature and it was holding some water at the time of the field investigation. The catchment area for this feature is greater than 1.6 acres and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-42 (CD)

Feature S-42 is a large non-karst closed depression located on the northern part of the Site where a stream flows into Deep Creek from the northwest. The feature measures approximately 320 ft. x 150 ft. x 4 ft. and was floored with compacted fine-grained sediment and short growth vegetation at the time of the field investigation. The catchment area for this feature is greater than 1.6 acres and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-43 (CD)

Feature S-43 is a non-karst closed depression located along a streambed flowing into Deep Creek from the west side. It appears to be a low area along the path of the stream created between a pathway and the main road. A culvert that had been previously installed was plugged at the time of the field investigation. The feature measures approximately 40 ft. x 15 ft. x 2 ft. and is floored with compacted fine-grained sediment and short growth vegetation. The catchment area for this feature is greater than 1.6 acres and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-44 (CD)

Feature S-44 is a non-karst closed depression located opposite of the road of S-43 and along the same streambed flowing into Deep Creek from the west side. The feature measures approximately 150 ft. x 100 ft. x 2 ft. The feature was holding water at the time of the field investigation. The catchment area for this feature is greater than 1.6 acres and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

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S-45 (CD)

Feature S-45 is a non-karst closed depression located between Deep Creek and the main pit on the central part of the Site. The feature measures approximately 165 ft. x 70 ft. x 6 ft. The feature was holding water at the time of the field investigation. The catchment area for this feature is greater than 1.6 acres and the interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-46 (F)

Feature S-46 is a fault that was observed on the southern part of the Site that runs southwest to northeast with an approximate trend of 67°. This observation confirms the presence of one of the three published faults that was discovered during the desktop review. The extent of the fault within the Site boundaries measures approximately 2,350 ft. The catchment area is greater than 1.6 acres. Where observed the fault area was vegetated with an established soil profile. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-47 (CD)

Feature S-47 is a non-karst closed depression located along a road east of the plant on the southeastern part of the Site. The feature consists of a bermed area that measures approximately 135 ft. x 60 ft. x 2 ft. The feature was holding water at the time of the field investigation. The catchment area is less than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-48 (MB)

Feature S-48 is a manmade feature in bedrock that consists of the main pit of the quarry operations. The feature measures approximately 530 ft. x 230 ft. x 85 ft. The floor consists of bedrock with rock piles and loose fine-grained sediment. The catchment area is greater than 1.6 acres. The interpreted probability of rapid infiltration is low because there was no solutioning observed in the bedrock or other conduit extending to the subsurface. This feature is rated not sensitive.

S-49 (MB)

Feature S-49 is a manmade feature in bedrock that consists of a system of settlement ponds located just west of the plant. The feature measures approximately 415 ft. x 245 ft. and the ponds are estimated to range from 1 ft. to 10 ft. in depth. They were holding water at the time of the field investigation. The catchment area is greater than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-50 (MB)

Feature S-50 is a manmade feature in bedrock that consists of an inactive pit located southeast of S-49 on the southern part of the main quarry operation. The feature measures approximately 700 ft. x 200 ft. x 35 ft. The floor consists of compacted fine-grained sediment with sediment piles and vegetation. Part of the feature was holding some water at the time of the field investigation. The catchment area is greater than 1.6 acres. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

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S-51 (F)

Feature S-51 is a published fault that is mapped on the northernmost part of the Site and runs southwest to northeast with an approximate trend of 64°. This fault was not observed onsite during field investigation but is included in this report because it is part of the published geologic literature. The extent of the mapped fault within the Site boundaries measures approximately 790 ft. The catchment area is greater than 1.6 acres. Vegetation and an established soil profile were observed in the mapped fault areas. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-52 (F)

Feature S-52 is a published fault that extends between faults S-51 and S-53 along Deep Creek. It runs almost north to south with an average approximate trend of 10°. This fault was not observed onsite during field investigation but is included in this report because it is part of the published geologic literature. The entire feature is mapped within the Site and measures approximately 4,850 ft. The catchment area is greater than 1.6 acres. Vegetation and an established soil profile were observed in the mapped fault areas. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-53 (F)

Feature S-53 is published fault that is mapped across the center of the Site and runs southwest to northeast with an approximate trend of 75°. This fault was not observed onsite during field investigation but is included in this report because it is part of the published geologic literature. The extent of the mapped fault within the Site boundaries measures approximately 3,785 ft. The catchment area is greater than 1.6 acres. Vegetation and an established soil profile were observed in the mapped fault areas. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-54 (F)

Feature S-54 is a published inferred fault that is mapped on the southern part of the Site that runs southwest to northeast with an approximate trend of 45°. This fault was not observed onsite during field investigation but is included in this report because it is part of the published geologic literature. The extent of the fault within the Site boundaries measures approximately 3,750 ft. The catchment area is greater than 1.6 acres. Vegetation and an established soil profile were observed in the mapped fault areas. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

S-55 (F)

Feature S-55 is a fault that was observed on the southern part of the Site that runs northwest to southeast with an approximate trend of 138°. This fault was observed during an exploratory drilling campaign. The extent of the fault within the Site boundaries measures approximately 4,116 ft. The catchment area is greater than 1.6 acres. Vegetation and an established soil profile were observed in the mapped fault areas. The interpreted probability of rapid infiltration is low. This feature is rated not sensitive.

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SELECT PHOTOGRAPHS



S-2: Solution cavity that extends horizontally into flow path.



S-3: Uncapped well that is no longer in use.



S-4: Water well (Tracking #77799) that is in use and compliant.



S-5: Small solution cavity located on the northern part of the Site.



S-6: Small solution cavity located within a zone on the northeast part of the Site.



S-7: Solution cavity located along a drainage area on the northeast part of the Site.



S-8: Cave surrounded by solution cavities along the Deep Creek streambed.



S-8: Close-up view inside the feature.

H. L. Zumwalt Quarry Operations, LLC – Mico, Texas FM 1283 Ranch Quarry Geologic Assessment



S-12: Solution small cave located on a hilltop on the north-central part of the Site.



S-14: Large cavity located along the Deep Creek streambed.



S-21: Solution cavity located on the eastern part of the Site.



S-23: Large solution cavity located on the west part of the Site.



S-24: Small solution cavity on a streambed on the west part of the Site.



S-26: Opening to a cave located on the south-central part of the Site.



S-29: Water well (Tracking #87171) found uncapped inside a well house.



S-30: Water well (Tracking #408650) that is in use and compliant.



S-32: Non-karst closed depression along Deep Creek near the main entrance to the quarry.



S-35: Historical observation well (State Well #6826403) located on the central part of the Site.



S-36: Water well (Tracking #77807) that is in use and compliant.



S-37: Non-karst closed depression along Deep Creek on the central part of the Site.



S-38: Non-karst closed depression along the same stream and just opposite the road of S-37.



S-44: Non-karst closed depression along a stream located on the northern part of the Site.



S-47: Stormwater pond classified as a non-karst closed depression.



S-49: Settlement ponds near the active quarry on the southern part of the Site.



S-50: Inactive pit, view to the northeast.



S-50: View to the west/southwest which includes evidence of the fault (S-46).



Vegetated area on the western part of the Site mapped as Ked.



Deep Creek drainage, view to the north.



Exposed bedrock on the northeast part of the Site mapped as Kgru.



Deep Creek drainage on the northern part of the Site, view to the southeast.

Attachment D

Site Geologic Map Site Soils Map



SITE GEOLOGIC MAP

FM 1283 RANCH QUARRY - GEOLOGIC ASSESSMENT H.L. ZUMWALT QUARRY OPERATIONS, LLC MICO, MEDINA COUNTY, TX

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H.L. ZUMWALT QUARRY OPERATIONS, LLC MICO, MEDINA COUNTY, TX

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Attachment E

Well Reports for:

Tracking #77799 Tracking #416867 Tracking #87171 Tracking #408650 State Well #6826403 Tracking #77807

	STATE OF TEXAS WELL REPORT for Tracking #77799					
Owner:	Henry Zumwalt	Owner Well #:	C102-075			
Address:	12354 FM 1560 N Helotes, TX, 78023	Grid #:	68-26-4			
Well Location:	1866 FM 1283	Latitude:	29° 33' 38" N			
-	Mico, TX 78056	Longitude:	098° 51' 54" W			
Well County:	Medina	Elevation:	1226 ft. above sea level			
Type of Work:	New Well	Proposed Use:	Stock			

Drilling Start Date: 2/13/2006 Drilling End Date: 2/15/2006

	Diameter ((in.)	Top Depth (ft.)	Bottom Dept	th (ft.)
Borehole:	9		0	167	
	8		167	760	
Drilling Method:	Air Hammer; A	ir Rotary			
Borehole Completion:	Filter Packed				
	Top Depth (ft.)	Bottom Depth (ft.)	Filter N	Naterial	Size
Filter Pack Intervals:	600	760	Gra	avel	3/8 in
	Top Depth (ft.)	Bottom Depth	(ft.) De	scription (number of sa	acks & material)
Annular Seal Data:	0	6	3 Portlan		d
	6	600		52 Bentoni	te
Seal Method: Be tri	entonite pumped	through	Distance to P	operty Line (ft.): 3	20
Sealed By: Dr	ller		Distance to Sept concentrated co	ic Field or other ntamination (ft.): r	ione
			Distance to	Septic Tank (ft.): N	No Data
			Metho	d of Verification: c	wner
Surface Completion:	Alternative Pro	cedure Used			
Water Level:	297 ft. below la	and surface on 2 0	006-02-15 Meas	surement Method:	Unknown
Packers:	No Data				
Type of Pump:	No Data				
Well Tests:	Estimated	Yield: 20	GPM		

	Strata Depth (ft.)	Water Type					
Water Quality:	650	fresh					
		Chemical Analysis N	lade: No				
	Did the driller	knowingly penetrate any strata w contained injurious constitue	′hich nts?: No				
Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.							
Company Information:	Pipe Creek Water	Well, Inc.					
	PO Box 63333 Pipe Creek, TX 78	3063					
Driller Name:	Randy Roberts	Lice	ense Number:	2450			
Comments:	No Data						

Lithology: DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description	Dia. (in.) New/Used Type Setting From/To (ft.)
0	10	soil	4.5 new pvc 0-760
10	110	white/tan limestone	perf. 640-760
110	180	gray limestone	
180	760	no returns	

Casing: BLANK PIPE & WELL SCREEN DATA

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation P.O. Box 12157 Austin, TX 78711 (512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #416867				
Owner:	HENRY L ZUMWALT	Owner Well #:	No Data	
Address:	18665 FM 1283	Grid #:	68-26-7	
Well Location:	17511 FM 1283	Latitude:	29° 32' 16" N	
	MICO, TX 78056	Longitude:	098° 51' 51.5" W	
Well County:	Medina	Elevation:	1150 ft. above sea level	
Type of Work:	New Well	Proposed Use:	Domestic	

Drilling Start Date: 12/20/2015 Drilling End Date: 1/17/2016

	Diameter (in.)		Top Dep	oth (ft.)	Bottom Depth (ft.)	
Borehole:	10		0		709	
Drilling Method:	Air Rotary					
Borehole Completion:	Straight Wall					
	Top Depth (ft.)	Bottom	Depth (ft.)	Des	cription (number of sacks & material)	
Annular Seal Data:	0		2		Cement 2 Bags/Sacks	
	2	e	678		Bentonite 48 Bags/Sacks	
Seal Method: Tremie Distance to Property Line (ft.): 120						
Sealed By: Driller Distance to Septic Field or other concentrated contamination (ft.): 100						
			D	istance to S	Septic Tank (ft.): 100	
				Method	of Verification: MEASURED	
Surface Completion:	Surface Sleeve Ir	nstalled		Su	rface Completion by Driller	
Water Level:	No Data					
Packers:	Plastic at 455 ft. Plastic at 460 ft.					
Type of Pump:	Submersible					
Well Tests:	No Test Data Sp	pecified				

