Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 29, 2019

Mr. Lalit Bhatnager, P.E.
Hanson Aggregates LLC
8505 Freeport Parkway, Suite 500
Irving, Texas 75063

Re: Edwards Aquifer, Comal County

NAME OF PROJECT: Servtex Quarry Fordyce Tract; Located approximately 1 mile east of the intersection of FM 2252 and FM 1337; Garden Ridge, Texas

TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Regulated Entity No. RN102541612; Additional ID No. 13000968

Dear Mr. Bhatnager:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the above-referenced project submitted to the San Antonio Regional Office by Forster Engineering on behalf of Hanson Aggregates LLC on August 1, 2019. Final review of the WPAP was completed after additional material was received on September 30, 2019 and October 24, 2019. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in 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 no later than 23 days after the date of this approval letter. *This approval expires two (2) 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 requested.*

PROJECT DESCRIPTION

The proposed limestone quarry will have an area of approximately 695.66 acres. Approximately 563 acres will be disturbed. Approximately 0.09 acres (0.01 percent) of impervious cover is proposed by this project consisting of haul roads extending outside the quarry pit limits. Quarrying activities shall occur to an elevation no deeper than 580 feet mean sea level. Blasting agents will be used in the mining process. The site shall not include process water. Trash generated on-site will be disposed of in a dumpster and handled by a licensed waste service. Wastewater collected from the portable toilets shall be disposed of by a TCEQ registered waste disposal service. The site is adjacent to the existing limestone quarry (Servtex

Quarry Plant) located south at 21303 FM 2252, Garden Ridge, Comal County. Stockpiles of materials will be kept at the Servtex Quarry Plant.

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.

A 50-foot natural buffer will be maintained along the perimeter of the site, as shown in the application, to reduce soil erosion. The 50-foot natural buffer will also serve as a natural vegetative filter strip to provide treatment for the 0.09 acres of impervious cover associated with the haul roads extending outside the quarry pit limits. The required total suspended solids (TSS) treatment for this project is 81 pounds of TSS generated from the 0.09 acres of impervious cover.

Expansion of the quarry will occur in phases. Expansion in phases allows vegetation to remain in place and limits the amount of soil that is disturbed at once.

Earthen berms (safety berms) composed of compacted soil and/or overburdens will be constructed. At the full extent of the quarry pits, the earthen berms will encircle the quarry pit. Upgradient storm water will be diverted around the site, and onsite flows will be prevented from leaving the site.

Rock berms will be installed on the downgradient side of the earthen berm in areas of concentrated flow.

Refueling and maintenance activities for vehicles and equipment will be performed outside of the quarry pits except under extenuating circumstances. If emergency maintenance occurs or if refueling within the pits, appropriate protection measures will be implemented. Portable secondary containment will be utilized and will be disposed of according to the applicable regulations.

GEOLOGY

According to the geologic assessment included with the application, the site lies on Pecan Gap Chalk, Buda Limestone, Del Rio Clay, and the Person Formation. Fifty (50) features, two (2) manmade and forty-eight (48) geologic, were identified by the project geologist. Twenty-eight (28) of the geologic features were identified as sensitive. The site assessment conducted on September 25, 2019 revealed the site was generally as described in geologic assessment.

Sensitive features S-1 (solution cavity), S-9 (sinkhole), S-10 (solution cavity), S-11 (sinkhole), S-13 (sinkhole), and S-44 (sinkhole) are located outside the proposed quarry limits and will be protected with natural vegetation buffers. No regulated activities (such as construction or soil disturbing activities) will take place within the natural buffers.

The remaining 22 sensitive features are located within the proposed quarry limits and will be excavated and mined. Prior to quarry excavation of the features, the sensitive features shall be protected by natural vegetation buffers until such time as the area of the quarry containing the sensitive features will be mined.

The size of the buffers is generally based on the drainage area for each sensitive feature, which is a minimum of 50 feet. The buffers of the identified sensitive features are illustrated on the plan sheets included in the application.

SPECIAL CONDITIONS

I. The permanent pollution abatement measures and other BMPs and measures proposed in the application or described in this letter must be operational prior to soil disturbing activities within their respective drainage areas.

II. In addition to the requirements for discovered features, the on-site quarry manager will receive annual training from a licensed Professional Geoscientist on feature identification

and protection. Each occurrence of this training must be documented, and documentation must be presented when requested by TCEQ representatives.

III. The on-site Quarry Manager experienced in feature identification will conduct visual surveys of the pit to ensure adequate identification and reporting of encountered sensitive features. Visual surveys will be conducted monthly. Results of each visual survey conducted by the on-site Quarry Manager must be documented and the documentation must be presented when requested by TCEQ representatives.

IV. This approval does not authorize the construction or installation of aboveground storage tanks at the site.

V. Intentional discharges of sediment laden water from regulated activities are not allowed. If dewatering becomes necessary, appropriate measures must be taken.

VI. If a new Edwards Aquifer protection plan is submitted to the TCEQ under 30 TAC §213.4(h)(3), the approved plan will continue in effect until the executive director makes a determination on the new plan.

VII. This letter addresses regulated activities (as defined in Chapter 213) and for best management practices presented in the application. Failure to obtain all necessary authorizations may result in enforcement actions.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.
5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written 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. The executive director will use the notification to determine if the approved plan is eligible for an extension.

8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, 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. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. 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.
9. 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. 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. Voids may be filled with gravel.

<u>During Construction:</u>

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. 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. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
13. Two wells exist on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. 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.
15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. 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.
17. 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:

18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.
19. 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 (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Mr. Joshua Vacek of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210-403-4028.

Sincerely,

Robert Sadlier, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

RCS/jv

Enclosures: Deed Recordation Affidavit, Form TCEQ-0625

cc: Mr. Ralph Voss Jr., P.E., Forester Engineering
Mr. Thomas H. Hornseth, P.E., Comal County Engineer
Mr. Roland Ruiz, Edwards Aquifer Authority
Mr. H. L. Saur, Comal Trinity Groundwater Conservation District
The Honorable Larry Thompson, Mayor of Garden Ridge

Deed Recordation Affidavit
Edwards Aquifer Protection Plan

THE STATE OF TEXAS §

County of _____ §

BEFORE ME, the undersigned authority, on this day personally appeared _____ who, being duly sworn by me, deposes and says:

(1) That my name is _____and that I own the real property described below.

(2) That said real property is subject to an EDWARDS AQUIFER PROTECTION PLAN which was required under the 30 Texas Administrative Code (TAC) Chapter 213.

(3) That the EDWARDS AQUIFER PROTECTION PLAN for said real property was approved by the Texas Commission on Environmental Quality (TCEQ) on _____.

A copy of the letter of approval from the TCEQ is attached to this affidavit as Exhibit A and is incorporated herein by reference.

(4) The said real property is located in _____ County, Texas, and the legal description of the property is as follows:

_____
LANDOWNER-AFFIANT

SWORN AND SUBSCRIBED TO before me, on this __ day of _____, ____.

_____
NOTARY PUBLIC

THE STATE OF _____ §

County of _____ §

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 __ day of _____, _____.

_____
NOTARY PUBLIC

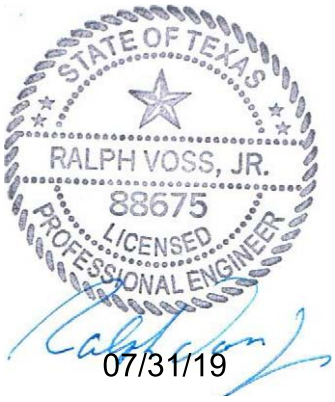
_____
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: _____

WATER POLLUTION PREVENTION PLAN (WPAP)

SERVTEX QUARRY, FORDYCE TRACT
Comal County, Texas
Project No. 1085A-18

Prepared for:
Hanson Aggregates LLC
300 E. John Carpenter Freeway, Suite 1645
Irving, Texas 75062
(972) 653-5500



Prepared by:
Forster Engineering
TBPE # 12385
19915 Wittenburg
San Antonio, Texas 78256
(210) 698-5544
JULY 2019

FORSTER ENGINEERING

19915 Wittenburg
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TBPE Firm No. 12385

July 31, 2019

Mr. Robert Sadlier
Texas Commission on Environmental Quality (TCEQ)
San Antonio Region 13
14250 Judson Road
San Antonio, Texas 78233

Subject: Hanson Aggregates LLC
Servtex Quarry, Fordyce Tract
Water Pollution Prevention Plan (WPAP)

Dear Mr. Sadlier:

Hanson Aggregates is planning to expand their current Servtex Quarry northeast onto their Fordyce Tract. This tract was previously covered by a WPAP, which expired on May 16, 2018 before it could be extended. Hanson Aggregates is submitting this WPAP application to re-permit the Fordyce Tract. We understand you will try to assign this permit application to the original reviewer to help expedite the review process.

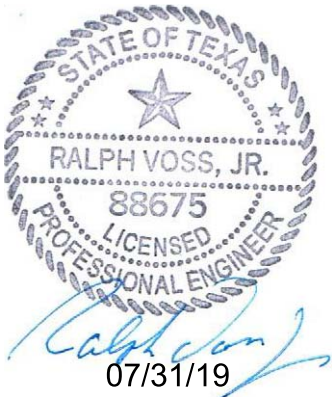
Please find attached one (1) original, one (1) copy, and one (1) CD with an electronic pdf file of the Hanson Aggregates LLC Servtex Quarry, Fordyce Tract, WPAP Application. This WPAP Application has been prepared in accordance with Texas Administrative Code (30 TAC §213) for development over the Edwards Aquifer Recharge Zone.

We are requesting your review and approval of this WPAP application. The required review fee of $10,000 is included herewith. If you have any questions or require additional information, please do not hesitate to contact me at your earliest convenience.

Sincerely,
Forster Engineering
(TBPE # F-12385)

Ralph Voss Jr., P.E.
Senior Engineer

1085A-18



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Section 1.0

WPAP PLAN CHECKLIST

Water Pollution Abatement Plan Checklist

X **Edwards Aquifer Application Cover Page (TCEQ-20705)**

X **General Information Form (TCEQ-0587)**

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

X **Geologic Assessment Form (TCEQ-0585)**

Attachment A - Geologic Assessment Table (TCEQ-0585-Table)
Comments to the Geologic Assessment Table
Attachment B - Soil Profile and Narrative of Soil Units
Attachment C - Stratigraphic Column
Attachment D - Narrative of Site Specific Geology
Site Geologic Map(s)
Table or list for the position of features' latitude/longitude (if mapped using GPS)

X **Water Pollution Abatement Plan Application Form (TCEQ-0584)**

Attachment A - Factors Affecting Water Quality
Attachment B - Volume and Character of Stormwater
Attachment C - Suitability Letter from Authorized Agent (if OSSF is proposed)
Attachment D - Exception to the Required Geologic Assessment (if requesting an exception)
Site Plan

X **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 sealing a feature
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

X **Permanent Stormwater Section (TCEQ-0600)**

Attachment A - 20% or Less Impervious Cover Waiver, if project is multi-family residential, a school, or a small business and 20% or less impervious cover is proposed for the site
Attachment B - BMPs for Upgradient Stormwater

Attachment C - BMPs for On-site Stormwater
Attachment D - BMPs for Surface Streams
Attachment E - Request to Seal Features (if sealing a feature)
Attachment F - Construction Plans
Attachment G - Inspection, Maintenance, Repair and Retrofit Plan
Attachment H - Pilot-Scale Field Testing Plan, if BMPs not based on Complying with the Edwards Aquifer Rules: Technical Guidance for BMPs
Attachment I -Measures for Minimizing Surface Stream Contamination

X **Agent Authorization Form (TCEQ-0599), if application submitted by agent**

X **Application Fee Form (TCEQ-0574)**

X **Check Payable to the "Texas Commission on Environmental Quality"**

X **Core Data Form (TCEQ-10400)**

Section 2.0

EDWARDS AQUIFER APPLICATION COVER PAGE

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 30 TAC 213.

Administrative Review

1. Edwards Aquifer applications 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: http://www.tceq.texas.gov/field/eapp.

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 if not withdrawn the application will be denied and 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 to you:

- You can withdraw your application, and your fees will be refunded or credited for a resubmittal.
- 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 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 effected 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: Servtex Quarry, Fordyce Tract						**2. Regulated Entity No.:** RN 102541612			
3. Customer Name: Hanson Aggregates, LLC						**4. Customer No.:** CN 603475864			
5. Project Type: **(Please circle/check one)**	New		Modification			Extension		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. Site (acres):**		695.66	
9. Application Fee:	$10,000.00		**10. Permanent BMP(s):**						
11. SCS (Linear Ft.):	0		**12. AST/UST (No. Tanks):**			0			
13. County:	Comal		**14. Watershed:**			Dry Comal Creek			

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.)	___	1 ___	___	___	___
Region (1 req.)	___	1 ___	___	___	___
County(ies)	___	1 ___	___	___	___
Groundwater Conservation District(s)	___ Edwards Aquifer Authority ___Trinity-Glen Rose	1 ___Edwards Aquifer Authority 1 Comal Trinity GCD	___Kinney	___EAA ___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 1 ___Garden Ridge ___New Braunfels ___Schertz	NA	___San Antonio ETJ (SAWS)	NA

1 + 4

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Ralph Voss Jr., P.E.
~~Print Name of Customer~~/Authorized Agent 
Signature of Customer/Authorized Agent Date 07/31/19

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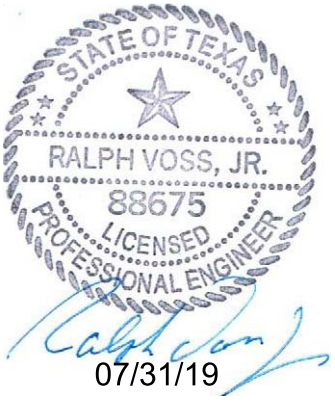
EAPP File Number:		Complex:		
Admin. Review(s) (No.):		No. AR Rounds:		
Delinquent Fees (Y/N):		Review Time Spent:		
Lat./Long. Verified:		SOS Customer Verification:		
Agent Authorization Complete/Notarized (Y/N):		Fee Check:	Payable to TCEQ (Y/N):	
Core Data Form Complete (Y/N):			Signed (Y/N):	
Core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



Section 3.0

GENERAL INFORMATION FORM

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.

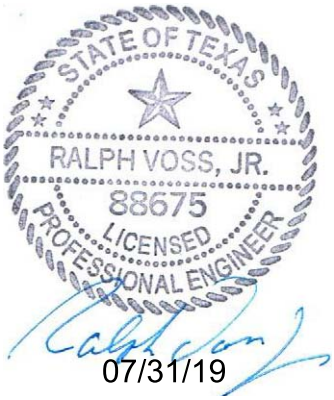
Signature

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 Customer/Agent: Ralph Voss Jr., P.E.

Date: 07/31/19

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Servtex Quarry, Fordyce Tract
2. County: Comal
3. Stream Basin: Dry Comal Creek
4. Groundwater Conservation District (If applicable): Edwards Aquifer Authority & Comal Trinity GCD
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☒ Transition Zone

6. Plan Type:

   ☒ WPAP
   ☐ SCS
   ☐ Modification
   ☐ AST
   ☐ UST
   ☐ Exception Request

7. Customer (Applicant):

   Contact Person: Lalit Bhatnager
   Entity: Hanson Aggregates LLC
   Mailing Address: 300 E. John Carpenter Freeway, Suite 1645
   City, State: Irving, TX Zip: 75062
   Telephone: (972) 814-4122 FAX: (469) 417-1438
   Email Address: lalit.bhatnagar@hanson.biz

8. Agent/Representative (If any):

   Contact Person: Ralph Voss Jr., P.E.
   Entity: Forster Engineering
   Mailing Address: 19915 Wittenburg
   City, State: San Anotnio, TX Zip: 78256
   Telephone: (210) 289-0580 FAX: (210) 698-5544
   Email Address: rvoss@forsterengineering.com

9. Project Location:

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

    The project site is located approximately 1 mile east of the intersection of FM 2252 and FM 1337 (Old Nacogdoches Road) on the north side of FM 1337. This is approximately 7.25 miles northeast of the Loop 1604/FM 2252 intersection.

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.

☒ Survey staking will be completed by this date: In advance of field inspection if requested.

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
☐ Existing industrial site
☒ Existing residential site
☐ Existing paved and/or unpaved roads
☐ Undeveloped (Cleared)
☒ 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:

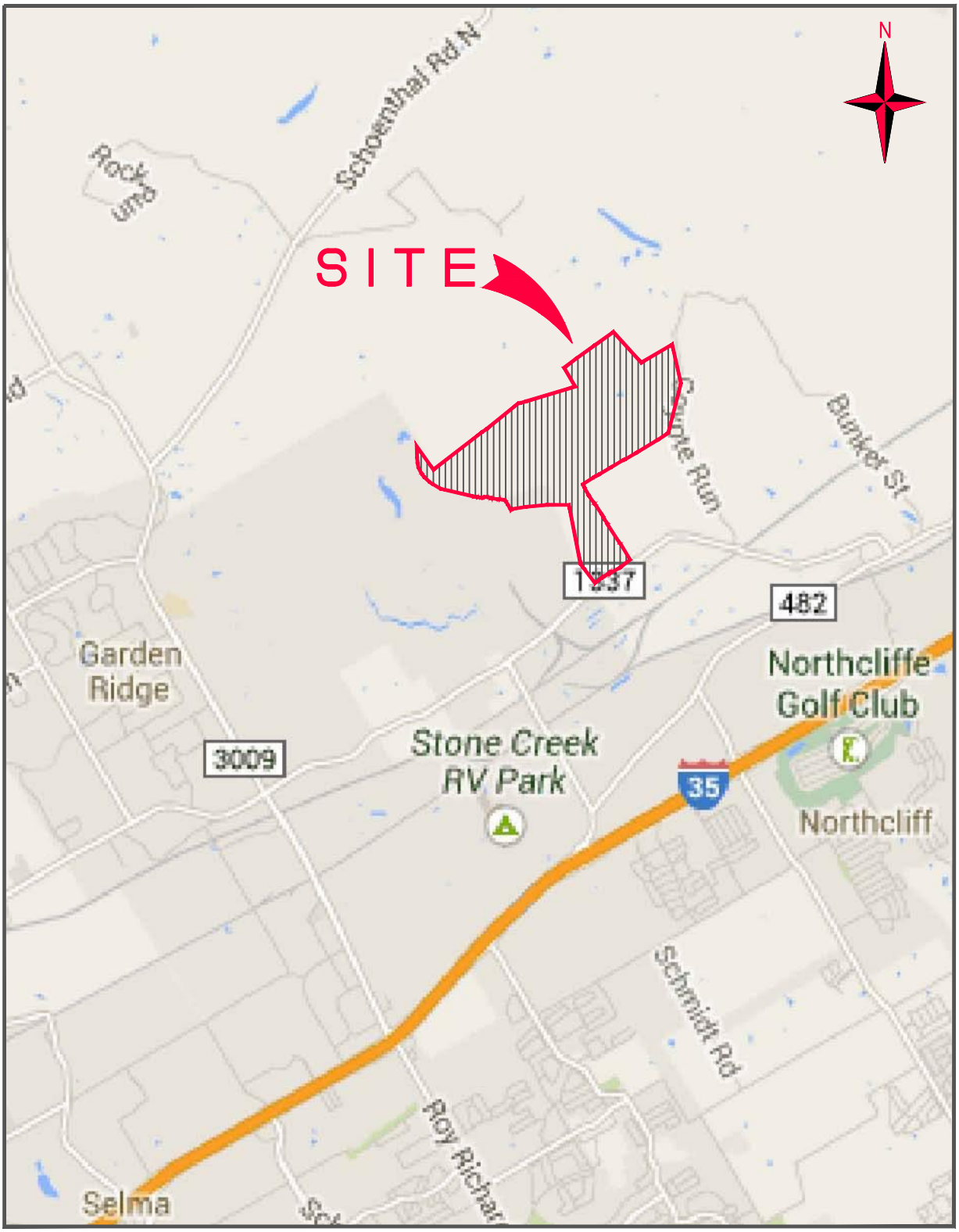
☒ For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
☐ For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
☐ For a UST Facility Plan or Modification or an AST Facility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

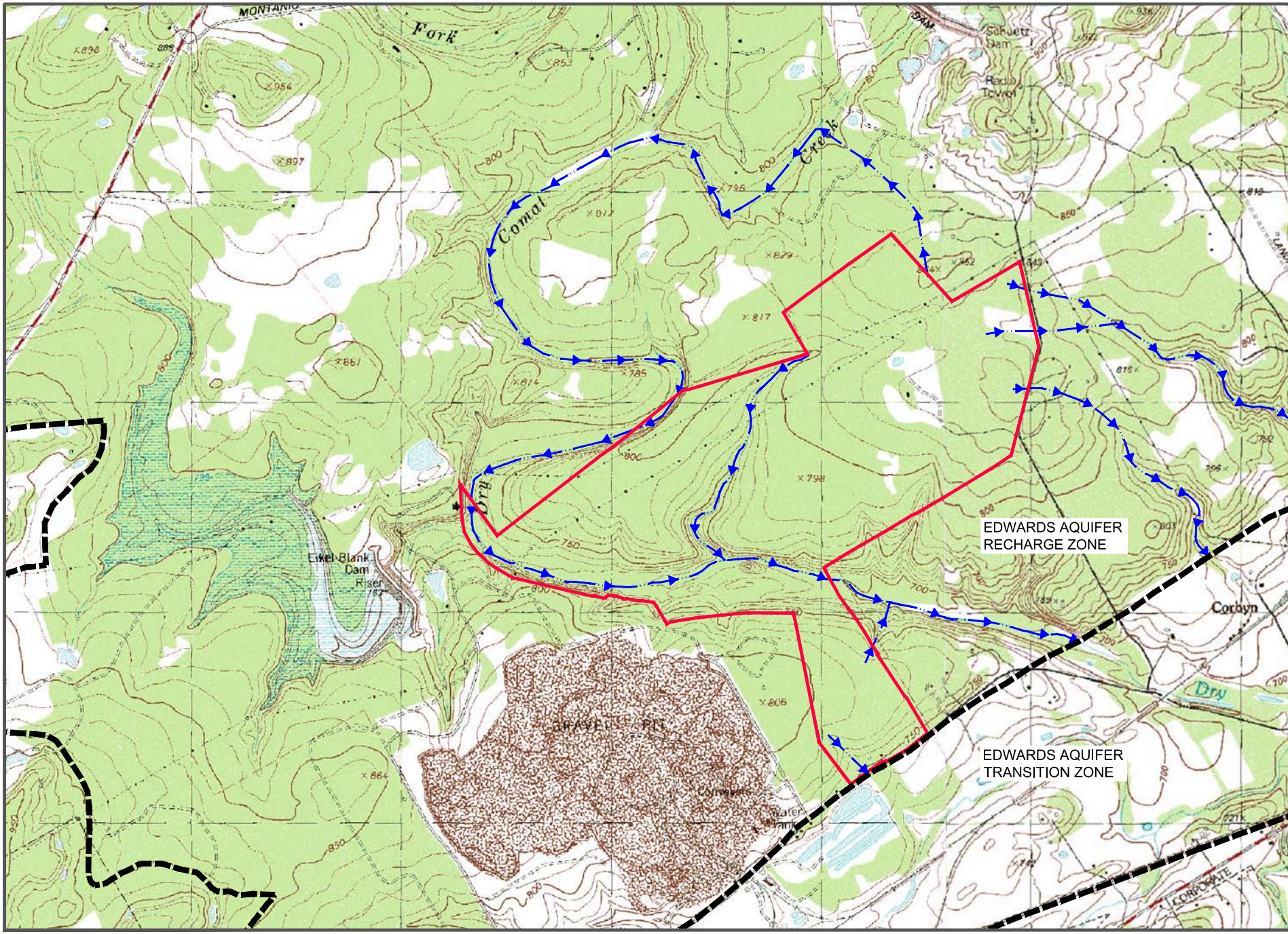


SITE LOCATION MAP
(Base Map: Google Map)

0' 2,500' 5,000' 10,000'

SCALE: 1" = 5,000'

HANSON FORDYCE
WPAP



GENERAL INFORMATION FORM TCEQ-0587
ATTACHMENT C
PROJECT DESCRIPTION

Hanson Aggregates LLC (Hanson) operates the Servtex Quarry in Comal County near Garden Ridge, Texas. The Servtex Quarry is an existing limestone quarrying and crushing operation which has been in operation since the late 1930's. Hanson has plans to expand the quarry into adjacent areas northeast of the existing quarry. The expansion area is comprised of approximately 695.66± acres known as the Fordyce Tract. The Fordyce Tract was acquired in 2000 and 2007 and has not been previously quarried.

This tract was previously covered by a WPAP, which expired on May 16, 2018 before it could be extended. The approval letter for this previous WPAP is included at the end of this section. Hanson Aggregates is submitting this WPAP application to re-permit the Fordyce Tract. Since the approval of the original WPAP application, Hanson has acquired an additional property, the 9.92± acre Mims Tract. The Mims Tract is located in the southwest corner of the original permitted boundary and is included as part of this permit application.

The Fordyce Tract has historically been utilized as ranchland. There are two rural homesteads on the property. No other previous developments were identified.