	Strata Depth (ft.)	Water Type		
Water Quality:	No Data	No Data		
		Chemical Analysis Made	e: No	
	Did the driller	knowingly penetrate any strata which contained injurious constituents	h ?: No	
Certification Data:	The driller certified th driller's direct supervi correct. The driller u the report(s) being re	at the driller drilled this well (or the v ision) and that each and all of the sta nderstood that failure to complete th sturned for completion and resubmitt	vell was drille atements her e required ite al.	ed under the rein are true and ems will result in
Company Information:	Landowner Drilled	1		
	18665 FM 1283 MICO, TX 78056			
Driller Name:	HENRY L ZUMWA	LT License	e Number:	N/A
Comments:	No Data			

Lithology: DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	3	BLACK DIRT
3	7	WHITE LIMESTONE
7	10	ORANGE CLAY
10	40	WHITE LIMESTONE
40	44	YELLOW LIMESTONE
44	60	RED CLAY
60	70	LOST CIRCULATION

Casing: BLANK PIPE & WELL SCREEN DATA

Dla (in.)	Туре	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
6		New Plastic (PVC)	17	0	509
6	Perforated or Slotted	New Plastic (PVC)	17	509	709

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Texas Department of Licensing and Regulation P.O. Box 12157 Austin, TX 78711 (512) 334-5540

	STATE OF TEXAS WELL REP	ORT for Trac	cking #87171
Owner:	Henry Zumwalt	Owner Well #:	C102-178
Address:	12354 F M 1560 Helotes, TX, 78023	Grid #:	68-26-7
Well Location:	18865 FM 1283	Latitude:	29°32'16"N
	Mico, TX 78056	Longitude:	098° 51' 51" W
Well County:	Medina	Elevation:	1150 ft. above sea level
Type of Work:	New Well	Proposed Use:	Domestic

Drilling Start Date: 6/7/2006

Drilling End Date: 6/12/2006

	Diameter ((in.)	Top Depth (ft.)	Bottom Dept	th (ft.)
Borehole:	9		0	740	
Drilling Method:	Air Rotary				
Borehole Completion:	Filter Packed				
	Top Depth (ft.)	Bottom Depth (ft.)	Filte	er Material	Size
Filter Pack Intervals:	630	740	G	iravel	3/8
	Top Depth (ft.)	Bottom Dept	h (ft.)	Description (number of sa	acks & material)
Annular Seal Data:	0	8		3 portland	d
	8	630		46 bentoni	te
Seal Method: pu	mped thru tremi	e	Distance to	Property Line (ft.): 1	20
Sealed By: Dr	iller		Distance to Se concentrated of	ptic Field or other contamination (ft.): 1	100+
			Distance t	o Septic Tank (ft.): N	No Data
			Meth	nod of Verification: c	owner
Surface Completion:	Alternative Pro	cedure Used			
Water Level:	230 ft. below la	and surface on 2	006-06-12 Me	asurement Method:	Unknown
Packers:	none				
Type of Pump:	No Data				
Well Tests:	Estimated	Yield: 10	0 GPM		

	Strata Depth (ft.)	Water Type				
Water Quality:	680	fresh				
		Chemical Analysis M	lade: No			
	Did the driller	knowingly penetrate any strata w contained injurious constitue	/hich ents?: No			
Certification Data:	The driller certified th driller's direct supervi correct. The driller u the report(s) being re	at the driller drilled this well (or the signal of the signal that each and all of the nderstood that failure to complete turned for completion and resub-	ne well was c e statements e the required mittal.	Irille her d ite	ed under the rein are true and ems will result in	
Company Information:	Pipe Creek Water	Well, Inc.				
	PO BOX 63333 Pipe Creek, TX 78	063				
Driller Name:	Randy Roberts	Lice	ense Number		2450	
Comments:	No Data					

Lithology: DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description	Dia. (in.) New/Used Type Setting From/To (ft.)
0	80	hard Edwards limestone	4.5 new sch40 & sdr17 0-740
80	680	no returns	slotted 680-740
680	730	tan porous glenrose reef	
730	740	solid gray limestone	

Casing: BLANK PIPE & WELL SCREEN DATA

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Texas Department of Licensing and Regulation P.O. Box 12157 Austin, TX 78711 (512) 334-5540

	STATE OF TEXAS WELL REP	ORT for Trac	king #408650
Owner:	Henry L Zumwalt	Owner Well #:	C104-623
Address:	12354 FM 1560 N Helotes TX 78023	Grid #:	68-26-7
Well Location:	18865 FM 1283	Latitude:	29° 32' 27.24" N
	Mico, TX 78056	Longitude:	098° 51' 57.48" W
Well County:	Medina	Elevation:	1150 ft. above sea level
Type of Work:	New Well	Proposed Use:	Industrial

Drilling Start Date: 9/10/2015 Drilling End Date: 9/22/2015

	Diameter (in.) Top De	pth (ft.)	Bottom Depth ('ft.)
Borehole:	10	C)	805	
	9	80)5	892	
Drilling Method:	Air Rotary				
Borehole Completion:	Straight Wall				
	Top Depth (ft.)	Bottom Depth (ft.)	Des	cription (number of sack	s & material)
Annular Seal Data:	0	2		Cement 2 Bags/S	acks
	2	600		Bentonite 56 Bags	/Sacks
Seal Method: Tre	emie	Dis	stance to Pro	operty Line (ft.): 100)
Sealed By: Aq	luatech Drilling, In	c. Dista	nce to Septie	c Field or other ntamination (ft.): 150	D
		C	Distance to S	Septic Tank (ft.): 100)
			Method	d of Verification: me	asured
Surface Completion:	Surface Slab Inst	talled	Su	Irface Completion	NOT by Driller
Water Level:	322 ft. below lan	d surface on 2015-09	-16 Meas	urement Method:	Steel Tape
Packers:	Rubber at 600 ft Rubber at 620 ft				
Type of Pump:	Submersible		Pur	mp Depth (ft.): 693	
Well Tests:	No Test Data Sp	ecified			

	Strata Depth (ft.)	Water Type		
Water Quality:	810 - 892	Trinity		
		Chemical Analysis Made:	No	
	Did the driller	knowingly penetrate any strata which contained injurious constituents?:	No	
Certification Data: T c c tl	The driller certified th Iriller's direct superv correct. The driller u he report(s) being re	hat the driller drilled this well (or the we ision) and that each and all of the state nderstood that failure to complete the eturned for completion and resubmittal	I was drille ements her required ite	ed under the rein are true and ems will result in
Company Information:	Aquatech Drilling,	, Inc.		
	P.O. Box 3340 Bandera, TX 7800	03		
Driller Name:	Owner and Reed S	Scruby License	Number:	54402
Comments:	Well was drilled by there were no ider were installed by Scruby #54402	y owner. Owner certified that after antified cuttings. Casing, pressure g Aquatech Drilling, Inc Licensed di	20 feet, cir yrouting, s riller/pump	rculation was lost and slab, and steel sleeve p installer - Reed

Lithology: DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing: BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description	Dla (in.)	Туре	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
0	3	Black dirt	6	Blank	New Plastic		2	790
3	20	caliche	U	Diank	(PVC)	SDR 17	2	730
20	892	lost circulation per driller/owner	6	Screen	New Plastic (PVC)	SDR-17 0.032	790	890

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing and Regulation P.O. Box 12157 Austin, TX 78711 (512) 334-5540



Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 68-26-403



GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	6826403
County	Medina
River Basin	San Antonio
Groundwater Management Area	10
Regional Water Planning Area	L - South Central Texas
Groundwater Conservation District	Medina County GCD
Latitude (decimal degrees)	29.544722
Latitude (degrees minutes seconds)	29° 32' 41" N
Longitude (decimal degrees)	-98.868055
Longitude (degrees minutes seconds)	098° 52' 05" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	218GLRS - Glen Rose Limestone
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1152
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	500
Well Depth Source	Another Government Agency
Drilling Start Date	
Drilling End Date	
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Unused
Water Level Observation	Historical Observation Well
Water Quality Available	No
Pump	None
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	A Haby
Driller	
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	U.S. Geological Survey
Created Date	6/10/1999
Last Update Date	6/10/1999

Remarks Well D-7-17 in B-5601.

Casing - No Data		
Well Tests - No Data		
Lithology - No Data		
Annular Seal Range - No Data		
Borehole - No Data	Plugged	Back - No Data
Filter Pack - No Data		Packers - No Data







Code Descriptions

Status Code	Status Description
Р	Publishable





Water Quality Analysis - No Data Available

GWDB DISCLAIMER: Except where noted, all of the information provided in the Texas Water Development Board (TWDB) Groundwater Database (https://www.twdb.texas.gov/groundwater/data/gwdbrpt.asp) is believed to be accurate and reliable; however, the TWDB assumes no responsibility for any errors appearing in rules or otherwise. Further, TWDB assumes no responsibility for the use of the information provided. PLEASE NOTE that users of these data are responsible for checking the accuracy, completeness, currency and/or suitability of all information themselves. TWDB makes no guarantees or warranties as to the accuracy, completeness, currency, or suitability of the information provided via the Groundwater Database (GWDB). TWDB specifically disclaims any and all liability for any claims or damages that may result from providing GWDB data or the information. For additional information or answers to questions concerning the TWDB GWDB, contact the Groundwater Data Team at GroundwaterData@twdb.texas.gov.

Texas Water Development Board Well Schedule

State Well No. 68 26 403 Previous Well No. 0-7-17 County	MEDINA 325
River Basin SAN ANTONIO 9 Zone 1 Lat. 2932 40 Long.	98 52 04 3
Owner's Well No Location 1/4, 1.4, Section, Block	«, Survey
AHARY	
Owner II IIII DI	
Address Tensor/Oper	
Dare Drilled Depth Depth Depth Darum A Minute	Source of
Aquifer <u>GLEN ROSE LS</u> . <u>AIBGCRS</u> Well Type	
Well Const. Casing Construction Method Material	Aquiper ID=28
Screen	Casing or Blank Pipe (C) Well Screen or Slotted Zone (S)
Life Data Pump Mfr Type NONE No. Stages	Open Hole (O) Cemented fromto
Bowls Diam in. Setting ft.Column Diam in.	Diam. Setting (feet) (in.) From To
Motor Mfr Power Horsepower	
Yield Flow GPM Pump GPM Meas.,Rept.,Est Date	
Performance Test Date Length of Test Production GPM	
Static Level ft. Pumping Level ft. Drawdown ft. Sp.Cap GPM/ft.	
Quality (Remarks	
Water Use Primary UNUSED D Secondary Terriary :	
Other Data Water H Water N Logs Data	
Dare 01 08 1934 Mess. 93 · 1 TAPE-USGS	
Water Date 01 16 1952 Mess. 213 • 9 12	
Date 03 (9 1952 Mean 219 · 5	
14	
13	
Recorded By Date Record Collected or Updated (70,	
Bemarks $W = 1/2 0 - 7 - 17 1 N R - 5601$	
	Del De
5	Aquiter 01804KS
6 73-43144	Well No. 60 40 705
2/9/93	

	STATE OF TEXAS WELL REPORT for Tracking #77807			
Owner:	Henry Zumwalt	Owner Well #:	C102-158 (#2)	
Address:	12354 FM 1560N Helotes_TX_78023	Grid #:	68-26-4	
Well Location:	1866 FM 1283	Latitude:	29° 32' 43" N	
	Mico, TX 78056	Longitude:	098° 52' 06" W	
Well County:	Medina	Elevation:	1152 ft. above sea level	
Type of Work:	New Well	Proposed Use:	Domestic	

Drilling Start Date: 2/15/2006 Drilling End Date: 2/20/2006

	Diameter	(in.)	Top Depth (ft.)	Bottom Depth (ft.)		
Borehole:	9		0	160)	
	8		160	700)	
Drilling Method:	Air Rotary					
Borehole Completion:	Filter Packed					
	Top Depth (ft.)	Bottom Depth (ft.)	Filter	Material	Size	
Filter Pack Intervals:	570	700	Gr	avel	3/8 in	
	Top Depth (ft.)	Bottom Depth	n (ft.) D	escription (number of	sacks & material)	
Annular Seal Data:	0			3 Portland		
	6	570	70 38 Bent		onite	
Seal Method: Be tri	entonite pumped mmie	l through	Distance to F	Property Line (ft.):	1000+	
Sealed By: Dr	riller		Distance to Sep concentrated co	otic Field or other ontamination (ft.):	100+	
			Distance to	Septic Tank (ft.):	No Data	
			Metho	od of Verification:	owner	
Surface Completion:	Alternative Pro	ocedure Used				
Water Level:	255 ft. below l	and surface on 2	006-02-20 Mea	surement Method	d: Unknown	
Packers:	No Data					
Type of Pump:	No Data					
Well Tests:	Estimated	Yield: 50-	+ GPM			

	Strata Depth (ft.)	Water Type	
Water Quality:	640	fresh	
		Chemical Analysis Mac	de: No
	Did the driller	knowingly penetrate any strata whic contained injurious constituents	ch s?: Yes
	Natural Injurious Const	tituents Unnatural Injurious Constituents	S
		naturally-occurring gyp layers	
	The driller did cert described well, inj landowner or person completed or plus	tify that while drilling, deepening jurious water or constituents was son having the well drilled was in grad in such a manner as to aver	or otherwise altering the above s encountered and the formed that such well must be
Certification Data:	The driller did cert described well, inj landowner or pers completed or plug The driller certified th driller's direct supervi correct. The driller ut	tify that while drilling, deepening jurious water or constituents was son having the well drilled was in gged in such a manner as to avoid nat the driller drilled this well (or the ision) and that each and all of the si nderstood that failure to complete the purped for completion and recubering	or otherwise altering the above s encountered and the formed that such well must be d injury or pollution. well was drilled under the tatements herein are true and he required items will result in
Certification Data: Company Information:	The driller did cert described well, inj landowner or pers completed or plug The driller certified th driller's direct supervi correct. The driller up the report(s) being re Pipe Creek Water	tify that while drilling, deepening jurious water or constituents was son having the well drilled was in gged in such a manner as to avoid hat the driller drilled this well (or the ision) and that each and all of the si inderstood that failure to complete the eturned for completion and resubmit Well, Inc.	or otherwise altering the above s encountered and the formed that such well must be d injury or pollution. well was drilled under the tatements herein are true and he required items will result in tal.
Certification Data: Company Information:	The driller did cert described well, inj landowner or pers completed or plug The driller certified th driller's direct supervi correct. The driller un the report(s) being re Pipe Creek Water PO Box 63333 Pipe Creek, TX 78	tify that while drilling, deepening jurious water or constituents was son having the well drilled was in gged in such a manner as to avoid hat the driller drilled this well (or the ision) and that each and all of the si inderstood that failure to complete the eturned for completion and resubmit Well, Inc.	or otherwise altering the above s encountered and the formed that such well must be d injury or pollution. well was drilled under the tatements herein are true and he required items will result in tal.
Certification Data: Company Information: Driller Name:	The driller did cert described well, inj landowner or pers completed or plug The driller certified th driller's direct supervi correct. The driller ut the report(s) being re Pipe Creek Water PO Box 63333 Pipe Creek, TX 78 Randy Roberts	tify that while drilling, deepening jurious water or constituents was son having the well drilled was in gged in such a manner as to avoid hat the driller drilled this well (or the ision) and that each and all of the si inderstood that failure to complete the turned for completion and resubmit Well, Inc. 3063	or otherwise altering the above s encountered and the formed that such well must be d injury or pollution. well was drilled under the tatements herein are true and he required items will result in tal.

Lithology: DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing: BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description	Dia. (in.) Nei
0	80	white/pink limestone	4.5 new pv
80	165	gray shale	perf. 640-7
165	280	spotted gray limestone	
280	305	дур	
305	350	gray limestone	
350	380	dark gray spotted limestone	
380	440	gray limestone	
440	500	gray/tan limestone	
500	510	spotted gray limestone	
510	525	дур	
525	640	gray limestone	
640	680	glenrose reef	
680	700	gray limestone	

Dia. (in.) New/Used Type Setting From/To (ft.) 4.5 new pvc 0-700 perf. 640-700

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Texas Department of Licensing and Regulation P.O. Box 12157 Austin, TX 78711 (512) 334-5540

Aboveground Storage Tank Facility Plan Application

Texas Commission on Environmental Quality

For Permanent Storage on The Edwards Aquifer Recharge and Transition Zones And Relating to 30 TAC §213.5(e), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Aboveground Storage Tank Facility Plan Application** is hereby submitted for TCEQ review and Executive Director approval. The application was prepared by:

Print Name of Engineer/Agent: Andrea Kidd, P.E.

Date: 5/23/2024

Signature of Engineer/Agent :

Muchen Kidd

Regulated Entity Name: FM 1283 Ranch Quarry

Aboveground Storage Tank (AST) Facility Information

1. Tanks and substance stored:

Table I - Talik and Substance Storage	Table	1	-	Tank	and	Substance	Storage
---------------------------------------	-------	---	---	------	-----	-----------	---------

AST Number	Size (Gallons)	Substance to be Stored	Tank Material
1	6,000	Diesel	Double-walled steel
2	275	Maintenance Oil	Double-walled nonmetallic UL SU2258
3	275	Maintenace Oil	Double-walled non metallic UL SU2258


AST Number	Size (Gallons)	Substance to be Stored	Tank Material
4	275	Used oil	Double-walled high density polyethylene

Total x 1.5 = 10,237.5 Gallons

- 2. The AST will be placed within a containment structure that is sized to capture one and one-half (1 1/2) times the storage capacity of the system. For facilities with more than one tank system, the containment structure is sized to capture one and one-half (1 1/2) times the cumulative storage capacity of all systems.
 - Attachment A Alternative Methods of Secondary Containment. Alternative methods for providing secondary containment are proposed. Specifications that show equivalent protection for the Edwards Aquifer are attached. Discussion provided for piping and dispensers.
- 3. Inside dimensions and capacity of containment structure(s):

Table 2 -Secondary Containment

Length (L) (Ft.)	Width (W) (Ft.)	Height (H) (Ft.)	L x W x H = (Ft3)	Gallons
			Tota	al· Gallons

- 4. All piping, hoses, and dispensers will be located inside the containment structure.
 - Some of the piping to dispensers or equipment will extend outside the containment structure.



The piping will be underground

- 5. The containment area must be constructed of and in a material impervious to the substance(s) being stored. The proposed containment structure will be constructed of the tanks are double-walled.
- 6. Attachment B Scaled Drawing(s) of Containment Structure. A scaled drawing of the containment structure that shows the following is attached: N/A no containment structures proposed
 -] Interior dimensions (length, width, depth and wall and floor thickness).
 - Internal drainage to a point convenient for the collection of any spillage.
 - \boxtimes Tanks clearly labeled.
 - \boxtimes Piping clearly labeled.
 - Dispenser clearly labeled.

Site Plan Requirements

Items 7 - 18 must be included on the Site Plan.

7. The Site Plan must have a minimum scale of 1'' = 400'.

Site Plan Scale: 1" = <u>300</u>'.

8. 100-year floodplain boundaries:

Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.

No part of the project site is located within the 100-year floodplain.

imes	The 100-year floodplain boundaries are based on the following specific (including date
	of material) sources(s): <u>FIRM Panel # 48325C0250D eff. 5/15/2020</u> .

9. The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Show lots, recreation centers, buildings, roads, etc.

The layout of the development is shown with existing contours. Finished topographic contours will not differ from the existing topographic configuration and are not shown.

10. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

There are <u>8</u>(#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply):

The wells are not in use and have been properly abandoned.

 \square The wells are not in use and will be properly abandoned.

The wells are in use and comply with 16 TAC § 76.

There are no wells or test holes of any kind known to exist on the project site.

- 11. Geologic or manmade features which are on the site:
 - All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.

No sensitive geologic or manmade features were identified in the Geologic Assessment.

Attachment C - Exception to the Geologic Assessment. A request and justification
for an exception to a portion of the Geologic Assessment is attached. N/A

- 12. The drainage patterns and approximate slopes anticipated after major grading activities.
 N/A No grading activities associated with placement of the tanks.
- **13.** Areas of soil disturbance and areas which will not be disturbed. N/A No soil disturbance associated with placement of tanks.

- 14. Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices. **N/A**
- 15. Locations where soil stabilization practices are expected to occur. N/A
- 16. Surface waters (including wetlands).
 - N/A
- 17. Locations where stormwater discharges to surface water or sensitive features.

There will be no discharges to surface water or sensitive features.

18. \square Legal boundaries of the site are shown.

Best Management Practices

19. 🖂	\Im Any spills must be directed to a point convenient for collection and recovery. Spills from
	storage tank facilities must be removed from the controlled drainage area for disposal
	within 24 hours of the spill.

In the event of a spill, any spillage will be removed from the containment structure within 24 hours of the spill and disposed of properly.

In the event of a spill, any spillage will be drained from the containment structure through a drain and valve within 24 hours of the spill and disposed of properly. The drain and valve system are shown in detail on the scaled drawing.

20. All stormwater accumulating inside the containment structure will be disposed of through an authorized waste disposal contractor. **N/A**

Containment area will be covered by a roof.

Containment area will not be covered by a roof.

A description of the alternate method of stormwater disposal is submitted for the executive director's review and approval and is attached.

- 21. Attachment D Spill and Overfill Control. A site-specific description of the methods to be used at the facility for spill and overfill control is attached.
- 22. Attachment E Response Actions to Spills. A site-specific description of the planned response actions to spills that will take place at the facility is attached.

Administrative Information

- 23. A Water Pollution Abatement Plan (WPAP) is required for construction of any associated commercial, industrial or residential project located on the Recharge Zone.
 - The WPAP application for this project was approved by letter dated <u>4/19/2024</u>. A copy of the approval letter is attached at the end of this application. **EAPP ID** 13001878.

TCEQ-0575 (Rev. 02-11-15)

The WPAP application for this project was submitted to the TCEQ on _	, but has
not been approved.	

- A WPAP application is required for an associated project, but it has not been submitted.
- There will be no building or structure associated with this project. In the event a building or structure is needed in the future, the required WPAP will be submitted to the TCEQ.
- The proposed AST is located on the Transition Zone and a WPAP is not required. Information requested in 30 TAC 213.5 subsection (b) (4)(B) and (C) and (5) is provided with this application. (Forms TCEQ-0600 Permanent Stormwater Section and TCEQ-0602 Temporary Stormwater Section or Stormwater Pollution Prevention Plan/SW3P).
- 24. This facility is subject to the requirements for the reporting and cleanup of surface spills and overfills pursuant to 30 TAC 334 Subchapter D relating to Release Reporting and Corrective Action.
- 25. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
- 26. Any modification of this AST Facility Plan application will require executive director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

AST Plan Application (TCEQ-0575) Attachment A

Alternative Methods of Secondary Containment

The proposed tanks in this application are double-walled tanks. Double-walled tanks are manufactured to provide secondary containment for their contents. The tanks are plumbed from the top to prevent free outward flow of the tank contents. For double-walled tanks, the interstitial space between the tanks walls serves as secondary containment. Discharges from the inner tank will flow into the outer wall that encloses it. The interstitial space between the primary and secondary wall is inspected by operating personnel on a monthly basis to detect any leak of product from the primary container. Records of the inspections will be maintained on-site.