Quarry activities in the expansion area will be similar to existing quarry activities and include blasting, loading, and hauling. Existing residences in the southwest corner and northeastern portion of the tract will be demolished.

The expansion area will be quarried, but will not include impervious cover, sewage facilities, settling ponds or Above Ground Storage Tanks (AST). Quarry pit excavation limits will be maintained fifty feet from property lines and 100-year flood plain boundaries. To the extent possible, upgradient storm water will be diverted around the proposed mine area and on-site storm water will be captured within the quarry; or maintained on site by perimeter berms.

Temporary BMPs will utilize earthen berms constructed of topsoil material, rock berms, and vegetated buffer areas to control and treat storm water runoff. The earthen berms will be advanced incrementally around the active quarry perimeter in sequence with surface disturbance to control surface runoff. No permanent BMPs are proposed.

Offsite areas will not be affected by the project. Adjacent properties consist of the Servtex Quarry to the adjacent southwest and ranchland with rural homesteads on remaining adjacent properties.

2.1 Separation from Groundwater in the Recharge Zone

The Greg Mim's Well is located at 21895 Old Nacodoches Road, within the proposed quarry limits. Based on the State Well Report for this well, the static water level is approximately 215 feet below ground surface. The surface elevation at the well location is approximately 764 feet MSL, which makes the static water level approximately 549 feet MSL. The quarry will be mined to an elevation of 580 feet MSL to maintain an approximate 31-foot buffer above the recorded static water level.

A copy of the well report is provided at the end of this section. The well report source is (https://www.tceq.texas.gov/gis/waterwellview.html.

2.2 Sensitive Features

2.2.2.1 Caves

Two cave features (S-6 and S-21) and were identified during the geologic assessment. Figures illustrating the physical dimensions for Feature S-6 are provided in the Geologic Assessment section of this permit application. Due to the small surface opening and safety considerations, it was not possible to enter or map Feature S-21.

A total of 50 geologic features were identified by the Geological Assessment on the subject site, of which 28 were rated as sensitive. Within the proposed quarry limits, there are a total of 41 features, of which 22 are rated as sensitive.

2.2.2 Setbacks and Buffers for Sensitive Features

A total of 50 geologic features were identified by the Geological Assessment on the subject site, of which 28 were rated as sensitive. Within the proposed quarry limits, there are a total of 41 features, of which 22 are rated as sensitive.

The geologic features within the proposed quarry limits will be excavated and mined out. Prior to quarry excavation of the features, the sensitive features will be protected by earthen berms or natural vegetation buffers until such time as the area of the quarry containing the sensitive feature will be mined.

The geologic features outside the proposed quarry limits will be protected by earthen berms or natural vegetation buffers.

2.2.3 Sensitive Features Identified in the Geological Assessment

A total of 50 geologic features were identified by the Geological Assessment on the entire site, of which 28 were rated as sensitive. Within the proposed quarry excavation limits, there are a total of 41 features, of which 22 are rated as sensitive. These 22 features will be excavated by quarry activities.

2.2.4 Sensitive Features Discovered During Quarrying

Sensitive geologic features discovered in the active pit during quarrying operations will be addressed as follows:

1. Sensitive geologic feature recognition training for plant and quarry operators will be conducted. An on-site quarry manager experienced in feature identification will conduct visual surveys to ensure adequate identification and reporting of sensitive features. The on-site quarry manager will receive annual training from a licensed Professional Geologist on feature identification and protection. Results of each visual survey conducted by the on-site quarry manager will be documented and provided to TCEQ upon request.
2. The appropriate TCEQ Regional Office will be immediately notified upon discovery of any sensitive features encountered during the quarrying operations. Upon discovery, sensitive features on quarry benches will be protected with material berms, which will be maintained on a daily basis if necessary.
3. Sensitive features located on the ultimate quarry floor, which will not be excavated or mined out by further quarry activities, will be sealed with flowable fill before regulated activities near the sensitive feature may proceed. Sensitive features located on the quarry floor of intermediate benches above the ultimate quarry floor, will not be sealed, but will be protected by material berms until such time as this area of the quarry containing the sensitive feature will be mined.
4. Sensitive features located in the highwalls, which are well above the level of potential water ponding in the quarry pit and unlikely to receive contamination from any other logical or recognized source, will not be sealed.
5. If sensitive features located in the highwalls are below the level of potential water ponding in the quarry pit, or likely to receive contamination from any other logical or recognized source, they will be sealed with flowable fill before regulated activities near the sensitive feature may proceed.
6. Large features may be first filled with gravel or large rocks before placement of flowable fill. A minimum of 18-inches of flowable fill will placed above the gravel or rocks. Flowable fill is to be used to provide a reliable seal throughout the sensitive feature as it's characteristics allow it to flow around and between the gravel and large rocks and conform to irregular limits of a sensitive feature. As structural integrity and bearing capacity is not a design concern in these applications, concrete is not recommended or required.

2.2.5 Inspection and Maintenance of Sensitive Features

The geologic features within the proposed quarry limits will be excavated and mined out. Prior to quarry excavation of the features, the sensitive features will be protected by earthen berms or natural vegetation buffers until such time as the area of the quarry containing the sensitive feature will be mined.

The geologic features outside the proposed quarry limits will be protected by earthen berms or natural vegetation buffers.

Sensitive features, protective earthen berms, and natural vegetation buffers will be inspected on an annual basis. If necessary, maintenance will be performed to restore the earthen berms to their original condition.

2.3 Quarry Berms

Earthen berms surrounding the disturbed areas of the site, rock berms, and natural vegetation buffers will either filter or prevent any on-site surface water from flowing off site untreated. The earthen berms and rock berms will be constructed in stages in advance of and in coordination with quarry disturbances. Once the quarry pit and earthen berms are established, there will be no significant or untreated discharges from this site. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features which may exist down-gradient of the site.

Earthen berms, rock berms, and natural vegetation buffers will be designed and constructed consistent with TCEQ guidance RG-348 Edwards Aquifer Rules Technical Guidance on BMPs.

2.4 Haul Roads, Parking Lots, and Tire Washes

There are no proposed parking lots or tire washes in the permit area. Hauling will take place along the quarry floor and connect with existing haul roads outside the permit area.

2.5 Stream Crossings and Buffers

An at-grade, un-paved, low-water crossing will cross the Dry Comal Creek on the southern site boundary, connecting the new quarry site with the existing quarry site. None of the Dry Comal Creek 100-year flood plain is proposed to be mined. Earthen berms and a natural vegetation buffer along the flood plain limits will prevent surface water from flowing off site untreated.

2.6 Dust Control

A water truck will be utilized to control dust in active areas of the quarry. Natural vegetative cover will be left in place as long as practicable to reduce the potential for dust to become airborne. A 50-foot wide natural vegetated buffer around the site will also serve as a wind break to reduce the potential for dust to become airborne.

2.7 Mineral-Exploration Test Holes and Water Wells

There are two existing water wells on the subject property, which will be plugged in accordance with applicable regulations prior to mining through the area.

2.8 Vehicle and Equipment Maintenance

Vehicle and equipment maintenance will not be performed on the Fordyce Tract except under extenuating circumstances. Vehicles and equipment will be parked in designated locations, visually checked on a daily basis, and drip pans will be used to catch drips as needed.

Chronic drips will be repaired as soon as practicable. When maintenance must be performed, a plastic liner or disposable base pad will be utilized as secondary containment.

Dispose of all used oil, antifreeze, solvents, and other automotive-related chemicals according to manufacturer instructions. These wastes require special handling and disposal. Used oil, antifreeze, and some solvents can be recycled at designated facilities, but other chemicals must be disposed of at a hazardous-waste disposal site.

2.9 Storage and Movement of Petroleum and Fuel

2.9.1 AST Facility Plan

This site will not have an AST Facility.

2.9.2 Fueling Outside the Pit

The Servtex Quarry has an active Spill Prevention Control and Countermeasure (SPCC) plan in accordance with 40 CFR part 112. Heavy equipment fueled outside the active pit area by mobile fuel trucks will be in areas where site topography, diversionary structures, and readily available on-site spill response equipment and materials are practical and effective to prevent a discharge of petroleum products from reaching navigable waters at this facility. Fueling may also occur outside the pit at a permanent fuel storage facility located at the main Servtex Quarry. This fuel storage location has permanent concrete aprons for secondary containment to catch any drips or spills during fueling.

2.9.3 Fueling of Equipment in the Pit

Because of distance and operational considerations, heavy equipment will be fueled in the active quarry pit. Wheels on mobile fuel truck and heavy equipment will be chocked while refueling, and the refueling operation will be continuously monitored by refueling personnel. Drip pans will be used for secondary containment when transferring fuel from the mobile fuel truck to the heavy equipment fuel tanks within the pit.

No permanent or temporary fuel containment structures are proposed to be implemented for the stationary equipment located within the quarry pit. Most, if not all, planned stationary equipment (eg conveyors, screens, crushers, etc.) is electrically powered.

2.10 Industrial Facilities on-Site

There are no existing or proposed industrial facilities located on site.

2.11 Sanitary Wastewater Disposal

There is no existing or proposed on-site sewage facility located on site. Domestic project wastewater will be collected in portable toilets and disposed of weekly by a TCEQ registered waste disposal service. Portable toilets will be located on level ground surfaces away from high traffic areas. Portable toilets will be routinely inspected and serviced at a frequency sufficient to maintain sanitary conditions. Employees will be trained on waste water discharging prohibitions.

2.11.1 Portable Toilet BMPs

Transport (industrial activity)

- Empty portable toilets before transporting them.
- Securely fasten the toilers to the transport truck.
- Use band trucks, dollies, and power tailgates whenever possible.

Placement (site activity – construction)

- Locate portable toilets at least 20 feet from the nearest storm-drain inlet or sensitive feature buffer area
- Build an earthen berm or sandbag containment around portable toilets for spill containment and protection from leaks.
- Prepare a level ground surface with clear access to the toilets.
- Secure all portable toilets with a stake driven into the ground to prevent tipping by accident, weather, or vandalism.

Maintenance of portable toilets (site activity – industrial and construction)

- Inspect the toilets frequently (daily during the work-week) for leaks and have the units serviced and sanitized at time intervals that will maintain sanitary conditions of each toilet (typically weekly).
- A licensed waste collector should service all the toilets.
- Suppliers should carry bleach for disinfection in the event of a spill or leak.
- Properly store (cover) and handle chemical materials.
- Train employees on these BMPs, prohibitions on discharging storm water, and wastewater-discharge requirements.

2.12 Spill Prevention and Control

Hanson Aggregates maintains the following required plans and permits onsite which address spill prevention and control and are incorporated herewith by reference.

- Spill Prevention Control and Countermeasure (SPCC) Plan (40CFR Part 112)
- TPDES Storm Water Pollution Prevention Plan

3 BMPs for Areas Discharging to Surface Waters

3.1 Introduction

Earthen berms surrounding the disturbed areas of the site, rock berms, and natural vegetation buffers will either filter or prevent any on-site surface water from flowing off site untreated. The earthen berms and rock berms will be constructed in stages in advance of and in coordination with quarry disturbances. Once the quarry pit and earthen berms are established, there will be no significant or untreated discharges from this site. By containing

the sediment and solids within the site, they will not enter surface streams and/or sensitive features which may exist down-gradient of the site.

3.2 BMPs for Temporary Erosion and Sediment Control

A discussion of temporary erosion and sediment control practices and measures is provided in Attachment D of the Temporary Section of this WPAP Application.

3.3 Permanent Structural BMPs

No permanent structural BMPs are proposed.

3.3.1 General Requirements

A discussion of the general requirements is provided in the Permanent Section of this WPAP Application.

3.3.2 Required Calculations

Any required calculations are provided in the Permanent Section of this WPAP Application.

4 BMP Requirements for Areas within Quarry Pits

4.1 Introduction

During the operational life of the quarry, the pit areas will not drain to surface waters. The primary BMPs for areas within the quarry pit have been previously described and include: watering for dust control; vehicle maintenance to minimize oil drips or leaks; proper placement, utilization, and maintenance of portable toilets; and identification and protection of sensitive features discovered during quarrying.

The quarry pit is similar to an active on-going construction site and there are no paved areas. No BMPs will be implemented within the quarry pit to remove sedimentation from vehicles as all vehicles will be traveling only on unpaved areas or roads. The Fordyce pit will connect to the main Servtex Quarry on unpaved roads. Equipment travel between the Fordyce pit and the main Servtex Quarry will be limited because almost all stone quarried in the Fordyce pit will be transported by conveyor, not by trucks or other mobile equipment.

4.2 Permanent Structural BMPs

Upon termination of quarry activities, storm water that falls in the quarry pits will be retained in the pits and will not discharge to surface streams. For this reason, the quarry pits will not generate more TSS than in the original condition. The quarry pits will be surrounded by earthen berms, rock berms, and natural vegetative buffers which will either filter or prevent any on-site surface water from flowing off site untreated. Additionally, the earthen berms will prevent most upgradient storm water from running into the pits. For this reason, the primary source of storm water entering the pits will be direct rainfall, the majority of which is expected to evaporate.

In a conventional quarry pit, it is not common practice to permanently abandon parts of the quarry. Portions of the quarry mined to total depth are frequently backfilled with undersized or oversized material. By its nature, the bottom of a quarry is permanently stabilized with compacted base material. Additionally, in the absence of suitable growing medium on the quarry floor, establishment of uniform perennial vegetative cover of at least 70 percent of the native background vegetative cover for the area is not practicable.

5 Management of Process Water

5.1.1 Dimension-Stone Facilities (and Other Sites with Minor Water Use)

This Fordyce tract will produce only aggregate, not dimension-stone. Therefore, this section is not applicable to this site. Aggregate washing operations are not proposed to be conducted within the site boundaries of this proposed WPAP application.

5.1.2 Innovative Technology for Aggregate-Production Facilities

If applicable, a discussion of innovative technology is provided in Attachment H of the Permanent Section of this WPAP Application.

2.1 Separation from Groundwater in the Recharge Zone

The Greg Mim's Well is located at 21895 Old Nacodoches Road, within the proposed quarry limits. Based on the State Well Report for this well, the static water level is approximately 215 feet below ground surface. The surface elevation at the well location is approximately 764 feet MSL, which makes the static water level approximately 549 feet MSL. The quarry will be mined to an elevation of 580 feet MSL to maintain an approximate 31-foot buffer above the recorded static water level.

A copy of the well report is provided at the end of this section. The well report source is (https://www.tceq.texas.gov/gis/waterwellview.html.

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1. Sensitive geologic feature recognition training for plant and quarry operators will be conducted. An on-site quarry manager experienced in feature identification will conduct visual surveys to ensure adequate identification and reporting of sensitive features. The on-site quarry manager will receive annual training from a licensed Professional Geologist on feature identification and protection. Results of each visual survey conducted by the on-site quarry manager will be documented and provided to TCEQ upon request.
2. The appropriate TCEQ Regional Office will be immediately notified upon discovery of any sensitive features encountered during the quarrying operations. Upon discovery, sensitive features on quarry benches will be protected with material berms, which will be maintained on a daily basis if necessary.
3. Sensitive features located on the ultimate quarry floor, which will not be excavated or mined out by further quarry activities, will be sealed with flowable fill before regulated activities near the sensitive feature may proceed. Sensitive features located on the quarry floor of intermediate benches above the ultimate quarry floor, will not be sealed, but will be protected by material berms until such time as this area of the quarry containing the sensitive feature will be mined.
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2.2.5 Inspection and Maintenance of Sensitive Features

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The geologic features outside the proposed quarry limits will be protected by earthen berms or natural vegetation buffers.

Sensitive features, protective earthen berms, and natural vegetation buffers will be inspected on an annual basis. If necessary, maintenance will be performed to restore the earthen berms to their original condition.

2.3 Quarry Berms

Earthen berms surrounding the disturbed areas of the site, rock berms, and natural vegetation buffers will either filter or prevent any on-site surface water from flowing off site untreated. The earthen berms and rock berms will be constructed in stages in advance of and in coordination with quarry disturbances. Once the quarry pit and earthen berms are established, there will be no significant or untreated discharges from this site. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features which may exist down-gradient of the site.

Earthen berms, rock berms, and natural vegetation buffers will be designed and constructed consistent with TCEQ guidance RG-348 Edwards Aquifer Rules Technical Guidance on BMPs.

2.4 Haul Roads, Parking Lots, and Tire Washes

There are no proposed parking lots or tire washes in the permit area. Hauling will take place along the quarry floor and connect with existing haul roads outside the permit area.

2.5 Stream Crossings and Buffers

An at-grade, un-paved, low-water crossing will cross the Dry Comal Creek on the southern site boundary, connecting the new quarry site with the existing quarry site. None of the Dry Comal Creek 100-year flood plain is proposed to be mined. Earthen berms and a natural vegetation buffer along the flood plain limits will prevent surface water from flowing off site untreated.

2.6 Dust Control

A water truck will be utilized to control dust in active areas of the quarry. Natural vegetative cover will be left in place as long as practicable to reduce the potential for dust to become airborne. A 50-foot wide natural vegetated buffer around the site will also serve as a wind break to reduce the potential for dust to become airborne.

2.7 Mineral-Exploration Test Holes and Water Wells

There are two existing water wells on the subject property, which will be plugged in accordance with applicable regulations prior to mining through the area.

2.8 Vehicle and Equipment Maintenance

Vehicle and equipment maintenance will not be performed on the Fordyce Tract except under extenuating circumstances. Vehicles and equipment will be parked in designated locations, visually checked on a daily basis, and drip pans will be used to catch drips as needed.

Chronic drips will be repaired as soon as practicable. When maintenance must be performed, a plastic liner or disposable base pad will be utilized as secondary containment.

Dispose of all used oil, antifreeze, solvents, and other automotive-related chemicals according to manufacturer instructions. These wastes require special handling and disposal. Used oil, antifreeze, and some solvents can be recycled at designated facilities, but other chemicals must be disposed of at a hazardous-waste disposal site.

2.9 Storage and Movement of Petroleum and Fuel

2.9.1 AST Facility Plan

This site will not have an AST Facility.

2.9.2 Fueling Outside the Pit

The Servtex Quarry has an active Spill Prevention Control and Countermeasure (SPCC) plan in accordance with 40 CFR part 112. Heavy equipment fueled outside the active pit area by mobile fuel trucks will be in areas where site topography, diversionary structures, and readily available on-site spill response equipment and materials are practical and effective to prevent a discharge of petroleum products from reaching navigable waters at this facility. Fueling may also occur outside the pit at a permanent fuel storage facility located at the main Servtex Quarry. This fuel storage location has permanent concrete aprons for secondary containment to catch any drips or spills during fueling.

2.9.3 Fueling of Equipment in the Pit

Because of distance and operational considerations, heavy equipment will be fueled in the active quarry pit. Wheels on mobile fuel truck and heavy equipment will be chocked while refueling, and the refueling operation will be continuously monitored by refueling personnel. Drip pans will be used for secondary containment when transferring fuel from the mobile fuel truck to the heavy equipment fuel tanks within the pit.

No permanent or temporary fuel containment structures are proposed to be implemented for the stationary equipment located within the quarry pit. Most, if not all, planned stationary equipment (eg conveyors, screens, crushers, etc.) is electrically powered.

2.10 Industrial Facilities on-Site

There are no existing or proposed industrial facilities located on site.

2.11 Sanitary Wastewater Disposal

There is no existing or proposed on-site sewage facility located on site. Domestic project wastewater will be collected in portable toilets and disposed of weekly by a TCEQ registered waste disposal service. Portable toilets will be located on level ground surfaces away from high traffic areas. Portable toilets will be routinely inspected and serviced at a frequency sufficient to maintain sanitary conditions. Employees will be trained on waste water discharging prohibitions.

2.11.1 Portable Toilet BMPs

Transport (industrial activity)

- Empty portable toilets before transporting them.
- Securely fasten the toilers to the transport truck.
- Use band trucks, dollies, and power tailgates whenever possible.

Placement (site activity – construction)

- Locate portable toilets at least 20 feet from the nearest storm-drain inlet or sensitive feature buffer area
- Build an earthen berm or sandbag containment around portable toilets for spill containment and protection from leaks.
- Prepare a level ground surface with clear access to the toilets.
- Secure all portable toilets with a stake driven into the ground to prevent tipping by accident, weather, or vandalism.

Maintenance of portable toilets (site activity – industrial and construction)

- Inspect the toilets frequently (daily during the work-week) for leaks and have the units serviced and sanitized at time intervals that will maintain sanitary conditions of each toilet (typically weekly).
- A licensed waste collector should service all the toilets.
- Suppliers should carry bleach for disinfection in the event of a spill or leak.
- Properly store (cover) and handle chemical materials.
- Train employees on these BMPs, prohibitions on discharging storm water, and wastewater-discharge requirements.

2.12 Spill Prevention and Control

Hanson Aggregates maintains the following required plans and permits onsite which address spill prevention and control and are incorporated herewith by reference.

- Spill Prevention Control and Countermeasure (SPCC) Plan (40CFR Part 112)
- TPDES Storm Water Pollution Prevention Plan

3 BMPs for Areas Discharging to Surface Waters

3.1 Introduction

Earthen berms surrounding the disturbed areas of the site, rock berms, and natural vegetation buffers will either filter or prevent any on-site surface water from flowing off site untreated. The earthen berms and rock berms will be constructed in stages in advance of and in coordination with quarry disturbances. Once the quarry pit and earthen berms are established, there will be no significant or untreated discharges from this site. By containing

the sediment and solids within the site, they will not enter surface streams and/or sensitive features which may exist down-gradient of the site.

3.2 BMPs for Temporary Erosion and Sediment Control

A discussion of temporary erosion and sediment control practices and measures is provided in Attachment D of the Temporary Section of this WPAP Application.

3.3 Permanent Structural BMPs

No permanent structural BMPs are proposed.

3.3.1 General Requirements

A discussion of the general requirements is provided in the Permanent Section of this WPAP Application.

3.3.2 Required Calculations

Any required calculations are provided in the Permanent Section of this WPAP Application.

4 BMP Requirements for Areas within Quarry Pits

4.1 Introduction

During the operational life of the quarry, the pit areas will not drain to surface waters. The primary BMPs for areas within the quarry pit have been previously described and include: watering for dust control; vehicle maintenance to minimize oil drips or leaks; proper placement, utilization, and maintenance of portable toilets; and identification and protection of sensitive features discovered during quarrying.

The quarry pit is similar to an active on-going construction site and there are no paved areas. No BMPs will be implemented within the quarry pit to remove sedimentation from vehicles as all vehicles will be traveling only on unpaved areas or roads. The Fordyce pit will connect to the main Servtex Quarry on unpaved roads. Equipment travel between the Fordyce pit and the main Servtex Quarry will be limited because almost all stone quarried in the Fordyce pit will be transported by conveyor, not by trucks or other mobile equipment.

4.2 Permanent Structural BMPs

Upon termination of quarry activities, storm water that falls in the quarry pits will be retained in the pits and will not discharge to surface streams. For this reason, the quarry pits will not generate more TSS than in the original condition. The quarry pits will be surrounded by earthen berms, rock berms, and natural vegetative buffers which will either filter or prevent any on-site surface water from flowing off site untreated. Additionally, the earthen berms will prevent most upgradient storm water from running into the pits. For this reason, the primary source of storm water entering the pits will be direct rainfall, the majority of which is expected to evaporate.

In a conventional quarry pit, it is not common practice to permanently abandon parts of the quarry. Portions of the quarry mined to total depth are frequently backfilled with undersized or oversized material. By its nature, the bottom of a quarry is permanently stabilized with compacted base material. Additionally, in the absence of suitable growing medium on the quarry floor, establishment of uniform perennial vegetative cover of at least 70 percent of the native background vegetative cover for the area is not practicable.

5 Management of Process Water

5.1.1 Dimension-Stone Facilities (and Other Sites with Minor Water Use)

This Fordyce tract will produce only aggregate, not dimension-stone. Therefore, this section is not applicable to this site. Aggregate washing operations are not proposed to be conducted within the site boundaries of this proposed WPAP application.

5.1.2 Innovative Technology for Aggregate-Production Facilities

If applicable, a discussion of innovative technology is provided in Attachment H of the Permanent Section of this WPAP Application.

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 16, 2016

Mr. Lalit Bhatnager, P.E.
Hanson Aggregates LLC
8505 Freeport Parkway, Suite 500
Irving, Texas 75063

Re: Edwards Aquifer, Comal County

NAME OF PROJECT: Servtex Quarry Fordyce Tract; Located approximately 1 mile east of the FM 2252 and FM 1337 intersection; Garden Ridge, Texas

PLAN TYPE: Request for the Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Regulated Entity No. RN102541612; Additional ID No. 13000022

Dear Mr. Bhatnager:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the above-referenced project submitted to the San Antonio Regional Office by Forster Engineering on behalf of Hanson Aggregates LLC on November 16, 2015. Final review of the WPAP was completed after additional material was received on March 17, 2016 and April 29, 2016. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in 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 no later than 23 days after the date of this approval letter. *This approval expires two (2) 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 requested.*

PROJECT DESCRIPTION

The proposed limestone quarry project will have a total area of approximately 685.74 acres. The proposed quarry pit will disturb approximately 485 acres. The proposed

activities for the site include quarrying to an elevation no deeper than 580 feet above mean sea level (a.m.s.l.). No on-site sewage facility is proposed at this time. Project wastewater (domestic) will be collected in portable toilets and disposed of two times per week by a TCEQ registered waste disposal service. Trash generated on-site will be disposed of in a dumpster and handled by a licensed waste service. Blasting agents will be used in the mining process. The site will not include process water. The site is adjacent to the existing limestone quarry (Servtex Quarry Plant) located south at 21303 FM 2252, Garden Ridge, Comal County. The Dry Comal Creek separates the quarries, but will utilize a haul road between the two quarries. Stockpiles of material will be kept at Servtex Quarry Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

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

A 50 foot natural buffer will be maintained along the perimeter of the property and the Dry Comal Creek to reduce soil erosion and runoff velocities.