Double-walled piping will be specified for AST #1 and a metal containment pan will be constructed to provide secondary containment for the dispensing hose and nozzle. AST #2 and #3 will each sit on a spill pallet, intended to provide secondary containment for the hose reel and dispensing nozzle that will sit on top of each tank. The waste oil tank (AST #4) has no piping associated with it.

AST Plan Application (TCEQ-0575) Attachment D

Spill and Overfill Control

Personnel in charge of loading/unloading tanks will be trained to utilize proper techniques and preventive measures to avoid spills. The tank levels will be checked prior to loading/unloading and the operator will be present at all times during tank loading/unloading. The tanks will be monitored as they are filled, either visually or in another manner, dependent upon the indicator present in the tank.

The site will be subject to the Environmental Protection Agency's requirements as specified in 40 CFR Part 112 regarding Spills, Prevention, Control, and Countermeasures (SPCC). The site will maintain an SPCC Plan in accordance with applicable rules.



AST Plan Application (TCEQ-0575) Attachment E

Spill Response Actions

Education

(1) Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ.

(2) Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.

(3) Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).

(4) Establish a continuing education program to indoctrinate new employees.

(5) Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

(1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.

(2) Store hazardous materials and wastes in covered containers and protect from vandalism.

(3) Place a stockpile of spill cleanup materials where it will be readily accessible.

(4) Train employees in spill prevention and cleanup.

(5) Designate responsible individuals to oversee and enforce control measures.

(6) Spills should be covered and protected from stormwater run on during rainfall to the extent that it doesn't compromise clean up activities.

(7) Do not bury or wash spills with water.

(8) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.

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(9) Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.

(10) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.

(11) Place Safety Data Sheets (SDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.

(12) Keep waste storage areas clean, well-organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

<u>Cleanup</u>

(1) Clean up leaks and spills immediately.

(2) Any spills from an AST facility must be removed from the controlled drainage area for disposal within 24 hours of the spill.

(3) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.

(4) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

(1) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.

(2) Use absorbent materials on small spills rather than hosing down or burying the spill.

(3) Absorbent materials should be promptly removed and disposed of properly.

(4) Follow the practice below for a minor spill:

(5) Contain the spread of the spill.

(6) Recover spilled materials.

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(7) Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

Spills should be cleaned up immediately:

(1) Contain spread of the spill.

(2) Notify the project foreman as soon as possible.

(3) If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.

(4) If the spill occurs in dirt areas, as soon as possible contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.

(5) If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

(1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.

(2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110, 119, and 302, the contractor should notify the National Response Center at (800) 424-8802.

(3) Notification should first be made by telephone and followed up with a written report.

(4) The services of a spills contractor or a Haz-Mat team should be obtained as soon as possible. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.

(5) Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

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In the event of a reportable spill, the following Emergency Response Agencies can be contacted for assistance. Always inform your supervisor of a reportable spill as soon as possible. Follow company policy when responding to an emergency.

State Emergency Response Commission	(512) 463-7727
National Response Center	(800) 424-8802
US EPA Region 6, Dallas, 24-hr Number	(866) 372-7745
National Weather Service	(281) 337-5074
TCEQ 24-hr	(800) 832-8224
TCEQ Region 13 San Antonio Office	(210) 490-3096

Vehicle and Equipment Fueling

(1) If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.

(2) Discourage "topping off" of fuel tanks.

(3) Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

(4) Equipment fueling will take place on a compacted base area. Any base material that becomes contaminated with hydrocarbons will be removed from the site and disposed of properly.







EDWARDS AQUIFER PROTECTION PROGRAM CONSTRUCTION NOTES - LEGAL DISCLAIMER

THE FOLLOWING/LISTED "CONSTRUCTION NOTES" ARE INTENDED TO BE ADVISORY IN NATURE ONLY AND DO NOT CONSTITUTE AN APPROVAL OR CONDITIONAL APPROVAL BY THE EXECUTIVE DIRECTOR (ED), NOR DO THEY CONSTITUTE A COMPREHENSIVE LISTING OF RULES OR CONDITIONS TO BE FOLLOWED DURING CONSTRUCTION. FURTHER ACTIONS MAY BE REQUIRED TO ACHIEVE COMPLIANCE WITH TCEQ REGULATIONS FOUND IN TITLE 30, TEXAS ADMINISTRATIVE CODE (TAC), CHAPTERS 213 AND 217, AS WELL AS LOCAL ORDINANCES AND REGULATIONS PROVIDING FOR THE PROTECTION OF WATER QUALITY. ADDITIONALLY, NOTHING CONTAINED IN THE FOLLOWING/LISTED "CONSTRUCTION NOTES" RESTRICTS THE POWERS OF THE ED, THE COMMISSION OR ANY OTHER GOVERNMENTAL ENTITY TO PREVENT, CORRECT, OR CURTAIL ACTIVITIES THAT RESULT OR MAY RESULT IN POLLUTION OF THE EDWARDS AQUIFER OR HYDROLOGICALLY CONNECTED SURFACE WATERS. THE HOLDER OF ANY EDWARDS AQUIFER PROTECTION PLAN CONTAINING "CONSTRUCTION NOTES" IS STILL RESPONSIBLE FOR COMPLIANCE WITH TITLE 30, TAC, CHAPTERS 213 OR ANY OTHER APPLICABLE TCEQ REGULATION, AS WELL AS ALL CONDITIONS OF AN EDWARDS AQUIFER PROTECTION PLAN THROUGH ALL PHASES OF PLAN IMPLEMENTATION. FAILURE TO COMPLY WITH ANY CONDITION OF THE ED'S APPROVAL, WHETHER OR NOT IN CONTRADICTION OF ANY "CONSTRUCTION NOTES," IS A VIOLATION OF TCEQ REGULATIONS AND ANY VIOLATION IS SUBJECT TO ADMINISTRATIVE RULES, ORDERS, AND PENALTIES AS PROVIDED UNDER TITLE 30, TAC § 213.10 (RELATING TO ENFORCEMENT). SUCH VIOLATIONS MAY ALSO BE SUBJECT TO CIVIL PENALTIES AND INJUNCTION. THE FOLLOWING/LISTED "CONSTRUCTION NOTES" IN NO WAY REPRESENT AN APPROVED EXCEPTION BY THE ED TO ANY PART OF TITLE 30 TAC, CHAPTERS 213 AND 217, OR ANY OTHER TCEQ APPLICABLE REGULATION

- WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY GROUND DISTURBANCE OR CONSTRUCTION ACTIVITIES. THIS NOTICE MUST INCLUDE: - THE NAME OF THE APPROVED PROJECT;
 - THE ACTIVITY START DATE: AND
 - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR
- 2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT SHOULD BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED AST PLAN AND THE TOCOLLETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTOR(S) SHOULD KEEP COPIES OF THE APPROVED PLAN AND APPROVAL LETTER ON- SITE.
- NO HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
- 4. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT_MUST_REPLACE_OR_MODIFY_THE_CONTROL FOR SITE_SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
- 5. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES,
- SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
- 7. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
- 8. ALL EXCAVATED MATERIAL THAT WILL BE STORED ON-SITE MUST HAVE PROPER E&S CONTROLS.
- 9. IF PORTIONS OF THE SITE WILL HAVE A CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.
- 10. THE FOLLOWING RECORDS SHOULD BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST: - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR:
 - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE: AND
 - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
- 11. THE HOLDER OF ANY APPROVED AST PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
 - ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY BEST MANAGEMENT PRACTICES (BMPS) OR STRUCTURE(S), INCLUDING BUT NOT LIMITED TO TEMPORARY OR PERMANENT PONDS, DAMS, BERMS, SILT FENCES, AND DIVERSIONARY STRUCTURES;
- B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED
- C. ANY CHANGE THAT WOULD SIGNIFICANTLY IMPACT THE ABILITY TO PREVENT POLLUTION OF THE EDWARDS AQUIFER; OR
- D. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE APPROVED CONTRIBUTING ZONE

AUSTIN REGIONAL OFFICE 12100 PARK 35 CIRCLE, BUILDING A AUSTIN, TEXAS 78753-1808 PHONE (512) 339-2929 FAX (512) 339-3795

SAN ANTONIO REGIONAL OFFICE 14250 JUDSON ROAD SAN ANTONIO, TEXAS 78233-4480 PHONE (210) 490-3096 FAX (210) 545-4329

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE RACTOR AND ALL SUBCONTRACTORS.

GENERAL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED FACILITIES FROM DAMAGE OF DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY, AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.
- FACILITIES PROPOSED HEREIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS. DEVIATIONS FROM THE APPROVED PLANS MUST BE APPROVED IN ADVANCE BY THE ENGINEER OF RECORD.
- 3. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE OF THE WORK, A FINAL INSPECTION SHALL VERIFY PROPER ADHERENCE TO ALL FACETS OF THE $\ensuremath{\mathsf{PLANS}}$ AND SPECIFICATIONS.
- A. AS-BUILT DRAWINGS SHALL BE PREPARED BY A REGISTERED LAND SURVEYOR, REGISTERED IN THE STATE OF TEXAS, AND SUBMITTED BY THE CONTRACTOR TO THE ENGINEER OF RECORD. CONTRACTOR TO PROVIDE RECORD INFORMATION WHICH LOCATES ALL UNDERGROUND UTILITIES, SITE GRADING AND CLEARANCE TO WATER MAIN FROM OTHER UTILITIES HORIZONTAL AND VERTICAL.
- CONTRACTOR SHALL NOTIFY TEXAS811 ONE CALL SYSTEM (1-800-344-8377) 48 HOURS IN ADVANCE OF CONSTRUCTION.
- 6. ALL VEGETATION, DEBRIS, CONCRETE OR OTHER UNSUITABLE MATERIAL SHALL BE LEGALLY DISPOSED OF OFF-SITE IN AN APPROPRIATE AREA AT THE CONTRACTORS EXPENSE
- CONTRACTOR SHALL UTILIZE CONSTRUCTION METHODS AND DEVICES, SUCH AS TURBIDITY SCREENS, CURTAINS AND FLOATING SILT BARRIERS WHERE NECESSARY IN ORDER TO COMPLY WITH ALL STATE AND LOCAL WATER QUALITY STANDARDS.
- 8. ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER, SPECIFICALLY, THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES SHALL BE STRICTLY OBSERVED.
- 9. MINIMUM COVER SHALL BE 3.0 FEET FOR ALL PIPES. (TYPICAL) UNLESS OTHERWISE NOTED ON DRAWINGS.
- 10. ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAY OR WALKWAYS SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
- 11. CONTRACTOR SHALL MONITOR AND PROHIBIT THE DEFACING OF FRESHLY PLACED CONCRETE SURFACES. ANY CONCRETE SURFACES DEFACED SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- 12. CLEARING AND GRUBBING SHALL INCLUDE REMOVAL OF ALL VEGETATION AS REQUIRED TO CONSTRUCT THE REQUIRED IMPROVEMENTS.
- 13. PROJECT SITE SAFETY:
- 13.1. THE ENGINEER/OWNER OR THEIR EMPLOYEES HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER THE CONTRACTOR, ANY SUB-CONTRACTOR OR OTHER ENTITY OR THEIR EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY JOBSITE HEALTH OR SAFETY PRECAUTIONS.
- 13.2. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOBSITE SAFETY, AND WARRANTS THAT THIS INTENT IS MADE EVIDENT BY THE AGREEMENT BETWEEN OWNER AND CONTRACTOR
- 13.3 ALL EXISTING OVERHEAD AND UNDERGROUND LITHUTIES SHOWN ON THESE DRAWINGS OR ENCOUNTERED THROUGH THE PROCRESSION OF WORK AT THIS PROJECT SITE ARE ASSUMED TO BE LIVE, CONTRACTOR SHALL BE RESPONSIBL FOR ALL SAFETY PRECAUTIONS WHEN WORKING AROUND EXISTING OVERHEAD OR UNDERGROUND UTILITIES.
- ALL CONCRETE SHALL DEVELOP A MINIMUM OF 4000 p.s.i. COMPRESSIVE STRENGTH AT 28 DAYS, UNLESS OTHERWISE STATED.
- 15. THE SEQUENCE OF CONSTRUCTION SHALL BE SUCH THAT ALL UNDERGROUND INSTALLATION OF ANY KIND THAT WILL COME UNDER THE PAVEMENT OR WITHIN 1 FEET OF ITS EDGES SHALL BE INSTALLED PRIOR TO THE CONSTRUCTION OF THE
- 16 TRENCHES SHALL BE DRY WHEN PIPES ARE INSTALLED PIPES PLACED BELOW THE WATER TABLE SHALL BE BEDDED ON PEA GRAVEL AND WELL POINT SYSTEMS SHALL BE USED. ALL DEWATERING PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR
- 17. SIX (6) COPIES OF ALL SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOF TO CONSTRUCTION. ALL REQUESTS FOR MATERIAL SUBSTITUTIONS MUST BE APPROVED PRIOR TO DELIVERY TO THE SITE. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL MANUFACTURED ITEMS.
- 18. ALL ROOTS IN THE PAVED AREA MUST BE REMOVED ONE FOOT BELOW THE BOTTOM OF SUB GRADE.
- 19. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STDS OF TCEQ 20. CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO LOCATE, EXCAVATE AND PREPARE FOR CONNECTIONS TO THE EXISTING SYSTEMS AS SHOWN ON THE
- DRAWINGS. 21. IF SOD IS USED ONSITE, IT SHALL BE PLACED 2" BELOW THE EDGES OF PAVEMENT TO ALLOW WATER TO DRAIN.
- 22. CONTOURS SHOWN ARE PRE DEVELOPMENT CONTOURS
- 23. COMPACTION NOTES:
- FOR FILL AREAS WHERE WATER WILL BE IMPOUNDED: 23.1. PLACE FILL IN LIFTS NO MORE THAN 12" DEEP AT NEAR OPT. MOISTURE CONTENT.
- 23.2. COMPACT TO AT LEAST 95% RC (ASTM D698)
- 23.3. COMPACT TO SLOPE OF FACE
- FOR ON GRADE BERMS AND OTHER MISC. FILL
- 23.4. PLACE CLEAN FILL IN 12" LIFTS
- 23.5. COMPACT WITH ON-SITE HEAVY EQUIPMENT
- 24. ALL CONCRETE SURFACES TO BE BROOM FINISH UNO
- 25. DRAINAGE STRUCTURES TO MEET MIN. TXDOT SPECIFICATIONS FOR CONSTRUCTION AND PLACEMENT OF TYPE 3 DROP INLET
- 26. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND GRADING PRIOR TO CONSTRUCTION. ENGINEER OF RECORD SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- 27. ALL RIP RAP SHALL BE COURSE GRADED ROCK AND SHALL BE SIZED IN ACCORDANCE WITH THE FOLLOWING TABLE
 - **SLOPE** RIP RAP SIZE

0.5%-1%	4 RUCK
1.1% TO 2%	6" ROCK
2.1% TO 4%	8" ROCK
4.1% TO 5%	8"-12" ROCK

- 28. MIN THICKNESS OF RIPRAP TO BE 1.5 TIMES THE STONE DIAMETER UNO
- 29. GEOTEXTILE FABRIC (FILTER FABRIC) SHALL BE A MON-WOVEN POLYPROPALENE FABRIC DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA w/ APPROX WEIGHT 6 OZ/YD^2, A MULLEN BURST RATTING OF 140 PSI, AND AN EQUIVALENT OPENING SIZE (ESO) GREATER THAN #50 SIEVE. TENCATE MIRIFI N-SERIES OF APPROVED EQUAL.
- 30. BASIN LINERS OVER THE RECHARGE ZONE SHALL COMPLY w/ RG-348 FOR COMPACTED CLAY LINERS.
- 31. ALL DISTURBED AREAS TO BE SEEDED AND MULCHED FOR SLOPE STABILIZATION. SEED TO BE BERMUDA GRASS OR APPROVED ALTERNATES.
- 32. ALL CONCRETE SLABS TO HAVE #5 BARS EACH WAY AT 12" c/c IN CENTER OF SLAB UNO.

BMP CONSTRUCTION NOTES

- 1. COMPACTED EARTHEN BERM INSTALLATION:
- COMPRISED OF SOIL AND OVERBURDEN MATTER EITHER GENERATED ONSITE OR DELIVERED FROM OFFSITE. COMPACT WITH HEAVY EQUIPMENT IN 12" (MAX) LIFTS.

MAINTENANCE (TEMPORARY); INSPECT BERMS ONCE A MONTH UNTIL SUFFICIENTLY VEGETATED. REPLACE AS NECESSARY

2 ROCK BERM

SHOULD BE SECURED WITH A WOVEN WIRE SHEATING, MAX. OPENING 1" AND MIN. WIRE DIA. 20 GAUGE GALVANIZED, SECURE WITH SHOAT RINGS

INSTALLATION:

AGGREGATE LISED SHOULD BE COMPRISED OF OPEN GRADED 3-5" DIAMETER ROCK. BERM SHOULD BE PLACED PERPENDICULAR TO FLOW LINE SIDE SLOPE MUST BE 2.1 OR FLATTER WIRE SHEATHING MUST BE SECURED WITH TIE WIRE SO THEY OVERLAP AT LEAST 2". BERM SHOULD BE BURIED IN A TRENCH APPROX. 4" DEEP.

MAINTENANCE (TEMPORARY):

INSPECT BERMS ONCE A WEEK. REMOVE SEDIMENT AND OTHER DEBRS WHEN BUILDUP REACHES 6°. REPLACE WHEN ROCK BECOMES CLOGGED WITH SEDIMENT.

ALTERNATE #1 & #2 ROCK BERMS (WEI)

INSTALLATION:

AGGREGATE USED SHOULD BE COMPRISED OF OPEN GRADED 3-5" DIAMETER ROCK. BERM SHOULD BE PLACED PERPENDICULAR TO FLOW GEOTEXTILE FABRIC PROPERTIES:

MAINTENANCE (TEMPORARY):

INSPECT BERMS ONCE A WEEK. REMOVE O EQUIVALENT OPENING SIZI SEDIMENT AND OTHER DEBRIS WHEN BUILDUP O GRADE SLOPE TO DRAIN.

- 3.1 STEEL POSTS SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MIN. OF 1' DEEP AND SPACED NOT MORE THAN 8' ON CENTER WHERE WATER CONCENTRATES, THE MAX. SPACING SHOULD BF 6'.
- 3.2 LAY OUT FENCING DOWN SLOPE O DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE.
- 3.3 THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT OF ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 IN. OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE
- 3.4 THE TRENCH MUST BE A MIN. OF 6 IN. DEEP AND 6 IN. WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
- 3. SILT FENCE W/ TRENCHED TOE INSTALLATION:
- 3.5 SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET. 3.6 INSPECT SILT FENCES ONCE A WEEK. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6". REPLACE SILT FENCES WHEN TORN OR OTHERWISE UNABLE TO FILTER SEDIMENT. 4. STABILIZED CONSTRUCTION ENTRANCE INSTALLATION: 4.1 AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE. 4.2 THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12' OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER. 4.3 THE CONSTRUCTION ENTRANCE SHOULD BE 50' LONG. 4.4 IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6-8" HIGHT WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD. 4.5 PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITONS ARE ANTICIPATED. 4.6 PLACE STONE TO DIMENSION AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE. 4.7 INSTALL A PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE. MAINTENANCE: INSPECT WEEKLY. REPLACE STONE AS NECESSARY TO PREVENT TRACKING OFF-SITE. 5/23/2024 Anchea Kidd O MIN. 6 OZ/SQ. YD.; 140 LB/SQ. IN MULLEN BURST EQUIVALENT OPENING SIZE MIN. 50 SIEVE. REACHES 6". REPLACE WHEN ROCK BECOMES 0 ADD ADDITIONAL STONE AS REQUIRED. CLOGGED WITH SEDIMENT. o STABILIZED CONSTRUCTION EXIT SHOULD EXTEND FULL WIDTH OF ROAD. S Ш **N** ONSTRUCTION AST PLAN

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Box 249

P.O. (830)



Specs for AST #2 and AST #3



Unique double-walled construction

Our uniquely designed oil tanks are the safest and most reliable on the market. The outer tank is made of leak-proof, weld-free galvanized steel and rollseamed with an oil and fire-resistant seal. It can contain at least 110 percent of the capacity of the inner tank for maximum protection. The inner tank is made of blow-molded, high-density, seamless polyethylene that is leak proof and will never corrode. And, our compact tanks are available in several different sizes, providing more flexibility for placement in any garage, service station or lube shop.

Built with safety and the environment in mind

Roth oil tanks exceed the industry standard safety regulations. They are rust resistant inside and out and are signed to prevent spills, leaks and fires caused by defective pipes, couplings or fittings located underneath the tank. Each tank undergoes thorough testing, including ultra-sound and pressure testing, to ensure optimal thickness and sealing.

Roth DWT Features

- 1 Weld-free galvanized steel outer tank that can hold 110 percent of the primary tank
- 2 Seamless high-density polyethylene inner tank
- 3 Highly visible optical leak alarm
- 4 Up to 50 percent lighter than a 12-gauge steel tank with larger storage capacity
- 5 Hose reel bracket
- 6 Cover for outside use





FREQUENTLY ASKED QUESTIONS

1) Is this a UL 142 tank?

No, UL 142 and UL 80 are standards used to certify steel tanks. The Roth DWT is a nonmetallic tank and is therefore certified to UL SU2258, a standard used to test and certify nonmetallic tanks.

2) Can this tank be used to store gasoline and other flammables?

No, this DWT is designed and certified for combustible liquids ONLY with a flashpoint above 130 degrees F! The DWT cannot be used for gasoline, windshield washer fluid or any flammable liquid.

3) Can this tank be used for collection of used lubricating oils?

Yes, the DWT can be used for storage of used oils as long as they are not contaminated with flammables i.e. gasoline or solvents that could change the class of liquid from combustible to flammable. Generally, lubricating oils collected directly from routine automotive maintenance procedures i.e. crankcase/gear case oils, transmission/ hydraulic fluids are not contaminated in this manner. Waste oils of unknown origin should be avoided.

Key Benefits

- · Leak-proof and will not corrode
- Outer tank holds 110 percent of inner tank for maximum protection
- Up to 50 percent lighter than conventional steel tanks
- Can use for heating oil, diesel and bio fuels, motor oil, DEF and ATF
- Compact, economical design (8 sq. ft. for 1000L)
- Provides maximum storage safety with minimum space requirements
- Removable base facilitates access to tight spaces and greater stability
- Wide handles on each end allow you to transport and handle with ease
- Quality control and testing exceeds industry standards



The Roth DWT storage tank is certified to UL SU2258 and is designed to store liquids that are classified as class II or class III combustible fluids. These include automotive lubricating oils, hydraulic fluids and used oil products. The Roth DWT is compliant with NFPA 30 & 30A, subject to building code approval by a local authority having jurisdiction.