Expansion of the quarry will occur in phases. Expansion in phases will allow vegetation to remain in place and limit the amount of soil that is disturbed at once.

An earthen berm (safety berm) composed of compacted soil and/or overburden will be constructed. At the full extent of the quarry pit, the earthen berm will encircle the quarry pit. Upgradient storm water will be diverted around the site and onsite flows will be prevented from leaving the site.

Rock berms will be installed on the downgradient side of the earthen berm in areas of concentrated flow.

Refueling and maintenance activities for vehicles and equipment will not be performed on the Servtex Quarry Fordyce Tract except under extenuating circumstances. If emergency maintenance occurs or if refueling on the tract must occur, appropriate protection measures will be implemented. Portable secondary containment will be utilized and will be disposed of according to 30 TAC 335.

An at-grade low-water crossing will cross the Dry Comal Creek on the southern site boundary, connecting the new quarry site with the existing quarry site. None of the Dry Comal Creek 100-year flood plain is proposed to be mined.

GEOLOGY

According to the geologic assessment included with the application, the site is located on the Pecan Gap Chalk, Buda Limestone, Del Rio clay and the Edwards Group-Person Formation. A total of forty-nine (49) geologic features were evaluated by the project geologist, with twenty-eight (28) geologic features having a high probability of rapid infiltration and therefore a sensitive rating. Sensitive features S-1, S-9, S-10, S-11, S-13, and S-44 are located outside the proposed quarry limits and will be protected. The San Antonio Regional Office site assessment conducted on January 15, 2016 revealed that the site was generally as described in the application. Natural buffers were proposed for six (6) natural sensitive features, S-1, S-9, S-10, S-11, S-13, and S-44. No regulated activities (such as

construction or soil disturbing activities) will take place within the natural buffers. The size of the natural buffers are generally based on the drainage area for each sensitive feature, which is a minimum of 50 feet. The remaining sensitive features will be addressed with temporary protection methods until such time the area is mined.

SPECIAL CONDITIONS

I. In addition to the requirements for discovered features, the on-site quarry manager will receive annual training from a licensed Professional Geoscientist on feature identification and protection. Each occurrence of this training must be documented and the documentation must be presented when requested by TCEQ representatives. The on-site quarry manager experienced in feature identification will conduct visual surveys of the pit to ensure adequate identification and reporting of encountered sensitive features. Visual surveys will be conducted monthly. Results of each visual survey conducted by the on-site quarry manager must be documented and must be made available when requested by TCEQ representatives.

II. This approval does not authorize the construction or installation of aboveground storage tanks at the site.

III. The BMPs and measures proposed in the application and/or described in this approval letter must be operational prior to any soil disturbing activities with in a BMP's drainage area.

IV. Prior to initiating construction activities, document the existing conditions of Dry Comal Creek at and below the proposed location of the low water crossing within the project limits. The assessment should include photographic and narrative documentation that will enable future comparisons for the purposes of determining impact from sediment accumulation. The plan holder must install at-grade erosion and sediment controls that have been designed to retain sediment on-site to the extent practicable with consideration for local topography and rainfall. Discharges that would cause or contribute to a violation of water quality standards, or would fail to protect and maintain existing designated areas of receiving waters are not allowed. Routine inspections must be performed following rain events to determine if Dry Comal Creek has accumulated any sediment from the quarrying activity. Accumulations of sediment must be removed before the next rain event and may require coordination with other governmental authorities. Records of inspection, maintenance, and repairs of the crossing's control measures must include the date of the inspection, date of regular maintenance, date(s) of discovery of areas in need of sediment removal, and date(s) that the control measure(s) were returned to full function. Those records must be maintained on site and be available for review by TCEQ.

V. Intentional discharges of sediment laden water from regulated activities are not allowed. If dewatering becomes necessary, appropriate measures must be taken.

VI. Pursuant to 30 TAC §213.4(h)(3) and as stated in the Edwards Aquifer protection plan, this protection plan approval or extension will expire and no extension will be granted if more than 50% of the total construction has not been completed within 10 years from the initial approval of the plan. A new Edwards Aquifer protection plan must be submitted to the TCEQ with the appropriate fees for review and

approval by the executive director prior to commencing or continuing any construction or regulated activities beyond 10 years. The Applicant must submit a status report for the project containing information regarding the percentage of the total project construction completed within 180 days prior to the expiration date of this plan approval. If at that time, the total project construction cannot be demonstrated to be at least 50% complete, the Applicant must submit a new Edwards Aquifer protection plan to the TCEQ for review and approval before continuing any construction or regulated activities beyond 10 years from the date of initial approval of the plan.

VII. If a new Edwards Aquifer protection plan is submitted to TCEQ in compliance with 30 TAC §213.4(h) (3), this approved plan will continue in effect until the executive director makes a determination on the new plan.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.
5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be

submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written 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. The executive director will use the notification to determine if the approved plan is eligible for an extension.

8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, 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. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. 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.
9. 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. 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. Voids may be filled with gravel.

<u>During Construction:</u>

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. 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. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
13. One well exists on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. 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.

15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.

16. 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.

17. 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.

<u>After Completion of Construction:</u>

18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

19. 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 (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Ms. Lillian Butler of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4026.

Sincerely,

Lynn Bumguardner, Water Section Manager
San Antonio Region
Texas Commission on Environmental Quality

LB/LB/eg

Enclosure: Deed Recordation Affidavit, Form TCEQ-0625

cc: Mr. Charles P. Forster, P.E., Forster Engineering
The Honorable Nadine L. Knaus, City of Garden Ridge
Mr. Thomas H. Hornseth, P.E., Comal County
Mr. Roland Ruiz, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC 212

Send original copy by certified mail to: TNRCC, P.O. Bo[illegible]87, Austin, TX 78711-3087

Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

1) OWNER Greg Mim's (Name) ADDRESS 21895 Old Nacogdoches (Street or RFD) San Antonio (City) TX (State) 78230 (Zip)

2) ADDRESS OF WELL: County Comal 21895 Old Nacogdoches Rd (Street, RFD or other) New Braunfels (City) TX (State) 78130 (Zip) GRID # 68-22-9

3) TYPE OF WORK (Check): [X] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

4) PROPOSED USE (Check): [ ] Monitor [ ] Environmental Soil Boring [X] Domestic [ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell
If Public Supply well, were plans submitted to the TNRCC? [ ] Yes [ ] No

5)

6) WELL LOG:
Date Drilling:
Started 5-3 1997
Completed 5-10 1997

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
10"	Surface	180
180'	180	285

7) DRILLING METHOD (Check): [ ] Driven [X] Air Rotary [ ] Mud Rotary [ ] Bored [ ] Air Hammer [ ] Cable Tool [ ] Jetted [ ] Other

From (ft.)	To (ft.)	Description and color of formation material
0	1	Black Dirt
1	15	Hard Rock
15	20	Hard Rock & Flint
20	22	Flint Rock
22	25	Orange Limestone
25	40	Orange Limestone w/Clay
40	58	White Limestone
58	60	Orange Clay
60	78	White Limestone
78	97	Yellow Limestone
97	122	White Limestone
122	285	Orange Honeycomb Edwards

(Use reverse side if necessary)

RECEIVED JUN - 4 1997

8) Borehole Completion (Check): [ ] Open Hole [X] Straight Wall [ ] Underreamed [ ] Gravel Packed [ ] Other
If Gravel Packed give interval ... from ____ ft. to ____ ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
10	Used	8 5/8" Steel	-1	10	
6"	New	Plastic	-1	184	
4 1/2	New	Plastic	-1	285	

9) CEMENTING DATA [Rule 338.44(1)]
Cemented from 205 ft. to 225 ft. No. of sacks used 2 Gallons
0 ft. to 11 ft. No. of sacks used 20 Reg
Method used 30 TAC § 238.44-(3)
Cemented by Driller
Distance to septic system field lines or other concentrated contamination ____ ft.
Method of verification of above distance Property Plat

13) TYPE PUMP: [ ] Turbine [ ] Jet [X] Submersible [ ] Cylinder [ ] Other
Depth to pump bowls, cylinder, jet, etc., 252 ft.

10) SURFACE COMPLETION
[ ] Specified Surface Slab Installed [Rule 338.44(2)(A)]
[X] Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
[ ] Pitless Adapter Used [Rule 338.44(3)(b)]
[X] Approved Alternative Procedure Used [Rule 338.71]

14) WELL TESTS:
Type test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: 50 gpm with 0 ft. drawdown after 2 hrs.

11) WATER LEVEL:
Static level 215 ft. below land surface Date 5-12-97
Artesian flow ____ gpm. Date ____

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [X] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ____ Depth of strata ____
Was a chemical analysis made? [ ] Yes [ ] No

12) PACKERS:

	Type	Depth
Rubber	Cone	
Rubber	Cone	10'

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Newborn Water Well Sor (Type or print) WELL DRILLER'S LICENSE NO. 1999 WPKL

ADDRESS 8015 Jethro Lane (Street or RFD) San Antonio (City) TX (State) 78266 (Zip)

(Signed) J E Newborn (Licensed Well Driller) (Signed) [signature] (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TNRCC-0199 (Rev. 11-01-94)

TNRCC COPY

Section 4.0

GEOLOGIC ASSESSMENT FORM

FORSTER ENGINEERING

19915 Wittenburg
San Antonio, Texas 78256
p (210) 698-5544 c (210) 771-5721
fforster@forsterengineering.com
www.forsterengineering.com

August 26, 2013

Mr. Lalit Bhatnagar
Hanson Aggregates, LLC.
21303 FM 2252
San Antonio, Texas 78266

Re: Servtex Quarry, Fordyce Tract
Geologic Assessment

Dear Mr. Bhatnagar:

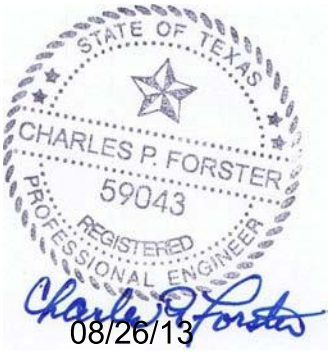
Forster Engineering has completed the Geologic Assessment for the above-referenced site. A copy of the Geologic Assessment report is attached on current Texas Commission on Environmental Quality (TCEQ) forms.

The surface reconnaissance was performed in two phases in May and June 2013. Transect spacing utilized during the surface reconnaissance was approximately 50-feet. Areas within the flood plain and areas not intended for future quarrying activities were generally not mapped. Geologic and man-made features were identified in the project area as discussed herein.

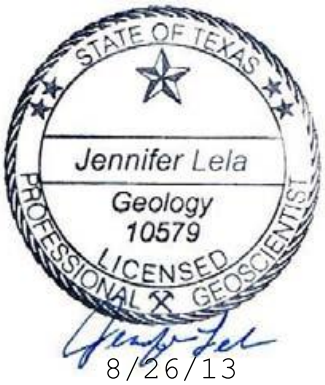
We appreciate the opportunity to be of service to Hanson Aggregates, LLC. Please contact us should you need further assistance, require additional services or have any questions.

Sincerely,

Charles P. "Frosty" Forster, P.E., P.G.
Principal
Forster Engineering
TBPE #12385



Jennifer R. Lela, P.G.
Project Geologist



Attachments

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.

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: Charles P. "Frosty" Forster, P.E., P.G.

Telephone: (210) 698-5544

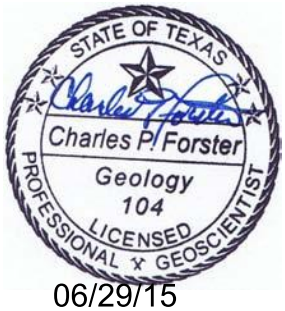
Fax: (210) 698-5544

Date: June 29, 2015

Representing: Forster Engineering TBPE #12385 (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:





06/29/15

Regulated Entity Name: Servtex Quarry, Fordyce Tract

Project Information

1. Date(s) Geologic Assessment was performed: May 29th & 31st; June 4th, 5th, 6th, 10th, 12th, 13th, 14th & 17th, July 3rd of 2013
2. Type of Project:
   - ☒ WPAP
   - ☐ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☒ Recharge Zone
   - ☒ Transition Zone

☐ Contributing Zone within the Transition Zone

4. ☒ **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.

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
Comfort-Rock outcrop complex, undulating (CrD)	D	0-2
Eckrant-Rock outcrop complex, steep (ErG)	D	0-2
Krum clay, 0 to 1 percent slopes (KrA)	D	0-7
Krum clay, 1 to 3 percent	D	0-7
See attached for additional soil types		

** 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" = 400'
   Site Geologic Map Scale: 1" = 400'

Site Soils Map Scale (if more than 1 soil type): 1" = 1000'

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 1 (#) 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.
    ☐ The wells are not in use and will be properly abandoned.
    ☒ 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.

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.

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

REGULATED ENTITY NAME: ***Servtex Quarry, Fordyce Tract***

TYPE OF PROJECT: _✓ WPAP __ AST __ SCS __ UST

LOCATION OF PROJECT: _✓ Recharge Zone _✓ Transition Zone __ Contributing Zone within the Transition Zone

PROJECT INFORMATION

1. _✓ Geologic or manmade features are described and evaluated using the attached **GEOLOGIC ASSESSMENT TABLE *(Attachment A)***.

2. 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.

Soil Units, Infiltration Characteristics & Thickness		
Soil Name	Group*	Thick-ness (feet)
Comfort-Rock outcrop complex, undulating (CrD)	***D***	***0-2***
Eckrant-Rock outcrop complex, steep (ErG)	***D***	***0-2***
Krum clay, 0 to 1 percent slopes (KrA)	***D***	***0-7***
Krum clay, 1 to 3 percent slopes (KrB)	***D***	***0-7***
Medlin-Eckrant association, undulating (MEC)	***D***	***0-7***
Orif soils, frequently flooded (Or)	***A***	***0-5***
Rumple-Comfort association, undulating (RUD)	***C-D***	***0-3***

* 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.

3. _✓ A **STRATIGRAPHIC COLUMN *(Attachment C)*** is attached at the end of this form that shows formations, members, and thicknesses. The outcropping unit should be at the top of the stratigraphic column.

4. _✓ A **NARRATIVE DESCRIPTION OF SITE SPECIFIC GEOLOGY *(Attachment D)*** is attached at the end of this form. The description must include a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure, and karst

characteristics of the site.

5. _✓ Appropriate **SITE GEOLOGIC MAP(S)** ***(Attachment B)*** are attached:

   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" = ***400***
Site Geologic Map Scale	1" = ***400***'
Site Soils Map Scale (if more than 1 soil type)	1" = ***1000***'

6. Method of collecting positional data:
   - _✓ Global Positioning System (GPS) technology.
   - __ Other method(s).

7. _✓ The project site is shown and labeled on the Site Geologic Map.

8. _✓ Surface geologic units are shown and labeled on the Site Geologic Map.

9. _✓ 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.

10. _✓ The Recharge Zone boundary is shown and labeled, if appropriate.

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

    _✓ There ~~are~~ ***is*** _1_ (#) well~~s~~ present on the project site and the location~~s~~ ~~are~~ ***is*** shown and labeled. (Check all of the following that apply.)
    - __ The wells are not in use and have been properly abandoned.
    - __ The wells are not in use and will be properly abandoned.
    - _1 The well~~s~~ ~~are~~ ***is*** in use and ~~comply~~ ***complies*** with 16 TAC Chapter 76.

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

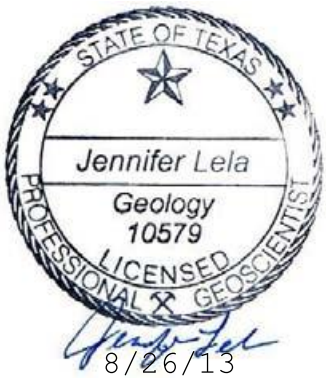
ADMINISTRATIVE INFORMATION

12. _✓ 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.

Date(s) Geologic Assessment was performed: ***May 29th & 31st; June 4th, 5th, 6th 10th, 12th, 13th, 14th, & 17th; July 3rd***

Date(s)

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.



Jennifer R. Lela, P.G. — Print Name of Geologist

(210) 698-5544 — Telephone

Fax

Signature of Geologist

Date

Representing: ***Forster Engineering***
(Name of Company)

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

GEOLOGIC ASSESSMENT TABLE | **PROJECT NAME:** *Servtex Quarry, Fordyce Tract*

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL 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	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
S-1	29°38'39.9"	98°15'08.5"	SC	20	Kep	3	3	1.5	N70ºW	0			O	20	40		X	X		Hillside
S-2	29°38'41.2"	98°15'09.8"	SC	20	Kep	0.8	2.5	1.5	N30ºE	0			O	20	40		X	X		Hillside
S-3	29°38'43.8"	98°15'21.4"	SC/SF	20	Kep	5	6	1	N45ºW	0			O	20	40		X	X		Hillside
S-4	29°39'50.0"	98°15'15.8"	Z	30	Kep	50	50	1	varies	0	1	1	O	30	60		X		X	Hillside
S-5	29°39'49.1"	98°15'12.1"	Z	30	Kep	50	50	1	varies	0	1	1	O	30	60		X		X	Hillside
S-6	29°39'49.2"	98°15'08.0"	Z	30	Kep	50	75	20	N50ºE	10			C,N	35	75		X	X		Hillside
S-7	29°39'51.7"	98°15'08.1"	SF	20	Kep	1.5	2	1.3	N85ºE	0			C,O	5	25	X		X		Hillside
S-8	29°39'47.2"	98°15'07.3"	SH	20	Kep	11	15	2	N85ºE	0			C,O	35	55		X	X		Hillside
S-9	29°39'37.8"	98°15'29.8"	SH	20	Kep	5	5	2	--	0			C,O	25	45		X	X		Hillside
S-10	29°39'36.7"	98°15'35.3"	SC	20	Kep	2	5.5	2	N70ºE	10			O	25	55		X	X		Hillside
S-11	29°39'36.7"	98°15'35.3"	SH	20	Kep	3	3	0.5	--	0			O	25	45		X	X		Hillside
S-12	29°39'35.5"	98°15'38.3"	SH	20	Kep	6	6	0.5	--	0			F	5	25	X		X		Hillside
S-13	29°39'34.1"	98°15'43.0"	SH	20	Kep	7	7	0.5	--	0			C,O	20	40		X	X		Hillside
S-14	29°39'11.8"	98°16'11.3"	CD	5	Kep	7	7	0.7	--	0			F	5	10	X		X		Hillside
S-15	29°39'09.0"	98°16'13.2"	CD	5	Kep	80	80	5	--	0			F	5	10	X		X		Hillside
S-16	29°39'29.5"	98°15'44.1"	SC	20	Kep	1.2	2.5	1.2	N25ºE	0			O	25	45		X	X		Hillside
S-17	29°39'43.9"	98°15'07.6"	SC	20	Kep	1	3	1	N10ºE	0			O	20	40		X	X		Hillside

* DATUM: NAD 83

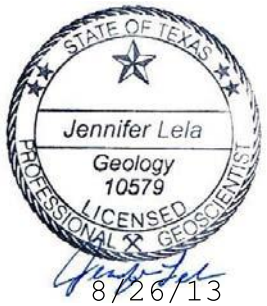
2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	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
X	Other materials

12 TOPOGRAPHY
Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

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

_____ Date _____



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

ATTACHMENT A
Sheet 1 of 3

GEOLOGIC ASSESSMENT TABLE	PROJECT NAME: *Servtex Quarry, Fordyce Tract*

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL 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	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
S-18	29°39'31.0"	98°14'56.1"	SC	20	Kep	1	2	0.9	N10°W	0			O	20	40		X	X		Hillside
S-19	29°39'27.7"	98°14'57.5"	SH	20	Kep	13	25	5	N65°W	0			C	35	55		X	X		Hillside
S-20	29°39'27.8"	98°14'58.2"	SH	20	Kep	5	5	2	--	0			C	25	45		X	X		Hillside
S-21	29°39'31.6"	98°14'59.7"	C	30	Kep	6	16	20	N70°E	10			N	35	75		X	X		Hillside
S-22	29°39'33.5"	98°15'08.3"	MB	30	Kbu	--	--	--	--	0			X	5	35	X		X		Hilltop
S-23	29°39'04.6"	98°16'01.1"	CD	5	Kep	50	50	2	--	0			F	5	10	X			X	Floodplain
S-24	29°39'14.54	98°16'0.0"	SH	20	Kep	7	7	0.5	--	0			C,O	25	45		X	X		Hillside
S-25	29°39'09.0"	98°15'57.7"	SC	20	Kep	0.5	2	4.5	N45°W	0			N	30	50		X	X		Hillside
S-26	29°39'10.4"	98°15'49.2"	SH	20	Kep	6	6	0.5	--	0			C,O	25	45		X	X		Hillside
S-27	29°39'22.0"	98°15'45.6"	SH	20	Kep	5	5	0.8	--	0			F	10	30	X		X		Hillside
S-28	29°39'18.1"	98°15'42.3"	SC	20	Kep	1	1.8	2	N13°W	0			O	30	50		X	X		Hillside
S-29	29°39'18.3"	98°15'42.0"	SC/SF	20	Kep	4	6	1.5	N5°W	0			O	25	45		X	X		Hillside
S-30	29°39'23.2"	98°15'39.8"	SF	20	Kep	0.2	3	1.3	N30°E	0			F	5	25	X		X		Hillside
S-31	29°39'24.0"	98°15'39.4"	SC	20	Kep	1	3	1	N45°W	0			F	5	25	X		X		Hillside
S-32	29°39'14.3"	98°15'42.3"	SC	20	Kep	7	8	2	E/W	0			N	5	25	X			X	Drainage
S-33	29°39'13.8"	98°15'35.6"	SC	20	Kep	1	1.7	2	N/S	0			C,O	20	40		X	X		Hillside
S-34	29°39'12.5"	98°15'24.0"	SH	20	Kep	7	7	0.8	--	0			F	5	25	X		X		Hillside

* DATUM: NAD 83

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
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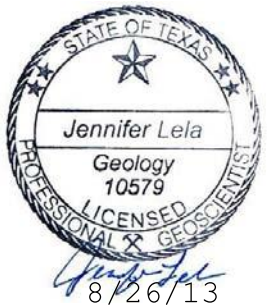
_____ Date _____



GEOLOGIC ASSESSMENT TABLE | **PROJECT NAME:** *Servtex Quarry, Fordyce Tract*

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL 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	DIMENSIONS (FEET)			TREND (DEGREES)	DIP	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
S-35	29°39'18.5"	98°15'20.4"	SH	20	Kep	6	7	1	N70°W	0			C,O	30	50		X	X		Hillside
S-36	29°39'20.6"	98°15'18.3"	SH	20	Kep	6	6	0.5	--	0			F	5	25	X		X		Hillside
S-37	29°39'13.1"	98°15'09.9"	SH	20	Kep	6	6	0.8	--	0			F	5	25	X		X		Hillside
S-38	29°39'13.6"	98°15'09.1"	SH	20	Kep	5	5	0.7	--	0			F	5	25	X		X		Hillside
S-39	29°39'20.8"	98°15'14.3"	SH	20	Kep	5	6	0.7	N70°W	0			F	5	25	X		X		Hillside
S-40	29°39'29.4"	98°15'22.1"	SH	20	Kep	30	75	3	N75°W	0			F	15	35	X		X		Hillside
S-41	29°39'17.9"	98°15'05.0"	CD	20	Kep	16	16	2	--	0			F	5	25	X			X	Drainage
S-42	29°39'30.4"	98°15'15.0"	SH	20	Kep	5	6	1	N/S	0			F	5	25	X		X		Hillside
S-43	29°39'17.5"	98°15'00.7"	SF	20	Kep	11.5	17.5	0.7	N80°E	0	0.3	0.5	F	5	25	X		X		Hillside
S-44	29°39'24.2"	98°14'50.7"	SH	20	Kep	5	5.7	4.5	N50°W	0			C	35	55		X	X		Hillside
S-45	29°39'37.8"	98°15'09.9"	CD	5	Kdr	120	250	10	N60°E	10			F	5	20	X		X		Hillside
S-46	29°39'37.8"	98°15'02.3"	SH	20	Kep	11	13	1.5	N75°E	0			O	20	40		X	X		Hillside
S-47	29°39'46.7"	98°14'47.3"	SC	20	Kep	3	2	1.5	N75°E	0			O	20	40		X	X		Hillside
S-48	29°39'40.4"	98°14'53.2"	SC	20	Kep	1	1.5	2	N70°E	10			O	25	55		X	X		Hillside
S-49	29°38'39.4"	98°15'07.7"	F	20	Kep/Kpg	--	800	--	N55°E	10			F	5	35	X		X		Hillside

* DATUM: NAD 83

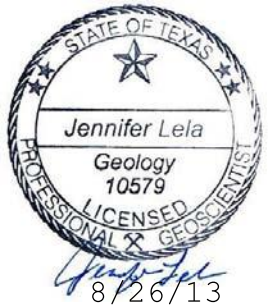
2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	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
X	Other materials

12 TOPOGRAPHY
Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

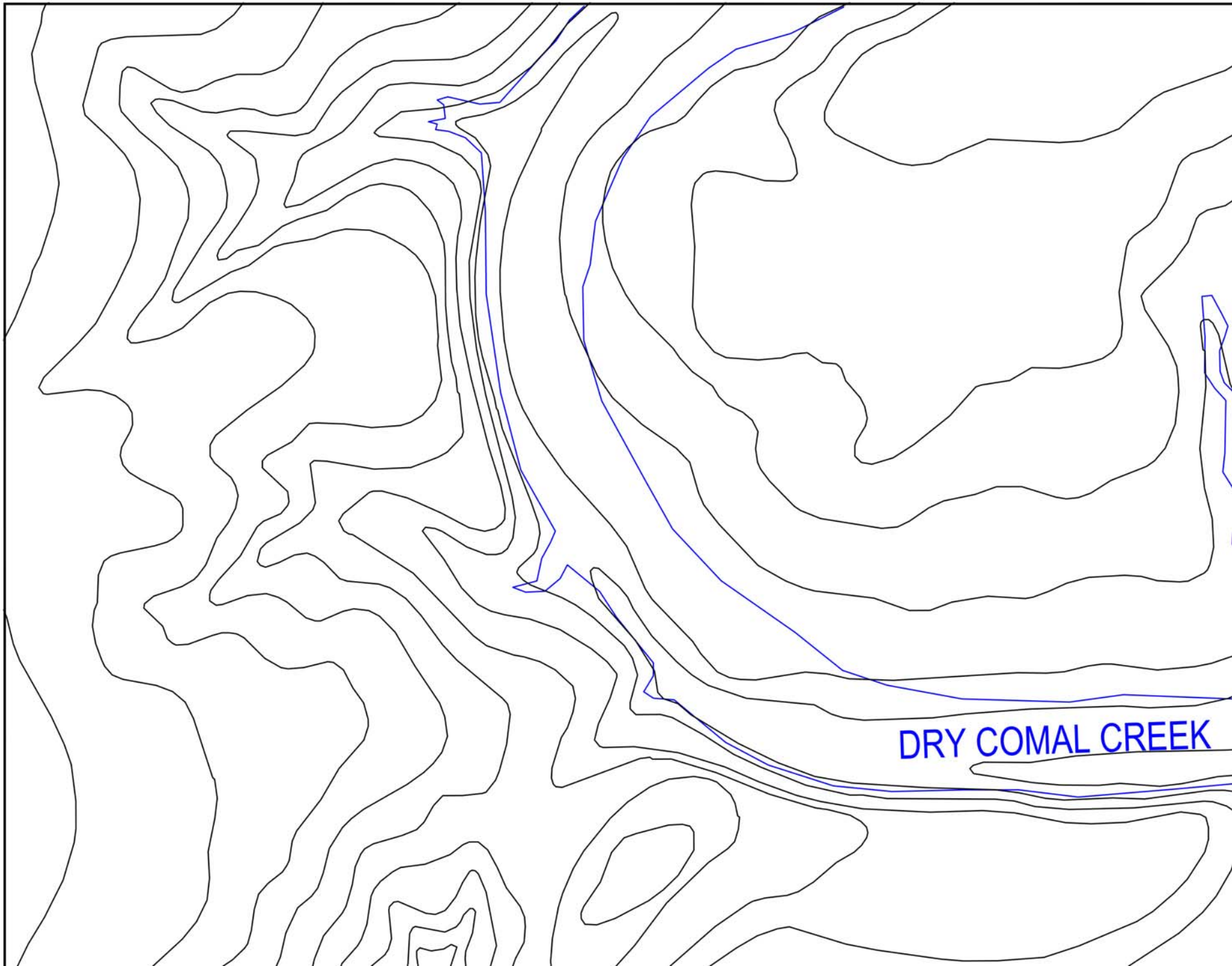
I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.
My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

_____ Date _____



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

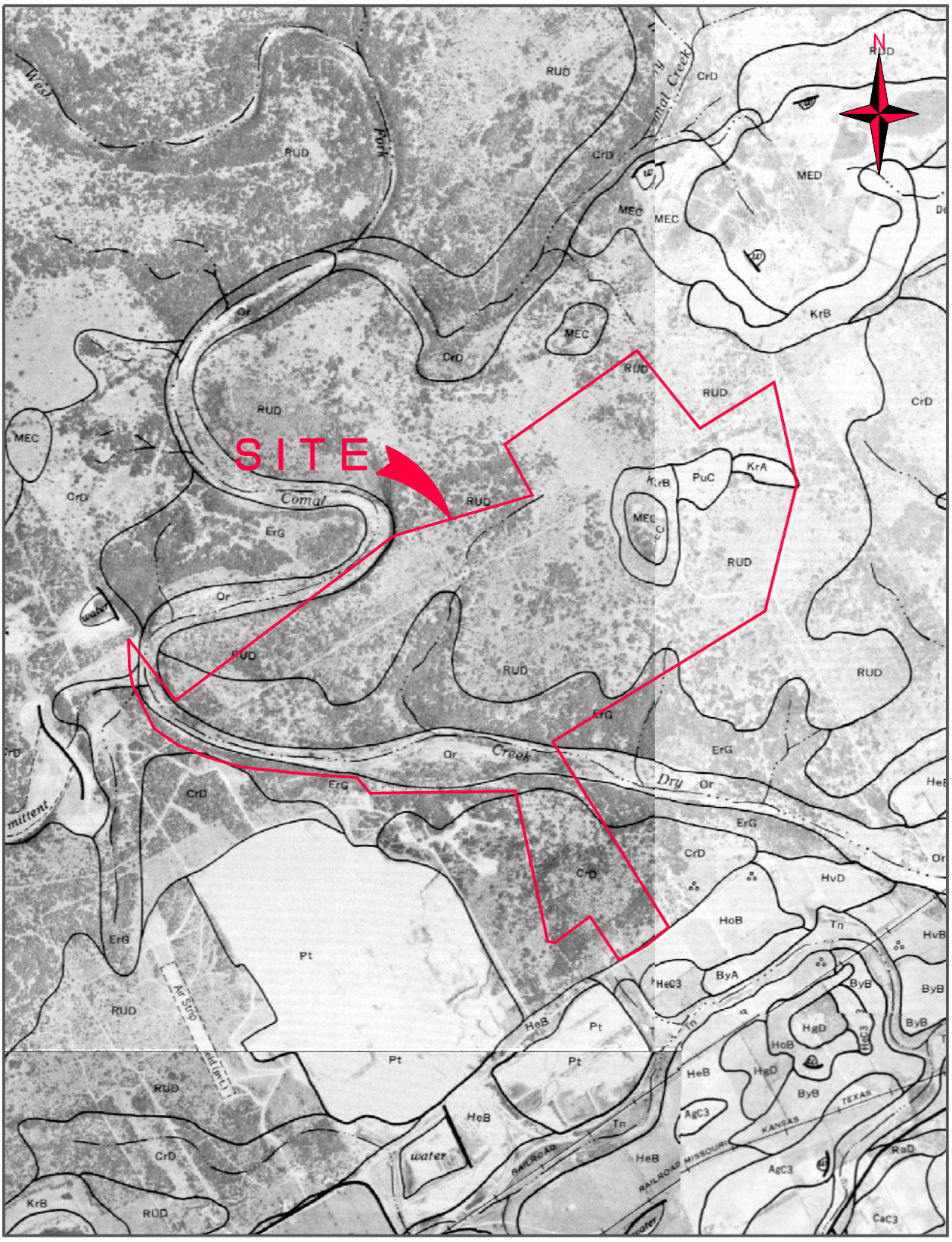
ATTACHMENT A
Sheet 3 of 3


DRY COMAL CREEK

SERVTEX QUARRY, FORDCYE TRACT

SITE SOILS MAP

FORSTER ENGINEERING



SOURCE: UNITED SATES DEPARTMENT OF AGRICULTURE, 1984, SOIL SURVEY-COMAL COUNTY, TEXAS, USDA, SHEETS 92, 98, 92 & 102

0' 1000' 2000' 4000'

SCALE: 1" = 2000'

SERVTEX QUARRY, FORDYCE TRACT

Stratigraphic Column

Hydrogeologic subdivision			Group, formation, or member			Hydrologic function	Thickness (feet)	Lithology	Field Identification	Cavern development	Porosity/ permeability type
Upper Cretaceous	Upper confining units		Pecan Gap Chalk (Kpg)			CU	100-400	Chalk and chalky marl	Seldom exposed; weathers to form moderately deep soil	None	Low porosity/low permeability
			Austin Chalk (Kau)			CU	200-225	Limestone and argillaceous chalky limestone	Glauconitic; fossiliferous, Gryphaea ancella	Caves related to structure	Some fracture plane and bedding plane
			Eagle Ford Group (Kef)			CU	30-50	Brown, flaggy shale and argillaceous limestone	Thin flagstone; petroliferous	None	Primary porosity lost/low permeability
			Buda Limestone (Kbu)			CU	40-50	Buff, light gray, dense mudstone	Porcelaneous limestone with calcite-filled veins	Minor surface karst	Low porosity/low permeability
			Del Rio Clay (Kdr)			CU	40-50	Blue-green to yellow-brown clay	Fossiliferous; llymatogyra arietina	None	None/primary upper confining unit
Lower Cretaceous	I	*Edwards Aquifer*	Georgetown Formation (Kgt)			Karst AQ; no karst CU	2-20	Reddish-brown, gray to light tan marly limestone	Marker fossil; *Waconella wacoensis*	None	Low porosity/low permeability
	II		*Edwards Group*	*Person Formation (Kep)*	Cyclic and marine members, undivided	AQ	80-90	Mudstone to packstone; *miliolid* grainstone; chert	Thin graded cycles; massive beds to relatively thin beds; crossbeds	Many subsurface; might be associated with earlier karst development	Laterally extensive; both fabric and not fabric/water-yielding
	III				Leached and collapsed members, undivided	AQ	70-90	Crystalline limestone; mudstone to grainstone; chert; collapsed breccia	Bioturbated iron-stained beds separated by massive limestone beds; stromatolitic limestone	Extensive lateral development; large rooms	Majority not fabric/one of the most permeable
	IV				Regional dense member	CU	20-24	Dense, argillaceous mudstone	Wispy iron-oxide stains	Very few; only vertical fracture enlargement	Not fabric/low permeability; vertical barrier
	V			*Kainer Formation (Kek)*	Grainstone member	AQ	50-60	*Miliolid* grainstone; mudstone to wackestone; chert	White crossbedded grainstone	Few	Not fabric/ recrystallization reduces permeability
	VI				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 permeable
	VII				Dolomitic member	AQ	110 -130	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

ATTACHMENT C

	VIII				Basal nodular member	Karst AQ; not karst CU	50-60	Shaly, nodular limestone mudstone and *miliolid* grainstone	Massive, nodular and mottled, *Exogyra texana*	Large lateral caves at surface; a few caves near Cibolo Creek	Fabric; stratigraphically controlled/large conduit flow at surface; no permeability in subsurface
	Lower confining unit		Upper member of the Glen Rose Limestone (Kgru)			CU; evaporite beds AQ	350-500	Yellowish tan, thinly bedded limestone and marl	Stair-step topography; alternating limestone and marl	Some surface cave development	Some water production at evaporite beds / relatively impermeable

Reference: U.S.G.S. Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Recharge Zone, Bexar County, Texas; Water-Resources Investigations Report 95-4030

SERVTEX QUARRY, FORDYCE TRACT

Narrative of Site Specific Geology

The overall potential of recharge to the Edward Aquifer at the site is moderate. Twenty-eight sensitive geologic features were identified on site. The dominant trend for the site is approximately N55°E, based on the trend of a major on-site fault mapped by the BEG (Barnes, 1983) and BEG (Collins, 1993). On-site outcropping units include the Pecan Gap Chalk (Kpg), Buda Limestone (Kbu), Del Rio Clay (Kdr), and the cyclic and marine (Kepcm) member of the Person Formation.

The Pecan Gap Chalk formation consists of chalk and chalky marl, is bluish gray in the subsurface and weathers to tan, gray, and buff. The Pecan Gap Chalk has a blocky structure with closely spaced joints, often filled with calcite and gypsum. The Buda Limestone is characterized by buff, light gray, dense mudstone. The Del Rio clay is a blue-green to yellow-brown waxy clay. There is generally only minor to no karst development in the Kpg, Kbu, and Kdr. The cyclic and marine member is characterized by a mudstone to packstone milliolid grainstone, with chert. Karst development in the Kepcm is characterized by small sinkholes, and caves developed as vertical shafts as well as lateral rooms.

Feature S-1
Feature S-1 is a possible solution cavity. Bedrock surrounds the opening forming a slightly dissolutioned "V" and animal burrowing is evident. Hand excavation and probing of the feature revealed loose, organic soil and rock. Due to the possible karst origin, absence of observable fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-2
Feature S-2 is a possible solution cavity. The cavity exists between two adjoining bedrock slabs with slightly dissolutioned edges. Animal burrowing is evident. Hand excavation and probing of the feature revealed loose, organic soil and rock. Due to the possible karst origin, absence of observable fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-3
Feature S-3 consists of a zigzagging fracture between two slabs of bedrock. The total length of the fracture is approximately eight feet long. The fracture has a maximum aperture of approximately one foot, at which point a solution cavity has formed. A persimmon tree was observed growing in the fracture. Hand excavation and probing of the feature revealed loose, organic soil and rock. Due to the interpreted karst origin, absence of observable fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Features S-4 & S-5
Features S-4 and S-5 are large zones of fractured rock that exhibit increased permeability. Sapping of fines was observed throughout these areas, and greener vegetation was observed in the field and on aerial photographs. The trend of the fractures was highly variable. No distinct points of recharge were observed; however, it is our professional opinion that the probability of rapid infiltration is high due to the interpreted karst origin, sapping of fines, and large catchment area. These zones are ranked as sensitive.

Feature S-6
Feature S-6 is a zone of three large cobble-filled sinkholes. The sinkholes occur in a lineation, which mimics the dominant trend. Two openings within the northeastern-most sinkhole lead to a cave. The cave consists of a large room, with three small extending cavities. One of the cavities extends laterally toward the southwest, toward the vicinity of the other sinkholes. Although impassible, daylight was observed within the cavity. Another impassible cavity extends laterally toward the northeast. A third cavity extends at a downward angle toward the northwest. This cavity leads to an extensive, disc-shaped, lateral room. The full extents of this room were not observable, as the ceiling and floor became too narrow to safely pass. Due to the karst origin and direct evidence of rapid infiltration, the probability of rapid infiltration is high. This feature is ranked as sensitive.

Feature S-7
Feature S-7 is a single solution-enlarged fracture located on a hillside. The feature consists of several perpendicularly-oriented blocks of bedrock on each side of a linear depression. Hand excavation and probing revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-8
Feature S-8 is a large cobble-filled sinkhole. The lack of soil infilling indicates increased flow. Due to the karst origin and direct evidence of rapid infiltration, the probability of rapid infiltration is high. This feature is ranked as sensitive.

Feature S-9
Feature S-9 is a small circular sinkhole with rim rock observed around the perimeter. Animal burrowing is evident. Hand excavation revealed loose, organic soil and rock. Due to the interpreted karst origin, absence of fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-10
Feature S-10 is a solution cavity that has two openings, one of which has a smooth solutioned surface. Prior to hand excavation, the feature was filled with loose organic soil and leaves. Hand excavation revealed loose, organic soil. Due to the interpreted karst origin, indirect evidence of rapid infiltration, and the location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-11
Feature S-11 is a small sinkhole. Hand excavation revealed very loose organic infilling. Due to the interpreted karst origin, absence of fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-12
Feature S-12 is a small sinkhole with abundant tree roots. Hand excavation and probing revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-13
Feature S-13 is a small sinkhole. Hand excavation revealed very loose organic infilling and rock. Due to the interpreted karst origin, absence of fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-14
Feature S-14 is a non-karst closed depression. The feature is located within an apparent area of disturbance and possible historic tree removal. A slight berm was observed at one end of the depression. Hand excavation revealed fine infilling. Due to the interpreted non-karst origin and fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-15
Feature S-15 is a non-karst closed depression. The depression consists of a dry, shallow, stock tank located just within the floodplain. Due to the interpreted non-karst origin and presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-16
Feature S-16 is a solution cavity with solutioned bedrock around the entire opening. A persimmon tree was observed growing within the feature. The cavity was filled with organic infilling to approximately one foot below the ground surface. Hand excavation of the feature revealed loose, organic soil. Due to the interpreted karst origin, indirect evidence of rapid infiltration, and the location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-17
Feature S-17 is a possible solution cavity. The cavity exists below one slab of bedrock with a slightly dissolutioned edge and extends downward at an angle. Hand excavation and probing of the feature revealed loose, organic soil. Due to the possible karst origin, absence of observable fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-18
Feature S-18 is a possible solution cavity. The cavity exists between two adjoining bedrock slabs with slightly dissolutioned edges. Several persimmon trees were observed near the feature. Hand excavation and probing of the feature revealed loose, organic soil. Due to the possible karst origin, absence of observable fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-19
Feature S-19 is a large cobble-filled sinkhole with rim rock present around part of the perimeter. Voids were observed below the rim rock and between the cobble infilling. The voids and lack of soil infilling indicates increased flow. Due to the karst origin and direct evidence of rapid infiltration, the probability of rapid infiltration is high. This feature is ranked as sensitive.

Feature S-20
Feature S-20 is a small sinkhole filled with several cobbles. Hand excavation revealed loose organic infilling and rock. Due to the interpreted karst origin, absence of fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-21
Feature S-21 is a cave developed as a vertical shaft. The cave is located within a tear-drop shaped, cobble-filled sinkhole. The sinkhole is approximately 16 foot long and follows the dominant trend. The cave opening is approximately 3 feet wide. The cave extends vertically for a few feet and then extends at a downward angle toward the southwest for a measurable 16 more feet. Due to the karst origin and open nature of the feature, the probability of rapid infiltration is high. This feature is ranked as sensitive.

Feature S-22
Feature S-22 is a residential water well. The well has steel casing that extends above the ground surface, is equipped with a submersible pump, and is in operation. The well has a small concrete slab surrounding the casing. Because the well is in operation and has casing that extends above the ground surface, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-23
Feature S-23 is a non-karst closed depression. The depression consists of a dry, shallow, stock tank located within the floodplain. Due to the interpreted non-karst origin and presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-24
Feature S-24 is a small sinkhole. Hand excavation revealed very loose organic infilling and rock. Due to the interpreted karst origin, absence of fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-25
Feature S-25 is a solution cavity with two small circular opening that join in the subsurface. Originally, the feature was found as a subtle depression. Hand excavation of some leaf litter at the surface revealed a solid solution cavity with no infilling. The feature extends vertically for approximately 4.5 feet, turns and continues out of sight. Due to the karst origin and open nature of the feature, the probability of rapid infiltration is high. This feature is ranked as sensitive.

Feature S-26
Feature S-26 is a small sinkhole. Hand excavation revealed very loose organic infilling and rock. Due to the interpreted karst origin, absence of fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-27
Feature S-27 is a small sinkhole. Hand excavation and probing of the feature revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-28
Feature S-28 is a solution cavity with solutioned bedrock around the entire opening. The cavity was originally filled with organic infilling to approximately one foot below the ground surface. Hand excavation to approximately two feet deep revealed loose, organic soil. Due to the interpreted karst origin, indirect evidence of rapid infiltration, and the location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-29
Feature S-29 consists of a slab of bedrock with a possible solution cavity on one edge and a possible solution-enlarged fracture on the other edge. The solution cavity exhibits a semi-circular dissolutioned edge. The fracture exhibited void space to approximately 1½ foot deep. Hand excavation revealed loose organic infilling. Due to the possible karst origin, absence of observable fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-30
Feature S-30 is a possible solution-enlarged fracture. The feature is developed between two adjoining bedrock slabs and exhibited void space to approximately 1 foot deep. A depression exists at end of the fracture. Hand excavation and probing revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-31
Feature S-31 is a possible solution cavity. The feature is developed between several adjoining bedrock slabs. Hand excavation and probing revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-32
Feature S-32 is a solution-enlarged discharge plane located within a steep rock bank of a tributary to Dry Comal Creek. Because the feature serves as a discharge feature, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-33
Feature S-33 is a possible solution cavity located on a hillside. The cavity exists below one slab of bedrock with a dissolutioned edge. The cavity extends laterally beneath the slab and may be the result of animal burrowing. Hand excavation and probing of the feature revealed loose, organic soil and rock. Due to the possible karst origin, absence of observable fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-34
Feature S-34 is possibly a small sinkhole. Hand excavation and probing of the feature revealed sticky red clay. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-35
Feature S-35 is a small sinkhole located on a hillside. Hand excavation revealed very loose cobbles and organic soil infilling. Due to the interpreted karst origin, indirect evidence of rapid infiltration, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Features S-36, S-37, S-38 & S-39
Features S-36, S-37, S-38 and S-39 are possibly small sinkholes. Hand excavation and probing of the features revealed sticky red clay. Due to the presence of fine in filling, the probability of rapid infiltration is low. These features are ranked as non-sensitive.

Feature S-40
Feature S-40 appears to be a large relic sinkhole. The sinkhole is developed as a tear-drop shape on a hillside. The sinkhole exhibits breakdown around portions of the perimeter but is soil filled. Probing in several locations revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-41
Feature S-41 is a non-karst closed depression created by stream scour. Hand excavation and probing of the features revealed red clay. Due to the non-karst origin and presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-42
Feature S-42 is possibly a small sinkhole. A couple of large cobbles and persimmon trees surround the feature. However, hand excavation and probing of the feature revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-43
Feature S-43 is an area of fractured rock on a hillside that exhibits void space between the fractures, possibly resultant from solution -enlargement. However, hand excavation and probing of the feature revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-44
Feature S-44 is a cobble-filled sinkhole with large breakdown material chocking the entrance to what appears likely to be a cave developed as a vertical shaft. The lack of soil infilling indicates increased flow. Due to the karst origin and direct evidence of rapid infiltration, the probability of rapid infiltration is high. This feature is ranked as sensitive.

Feature S-45
Feature S-45 is a non-karst closed depression. The depression consists of a dry stock tank located within the Del Rio clay. Due to the interpreted non-karst origin and fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

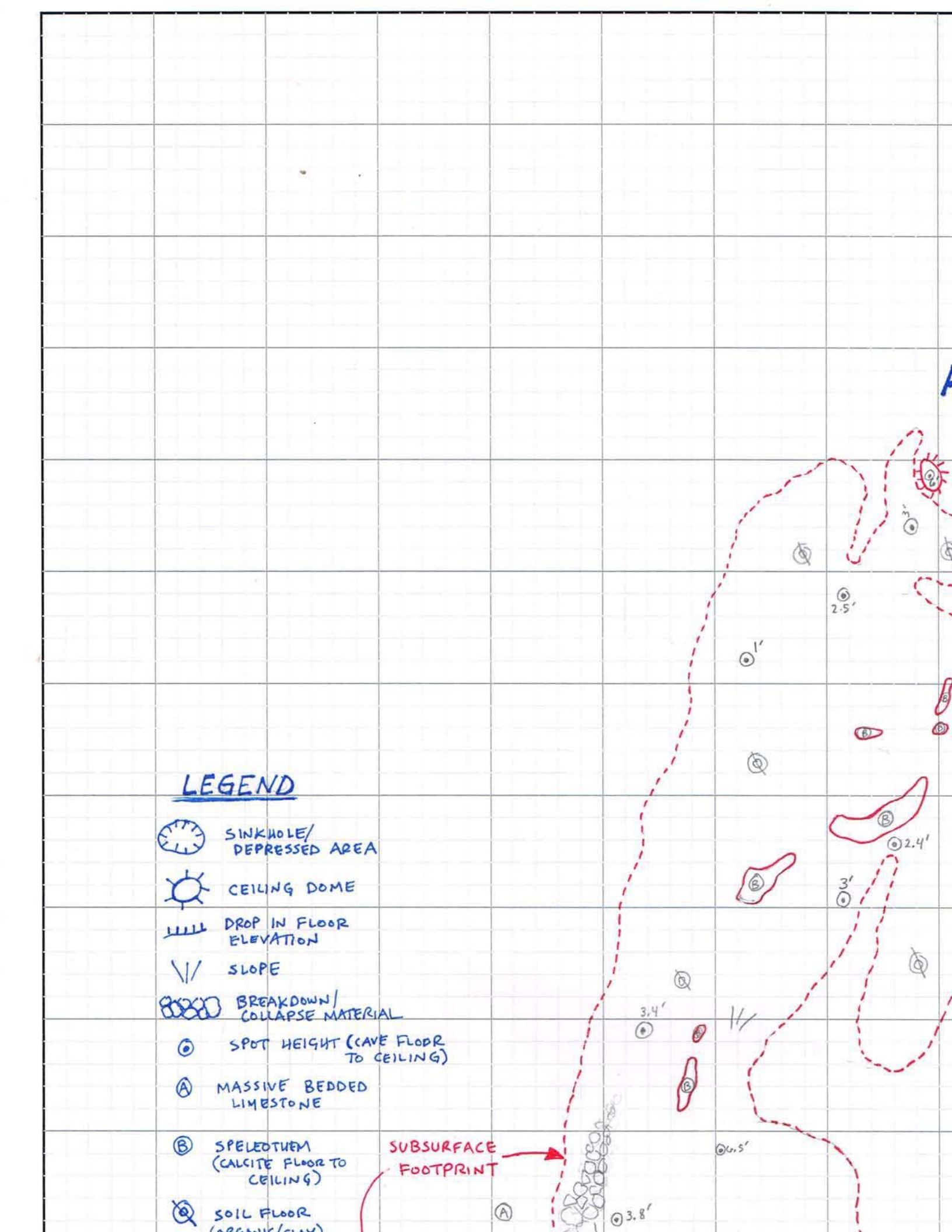
Feature S-46
Feature S-46 is a large soil-filled sinkhole located on a hillside. Probing of the feature revealed loose organic infilling. Due to the interpreted karst origin, lack of fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-47
Feature S-47 is a solution cavity located within a solid slab of bedrock on a hillside. The cavity was originally filled with organic infilling to approximately one foot below the ground surface. Hand excavation to approximately two feet and an additional several feet of probing revealed loose, organic soil infilling. Due to the interpreted karst origin, indirect evidence of rapid infiltration, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-48
Feature S-48 is a solution cavity located within a solid slab of bedrock on a hillside. The cavity was originally filled with organic infilling to approximately ½ foot below the ground surface. Hand excavation to approximately one foot and an additional several feet of probing revealed very loose, organic infilling. Due to the interpreted karst origin, indirect evidence of rapid infiltration, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-49

Feature S-49 is an interformational fault identified on two published geologic maps (BEG, Barnes and BEG Collins). The fault juxtaposes the Person Formation to the north and the Pecan Gap Chalk to the south. No karst features or other evidence of enhanced permeability was observed along the fault. Therefore, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.