Tank Dimensions					
Tank Model	DWT 400L	DWT 620L	DWT 1000L	DWT 1000LH	DWT 1500L
Nom. capacity US gal (liters)	110 (400)	165(620)	275 (1000)	275 (1000)	400 (1500)
Length inches (cm)	29 (74)	29 (74)	43 (110)	51 (130)	64 (163)
Width inches (cm)	28 (72)	28 (72)	28 (72)	30 (76)	30 (77)
Height inches (cm)	44 (112)	61 (155)	61 (155)	54 (137)	68 (173)
Min. height required inches (cm)	49 (125)	66 (168)	66 (168)	60 (152)	76 (193)
Tank weight lbs. (kg)	106 (48)	132 (60)	167 (76)	208 (94)	333 (151)
Shipping weight lbs. (kg)	115 (52)	143 (65)	185 (84)	230 (104)	358 (162)
Approximate Fo	otprint f	or Multip	le DWT In	stallation	S
Tank Model	DWT 400L	DWT 620L	DWT 1000L	DWT 1000LH	DWT 1500L
2 tanks in inches (side by side)	29 x 60 (74 x 152)	29 x 60 (74 x 152)	43 x 60 (110 x 152)	51 x 63 (130 x 160)	64 x 63 (163 x 160)
3 tanks in inches (side by side)	29 x 92 (74 x 234)	29 x 92 (74 x 234)	43 x 92 (110 x 234)	51 x 96 (130 x 244)	64 x 96 (163 x 244)
4 tanks in inches (side by side)	29 x 124 (74 x 315)	29 x 124 (74 x 315)	43 x 124 (110 x 315)	51 x 129 (130 x 328)	N/A
5 tanks in inches (side by side)	29 x 156 (74 x 397)	29 x 156 (74 x 397)	43 x 156 (110 x 397)	51 x 162 (130 x 411)	N/A
2 tanks in inches (end to end)	N/A	N/A	28 x 90 (72 x 229)	N/A	N/A

All double-walled tanks come with a generous 30-year limited warranty, as well as an insurance policy worth up to \$2 million.



4) Does the DWT require normal and emergency vents?

Depending on the local AHJ's interpretation and adherence to national codes, the AHJ may require that the primary tank be equipped with a normal vent (normally closed pressure/vacuum vent designed to protect the tank from overpressure and vacuum while filling and emptying) and an emergency vent which opens and protects the tank against overpressure in the event of fire in proximity to the tank. 5) Can typical lube oil industry pumping and fluid handling equipment be used with the DWT?

Yes, any manual, pneumatic or electric pumping packages that can be installed in a 2 inch tank opening can safely be used with the DWT in accordance with local code requirements.

6) Is there a means of mounting a hose reel directly to the DWT as there is with steel tanks to facilitate fluid dispensing?"

Yes, Roth offers an accessory bracket that mounts on the DWT to provide a solid mounting base for hose reels and other accessories. Tanks equipped in this manner do require a tie down kit to insure tank stability during use of the hose reel.



spec sheet AST 4





Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Temporary Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Andrea Kidd, P.E.

TX License No. 132541 | TX Firm No. 4524

Date: <u>5/23/2024</u>

Signature of Engineer/Agent:

Anchea Kidd

Regulated Entity Name: FM 1283 Ranch Quarry

Project Information

Potential Sources of Contamination

Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.

1. Fuels for construction equipment and hazardous substances which will be used during construction:

The following fuels and/or hazardous substances will be stored on the site: <u>Diesel,</u> <u>Maintenance Oils, Used Oil</u>

These fuels and/or hazardous substances will be stored in:





Aboveground storage tanks with a cumulative storage capacity of less than 250
gallons will be stored on the site for less than one (1) year.

- Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.
- Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

Fuels and hazardous substances will not be stored on the site.

- 2. Attachment A Spill Response Actions. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.
- 3. Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
- 4. Attachment B Potential Sources of Contamination. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

- 5. Attachment C Sequence of Major Activities. A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached. N/A
 - For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given. **N/A**
 - For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented. **N/A**
- 6. Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: **N/A**

Temporary Best Management Practices (TBMPs)

Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. All structural BMPs must be shown on the site plan.

7. Attachment D – Temporary Best Management Practices and Measures. TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to

	retain sediment on site to the extent practicable. The following information is attached: N/A
	 A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site. A description of how BMPs and measures will prevent pollution of surface water or
	groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
	 Surface streams, sensitive features, or the aquifer. A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.
8.] The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.
	 Attachment E - Request to Temporarily Seal a Feature. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature. There will be no temporary sealing of naturally-occurring sensitive features on the site.
9.	Attachment F - Structural Practices. A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided. N/A
10.	Attachment G - Drainage Area Map. A drainage area map supporting the following requirements is attached: N/A
	 For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided. For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.
	 For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area. There are no areas greater than 10 acres within a common drainage area that will be
	disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.
11. Attachment H - Temporary Sediment Pond(s) Plans and Calculations. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.
N/A
12. Attachment I - Inspection and Maintenance for BMPs. A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP. N/A
13. All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. N/A
14. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). N/A
15. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume. N/A
16. 🔀 Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).
Soil Stabilization Practices
Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.
17 Attachment L. Schedule of Interim and Permanent Soil Stabilization Practices A

17. Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices. A schedule of the interim and permanent soil stabilization practices for the site is attached. N/A – No grading associated with placement of tanks.

- 18. Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated. **N/A**
- 19. Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased. **N/A**

Administrative Information

- 20. All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project. **N/A**
- 21. If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
- 22. Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction. N/A

Temporary Stormwater Section (TCEQ-0602) Attachment A

Spill Response Actions

Education

(1) Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ.

(2) Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.

(3) Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).

(4) Establish a continuing education program to indoctrinate new employees.

(5) Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

(1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.

(2) Store hazardous materials and wastes in covered containers and protect from vandalism.

(3) Place a stockpile of spill cleanup materials where it will be readily accessible.

(4) Train employees in spill prevention and cleanup.

(5) Designate responsible individuals to oversee and enforce control measures.

(6) Spills should be covered and protected from stormwater run on during rainfall to the extent that it doesn't compromise clean up activities.

(7) Do not bury or wash spills with water.



(8) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.

(9) Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.

(10) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.

(11) Place Safety Data Sheets (SDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.

(12) Keep waste storage areas clean, well-organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

<u>Cleanup</u>

(1) Clean up leaks and spills immediately.

(2) Any spills from an AST facility must be removed from the controlled drainage area for disposal within 24 hours of the spill.

(3) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.

(4) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

(1) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.

(2) Use absorbent materials on small spills rather than hosing down or burying the spill.

(3) Absorbent materials should be promptly removed and disposed of properly.

(4) Follow the practice below for a minor spill:

(5) Contain the spread of the spill.

May 2024

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(6) Recover spilled materials.

(7) Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

Spills should be cleaned up immediately:

(1) Contain spread of the spill.

(2) Notify the project foreman as soon as possible.

(3) If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.

(4) If the spill occurs in dirt areas, as soon as possible contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.

(5) If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

(1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.

(2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.

(3) Notification should first be made by telephone and followed up with a written report.

(4) The services of a spills contractor or a Haz-Mat team should be obtained as soon as possible. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.



(5) Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

In the event of a reportable spill, the following Emergency Response Agencies can be contacted for assistance. Always inform your supervisor of a reportable spill as soon as possible. Follow company policy when responding to an emergency.

State Emergency Response Commission	(512) 463-7727
National Response Center	(800) 424-8802
US EPA Region 6, Dallas, 24-hr Number	(866) 372-7745
National Weather Service	(281) 337-5074
TCEQ 24-hr	(800) 832-8224
TCEQ Region 13 San Antonio Office	(210) 490-3096

Vehicle and Equipment Fueling

(1) If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.

(2) Discourage "topping off" of fuel tanks.

(3) Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

(4) Fueling will occur over compacted base. Drain pans, curbing and sumps will be used to control spills from fueling.

Portable Toilet BMPs:

If portable toilets are used at this site, they will be handled in accordance with the following guidelines:

- A licensed waste collector should service all the toilets. The following tasks will be performed by the portable toilet supplier:
 - Empty portable toilets before transporting them.
 - Securely fasten the toilets to the transport truck.
 - Use hand trucks, dollies, and power tailgates whenever possible.
 - Suppliers should carry bleach for disinfection in the event of a spill or leak.
 - Inspect the toilets frequently for leaks and have the units serviced and sanitized at time intervals that will maintain sanitary conditions of each toilet.
- Locate portable toilets at least 20 feet from the nearest storm-drain inlet or sensitive-feature filter strip area
- A berm will be constructed around all portable toilet facilities.
- Prepare a level ground surface with clear access to the toilets.

Secure all portable toilets to prevent tipping by accident, weather, or vandalism.

Sewage pump-out tanks may be associated with modular or trailer-style buildings (i.e. – plant office, scale house, etc.). These tanks operate with the same nature and character as the portable toilets: they temporarily hold sewage from modular building restrooms and will be serviced by the same contractor, in the same way, as portable toilets. These tanks may be partially or fully buried but are still considered temporary/portable as they are intended to be repositioned on site over time to meet operational needs, and therefore do not constitute an OSSF or holding tank as defined by 30 TAC 285, nor any other type of organized sewage collection system.

Temporary Stormwater Section (TCEQ-0602) Attachment B

Potential Sources of Contamination

Potential sources of contamination are the fuels and lubricants from vehicles and trash/debris items.

Temporary Stormwater Section (TCEQ-0602) Attachments C, D, E, F, G, H, I & J

The Temporary Stormwater Attachments C, D, E, F, G, H, I, and J are not necessary for this project as no grading activities are occurring as a result of the placement of tanks in this AST Plan application; the tanks will be placed in an area that is already graded and covered with compacted base.



DETAILED TELEPHONE SPILL REPORT FORM

Date of Incident:
Location of Incident:
Description of material spilled:
Quantity of material spilled:
Cause of spill:
Authorities notified:
Remediation/clean-up action:
Corrective measures taken for prevention of reoccurrence:
Signature:
Notes:

Emergency Number for the National Response Center 1-800-424-8802

WPAP Mod Approval Letter

EAPP ID 13001878

Dated April 19, 2024



Jon Niermann, *Chairman* Bobby Janecka, *Commissioner* Catarina R. Gonzales, *Commissioner* Kelly Keel, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 19, 2024

Ms. Bonnie Zumwalt H.L. Zumwalt Quarry Operations LLC 17511 FM 1283 Mico, Texas, 78056

Re: Modification of an approved Water Pollution Abatement Plan (WPAP) FM 1283 Ranch Quarry; Located 5 miles west of FM 471 and SH 211 on the north side of FM 1283; Medina County, Texas Edwards Aquifer Protection Program ID: 13001878, Regulated Entity No. RN105835375

Dear Ms. Zumwalt:

The Texas Commission on Environmental Quality (TCEQ) has completed its review on the application for the above-referenced project submitted to the Edwards Aquifer Protection Program (EAPP) by Westward Environmental, Inc. on behalf of the applicant, H.L. Zumwalt Quarry Operations LLC on January 30, 2024. Final review of the application was completed after additional material was received on March 15, 2024, April 3, 2024, and April 16, 2024.

As presented to the TCEQ, the application was prepared in general compliance with the requirements of 30 Texas Administrative Codes (TAC) Chapter §213. The permanent best management practices (BMPs) and measures represented in the application were prepared by a Texas licensed professional engineer (PE). All construction plans and design information were sealed, signed, and dated by a Texas licensed PE. Therefore, the application for the construction of the proposed project and methods to protect the Edwards Aquifer are **approved**, subject to applicable state rules and the conditions in this letter.

This approval expires two years from the date of this letter, unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been officially requested. This approval or extension will expire, and no extension will be granted if more than 50 percent of the project has not been completed within ten years from the date of this letter.

The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer protection plan. A motion for reconsideration must be filed in accordance with 30 TAC §50.139.

BACKGROUND

The original WPAP (13-09110601) was approved by letter dated October 5, 2010.

PROJECT DESCRIPTION

The proposed limestone quarry project will expand to an area of approximately 561-acres and will function as an expansion of the adjacent, existing FM 1283 Ranch quarry (13-09110601).

TCEQ Region 11 · P.O. Box 13087 · Austin, Texas 78711-3087 · 512-339-2929 · Fax 512-339-3795

Austin Headquarters: 512-239-1000 · tceq.texas.gov · How is our customer service? tceq.texas.gov/customersurvey printed on recycled paper

Ms. Bonnie Zumwalt Page 2 April 19, 2024

The quarry project will consist of a total of two (2) quarry pits, on-grade paved crossings, and the relocation of two building structures. Quarrying activities shall occur to an elevation no deeper than 954 feet above mean sea level (AMSL).