LEGEND
SINKHOLE/ DEPRESSED AREA
CEILING DOME
DROP IN FLOOR ELEVATION
SLOPE
BREAKDOWN/ COLLAPSE MATERIAL
SPOT HEIGHT (CAVE FLOOR TO CEILING)
A MASSIVE BEDDED LIMESTONE
B SPELEOTHEM (CALCITE FLOOR TO CEILING)
SOIL FLOOR
SUBSURFACE FOOTPRINT
2.5'
1'
2.4'
3'
3.4'
3.8'
6.5'

GROUND SURFACE

A'

Ⓐ

Ⓐ

CROSS SECTION A-A'

25'

25'

0

STATE OF TEXAS

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.

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: Roman C. Pineda, P.G.

Telephone: (210) 698-5544

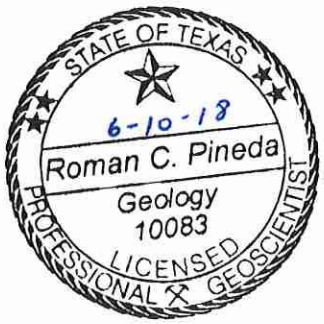
Fax: (210) 698-5544

Date: June 9, 2018

Representing: Forster Engineering, TBPE Firm #12385 (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:





Regulated Entity Name: Fordyce Tract - Mims 10+/- Acre Tract

Project Information

1. Date(s) Geologic Assessment was performed: May 26, 2018
2. Type of Project:
   - ☒ WPAP
   - ☐ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☒ Recharge Zone
   - ☐ Transition Zone
   - ☐ Contributing Zone within the Transition Zone

4. ☒ **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.

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
Comfort-Rock outcrop complex (CrD)	D	0-2
Heiden clay, 1 to 3 percent slopes (HeB)	D	0-6
Houston Black clay, 1 to 3 percent slopes (HoB)	D	0-6

Soil Name	Group*	Thickness(feet)

** 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" = 400'
   Site Geologic Map Scale: 1" = 400'
   Site Soils Map Scale (if more than 1 soil type): 1" = 500'

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 one (1) (#) 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.
    - ☒ The wells are not in use and will be properly abandoned.
    - ☐ 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.

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.

GEOLOGIC ASSESSMENT TABLE			PROJECT NAME: Fordyce Tract-Mims 10+/- Acre Tract																	
LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL 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	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
S-100	29°38'37.8"	98°15'13.7"	MB	30	Kep	0.5	0.5	100+	-	0			N,X	5	35	35		X		Hillside
S-49	29°38'39.4"	98°15'07.7"	F	20	Kep/Kpg	--	711	--	N55°E	10			F	5	35	35		X		Hillside

* DATUM: NAD 83

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	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	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	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
X	Other materials

12 TOPOGRAPHY

Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

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

Signature

Date 6-16-18

Sheet 1 of 1

Attachment A

STATE OF TEXAS
Roman C. Pineda
Geology
10083
LICENSED PROFESSIONAL GEOSCIENTIST

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

FORDYCE TRACT – MIMS 10+/- ACRE TRACT

Stratigraphic Column

Hydrogeologic subdivision			Group, formation, or member			Hydrologic function	Thickness (feet)	Lithology	Field Identification	Cavern development	Porosity/ permeability type
Upper Cretaceous	Upper confining units		Pecan Gap Chalk (Kpg)			CU	100-400	Chalk and chalky marl	Seldom exposed; weathers to form moderately deep soil	None	Low porosity/low permeability
			Austin Chalk (Kau)			CU	200-225	Limestone and argillaceous chalky limestone	Glauconitic; fossiliferous, Gryphaea ancella	Caves related to structure	Some fracture plane and bedding plane
			Eagle Ford Group (Kef)			CU	30-50	Brown, flaggy shale and argillaceous limestone	Thin flagstone; petroliferous	None	Primary porosity lost/low permeability
			Buda Limestone (Kbu)			CU	40-50	Buff, light gray, dense mudstone	Porcelaneous limestone with calcite-filled veins	Minor surface karst	Low porosity/low permeability
			Del Rio Clay (Kdr)			CU	40-50	Blue-green to yellow-brown clay	Fossiliferous; Ilymatogyra arietina	None	None/primary upper confining unit
Lower Cretaceous	I	*Edwards Aquifer*	Georgetown Formation (Kgt)			Karst AQ; no karst CU	2-20	Reddish-brown, gray to light tan marly limestone	Marker fossil; *Waconella wacoensis*	None	Low porosity/low permeability
	II		*Edwards Group*	*Person Formation (Kep)*	Cyclic and marine members, undivided	AQ	80-90	Mudstone to packstone; *miliolid* grainstone; chert	Thin graded cycles; massive beds to relatively thin beds; crossbeds	Many subsurface; might be associated with earlier karst development	Laterally extensive; both fabric and not fabric/water-yielding
	III				Leached and collapsed members, undivided	AQ	70-90	Crystalline limestone; mudstone to grainstone; chert; collapsed breccia	Bioturbated iron-stained beds separated by massive limestone beds; stromatolitic limestone	Extensive lateral development; large rooms	Majority not fabric/one of the most permeable
	IV				Regional dense member	CU	20-24	Dense, argillaceous mudstone	Wispy iron-oxide stains	Very few; only vertical fracture enlargement	Not fabric/low permeability; vertical barrier
	V			*Kainer Formation (Kek)*	Grainstone member	AQ	50-60	*Miliolid* grainstone; mudstone to wackestone; chert	White crossbedded grainstone	Few	Not fabric/ recrystallization reduces permeability
	VI				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 permeable
	VII				Dolomitic member	AQ	110 -130	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

	VIII				Basal nodular member	Karst AQ; not karst CU	50-60	Shaly, nodular limestone mudstone and *miliolid* grainstone	Massive, nodular and mottled, *Exogyra texana*	Large lateral caves at surface; a few caves near Cibolo Creek	Fabric; stratigraphically controlled/large conduit flow at surface; no permeability in subsurface
	Lower confining unit		Upper member of the Glen Rose Limestone (Kgru)			CU; evaporite beds AQ	350-500	Yellowish tan, thinly bedded limestone and marl	Stair-step topography; alternating limestone and marl	Some surface cave development	Some water production at evaporite beds / relatively impermeable

Reference: U.S.G.S. Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Recharge Zone, Bexar County, Texas; Water-Resources Investigations Report 95-4030

FORDYCE TRACT – MIMS 10+/- ACRE TRACT

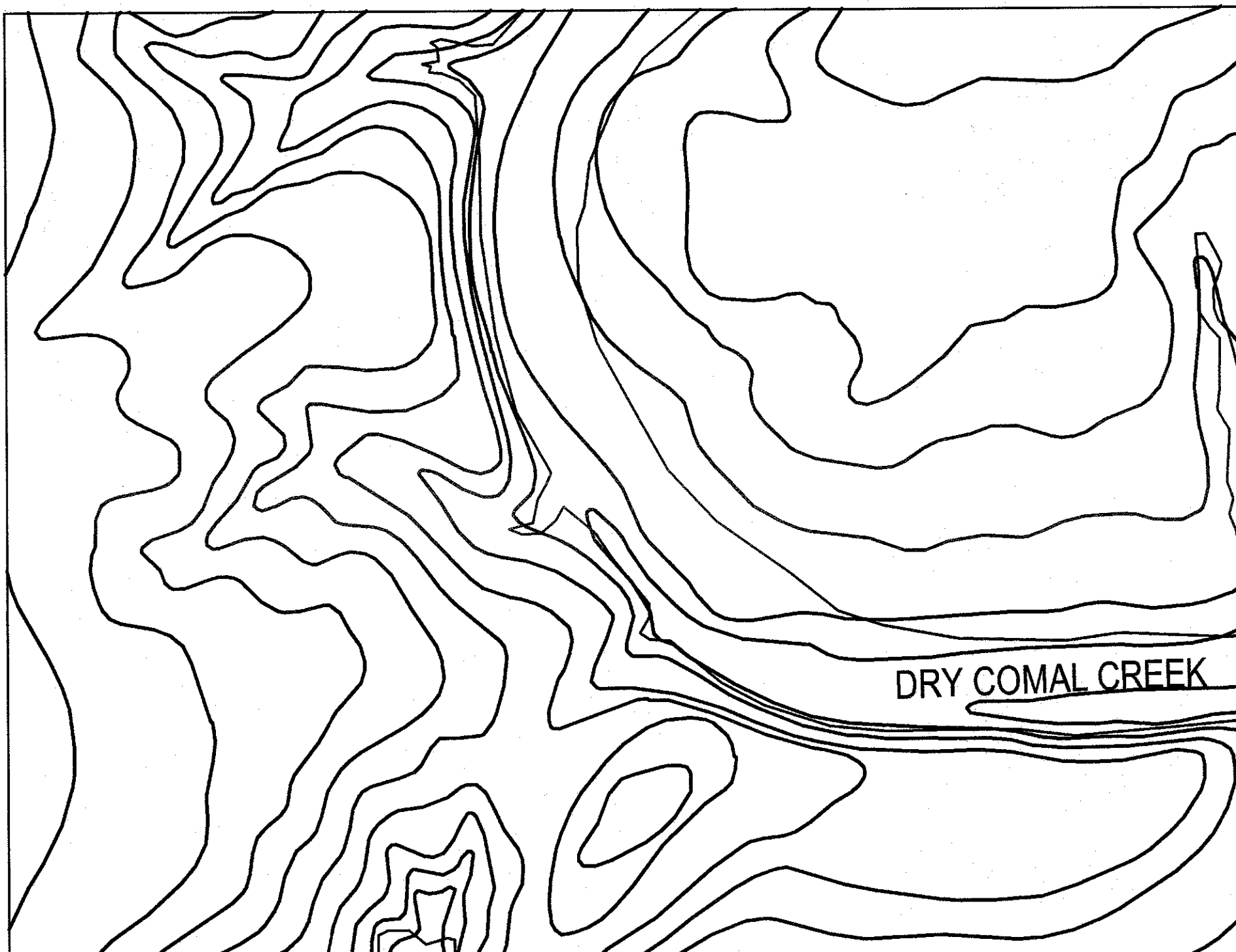
Narrative Description of Site Geology

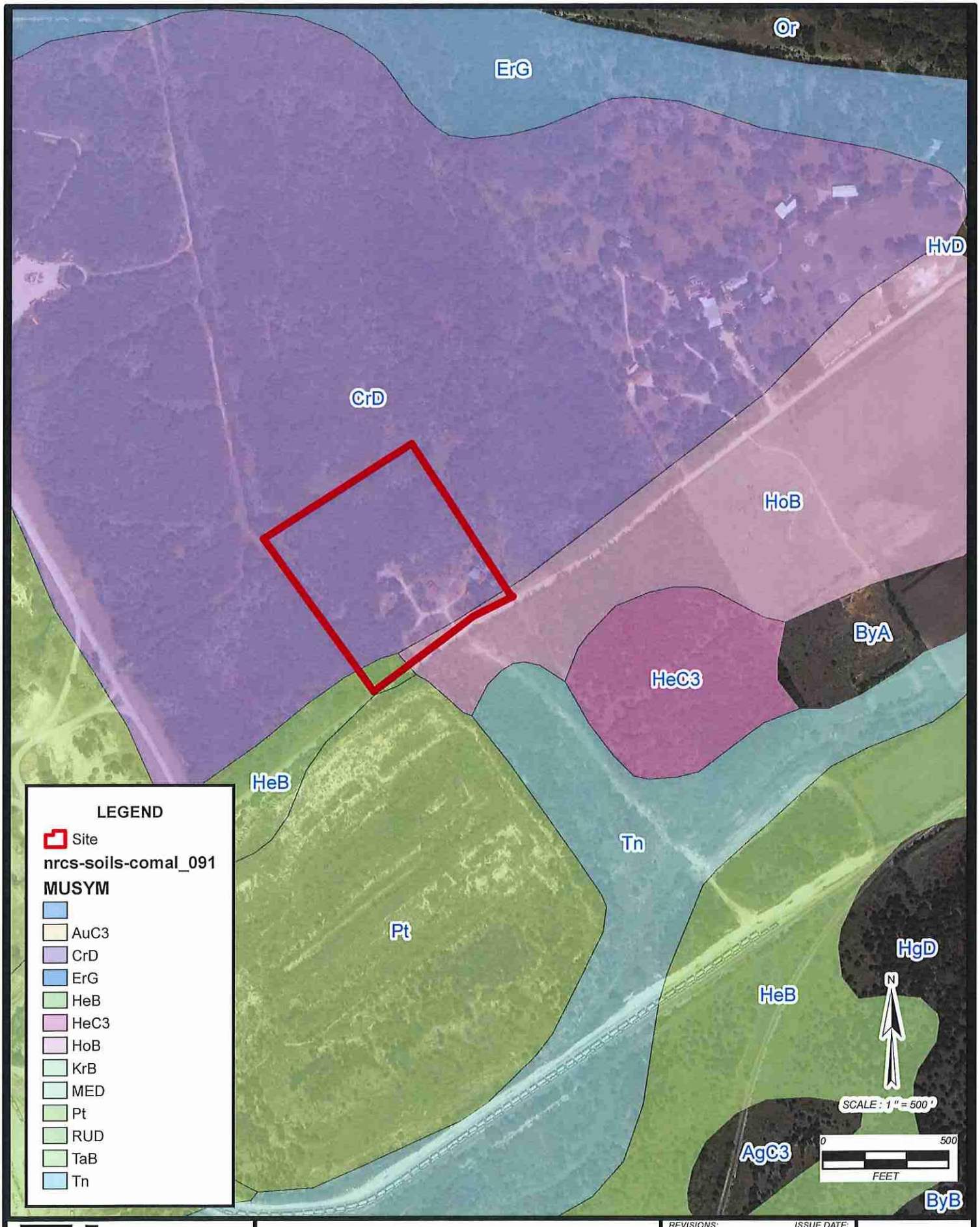
The overall potential for fluid migration to the Edwards Aquifer on the site is low to moderate. The majority of the site is located within the cyclic and marine members of the Person Formation (Kepcm). A small portion along the southern boundary of the site is located within the Pecan Gap Chalk (Kpg). The dominant trend for the site is N48°E, based on an average of the trends of known faults within the surrounding area and from published maps (Stein & Ozuna, 1995).

The Kepcm is characterized by a mudstone to packstone milliolid grainstone and chert. Karst development within the cyclic and marine members is characterized by small sinkholes and caves formed as vertical shafts as well as lateral rooms. The Kpg is characterized by chalk and chalky marl, bluish gray in the subsurface and weathers to tan, gray, and buff. There is generally only minor to no karst development in the Kpg. No caves or sinkholes were identified onsite.

FEATURE S-49
Feature is a possible fault identified on published geologic maps (BEG, Barnes and BEG, Collins). The fault juxtaposes the Person Formation to the north and the Pecan gap chalk to the south. No field evidence was observed which suggests a fault exist within the project limits. No areas of enhanced infiltration greater than background infiltration was observed. Loose organics and fine infilling were observed in the area of the possible fault. Therefore, the probability for rapid infiltration is low.

FEATURE S-100
Feature is a residential water well currently not in use. The wellhead is surrounded by a concrete slab enclosed in a small structure. The well head extends approximately 1-feet above the ground surface. Due to the impervious concrete slab, enclosed wellhead and well casing extending above the ground surface, the probability for rapid infiltration is low.


DRY COMAL CREEK



FORSTER ENGINEERING
TBPE FIRM# 12385
19915 WITTENBURG
SAN ANTONIO, TEXAS 78256
PHONE (210) 698-5544
FAX (210) 698-5544

FORDYCE TRACT - MIMS 10+/- ACRE TRACT
COMAL COUNTY, TEXAS
SITE SOILS MAP

REVISIONS:	ISSUE DATE:
JOB NO. 1066H-17	
DATE: June 2018	DESIGNER: RCP
DRAWN: RCP	CHECKED: CPF

ATTACHMENT E

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL.

FORDYCE TRACT – MIMS 10+/- ACRE TRACT

References

Arnow, Ted, 1959, Groundwater Geology of Bexar County, Texas: Texas Board of Water Engineers, Bulletin 5911, 62pp., 18 figs.

Ashworth, J.B., Jan 1983, Ground-Water Availability of the Lower Cretaceous Formations in the Hill Country of South-Central Texas, Texas Department of Water Resources, rept., 273, 12pp.

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Federal Emergency Management Agency (FEMA), September 1, 2009, Comal County, Texas and Incorporated areas, Flood Insurance Rate Map (FIRM), Panel 48091C0420 F, FEMA, Washington, D.C.

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Stein, W.G., and Ozuna, G.B., 1995, Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Recharge Zone, Bexar County, Texas: U.S. Geol. Survey, Water – Resources Investigations 95-4030, 8 pp., 2 figs.

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Section 5.0

WATER POLLUTION ABATEMENT PLAN APPLICATION

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(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

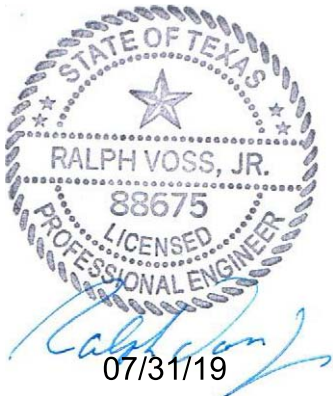
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Water Pollution Abatement Plan Application Form** is hereby submitted for TCEQ review and Executive Director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

Print Name of Customer/Agent: Ralph Voss Jr., P.E.

Date: 07/31/19

Signature of Customer/Agent:





Regulated Entity Name: Servtex Quarry, Fordyce Tract

Regulated Entity Information

1. The type of project is:

   ☐ Residential: Number of Lots:_____
   ☐ Residential: Number of Living Unit Equivalents:_____
   ☐ Commercial
   ☐ Industrial
   ☒ Other:Quarry

2. Total site acreage (size of property):695.66±

3. Estimated projected population:0

4. The amount and type of impervious cover expected after construction are shown below:

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	0	÷ 43,560 =	0
Parking	0	÷ 43,560 =	0
Other paved surfaces	0	÷ 43,560 =	0
Total Impervious Cover	0	÷ 43,560 =	0

Total Impervious Cover 0 **÷ Total Acreage** 695.66 **X 100 =** 0**% Impervious Cover**

5. ☒ **Attachment A - Factors Affecting Surface Water Quality**. A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.

6. ☒ Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

For Road Projects Only

Complete questions 7 - 12 if this application is exclusively for a road project.

7. Type of project:

☐ TXDOT road project.
☐ County road or roads built to county specifications.
☐ City thoroughfare or roads to be dedicated to a municipality.
☐ Street or road providing access to private driveways.

8. Type of pavement or road surface to be used:

☐ Concrete
☐ Asphaltic concrete pavement
☐ Other: _____

9. Length of Right of Way (R.O.W.): _____ feet.

Width of R.O.W.: _____ feet.
L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.

10. Length of pavement area: _____ feet.

Width of pavement area: _____ feet.
L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.
Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = _____% impervious cover.

11. ☐ A rest stop will be included in this project.

☐ A rest stop will not be included in this project.

12. ☐ Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

Stormwater to be generated by the Proposed Project

13. ☒ **Attachment B - Volume and Character of Stormwater**. A detailed description of the volume (quantity) and character (quality) of the stormwater runoff which is expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on the area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

Wastewater to be generated by the Proposed Project

14. The character and volume of wastewater is shown below:

_____% Domestic	_____Gallons/day
_____% Industrial	_____Gallons/day
_____% Commingled	_____Gallons/day
TOTAL gallons/day _____	

15. Wastewater will be disposed of by:

☐ On-Site Sewage Facility (OSSF/Septic Tank):

☐ **Attachment C - Suitability Letter from Authorized Agent**. An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.

☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☐ Sewage Collection System (Sewer Lines):

☐ Private service laterals from the wastewater generating facilities will be connected to an existing SCS.

☐ Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

☐ The SCS was previously submitted on_____.

☐ The SCS was submitted with this application.

☐ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

☐ The sewage collection system will convey the wastewater to the _____ (name) Treatment Plant. The treatment facility is:

☐ Existing.
☐ Proposed.

16. ☐ All private service laterals will be inspected as required in 30 TAC §213.5.

Site Plan Requirements

Items 17 – 28 must be included on the Site Plan.

17. ☒ The Site Plan must have a minimum scale of 1" = 400'.

Site Plan Scale: 1" = 400'.

18. 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.
The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA FIRM Map Numbers 48091C0420F and 48091C0400F (September 2, 2009)

19. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, open space, etc. are shown on the plan.

☐ The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, open space, etc. are shown on the site plan.

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

☒ There are 2 (#) 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.
☐ 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.

21. 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 D - Exception to the Required Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

22. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.
23. ☒ Areas of soil disturbance and areas which will not be disturbed.
24. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
25. ☒ Locations where soil stabilization practices are expected to occur.
26. ☒ Surface waters (including wetlands).

    ☐ N/A
27. ☒ Locations where stormwater discharges to surface water or sensitive features are to occur.

    ☐ There will be no discharges to surface water or sensitive features.
28. ☒ Legal boundaries of the site are shown.

Administrative Information

29. ☒ 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.
30. ☒ Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

WPAP APPLICATION FORM TCEQ-0584
ATTACHMENT A
FACTORS AFFECTING WATER QUALITY

The major factor which could potentially affect surface water quality is sediment in storm water runoff after vegetation clearing. Additional factors include fuels and lubricants from vehicles and equipment, trash or debris, and spills or overflows from portable toilets.

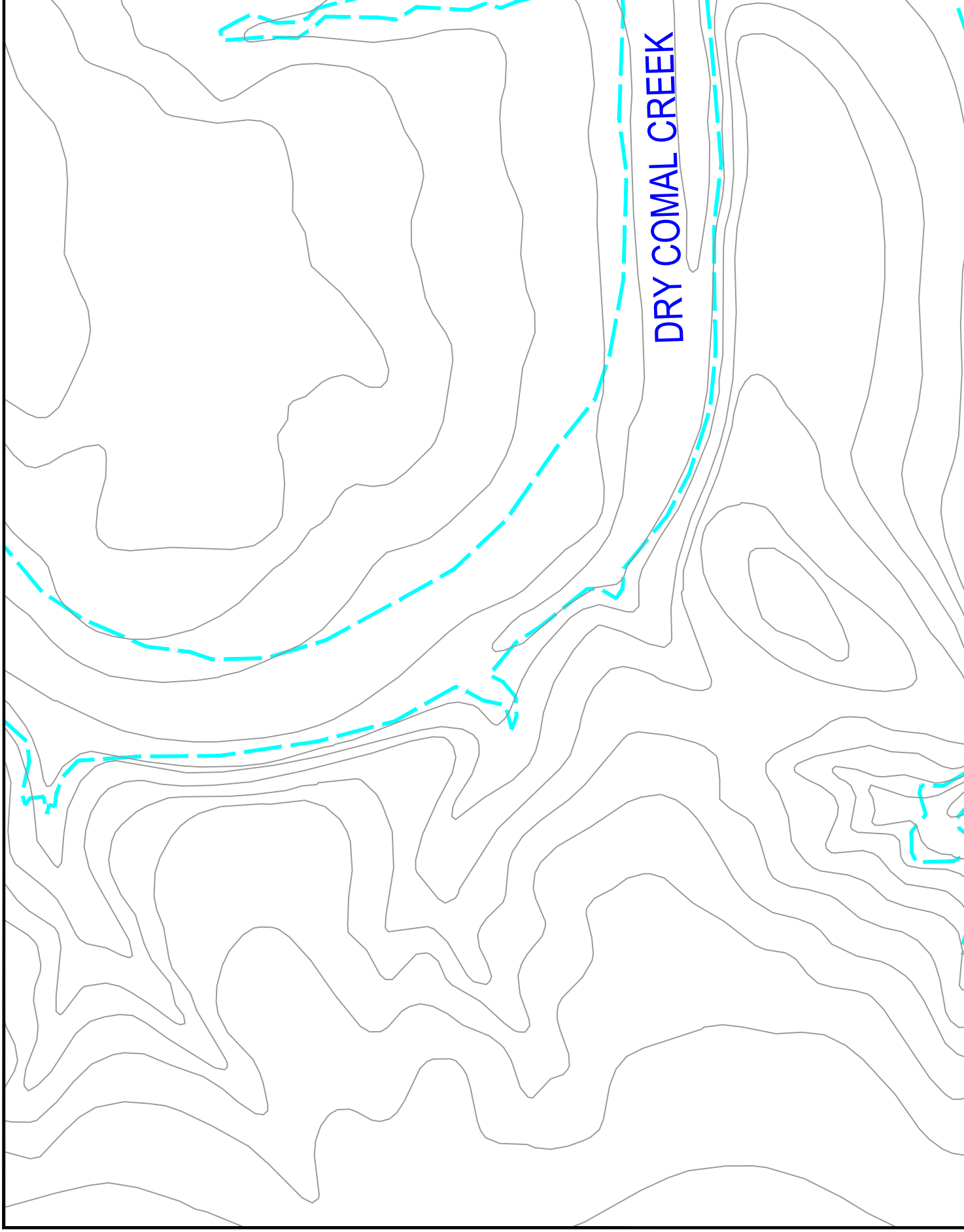
The major factor which could potentially affect groundwater quality is migration of suspended solids through bedrock fractures after quarry activities are completed.

WPAP APPLICATION FORM TCEQ-0584
ATTACHMENT B
VOLUME AND CHARACTER OF STORM WATER

In the pre-quarry condition, limited areas of up-gradient surface water sheet flows onto the project area. Prior to disturbing areas of the project site which will receive up-gradient surface water run-on, earthen berms will be constructed to intercept and prevent off-site water from flowing across disturbed areas, and thence off site.

Earthen berms surrounding the disturbed areas of the site, rock berms, and natural vegetation buffers will either filter or prevent any on-site surface water from flowing off site untreated. The earthen berms and rock berms will be constructed in stages in advance of and in coordination with quarry disturbances. The entire site will be surrounded by a 50-foot natural vegetation buffer. Once the quarry pit and earthen berms are established, there will be no significant or untreated discharges from this site. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features which may exist down-gradient of the site.

The runoff coefficient of the site in the pre-construction condition is estimated to be approximately 0.25. The overall runoff coefficient of the site in the post-construction condition is estimated to be approximately 0.75. However, this overall runoff coefficient is heavily weighted by conditions within the excavated quarry pit, and no runoff will occur from the pit itself. The post-construction runoff coefficient outside the limits of the quarry pit will be similar to pre-construction conditions since these areas will be comprised of vegetated earthen berms and natural vegetation buffers.


DRY COMAL CREEK

Section 6.0

TEMPORARY STORM WATER SECTION

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

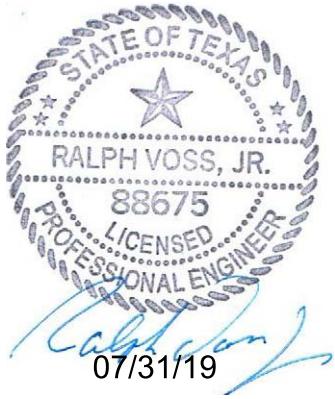
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Temporary Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The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

Print Name of Customer/Agent: Ralph Voss Jr., P.E.

Date: 07/31/19

Signature of Customer/Agent:





Regulated Entity Name: Servtex Quarry, Fordyce Tract

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: Possible diesel

   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.

   ☒ For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.

   ☒ 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.

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: Dry Comal Creek

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:

☒ 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.

☒ A description of how BMPs and measures will prevent pollutants from entering 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.

10. ☒ **Attachment G - Drainage Area Map**. A drainage area map supporting the following requirements is attached:

☐ 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.

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.

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).

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.

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 J - Schedule of Interim and Permanent Soil Stabilization Practices**. A schedule of the interim and permanent soil stabilization practices for the site is attached.

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.

19. ☒ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. ☒ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.

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.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT A
SPILL RESPONSE ACTIONS

In the event of accidental spills of hazardous materials or hydrocarbons, the following actions will be taken as necessary:

1. In the event of a spill, appropriate actions shall be taken to contain the spill using all available means including absorbent and/or adsorbent materials and readily available mobile equipment. Absorbent and/or adsorbent materials are kept in a readily available location. In the event of an uncontained discharge, available facility equipment shall immediately construct a containment berm down gradient from the discharge and absorb and/or adsorb the discharged material with sand, screenings, and/or other available fines that are on hand. This material shall be properly disposed of in accordance with applicable local, state and federal environmental regulations.

2. After containing the discharge, all media (soil, water, etc.) that came into contact with oil will be collected and stored in such a way that will not continue to affect additional media. Examples of proper materials to use for cleanup include adsorbents and/or absorbents such as: aggregates fines, sand, absorbent pads, booms, socks, etc. Proper cleanup will be deemed complete when all the applicable response requirements are met on all local, state and/or federal levels.

3. Materials that have come into contact with the discharged fluids shall be placed in a temporary staging area until proper methods of disposal can be determined. To prevent additional contamination, impacted materials will be stored on plastic sheets until removal. Plastic sheets will also be used to cover the materials to mitigate contact with rainfall and wind. Sampling of impacted media may be required prior to determining a proper method of disposal. Determining a proper method of disposal will take into consideration all local, state and federal environmental regulatory requirements.

4. In the event of a leak from a tank or piping, as much of the discharge as possible shall be collected manually and stored in an appropriate container until proper disposal or reuse. Immediate action shall be taken to stop or minimize the leak rate. The remaining product in the containment area shall be cleaned up and properly disposed.

5. In the event of a tank, hose or piping failure, arrangements shall be made to empty the tank to a safe level by immediately filling all mobile equipment on the job. The products remaining in the containment shall be handled as previously described.

6. In the event of a fire, the local fire authority shall be contacted immediately.

The following reporting procedures will be implemented after an oil/fuel discharge (of any size) has occurred.

1. Immediately contact the Plant Manager to report the discharge:

Quarry Plant Manager	
Office Phone Number:	(210) 658-7461
Fax Number:	(210) 581-0079
Environmental Contact	
Office Phone Number:	(972) 653-3735
Fax Number:	(469) 417-1438
Mobile Phone Number:	(972) 814-4122

2. Based on the size, nature, and circumstances of the discharge, the Plant Manager shall contact the Environmental Contact who will notify the appropriate regulatory authorities. In addition, federal SPCC regulations require that any discharge with the potential of reaching a navigable waterway in harmful quantities, as defined in 40 CFR 110.3, be immediately reported to the National Response Center (NRC).

   - Any discharge greater than 42 U.S. gallons in volume must be immediately reported to the NRC.

National Response Center:	(800) 424-8802
U.S. EPA, Region 6:	(214) 655-2222

3. Texas State Regulations require that a spill or accidental discharge equal to or greater than the Reportable Quantities listed in Title 30 TAC §327.4 be reported immediately to the TCEQ within 24 hours after the discovery of the spill or discharge. The reportable quantities are listed below:

   - For petroleum product or used oil discharged to land – 25 gallons
   - For petroleum product or used oil discharged to waters in the state – quantity sufficient to cause a sheen

State Emergency Response Center:	(800) 832-8224 (24 hour)
TCEQ Spill Reporting Hotline:	(512) 463-7727 (24 hour)
TCEQ Region 13:	(210) 490-3096 (8am – 5pm)
Edwards Aquifer Authority:	(210) 222-2204
New Braunfels Utility Company	(830) 629-4628

4. If a discharge is too large for facility personnel to handle or the release occurred within a secondary containment structure, the following entity may be contracted to remove oil and oily waste from the facility:

Southwest Land and Marine	(800) 527-9835

5. Pursuant to Texas regulations, the facility must also submit written information, such as a letter, describing the details of the discharge or spill and supporting the adequacy

of the response action, to the appropriate TCEQ regional manager within 30 working days of the discovery of the reportable discharge spill. The written response must document the requirements outlined in 30 TAC §327.5(c).

Regional Director
TCEQ Region 13 Office
14250 Judson Road
San Antonio, TX 78233-4480

6. Transformers located at the facility are the property of New Braunfels Utilities. In the event of a spill related to the failure or explosion of a transformer, New Braunfels Utilities or specialized clean-up contractor will be contacted so that they can remove spilled material and notify the appropriate regulatory agencies.

DETAILED DISCHARGE REPORT FORM

Reporter's Name and Date: _____

Location of Discharge: _____

Date and Time Discharge Occurred: _____

Material and Amount Discharged: _____

Source of the Release: _____

Cause and Circumstances of Release: _____

Countermeasures to Contain and Clean-up Discharge: _____

_____

_____

_____

_____

Personnel/Agency Contacted Regarding Discharge Procedures: _____

_____

_____

Corrective Actions Implemented to Prevent Recurrence of Discharge: _____

_____

_____

_____

_____

Discharge Report Sent To: _____

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT B
POTENTIAL SOURCES OF CONTAMINATION

Potential sources of contamination during operations and preventative measures include the following:

Potential Source – Oil, grease, fuel and hydraulic fluid contamination from equipment and vehicle dripping.
Preventative Measure – Vehicle and equipment maintenance will not be performed on the project site except under extenuating circumstances. Vehicles and equipment will be parked in designated locations, visually checked on a daily basis, and drip pans will be used to catch drips as needed. Chronic drips will be repaired as soon as practicable. When maintenance must be performed, a plastic liner or disposable base pad will be utilized as secondary containment.

Potential Source – Miscellaneous trash and litter from quarry workers.
Preventive Measure – Trash containers will be placed throughout the site to encourage proper trash disposal.

Potential Source - Accidental leaks or spills of oil, petroleum products, or hazardous substances, which are used or stored temporarily on site.
Preventative Measures – Quarry Operator shall incorporate discussions of spill prevention and response actions into regular safety meetings; proper spill prevention and control measures will be adhered to strictly; oil, petroleum products, or hazardous substances will be properly stored, and spill cleanup materials will be stored and readily accessible on site.

Potential Source – Portable toilet spills or overflows
Preventative Measures - Contractor will locate portable toilets on level ground surfaces away from high traffic areas. Portable toilets will be routinely inspected and serviced at a frequency sufficient to maintain sanitary conditions.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
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) including an estimate of the total area of the site to be disturbed by each activity is as follows:

The sequence of major soil disturbance activities is as follows:

- Installation of Temporary BMPs
- Clearing and stripping of the pit area
- Stockpiling topsoil for perimeter berm construction
- Grading as needed
- Construction of perimeter berms
- Quarry pit mining
- Ramp Construction
- Stabilization of disturbed area

Approximately 563± acres of the 695.66± acre site will ultimately be disturbed. Approximately 133± acres will be undisturbed or maintained as a natural vegetation buffer which will not be disturbed.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT D
TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

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.

No groundwater is expected to be encountered on site. In the pre-quarry condition, limited areas of up-gradient surface water sheet flows onto the project area. Prior to disturbing these portions of the project site, earthen berms will be constructed which prevent off-site water from flowing across disturbed areas, and thence off site.

b. 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.

No groundwater is expected to be encountered in the quarry excavation or other activities. Earthen berms surrounding the disturbed areas of the site, rock berms, and natural vegetation buffers will either filter or prevent any on-site surface water from flowing off site untreated. The earthen berms and rock berms will be constructed in stages in advance of and in coordination with quarry disturbances. Once the quarry pit and earthen berms are established, there will be no significant or untreated discharges from this site. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features which may exist down-gradient of the site.

c. A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

BMPs will be in place prior to up-gradient site disturbance. A combination of earthen berms, rock berms, and natural vegetation buffers will filter storm water or prevent storm water which has contacted disturbed areas from leaving the site and entering surface streams, sensitive features, or the aquifer. The entire site will be surrounded by a 50-foot natural vegetation buffer. Earthen berms will store and prevent water from leaving the site and rock berms will filter surface flows. Sensitive features will be protected by earthen berms or natural vegetation buffers.

d. 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.

Flow will be maintained to the natural runoff system, to the maximum extent practicable, by using rock berms and natural vegetated areas. These types of BMPs slow the flow of water allowing for sedimentation but allow the flow to be maintained. Earthen berms and the quarry pits, which store flows, will be used as pollution prevention measures to mitigate runoff from larger disturbed areas. These larger disturbed areas have a greater potential to contain sediment, therefore retention of these flows will be used to provide a higher level of protection to the water quality of the aquifer.

BMP measures utilized in this plan are intended to allow storm water to continue downstream after passing through the BMPs. This will allow storm water runoff to continue down gradient to streams or features that may exist downstream of the site.

Additional sensitive geologic features discovered in the active pit during quarrying operations will be addressed as follows:

1. Sensitive geologic feature recognition training for plant and quarry operators will be conducted. An on-site quarry manager experienced in feature identification will conduct visual surveys to ensure adequate identification and reporting of sensitive features. The on-site quarry manager will receive annual training from a licensed Professional Geologist on feature identification and protection. Results of each visual survey conducted by the on-site quarry manager will be documented and provided to TCEQ upon request.
2. The appropriate TCEQ Regional Office will be immediately notified upon discovery of any sensitive features encountered during the quarrying operations. Upon discovery, sensitive features on quarry benches will be protected with material berms, which will be maintained on a daily basis if necessary.
3. Sensitive features located on the ultimate quarry floor, which will not be excavated or mined out by further quarry activities, will be sealed with flowable fill before regulated activities near the sensitive feature may proceed. Sensitive features located on the quarry floor of intermediate benches above the ultimate quarry floor, will not be sealed, but will be protected by material berms until such time as this area of the quarry containing the sensitive feature will be mined.
4. Sensitive features located in the highwalls, which are well above the level of potential water ponding in the quarry pit and unlikely to receive contamination from any other logical or recognized source, will not be sealed.
5. If sensitive features located in the highwalls are below the level of potential water ponding in the quarry pit, or likely to receive contamination from any other logical or recognized source, they will be sealed with flowable fill before regulated activities near the sensitive feature may proceed.
6. Large features may be first filled with gravel or large rocks before placement of flowable fill. A minimum of 18-inches of flowable fill will placed above the gravel or rocks. Flowable fill is to be used to provide a reliable seal throughout the sensitive feature as it's characteristics allow it to flow around and between the gravel and large rocks and conform to irregular limits of a sensitive feature. As structural integrity and bearing capacity is not a design concern in these applications, concrete is not recommended or required.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT F
STRUCTURAL PRACTICES

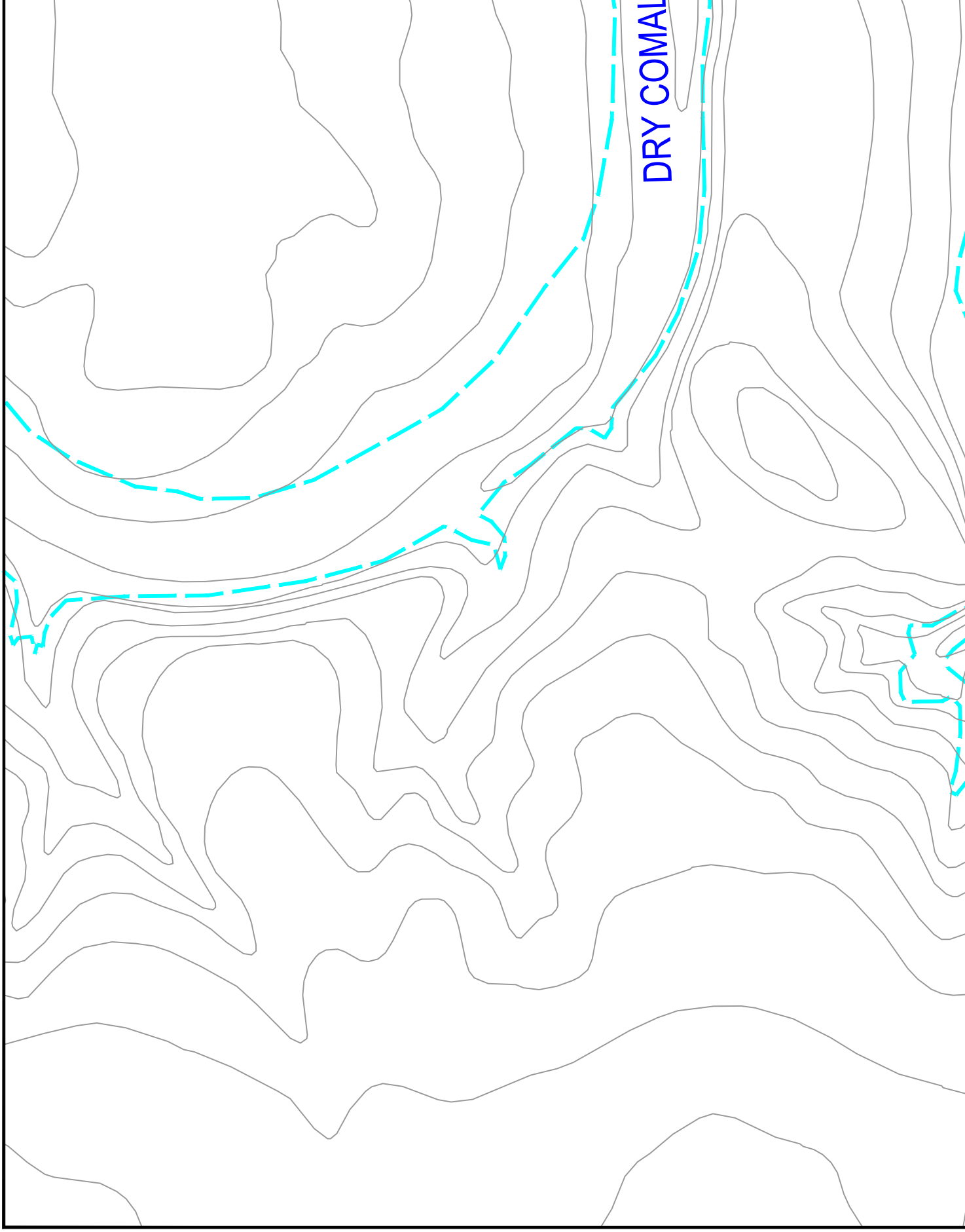
Temporary best management practices proposed for the quarry includes earthen berms and rock berms. The earthen berms are used to store flows and limit runoff discharge of pollutants from exposed areas of the site as well as to divert flows away from exposed soils. Rock berms will be used to limit storm water runoff discharge of sediment from exposed soils. Undisturbed natural vegetation buffers will be preserved around the site perimeter.

Temporary Stormwater Attachment G drawing provides details of earthen berms, natural vegetated buffers, and rock berms designed in accordance with RG-348 which will serve as temporary BMPs. Although "temporary" BMPs are discussed and described to fulfill the regulatory requirements, these types of BMPs at a quarry are more "permanent" than "temporary". To meet regulatory requirements, the temporary quarry berms are designed for a 10-year 24-hour rain event. However, in practice, these berms will be "overbuilt" because they also serve as safety barriers around the quarry; and will be left in place for the life of the project and beyond.

As an example, the earthen berms only need to be 2 feet high to meet the regulatory design requirements for a 10-year 24-hour rain event design, for the worst-case runoff condition on the project site. However, for safety purposes, earthen berms around the perimeter of the quarry will be constructed to a minimum of 4 feet high; and will be left in place after quarry activities are completed.

Although berms are not identified in RG-348 as permanent structural BMPS, they are also illustrated on the Permanent Stormwater Attachment F drawing since they will be left in place.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT G
DRAINAGE AREA MAP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TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT I
INSPECTION AND MAINTENANCE FOR BMPS

The Servtex Quarry is authorized to discharge storm water under the TPDES General Permit No. TXR050000 for industrial activities. Requirements of the general permit include maintaining a Storm Water Pollution Prevention Plan, which includes provisions for inspections of storm water best management practices and sampling of storm water discharged from the site. Inspections will be conducted in accordance with the Storm Water Pollution Prevention Plan, which is incorporated herewith by reference. A copy of a typical Storm Water Periodic Inspection (Quarterly) form is attached.

As a minimum, the inspector shall observe: (1) significant disturbed areas for evidence of erosion, (2) storage areas for evidence of leakage from the exposed stored materials, (3) structural controls (earthen berms and rock berms) for evidence of failure or excess siltation, (4) vehicle exit point for evidence of off-site sediment tracking, (5) vehicle storage areas for signs of leaking equipment or spills, (6) embankment, spillways, and outlet of sediment basin (where applicable) for erosion damage, and (7) sediment basins (where applicable) for evidence that basin has accumulated 50% of its volume in silt.

The earthen berms, rock berms, and natural vegetated buffers will be inspected on a quarterly basis. Written documentation of these inspections will be kept during the course of mining or construction at the project site. Significant erosion of berms should be backfilled and compacted as soon as possible. If a rock berm is no longer able to properly filter the sediment form storm water due to silt contamination, it should be replaced. The original minimum design dimensions of the rock berm should be maintained. Natural vegetated buffers should be treated for erosion by refilling and reseeding and sediment buildup by removal of sediment to maintain vegetation.

The WPAP Application process requires a Temporary Stormwater Section, which doesn't consider or address the unique characteristics or operations of a long-term quarry project. A quarry project is vastly different than a typical construction site if for no other reason, the extended project duration. Although "temporary" BMPs are discussed and described to fulfill the regulatory requirements, these types of BMPs at a quarry are more "permanent" than "temporary".

To meet regulatory requirements, the temporary quarry berms are designed for a 10-year 24-hour rain event. However, in practice, these berms will be "overbuilt" because they also serve as safety barriers around the quarry; and will be left in place for the life of the project and beyond. As an example, the earthen berms only need to be 2 feet high to meet the regulatory design requirements for a 10-year 24-hour rain event design, for the worst case runoff condition on the project site. However, for safety purposes, earthen berms around the perimeter of the quarry will be constructed to a minimum of 4 feet high; and will be left in place after quarry activities are completed.

Quarry operations are required to comply with TXR 050000, which includes inspections and also discharge water quality sampling. Because there really aren't any "temporary" BMPs, and the water quality sampling required by TXR 050000 provides equivalent protection to the Edwards Aquifer, weekly and daily inspections of "temporary" BMPs are not proposed.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT I (CONTINUED)
INSPECTION AND MAINTENANCE FOR BMPS

Storm Water Periodic Inspection (Quarterly)

Name: _____ Year: _____

Signature: _____

Date: _____

Location: _____ Permit No. TXR050000

Circle the Appropriate Month

Jan Feb Mar Apr May June

July Aug Sep Oct Nov Dec

Describe in detail any "YES" responses to these questions on Page 2 in the Comments section.

YES	NO	General
☐	☐	Is the storm water plan unavailable or at an offsite location?
☐	☐	Is there any water leaving the property that wasn't generated from a rain event?
☐	☐	Are there any raw land clearing activities that will disturb one (1) acre or more?
☐	☐	Are there any new activities at the facility that are not described in the facility's storm water plan? (refer to the Descriptive Narrative and Operation Summary in the facility's storm water plan.)
☐	☐	Does the site map need to be updated? (refer to the site map in Appendix B of the storm water plan)
☐	☐	Is the Storm Water Log incomplete or missing data? (rainfall data should be kept daily.)

YES	NO	Good Housekeeping
☐	☐	Are there any potential sources of pollution in **Loading/Unloading** Areas?
☐	☐	Are there any potential sources of pollution in **Outdoor Storage** Areas? (silos, hoppers, stockpiles, etc.)
☐	☐	Are there any potential sources of pollution in **Outdoor Processing** Areas?
☐	☐	Are there any potential sources of pollution in **Waste Disposal** Areas? (dumpster, trach cans, etc.)
☐	☐	Are there any potential sources of pollution in **Maintenance, Fueling, or Cleaning** Areas?
☐	☐	Are there any potential sources of pollution in **Liquid Storage Tank** Areas? (admixtures, fuel, etc.)
☐	☐	Are **Dust Producing Activities or Areas** in need of housekeeping, maintenance, or repair?
☐	☐	Are there any potential contaminants (containers, open containers, parts, etc.) exposed to precipitation that can be covered or moved under a cover?
☐	☐	Are there any dumpster/trash bins that are not closed or covered to prevent precipitation from accumulating in them?
☐	☐	Is there any debris, refuse, or garbage in potential contact with stormwater?
☐	☐	Are scrap material/parts areas in need of housekeeping?