Approximately 0.54-acres (0.1 percent) of impervious cover is proposed by this project consisting of two (2) new on-grade crossings through the Deep Creek and other minor improvements.

Routine maintenance will take place at designated areas. Fueling of equipment will take place on compacted base pads within the quarry pits and/or with drip pans as appropriate.

Two existing on-site sewage facility will be removed from this site. No new OSSF are proposed. Project wastewater (domestic) will be collected in portable toilets and disposed of by a TCEQ registered waste disposal service.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site, the various controls described below will be utilized.

Impervious cover consisting of a portion of the two (2) paved on-grade crossing does not flow to the quarry pit. A natural vegetative filter strip designed using the TCEQ technical guidance, *RG-348, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices*, will be implemented to treat stormwater runoff generated by the two (2) crossings.

The earthen berms shall prevent stormwater runoff, generated from the remaining site impervious cover, from discharging from the site.

During the life of the quarry, earthen berms will be constructed to prevent pollutants from entering the surface streams and the aquifer. The earthen berms will be vegetated with native grasses to stabilize soils. All stormwater which originates upgradient from the site and flow across the site will ultimately be retained within these earthen berms and the quarry pit.

Permanent stormwater controls are those that are to remain in place after construction has been completed. At the time construction is completed at the site, the vegetated final earthen berm and the 50-foot vegetated buffer located along the property boundary will retain on-site stormwater inside the pit.

The permanent BMPS shall be operational prior to occupancy or use of the proposed project. Inspection, maintenance, repair, and retrofit of the permanent BMPs shall be in accordance with the approved application.

GEOLOGY

According to the Geologic Assessment (GA) included with the application, the surficial units of the site are the Dolomitic member, Basal Nodular member of the Kainer Formation and the Upper member of Glen Rose Limestone. Five (5) sensitive geologic features (S-8, S-11, S-23, S-24, and S-26) were identified in the GA. Of these, three (3) features (S-8, S-23, and S-26) are proposed to be temporarily sealed and eventually removed through mining. Natural buffer setbacks are proposed for the sensitive features (S-11, and S-24) and are illustrated on the site plan. No regulated activities, such as construction or soil disturbing activities, will take place within the natural buffers. The site assessment conducted on February 14, 2024, by TCEQ staff determined the site to be generally as described by the GA.

SPECIAL CONDITIONS

- I. This modification is subject to all the special and standard conditions listed in the approval letter(s) dated October 5, 2010.
- II. Natural existing vegetation will be maintained in a 25-foot buffer along the FEMA 100-year floodplain of Deep Creek. This buffer will be maintained until appropriate permits can be

obtained from FEMA and/or USACE to allow mining in the area in which a modification will be submitted to the Edwards Aquifer Protection Program for review and approval.

- III. Permanent fuel storage tanks will be submitted as an aboveground storage tank applications to the Edwards Aquifer Protection Program prior to use of tanks.
- IV. Unpaved ranch roads associated with the site will continue to be used until ultimately mined and shall not be repurposed as haul roads for quarrying operations. County Road 273 access roads shall not be repurposed as quarry entrances.

STANDARD CONDITIONS

- 1. The plan holder (applicant) must comply with all provisions of 30 TAC Chapter §213 and all technical specifications in the approved plan. The plan holder should also acquire and comply with additional and separate approvals, permits, registrations or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, Dam Safety, Underground Injection Control) as required based on the specifics of the plan.
- 2. In addition to the rules of the Commission, the plan holder must also comply with state and local ordinances and regulations providing for the protection of water quality as applicable.

Prior to Commencement of Construction:

- 3. Within 60 days of receiving written approval of an Edwards Aquifer protection plan, the plan holder must submit to the EAPP proof of recordation of notice in the county deed records, with the volume and page number(s) of the county record. A description of the property boundaries shall be included in the deed recordation in the county deed records. TCEQ form, Deed Recordation Affidavit (TCEQ-0625), may be used.
- 4. The plan holder of any approved Edwards Aquifer protection plan must notify the EAPP and obtain approval from the executive director prior to initiating any modification to the activities described in the referenced application following the date of the approval.
- 5. The plan holder must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the EAPP no later than 48 hours prior to commencement of the regulated activity. Notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person.
- 6. Temporary erosion and sedimentation (E&S) controls as described in the referenced application, must be installed prior to construction, and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
- 7. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring or gravel. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation.

During Construction:

Ms. Bonnie Zumwalt Page 4 April 19, 2024

- 8. This approval does not authorize the installation of temporary or permanent aboveground storage tanks on this project that will have a total storage capacity of five hundred gallons or more of static hydrocarbons or hazardous substances without prior approval of an Aboveground Storage Tank facility application.
- 9. If any sensitive feature is encountered during construction, replacement, or rehabilitation on this project, all regulated activities must be **immediately** suspended near it and notification must be made to TCEQ EAPP staff. Temporary BMPs must be installed and maintained to protect the feature from pollution and contamination. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality.
- 10. All water wells, including injection, dewatering, and monitoring wells shall be identified in the geologic assessment and must be in compliance with the requirements of the Texas Department of Licensing and Regulation 16 TAC Chapter §76 and all other locally applicable rules, as appropriate.
- 11. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
- 12. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge must be filtered through appropriately selected BMPs.
- 13. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
- 14. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

- 15. Owners of permanent BMPs and temporary measures must ensure that the BMPs and measures are constructed and function as designed. A Texas licensed PE must certify in writing that the **permanent** BMPs or measures were constructed as designed. The certification letter must be submitted to the EAPP within 30 days of site completion.
- 16. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property or the ownership of the property is transferred to the entity. A copy of the transfer of responsibility must be filed with the executive director through the EAPP within 30 days of the transfer. TCEQ form, Change in Responsibility for Maintenance on Permanent BMPs and Measures (TCEQ-10263), may be used.

Ms. Bonnie Zumwalt Page 5 April 19, 2024

The holder of the approved Edwards Aquifer protection plan is responsible for compliance with Chapter §213 and any condition of the approved plan through all phases of plan implementation. Failure to comply with any condition within this approval letter is a violation of Chapter §213 and is subject to administrative rule or orders and penalties as provided under §213.10 of this title (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. Upon legal transfer of this property, the new owner is required to comply with all terms of the approved Edwards Aquifer protection plan.

This action is taken as delegated by the executive director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Monica Reyes of the Edwards Aquifer Protection Program at (210)403-4061 or the regional office at 512-339-2929.

Sincerely, Lillian Butter

Lillian I. Butler, Section Manager Edwards Aquifer Protection Program Texas Commission on Environmental Quality

LIB/mr

cc: Mr. Nicolas Mercado, P.E., Westward Environmental, Inc.

Owner Authorization Form

Texas Commission on Environmental Quality

for Required Signature Edwards Aquifer Protection Program Relating to 30 TAC Chapter 213 Effective June 1, 1999

Land Owner Authorization

L Bonnie Zumwalt of Zumwalt Quarry, LLC

Land Owner Signatory Name

Land Owner Name (Legal Entity or Individual)

am the owner of the property located at A1169 H.E. & W. T. RR Survey 297

Legal description of the property referenced in the application

and am duly authorized in accordance with 213.4(c)(2) and 213.4(d)(1) or 213.23(c)(2) and §213.23(d) relating to the right to submit an application, signatory authority, and proof of authorized signatory.

I do hereby authorize H.L. Zumwalt Quarry Operations, LLC

Applicant Name (Legal Entity or Individual)

to conduct an application for Aboveground Storage Tank (AST) Plan

Description of the proposed regulated activities

at 17511 FM 1283, Mico, Texas (in Medina County)

Precise location of the authorized regulated activities

Land Owner Acknowledgement

I understand that H.L. Zumwalt Quarry Operations, LLC Land Owner Name (Legal Entity or Individual)

Is ultimately responsible for compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation even if the responsibility for compliance and the right to possess and control the property referenced in the application has been contractually assumed by another legal entity. I further understand that any failure to comply with any condition of the executive director's approval is a violation is subject to administrative rule or orders and penalties as provided under §213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

Land Owner Signature

Barrid Jumuth Land Owner Signature

THE STATE OF § Jeg no

11-12-23

BEFORE ME, the undersigned authority, on this day personally appeared known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 13TH day of A Non Ber 2025



NOTARY PUBLIC

MARCIA AND FOSTER Typed or Printed Name of Notary

MY COMMISSION EXPIRES: The 26, 2024

Attached: (Mark all that apply)

Lease Agreement

Signed Contract

Deed Recorded Easement

Other legally binding document

Applicant Acknowledgement

1, Berrid Fumulle

Zumwalt Quarry, LLC

Applicant Signatory Name	Applicant Name (Legal Entity or Individual)
acknowledge that	Zumwalt Quarry, LLC
	Land Owner Name (Legal Entity or Individual)
has provided	H.L. Zumwalt Quarry Operations, LLC
	Applicant Name (Legal Entity or Individual)
with the right to possess and	control the property referenced in the Edwards Aquifer protection plan.
I understand that	H.L. Zumwalt Quarry Operations, LLC

Applicant Name (Legal Entity or Individual)

is contractually responsible for compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation. I further understand that failure to comply with any condition of the executive director's approval is a violation is subject to administrative rule or orders and penalties as provided under §213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

Applicant Signature

Applicant Signature THE STATE OF § July as

County of § Medina

<u>//-/3-23</u> Date

BEFORE ME, the undersigned authority, on this day personally appeared DISA IE Zunukar known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 2^{3} day of χ FUBER JAZO



NOTARY PUBLIC

Typed or Printed Name of Notary MY COMMISSION EXPIRES: Ja Sta 26, 2024
Owner Authorization Form

Texas Commission on Environmental Quality for Required Signature **Edwards Aquifer Protection Program** Relating to 30 TAC Chapter 213 Effective June 1, 1999

Land Owner Authorization

I, Bonnie Zumwalt of Land Owner Signatory Name

Bonnie Zumwalt

Land Owner Name (Legal Entity or Individual)

am the owner of the property located at

A1391 G. C. & S. F. RR. Survey 399; A1169 H.E. & W. T. RR Survey 297

Legal description of the property referenced in the application

and am duly authorized in accordance with 213.4(c)(2) and 213.4(d)(1) or 213.23(c)(2) and §213.23(d) relating to the right to submit an application, signatory authority, and proof of authorized signatory.