YES	NO	Spill Prevention and Response Measures
☐	☐	Are there any tanks, barrels, or other containers that are not tightly **sealed**; have noticable tears, **leaks** or drips; or are not clearly **labeled**?
☐	☐	Does any onsite equipment show signs of leaking fluids? (Equipment Pre-Shift Inspections and Maintenance Activities should also be available for inspection)
☐	☐	Have there been any reportable spills or leaks? (If yes, the storm water plan should reflect the event.)
☐	☐	Does the *Spills and Leaks Log* need to be updated for the month?
☐	☐	Do the spill cleanup supplies need to be restocked? (aggregates, booms, absorbent pads, etc.)
☐	☐	Are there any chemical or oil containers outside of secondary containment structural controls?

YES	NO		
			Erosion Control Measures
☐	☐		Are natural vegetative areas in need of maintenance?
☐	☐		Are there any obvious signs of erosion at the facility?
☐	☐		Are there signs of erosion from stormwater run-on or run-off in stockpile areas?
☐	☐		Do existing erosion control best management practices appear to be ineffective?
☐	☐		Are there any new areas with a high potential for erosion?
YES	NO		
			Maintenance Program for Structural Controls
☐	☐		Are there any structural controls in need of maintenance?
			Structural Controls include catch basins, diversion channels, natural vegetation, construction entrances, filter berms, channels, rip rap, silt fences, ground slopes and roughening, brush barriers,sediment trap, grass swales, mobile equipment, etc.
☐	☐		Is the Preventative Maintenance Log incomplete for structural control repairs/maintenance?
YES	NO	N/A	
			Best Management Practices (BMPs)
☐	☐	☐	Are sweeper / water truck use records missing or incomplete?
☐	☐	☐	Do any filter berms, sediment traps, and other BMPs require maintenance or repair? (Records should be on the *Preventative Maintenance Log* in the stormwater plan.)
YES	NO		
			Employee Training and Education Program
☐	☐		Are there any new employees or has any member of the pollution prevention team changed? (If Yes, then call Environmental Services for Training)
☐	☐		Has the facility's required annual training expired? (once a year)
YES	NO	N/A	
			Sampling Requirements
☐	☐		Did a stormwater discharge occur at an authorized outfall during the preceding month?
☐	☐	☐	If a stormwater discharge occurred within the quarter, are required Quarterly Benchmark Monitoring samples pending collection for the quarter?
☐	☐	☐	If a stormwater discharge occurred within the preceding month, are required Monthly Visual Monitoring samples pending collection for the month? (Visual observations of samples should be documented on the Monthly Visual Examination Forms)
☐	☐	☐	If samples have been collected, is sampling documentation missing any of the following required information? date, time, sampling location, name of sampler
☐	☐	☐	Are samples being collected after 30 minutes of discharge? (Samples should be collected within 30 minutes of the beginning of discharge)

Comments: Describe any "Yes" response given above.

Corrective Action: Describe in detail all corrective actions taken.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT J
SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION

Conventional stabilization measures are not applicable in a quarry operation, in particular, in relation to a quarry pit. Continuous interim on-site stabilization measures will be implemented consisting of minimizing soil disturbance outside of the pit area and maximizing the use of natural vegetation as a buffer or TBMP.

As the quarry pit is excavated, loose rock will be removed and transported off the Recharge Zone. Interim stabilization will consist of native bedrock excavation. Ultimate final stabilization of the pit will be removal or compaction of loose rock resulting in a permanent native bedrock floor.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT J (CONTINUED)
SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION

PROJECT MILESTONE DATES

Date when major site grading activities begin:

Construction Activity	**Date**

Dates when construction activities temporarily or permanently cease on all or a portion of the project:

Construction Activity	**Date**

Dates when stabilization measures are initiated:

Stabilization Activity	**Date**

Section 7.0

PERMANENT STORM WATER SECTION

Permanent 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)(C), (D)(Ii), (E), and (5), 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

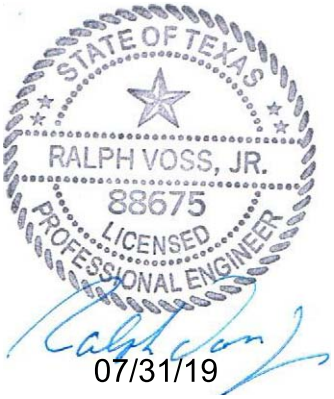
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Permanent Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The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

Print Name of Customer/Agent: Ralph Voss Jr., P.E.

Date: 07/31/19

Signature of Customer/Agent





Regulated Entity Name: Servtex Quarry, Fordyce Tract

Permanent Best Management Practices (BMPs)

Permanent best management practices and measures that will be used during and after construction is completed.

1. ☐ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.

   ☒ N/A

2. ☐ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

   ☐ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: _____

☒ N/A

3. ☐ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

   ☒ N/A

4. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

   ☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.
   ☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.
   ☒ The site will not be used for low density single-family residential development.

5. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

   ☐ **Attachment A - 20% or Less Impervious Cover Waiver**. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
   ☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
   ☒ The site will not be used for multi-family residential developments, schools, or small business sites.

6. ☒ **Attachment B - BMPs for Upgradient Stormwater**.

☒ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.

☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.

☐ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

7. ☒ **Attachment C - BMPs for On-site Stormwater**.

☒ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.

☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.

8. ☒ **Attachment D - BMPs for Surface Streams**. A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.

☐ N/A

9. ☒ The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.

☐ The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.

☒ **Attachment E - Request to Seal Features**. A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.

10. ☒ **Attachment F - Construction Plans**. All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:

☐ Design calculations (TSS removal calculations)

☒ TCEQ construction notes

☒ All geologic features

☐ All proposed structural BMP(s) plans and specifications

☐ N/A

11. ☐ **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan**. A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:

    ☐ Prepared and certified by the engineer designing the permanent BMPs and measures
    ☐ Signed by the owner or responsible party
    ☐ Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
    ☐ A discussion of record keeping procedures

    ☒ N/A

12. ☐ **Attachment H - Pilot-Scale Field Testing Plan**. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.

    ☒ N/A

13. ☒ **Attachment I -Measures for Minimizing Surface Stream Contamination**. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.

    ☐ N/A

Responsibility for Maintenance of Permanent BMP(s)

Responsibility for maintenance of best management practices and measures after construction is complete.

14. ☐ The applicant is 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 (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

    ☒ N/A

15. ☒ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

    ☐ N/A

PERMANENT STORMWATER SECTION FORM TCEQ-0600
ATTACHMENT B
BMPS FOR UPGRADIENT STORM WATER

No groundwater is expected to be encountered on site. In the pre-quarry condition, limited areas of up-gradient surface water sheet flows onto the project area. Prior to disturbing these portions of the project site, earthen berms will be constructed which prevent off-site water from flowing across disturbed areas, and thence off site.

PERMANENT STORMWATER SECTION FORM TCEQ-0600
ATTACHMENT C
BMPS FOR ON-SITE STORM WATER

No groundwater is expected to be encountered in the quarry excavation or other activities. Earthen berms surrounding the disturbed areas of the site, rock berms, and natural vegetation buffers will either filter or prevent any on-site surface water from flowing off site untreated. The earthen berms and rock berms will be constructed in stages in advance of and in coordination with quarry disturbances. Once the quarry pit and earthen berms are established, there will be no significant or untreated discharges from this site. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features which may exist down-gradient of the site.

PERMANENT STORMWATER SECTION FORM TCEQ-0600
ATTACHMENT D
BMPS FOR SURFACE STREAMS

BMPs will be in place prior to up-gradient site disturbance. A combination of earthen berms, rock berms, and natural vegetation buffers will filter storm water or prevent storm water which has contacted disturbed areas from leaving the site and entering surface streams, sensitive features, or the aquifer. The entire site will be surrounded by a 50-foot natural vegetation buffer. Earthen berms will store and prevent water from leaving the site and rock berms will filter surface flows. Sensitive features will be protected by earthen berms or natural vegetation buffers.

PERMANENT STORMWATER SECTION FORM TCEQ-0600
ATTACHMENT E
REQUEST TO SEAL FEATURES

This request to mine out naturally-occurring sensitive features is based on the absence of any reasonable or practicable alternatives. Sensitive features discovered during the Geologic Assessment or during the quarry process will be mined out as the pit will be mined to a depth of approximately 150 feet, and it would be unsafe and impractical to preserve a feature and buffer within the quarry pit.

Sensitive geologic features discovered in the active pit during quarrying operations will be addressed as follows:

1. Sensitive geologic feature recognition training for plant and quarry operators will be conducted. An on-site quarry manager experienced in feature identification

will conduct visual surveys to ensure adequate identification and reporting of sensitive features. The on-site quarry manager will receive annual training from a licensed Professional Geologist on feature identification and protection. Results of each visual survey conducted by the on-site quarry manager will be documented and provided to TCEQ upon request.

2. The appropriate TCEQ Regional Office will be immediately notified upon discovery of any sensitive features encountered during the quarrying operations. Upon discovery, sensitive features on quarry benches will be protected with material berms, which will be maintained on a daily basis if necessary.
3. Sensitive features located on the ultimate quarry floor, which will not be excavated or mined out by further quarry activities, will be sealed with flowable fill before regulated activities near the sensitive feature may proceed. Sensitive features located on the quarry floor of intermediate benches above the ultimate quarry floor, will not be sealed, but will be protected by material berms until such time as this area of the quarry containing the sensitive feature will be mined.
4. Sensitive features located in the highwalls, which are well above the level of potential water ponding in the quarry pit and unlikely to receive contamination from any other logical or recognized source, will not be sealed.
5. If sensitive features located in the highwalls are below the level of potential water ponding in the quarry pit, or likely to receive contamination from any other logical or recognized source, they will be sealed with flowable fill before regulated activities near the sensitive feature may proceed.
6. Large features may be first filled with gravel or large rocks before placement of flowable fill. A minimum of 18-inches of flowable fill will placed above the gravel or rocks. Flowable fill is to be used to provide a reliable seal throughout the sensitive feature as it's characteristics allow it to flow around and between the gravel and large rocks and conform to irregular limits of a sensitive feature. As structural integrity and bearing capacity is not a design concern in these applications, concrete is not recommended or required.

Sensitive features identified during the Geologic Assessment which are within the quarry excavation limits are identified in the following table.

Feature No.	Feature Type	Relative Infiltration Rate (refer to Geologic Assessment	Feature Sensitivity	Permanent Pollution Abatement Measure
S-1	Solution Cavity	Intermediate	Sensitive	
S-2	Solution Cavity	Intermediate	Sensitive	Mine out
S-3	Solution Cavity/Solution-Enlarged Fractures	Intermediate	Sensitive	Mine out
S-4	Zone	High	Sensitive	Mine out
S-5	Zone	High	Sensitive	Mine out
S-6	Zone	High	Sensitive	Mine out
S-7	Solution-Enlarged Fractures	Low	Non-Sensitive	Mine out
S-8	Sink Hole	High	Sensitive	Mine out
S-9	Sink Hole	Intermediate	Sensitive	
S-10	Solution Cavity	Intermediate	Sensitive	
S-11	Sink Hole	Intermediate	Sensitive	
S-12	Sink Hole	Low	Non-Sensitive	
S-13	Sink Hole	Intermediate	Sensitive	
S-14	Non-Karst Closed Depression	Low	Non-Sensitive	Mine out
S-15	Non-Karst Closed Depression	Low	Non-Sensitive	
S-16	Solution Cavity	Intermediate	Sensitive	Mine out
S-17	Solution Cavity	Intermediate	Sensitive	Mine out
S-18	Solution Cavity	Intermediate	Sensitive	Mine out
S-19	Sink Hole	High	Sensitive	Mine out
S-20	Sink Hole	Intermediate	Sensitive	Mine out
S-21	Cave	High	Sensitive	Mine out
S-22	Manmade feature in bedrock	Low	Non-Sensitive	Mine out
S-23	Non-Karst Closed Depression	Low	Non-Sensitive	
S-24	Sink Hole	Intermediate	Sensitive	Mine out
S-25	Solution Cavity	High	Sensitive	Mine out
S-26	Sink Hole	Intermediate	Sensitive	Mine out
S-27	Sink Hole	Low	Non-Sensitive	Mine out
S-28	Solution Cavity	Intermediate	Sensitive	Mine out
S-29	Solution Cavity/Solution-Enlarged Fractures	Intermediate	Sensitive	Mine out
S-30	Solution-Enlarged Fractures	Low	Non-Sensitive	Mine out
S-31	Solution Cavity	Low	Non-Sensitive	Mine out
S-32	Solution Cavity	Low	Non-Sensitive	Mine out
S-33	Solution Cavity	Intermediate	Sensitive	Mine out
S-34	Sink Hole	Low	Non-Sensitive	Mine out
S-35	Sink Hole	Intermediate	Sensitive	Mine out
S-36	Sink Hole	Low	Non-Sensitive	Mine out
S-37	Sink Hole	Low	Non-Sensitive	

S-38	Sink Hole	Low	Non-Sensitive	
S-39	Sink Hole	Low	Non-Sensitive	Mine out
S-40	Sink Hole	Low	Non-Sensitive	Mine out
S-41	Non-Karst Closed Depression	Low	Non-Sensitive	Mine out
S-42	Sink Hole	Low	Non-Sensitive	Mine out
S-43	Solution-Enlarged Fractures	Low	Non-Sensitive	
S-44	Sink Hole	High	Sensitive	
S-45	Non-Karst Closed Depression	Low	Non-Sensitive	Mine out
S-46	Sink Hole	Intermediate	Sensitive	Mine out
S-47	Solution Cavity	Intermediate	Sensitive	Mine out
S-48	Solution Cavity	Intermediate	Sensitive	Mine out
S-49	Fault	Low	Non-Sensitive	
S-100	Manmade feature in bedrock	Low	Non-Sensitive	Mine out

PERMANENT STORMWATER SECTION FORM TCEQ-0600
ATTACHMENT F
CONSTRUCTION PLANS

Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information have been signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed permanent BMPs and measures are provided at the end of this form. Design Calculations, TCEQ Construction Notes, all man-made or naturally occurring geologic features, all proposed structural measures, and appropriate details are shown on the construction plans.

The site has no impervious cover according to RG-500; including, but not limited to the following:

- pavement including roadways, driveways, parking lots, etc.
- roofs, if not part of a rainwater-harvesting system
- compacted road base, such as that used for parking areas
- material stockpile areas
- other surfaces that prevent the infiltration of water into the soil.

There are no proposed paved areas, roofs, compacted road base, or material stockpile areas projected for the project site outside of the quarry pit. During quarry operations, a primary crusher will be located inside the quarry pit on the quarry floor. The primary crusher will be removed after quarrying activities are complete. Equipment will also be parked in this area.

PERMANENT STORMWATER SECTION FORM TCEQ-0600
ATTACHMENT I
MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

Any points where discharge from the site is concentrated and erosive velocities exist will include appropriately sized energy dissipaters to reduce velocities to non-erosive levels. BMPs will be in place prior to up-gradient site disturbance. A combination of earthen berms, rock berms, and natural vegetation buffers will filter storm water or prevent storm water which has contacted disturbed areas from leaving the site and entering surface streams. Due to the earthen berms surrounding the quarry operation, erosive discharge points are not anticipated.

CONSTRUCTION NOTES

1. Written construction notification must be given to the appropriate TCEQ regional office no later than 48 hours prior to commencement of the reg
will commence, the name of the approved plan for the regulated activity, and the name of the prime contractor and the name and telephone numb
2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution
approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval le
3. If any sensitive feature is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The
features encountered during construction. The regulated activities near the sensitive feature may not proceed until the TCEQ has reviewed and appr
Aquifer from any potentially adverse impacts to water quality.
4. No temporary aboveground hydrocarbon and hazardous substance storage tank system is installed within 150 feet of a domestic, industrial, irriga
5. Prior to commencement of construction, all temporary erosion and sedimentation (E&S) control measures must be properly selected, installed, an
engineering practices. Controls specified in the temporary storm water section of the approved Edwards Aquifer Protection Plan are required during
incorrectly, the applicant must replace or modify the control for site situations. The controls must remain in place until disturbed areas are revegeta
6. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite imp
streams or sensitive features by the next rain).
7. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A perm
of the basin volume.
8. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwate
9. All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spo
must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at th
10. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permaner
that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction ac
stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth
measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the
precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.
11. The following records shall be maintained and made available to the TCEQ upon request: the dates when major grading activities occur; the da
the site; and the dates when stabilization measures are initiated.
12. The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the e
A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms,
B. any change in the nature or character of the regulated activity from that which was originally approved or a change which would signif
C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office		San Antonio Regional Office	
2800 S. IH 35, Suite 100		14250 Judson Road	
Austin, Texas 78704-5712		San Antonio, Texas 78233-4480	
Phone	(512) 339-2929	Phone	(210) 490-3096
Fax	(512) 339-3795	Fax	(210) 545-4329

Section 8.0

AGENT AUTHORIZATION FORM

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Carol Lowry,
Print Name

Vice President,
Title - Owner/President/Other

of Hanson Aggregates LLC,
Corporation/Partnership/Entity Name

have authorized Lalit Bhatnagar
Print Name of Agent/Engineer

of Hanson Aggregates LLC
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:

Carol L. Lowry
Applicant's Signature

06/03/2019
Date

Carol Lowry, Vice President of
Hanson Aggregates LLC

THE STATE OF TEXAS §

County of Dallas §

BEFORE ME, the undersigned authority, on this day personally appeared Carol Lowry, Vice President of Hanson Aggregates LLC 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 3rd day of June, 2019.

NOTARY PUBLIC

AMY C YI
Notary ID #125901005
My Commission Expires
November 12, 2022

Amy C. Yi
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: November 12, 2022

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Carol Lowry,
Print Name

Vice President,
Title - Owner/President/Other

of Hanson Aggregates LLC,
Corporation/Partnership/Entity Name

have authorized Forster Engineering
Print Name of Agent/Engineer

of Forster Engineering
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:

Carol L. Lowry
Applicant's Signature

07/22/2019
Date

Carol Lowry, Vice President of
Hanson Aggregates LLC

THE STATE OF TEXAS §

County of DALLAS §

BEFORE ME, the undersigned authority, on this day personally appeared Carol Lowry, Vice President of Hanson Aggregates LLC 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 22nd day of July, 2019.

NOTARY PUBLIC

AMY C YI
Notary ID #125901005
My Commission Expires
November 12, 2022

Amy C. Yi
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: November 12, 2022

CERTIFICATE OF ASSISTANT SECRETARY

OF

HANSON AGGREGATES LLC

I, AMY C. YI, an Assistant Secretary of Hanson Aggregates LLC, a Delaware limited liability company (the "Company"), DO HEREBY CERTIFY as follows:

(1) The following individuals whose names and titles appear below are duly elected, qualified and acting officers of the Company and do continue to hold such offices or titles as of the date hereof.

NAME	OFFICE / TITLE
Carol L. Lowry	Vice President and Secretary
Lalit Bhatnagar	Assistant Secretary

IN WITNESS WHEREOF, the undersigned has hereunto subscribed her name and affixed hereto the official seal of the Company on this 10th day of June, 2019.



[CORPORATE SEAL]

Amy C. Yi
Assistant Secretary

Lehigh Hanson
HEIDELBERGCEMENT Group

Lehigh Hanson, Inc.

Carol L. Lowry
Vice President and General Counsel
300 E. John Carpenter Freeway
Suite 1645
Irving, Texas 75062
Direct: (972) 653-3895
Fax: (972) 819-1735

June 3, 2019

Ms. Lillian Butler
Texas Commission on Environmental Quality
Edwards Aquifer Protection Program
TCEQ – San Antonio Region 13
14250 Judson road
San Antonio, TX 78233

Subject: 350.194 acre tract of land owned by Hanson Aggregates Mid-Pacific, Inc. authorizing Hanson Aggregates LLC to conduct Regulated Activities

Dear Ms. Butler:

I, **Carol Lowry**, am a duly designated officer, **Vice President of Hanson Aggregates Mid-Pacific, Inc.**, and authorized under 30TAC §213.4(c)(2) and 30TAC §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.

As **Vice President of Hanson Aggregates Mid-Pacific, Inc.**, I do hereby authorize **Hanson Aggregates LLC** to conduct any and all activities or permitting actions related to any TCEQ regulations including but not limited to Edwards Aquifer Protection Program regulations. Examples of such to specifically include but not be limited to: Water Pollution Prevention Plans, Contributing Zone Plans, Above-ground Storage Tank Plans, Geological Assessments, TCEQ Storm Water permits of any type, or TCEQ Air permits of any type. This authorization applies to ANY and ALL regulated activities conducted on ANY or ALL portions of the properties described in the Comal County Tax Appraisal records as follows:

Tract 1 - Property ID # 78747, A-463 SUR-492 V PFEUFFER, 42.464 ACRES
Tract 2 – Property ID #80507, A-609 SUR-752 J THOMPSON, 228.23 ACRES,
A-114 AUR-100 1/2 N. Comer
Tract 3 – Property ID #81351, A-689 SUR-499 M ZILLER, 79.5 ACRES

As **Vice President of Hanson Aggregates Mid-Pacific, Inc. (land owner)**, I do hereby acknowledge ultimate responsibility 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 subject to administrative rule or orders and penalties as provided under 30TAC §213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

If you have any questions or require additional information, please do not hesitate to contact me at your earliest convenience.

Sincerely,

Carol L. Lowry

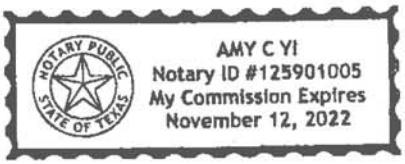
Carol Lowry
Vice President
Hanson Aggregates Mid-Pacific, Inc.

STATE OF TEXAS
COUNTY OF DALLAS

I, Amy C. Yi, a Notary Public, do hereby certify that Carol Lowry as Vice President of Hanson Aggregates Mid-Pacific, Inc., personally appeared before me this day, known to me to be the person whose name is subscribed on the foregoing instrument and acknowledged to me that she executed the same for the purposes and consideration therein expressed.

WITNESS my hand and official seal this 3rd day of June, 2019.

[SEAL]



Notary Public

My Commission expires: November 12, 2022

BEAZER EAST, INC.
c/o Three Rivers Management, Inc. (Agent for Beazer East, Inc.)
600 River Avenue, Suite 200, Pittsburgh, PA 15212-5994

Carol L. Lowry
Phone: 972-653-3895
Fax: 972-819-1735
Email: carol.lowry@lehighhanson.com

June 11, 2019

Ms. Lillian Butler
Texas Commission on Environmental Quality
Edwards Aquifer Protection Program
TCEQ – San Antonio Region 13
14250 Judson road
San Antonio, TX 78233

Subject: 335.850 acre tract of land owned by Beazer East, Inc. (formerly, 8364 Fordyce Property LLC) authorizing Hanson Aggregates LLC to conduct WPAP Regulated Activities

Dear Ms. Butler:

I, **Carol Lowry**, am a duly designated officer, **Vice President of Beazer East, Inc., formerly known as 8364 Fordyce Property LLC.** On January 1, 2019, 8364 Fordyce Property LLC merged with and into Beazer East, Inc. Therefore, Beazer East, Inc. has full possession and control of the various properties identified or recorded in the Comal County records as owned by 8364 Fordyce Property LLC by virtue of ownership. Subsequently, as Vice President of Beazer East, Inc., I am authorized under 30TAC §213.4(c)(2) and 30TAC §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 **Hanson Aggregates LLC** to conduct any and all activities or permitting actions related to any TCEQ regulations including but not limited to Edwards Aquifer Protection Program regulations. Examples of such to specifically include but not be limited to: Water Pollution Prevention Plans, Contributing Zone Plans, Above-ground Storage Tank Plans, Geological Assessments, TCEQ Storm Water permits of any type, or TCEQ Air permits of any type. This authorization applies to ANY and ALL regulated activities conducted on ANY or ALL portions of the properties described in the Comal County Tax Appraisal records as follows:

Tract 1 - Property ID # 73842, A-78 SUR-104 V BENNETT, 71.67 ACRES
Tract 2 – Property ID #74376, A-114 SUR-100 ½ N COMER, 208.092 ACRES
Tract 3 – Property ID #78328, A-436 SUR-97 J NELSON, 51.428 ACRES
Tract 4 – Property ID #80506, A-609 SUR-752 J THOMPSON, 4.66 ACRES

As **Vice President of Beazer East, Inc. (land owner)**, I do hereby acknowledge ultimate responsibility 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 subject to administrative rule or orders and penalties as provided under

30TAC §213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

If you have any questions or require additional information, please do not hesitate to contact me at your earliest convenience.

Sincerely,

Carol Lowry
Vice President, Beazer East, Inc.

STATE OF TEXAS)
COUNTY OF DALLAS)

I, Amy C. Yi, a Notary Public, do hereby certify that Carol Lowry, a Vice President of Beazer East, Inc., personally appeared before me this day, known to me to be the person whose name is subscribed on the foregoing instrument and acknowledged to me that she executed the same for the purposes and consideration therein expressed.

WITNESS my hand and official seal this 11th day of June, 2019.