I do hereby authorize H.L. Zumwalt Quarry Operations, LLC

Applicant Name (Legal Entity or Individual)

to conduct an application for Aboveground Storage Tank (AST) Plan

Description of the proposed regulated activities

at 17511 FM 1283, Mico, Texas (in Medina County)

Precise location of the authorized regulated activities

Land Owner Acknowledgement

I understand that H.L. Zumwalt Quarry Operations, LLC

Land Owner Name (Legal Entity or Individual)

Is ultimately responsible for compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation even if the responsibility for compliance and the right to possess and control the property referenced in the application has been contractually assumed by another legal entity. further understand that any failure to comply with any condition of the executive director's approval is a violation is subject to administrative rule or orders and penalties as provided under §213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

Land Owner Signature

Land Owner Signature

THE STATE OF § TEXAS County of § MESINA

<u>_//-3-2</u> Date

BEFORE ME, the undersigned authority, on this day personally appeared **BOUNTE ZumWALT** known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this Jes_ day of KOVENDER, 2023



NOTARY PUBLIC

MARCIA Hald Foster Typed or Printed Name of Notary

MY COMMISSION EXPIRES: Jude 26, 2024

Attached: (Mark all that apply)

Lease Agreement

Signed Contract

Deed Recorded Easement

Other legally binding document

Applicant Acknowledgement

1. Renger Puppingt

Bonnie Zumwalt

Applicant Signatory Name	Applicant Name (Legal Entity or Individual)
acknowledge that	Bonnie Zumwalt
	Land Owner Name (Legal Entity or Individual)
has provided	H.L. Zumwalt Quarry Operations, LLC
	Applicant Name (Legal Entity or Individual)
with the right to possess and	control the property referenced in the Edwards Aquifer protection plan.
I understand that	H.L. Zumwalt Quarry Operations, LLC
	Applicant Name (Logal Entity or Individual)

Applicant Name (Legal Entity or Individual)

is contractually responsible for compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation. I further understand that failure to comply with any condition of the executive director's approval is a violation is subject to administrative rule or orders and penalties as provided under §213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

Applicant Signature

Sand umualt **Applicant Signature**

THE STATE OF STERAS

Date

GIVEN under my hand and seal of office on this the day of November, 2024

NOTARY PUBLIC

Typed or Printed Name of Notary

MY COMMISSION EXPIRES: Ja NE 26,2024



TCEQ Core Data Form

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

	1. Uti											
1. Reason fo	or Submiss	sion (If other is c	hecked pleas	e desc	cribe in s	space	provide	ed.)				
New Per	rmit, Regis	tration or Authori	zation (Core	Data F	orm sho	ould be	subm	itted w	ith the p	orogram applicatio	n.)	
🗌 Renewa	l (Core Da	ta Form should b	e submitted v	vith the	e renew	al form	ı)		Other			
2. Customer	Referenc	e Number <i>(if i</i> ss	sued)	<u>Follo</u>	w this lin	nk to se	arch	3. Re	gulated	Entity Reference	e Number (i	if issued)
CN 6062	24319			for C C	N or RN entral Re	numbe egistry*	<u>rs in</u> *_	RN	10583	35375		
SECTION	II: Cu	stomer Info	ormation									
4. General C	ustomer lı	nformation	5. Effective	e Date	for Cus	stome	r Inforr	mation	Updat	es (mm/dd/yyyy)		
New Cust	omer Legal Nar	ne (Verifiable wit	h the Texas S	Updat Secreta	e to Cus ary of St	stomer ate or	Inform Texas	ation Compt	roller of	Change in Public Accounts)	Regulated E	Entity Ownership
The Custo	mer Nan	ne submitted	here may	be up	dated	l auto	matic	ally l	based	on what is cu	rrent and	active with the
Texas Sec	retary of	State (SOS)	or Texas C	Comp	troller	of Pl	ublic	Acco	unts (CPA).		
6. Customer	Legal Nar	ne (If an individua	l, print last nam	e first:	eg: Doe,	John)		<u> </u> [new Cu	stomer, enter previ	ious Custom	er below:
H.L. Zum	walt Qu	arry Operatio	ons, LLC									
7. TX SOS/C	PA Filing I	Number	8. TX State	Tax ID (11 digits)			9.	Federa	al Tax ID (9 digits)	10. DUN	S Number (if applicable)	
80499516	0		3208915	6932)32							
11. Type of C	Customer:	Corporati	ion			Individ	lual		Pa	rtnership: 🔲 Gener	al 🗌 Limited	
Government:	City 🗌 🕻	County 🗌 Federal [] State 🗌 Othe	r		Sole P	Propriet	orship		Other:		
12. Number of	of Employ	ees			_			13. Independently Owned and Operated?			ited?	
0-20	21-100	101-250	251-500] 501 ar	nd high	ner	\square	Yes	No 🗌 No		
14. Custome	r Role (Pro	posed or Actual) -	- as it relates to	the Re	egulated	Entity I	isted on	this fo	m. Plea	se check one of the	following	
Owner		🛛 Operat	tor		0	wner 8	opera	ator				
	nal License	ee 🗌 Respo	onsible Party			oluntar	y Clea	nup Ap	plicant	Other:		
	17511	FM 1283										
15. Mailing												
Address.	City	Mico		;	State	TX		ZIP	780	56	ZIP + 4	9203
16. Country	Mailing Inf	ormation (if outsi	de USA)				17. E	-Mail /	Addres	S (if applicable)		
			,							/		
18. Telephon	e Number			19. E	Extensi	on or (Code			20. Fax Numbe	r (if applical	ble)
830-751-2	.587											
L				I								

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If 'New Regulated Entity" is selected below this form should be accompanied by a permit application)

 New Regulated Entity
 Update to Regulated Entity Information

 The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC).
 22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)

FM 1283 Ranch Quarry

23. Street Address of	1751	1 FM 1283							
the Regulated Entity:									
(<u>No PO Boxes)</u>	City	Mico	State	TX	ZIP	78056		ZIP + 4	9203
24. County	Medi	ina							
		Enter Phys	ical Location De	scription if r	o street add	ess is provid	led.		
25. Description to Physical Location:	5 MI	W OF FM	471 & SH 2	11 ON N 3	SIDE of FI	M 1283			
26. Nearest City				-		State		Ne	arest ZIP Code
Mico						TX		78	056
27. Latitude (N) In Decir	nal:	29.537	78		28. Longitude	e (W) In Deci	mal:	-98.8633	33
Degrees	Minutes		Seconds		Degrees	Min	utes		Seconds
29		32	16	5	-98		:	51	48
29. Primary SIC Code (4	digits)	30. Secondar	y SIC Code (4 digi	ts) 31. P (5 or 0	rimary NAICS digits)	6 Code	32. Se (5 or 6	econdary NA digits)	ICS Code
2951				324	121				
33. What is the Primary	Busines	ss of this entit	y? (Do not repeat	the SIC or NAIC	S description.)				
Construction Mater	ials M	lanufacturi	ng						
	17511 FM 1283								
34. Mailing									
Address:	Cit	y Mico	Sta	te TX	ZIP	78056		ZIP + 4	9203
35. E-Mail Address	:								
36. Telepho	one Num	nber	37. Ex	tension or C	ode	38.	Fax Nu	mber (if app	licable)
830-75	1-258	7							
TCEQ Programs and II n. See the Core Data Form) Number	ers Check all Prons for additional	ograms and write in guidance.	the permits/re	gistration numb	ers that will be	affected	by the update	es submitted on this
Dam Safety	Di	stricts	🛛 Edwar	Edwards Aquifer		Emissions Inventory A		Industri	al Hazardous Wast
			13-0911	0601A					
] Municipal Solid Waste	□ Ne	ew Source Revie	w Air 🗌 OSSF	OSSF		Petroleum Storage Tank		D PWS	
		orm Water	Title V	/ Air	Tire			Used Oil	
] Sludge									

40. Name: Bobbi Bondarenko 41. Title: Staff Geologist 42. Telephone Number 43. Ext./Code 44. Fax Number 45. E-Mail Address (830) 249-8284 (830) 249-0221 bbondarenko@westwardenv.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	H.L. Zumwalt Quarry Operations, LLC.	Job Title:	Preside	nt/Owner	
Name (In Print):	Bonnie Zumwalt			Phone:	830-751-2587
Signature:	Bannic umwalt			Date:	11-3-23

A Edwa Rel	Gent Authorization Form For Required Signature rds Aquifer Protection Program ating to 30 TAC Chapter 213 Effective June 1, 1999
1	Bonnie Zumwalt
	Print Name
	President/Owner
Ti	tle - Owner/President/Other
of <u>H.L Zu</u> Corpo	mwalt Quarry Operations, Inc, pration/Partnership/Entity Name
have authorized <u>Curt G. Campbell</u> <u>Gary D. Nicholls, PE; Andrea Kidd</u> Pr	, PE; Doug PE; Millsaps PE; Vance Houy PE; , PE; and Nicolas Mercado, PE int Name of Agent/Engineer
of	Westward Environmental, Inc. Print Name of Firm

to represent and act on the behalf of the above-named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

- 1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to \$10,000 per day per violation.
- 2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.
- 3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.
- 4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.
- 5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Barne Sumuelt

Applicant's Signature

11-3-23 Date

THE STATE OF TEXAS § County of MEDINA §

BEFORE ME, the undersigned authority, on this day personally appeared to the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this had day of Anterior, 2023

MARCIA ANN FOSTER Notary ID #174322 My Commission Expires June 26, 2024

Norary PUBLIC Ø

MARCA AND T-05 Typed or Printed Name of Notary

MY COMMISSION EXPIRES: Tude 26, 2024

Application Fee Form

Texas Commission on Environment	al Quality					
Name of Proposed Regulated Entity	: FM 1283 Ranch Qua	arry				
Regulated Entity Location: 17511 FM	A 1283, Mico, Texas	78056				
Name of Customer: H.L. Zumwalt Q	uarry Operations, LLO	2				
Contact Person: Bonnie Zumwalt Phone: (210) 695-3541						
Customer Reference Number (if issu	ued):CN <u>606224319</u>					
Regulated Entity Reference Number	r (if issued):RN <u>10583</u>	<u>35375</u>				
Austin Regional Office (3373)						
Hays	Travis		/illiamson			
San Antonio Regional Office (3362)						
Bexar	🔀 Medina	Πυ	valde			
 Comal	 Kinney					
Application fees must be paid by ch	eck, certified check, (or money order, paya	ble to the Texas			
Commission on Environmental Qua	ality. Your canceled o	check will serve as you	ur receipt. This			
form must be submitted with your	fee payment. This p	ayment is being subm	nitted to:			
Austin Regional Office	San Antonio Regional Office					
Mailed to: TCEQ - Cashier ePay		Overnight Delivery to: TCEQ - Cashier				
Revenues Section	1	12100 Park 35 Circle				
Mail Code 214	E	Building A, 3rd Floor				
P.O. Box 13088	A	Austin, TX 78753				
Austin, TX 78711-3088	(512)239-0357				
Site Location (Check All That Apply):					
Recharge Zone	Contributing Zone	Trans	sition Zone			
Type of Plan		Size	Fee Due			
Water Pollution Abatement Plan, C	Contributing Zone					
Plan: One Single Family Residentia	l Dwelling	Acres	\$			
Water Pollution Abatement Plan, C	Contributing Zone					
Plan: Multiple Single Family Reside	Acres	\$				
Water Pollution Abatement Plan, C						
Plan: Non-residential	Acres	\$				
Sewage Collection System	L.F.	\$				
Lift Stations without sewer lines	Acres	\$				
Underground or Aboveground Stor	rage Tank Facility	4 Tanks	\$ 2,600			
Piping System(s)(only)		Each	\$			
Exception		Each	\$			
Extension of Time		Each	\$			

Signature: <u>Amdrea Kidd</u> Date: <u>5/9/2024</u>

Application Fee Schedule

Texas Commission on Environmental Quality

Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications Contributing Zone Plans and Modifications

Project	Project Area in Acres	Fee
One Single Family Residential Dwelling	< 5	\$650
Multiple Single Family Residential and Parks	< 5	\$1,500
	5 < 10	\$3,000
	10 < 40	\$4,000
	40 < 100	\$6,500
	100 < 500	\$8,000
	≥ 500	\$10,000
Non-residential (Commercial, industrial,	< 1	\$3,000
institutional, multi-family residential, schools, and	1 < 5	\$4,000
other sites where regulated activities will occur)	5 < 10	\$5,000
	10 < 40	\$6,500
	40 < 100	\$8,000
	≥ 100	\$10,000

Organized Sewage	Collection :	Svstems ar	d Modifications
	00110011011	eystems an	

Project	Cost per Linear Foot	Minimum Fee- Maximum Fee
Sewage Collection Systems	\$0.50	\$650 - \$6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

Project	Cost per Tank or Piping System	Minimum Fee- Maximum Fee
Underground and Aboveground Storage Tank		
Facility	\$650	\$650 - \$6,500

Exception Requests

	Project	Fee
Exception Request		\$500

Extension of Time Requests

Project	Fee		
Extension of Time Request	\$150		