AMY C YI
Notary ID #125901005
My Commission Expires
November 12, 2022

[SEAL]

Notary Public

My Commission expires: November 12, 2022

Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF MERGER, WHICH MERGES:

"8364 FORDYCE PROPERTY LLC", A DELAWARE LIMITED LIABILITY COMPANY,

WITH AND INTO "BEAZER EAST, INC." UNDER THE NAME OF "BEAZER EAST, INC.", A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED IN THIS OFFICE ON THE TWENTY-FIRST DAY OF DECEMBER, A.D. 2018, AT 6:30 O`CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF MERGER IS THE FIRST DAY OF JANUARY, A.D. 2019 AT 12:01 O'CLOCK A.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.





391209 8100M
SR# 20188329332

Authentication: 204178348
Date: 12-26-18

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 06:30 PM 12/21/2018
FILED 06:30 PM 12/21/2018
SR 20188329332 - File Number 391209

CERTIFICATE OF MERGER
MERGING
8364 FORDYCE PROPERTY LLC
(a Delaware limited liability company)
WITH AND INTO
BEAZER EAST, INC.
(a Delaware corporation)

Pursuant to Title 8, Section 264 of the Delaware General Corporation Law, as amended, and Title 6, Section 18-209 of the Limited Liability Company Act, Beazer East, Inc., a Delaware corporation, does hereby certify that:

FIRST: The name, type of entity and jurisdiction of formation of each of the constituent entities are as follows:

Name	Type of Entity	Jurisdiction of Formation
8364 Fordyce Property LLC	Limited Liability Company	Delaware
Beazer East, Inc.	Corporation	Delaware

SECOND: The agreement and plan of merger (the "***Plan of Merger***") has been approved, adopted, certified, executed and acknowledged by each of the constituent entities.

THIRD: The name of the surviving corporation of the merger shall be Beazer East, Inc., a Delaware corporation (the "***Surviving Entity***").

FOURTH: The Certificate of Incorporation of Beazer East, Inc. shall be the Certificate of Incorporation of the Surviving Entity.

FIFTH: The executed Plan of Merger is on file at the office of the Surviving Entity, located at 300 East John Carpenter Freeway, Suite 1645, Irving, Texas 75062.

SIXTH: A copy of the Plan of Merger will be furnished by the Surviving Entity, on request and without cost, to any stockholder of the Surviving Entity or member of any constituent company.

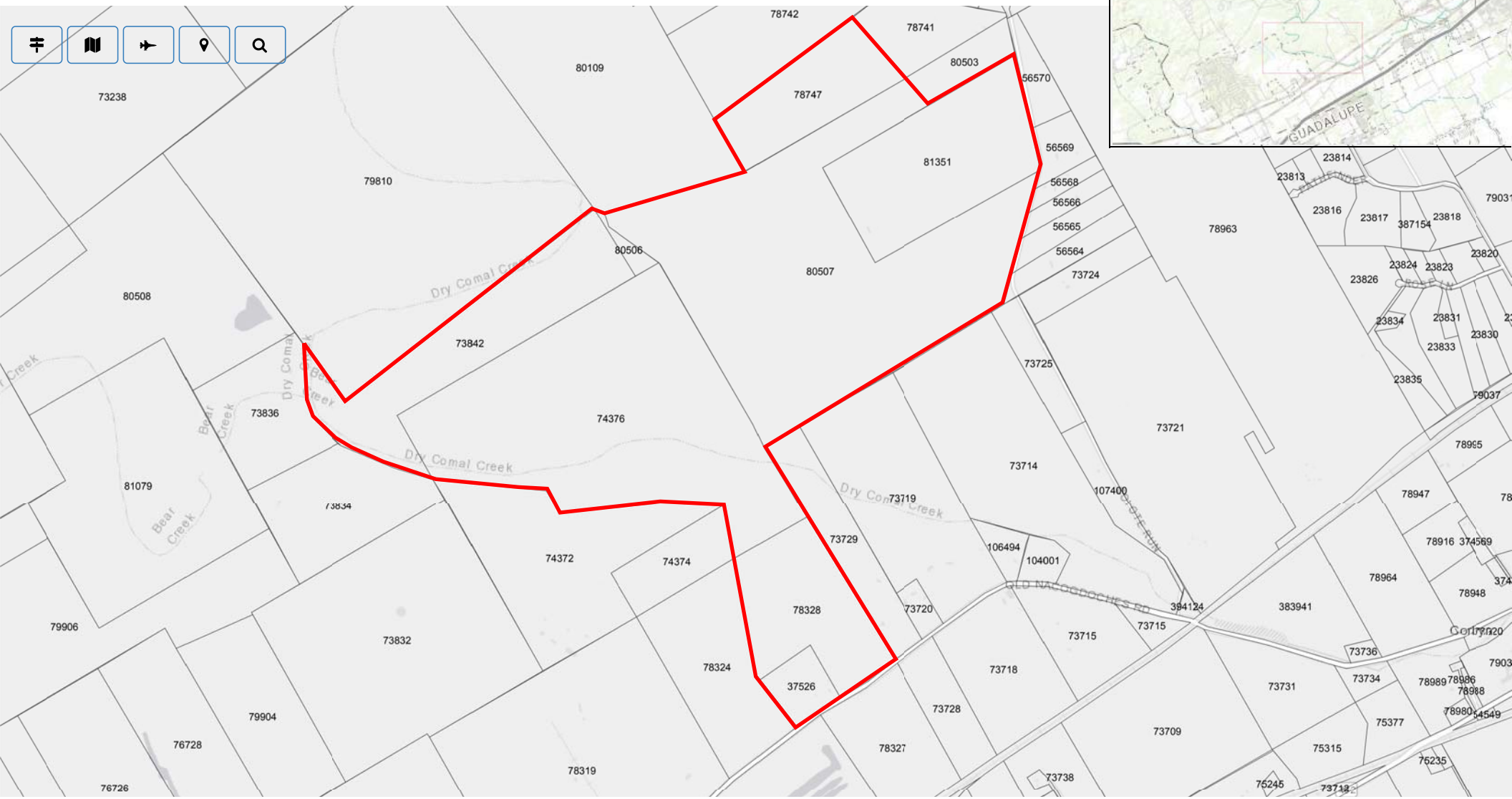
SEVENTH: The merger is to become effective at 12:01 a.m., Eastern Time, on January 1, 2019 (the "***Effective Time***").

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the Surviving Entity has caused this Certificate of Merger to be executed by an authorized officer as of December 21, 2018, to be effective as of the Effective Time.

BEAZER EAST, INC.

By: Carol L. Lowry
Name: Carol L. Lowry
Title: Vice President



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78741
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73724
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78963
80508
Dry Comal Creek
73842
73725
73836
74376
73721
Bear Creek
81079
73834
73714
73719
107400
73729
106494
104001
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383941
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78980
54549
75377
75235
73712

0.4km
0.3mi

Property Identification #: 78747

Geo ID: 740463000401
Situs Address: 0 NACOGDOCHES RD GARDEN RIDGE, TX 78266
Property Type: Real
State Code: E4

Property Information: 2019

Legal Description: A-463 SUR-492 V PFEUFFER, ACRES 42.464
Abstract: A0463
Neighborhood: Rural Ac. Area 1
Appraised Value: $294,710.00
Jurisdictions: ZZZ, ES6, 046, CAD, EDW, SCIS, 046LR

Owner Identification #: 224917

Name: HANSON AGGREGATES MID PACIFIC INC
Exemptions:
DBA: HANSON AGGREGATES



Comal CAD Map Search

This product is for informational purposes only and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. The Comal County Appraisal District expressly disclaims any and all liability in connection herewith.

Property Identification #: 80507

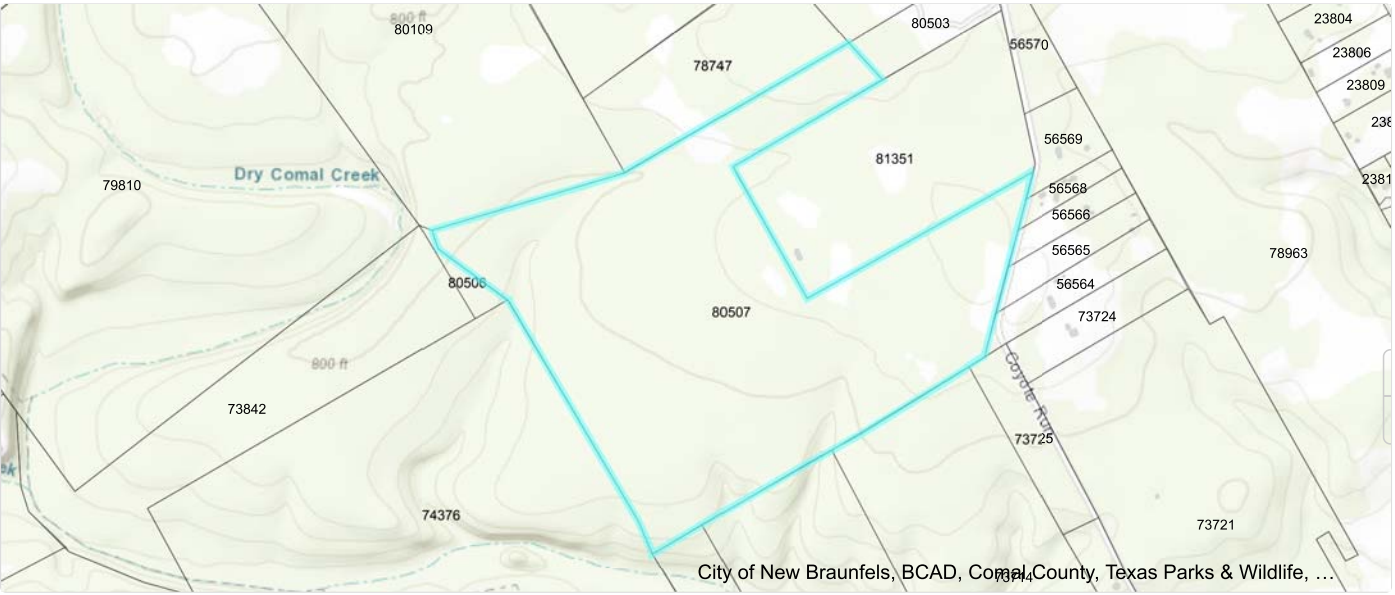
Geo ID: 780609000800
Situs Address: 0 TBD
Property Type: Real
State Code: E4

Property Information: 2019

Legal Description: A-609 SUR-752 J THOMPSON, ACRES 228.23, A-114 AUR-100 1/2 N COMER
Abstract: A0609
Neighborhood: Rural Ac. Area 1
Appraised Value: $1,759,950.00
Jurisdictions: ZZZ, 046, CAD, EDW, FLC, ES6, SCIS, 046LR

Owner Identification #: 224917

Name: HANSON AGGREGATES MID PACIFIC INC
Exemptions:
DBA: HANSON AGGREGATES



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Property Identification #: 81351

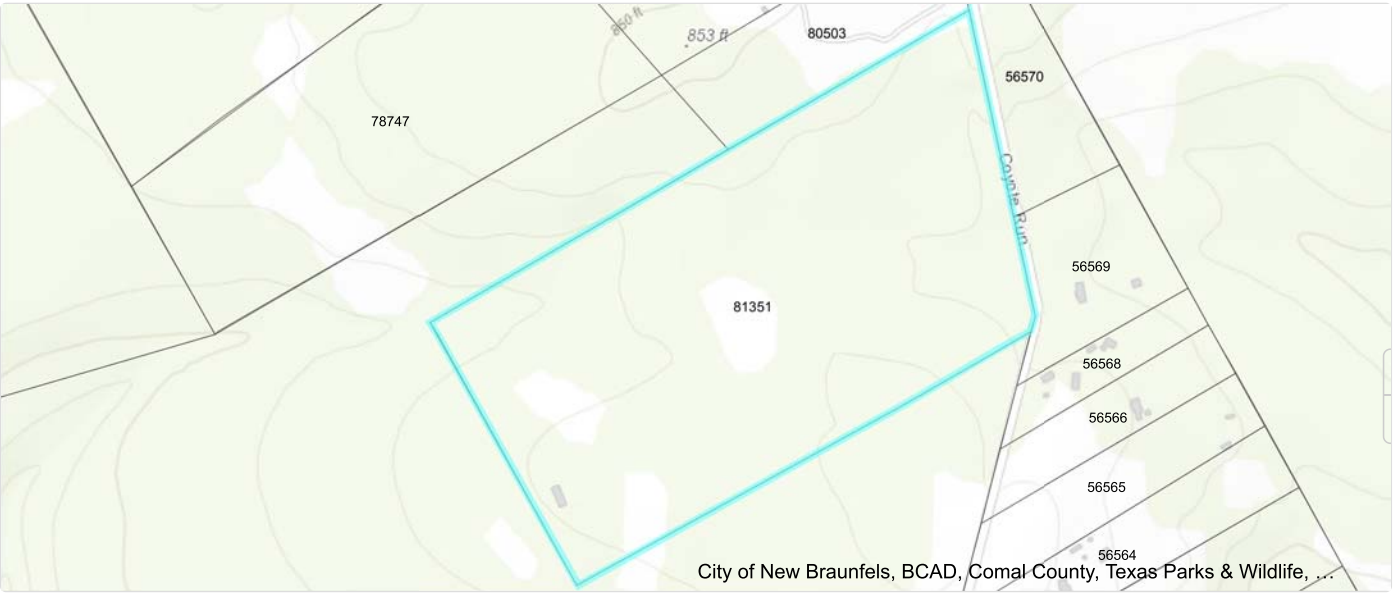
Geo ID: 780689000100
Situs Address: 551 COYOTE RUN NEW BRAUNFELS, TX 78132
Property Type: Real
State Code: E1

Property Information: 2019

Legal Description: A-689 SUR-499 M ZILLER, ACRES 79.5
Abstract: A0689
Neighborhood: Rural Ac. Area 1
Appraised Value: $675,820.00
Jurisdictions: SCIS, 046LR, EDW, CAD, ZZZ, 046, FLC, ES6

Owner Identification #: 224917

Name: HANSON AGGREGATES MID PACIFIC INC
Exemptions:
DBA: HANSON AGGREGATES



Comal CAD Map Search

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Property Identification #: 73842

Geo ID: 740078000700
Situs Address: 0 NACOGDOCHES RD GARDEN RIDGE, TX 78266
Property Type: Real
State Code: D1

Property Information: 2019

Legal Description: A- 78 SUR-104 V BENNETT, ACRES 71.67
Abstract: A0078
Neighborhood: Rural Ac. Area 1
Appraised Value: $4,590.00
Jurisdictions: EDW, 046LR, CAD, SCIS, 046, FLC, ES6, ZZZ

Owner Identification #: 935955

Name: 8364 FORDYCE PROPERTY LLC
Exemptions:
DBA: H A W AQUISITION CO LLC



Comal CAD Map Search

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Property Identification #: 74376

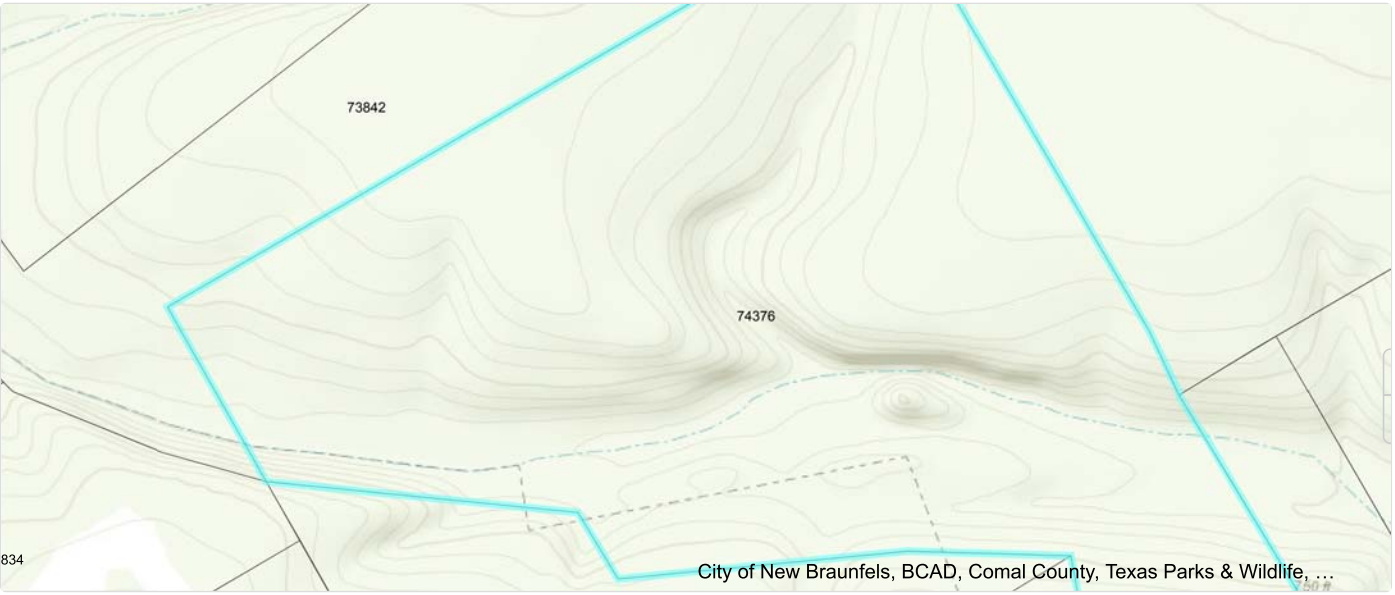
Geo ID: 740114000400
Situs Address: 0 NACOGDOCHES RD GARDEN RIDGE, TX 78266
Property Type: Real
State Code: D1

Property Information: 2019

Legal Description: A-114 SUR-100 1/2 N COMER, ACRES 208.092
Abstract: A0114
Neighborhood: Rural Ac. Area 1
Appraised Value: $13,320.00
Jurisdictions: CAD, SCIS, ZZZ, EDW, FLC, ES6, 046, 046LR

Owner Identification #: 935955

Name: 8364 FORDYCE PROPERTY LLC
Exemptions:
DBA: H A W AQUISITION CO LLC



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Property Identification #: 78328

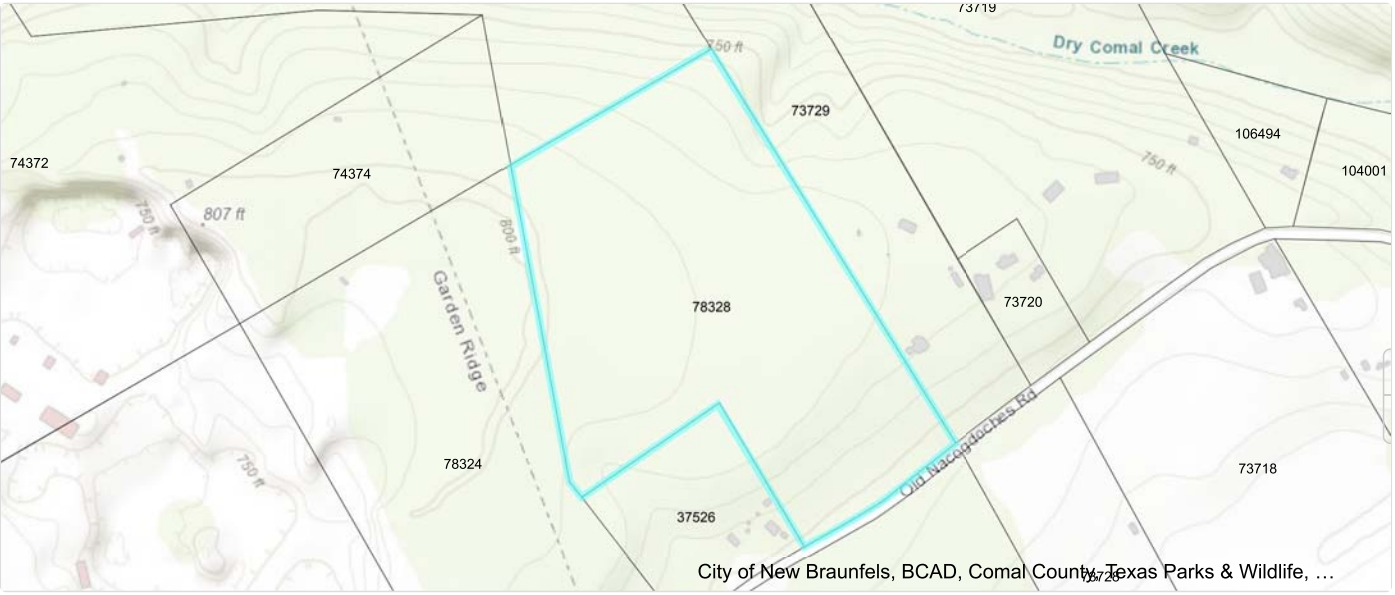
Geo ID: 740436001501
Situs Address: 0 NACOGDOCHES RD GARDEN RIDGE, TX 78266
Property Type: Real
State Code: D1

Property Information: 2019

Legal Description: A-436 SUR- 97 J NELSON, ACRES 51.428
Abstract: A0436
Neighborhood: Rural Ac. Area 1
Appraised Value: $3,290.00
Jurisdictions: FLC, ES6, ZZZ, CAD, EDW, SCIS, 046, 046LR

Owner Identification #: 935955

Name: 8364 FORDYCE PROPERTY LLC
Exemptions:
DBA: H A W AQUISITION CO LLC



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Property Identification #: 80506

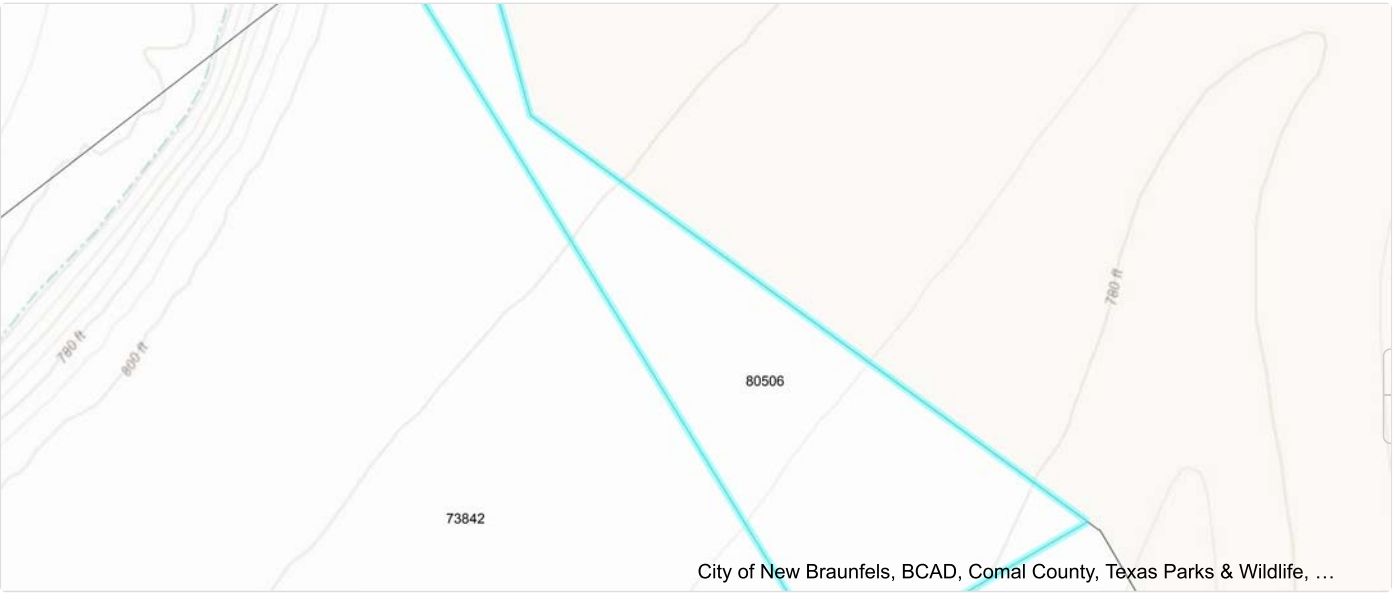
Geo ID: 780609000700
Situs Address: 0 NACOGDOCHES RD GARDEN RIDGE, TX 78266
Property Type: Real
State Code: D1

Property Information: 2019

Legal Description: A-609 SUR-752 J THOMPSON, ACRES 4.66
Abstract: A0609
Neighborhood: Rural Ac. Area 1
Appraised Value: $300.00
Jurisdictions: 046LR, SCIS, 046, EDW, CAD, FLC, ES6, ZZZ

Owner Identification #: 935955

Name: 8364 FORDYCE PROPERTY LLC
Exemptions:
DBA: H A W AQUISITION CO LLC



Comal CAD Map Search

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Property Identification #: 37526

Geo ID: 350483000100
Situs Address: 21895 OLD NACOGDOCHES RD NEW BRAUNFELS, TX 78132
Property Type: Real
State Code: A1

Property Information: 2019

Legal Description: MIMS, LOT 1
Abstract: 350483
Neighborhood: Rural Ac. Area 1
Appraised Value: $519,923.00
Jurisdictions: SCIS, ZZZ, CAD, EDW, 046LR, 046, FLC, ES6

Owner Identification #: 956854

Name: HANSON AGGREGATES LLC
Exemptions:
DBA: Null



Comal CAD Map Search

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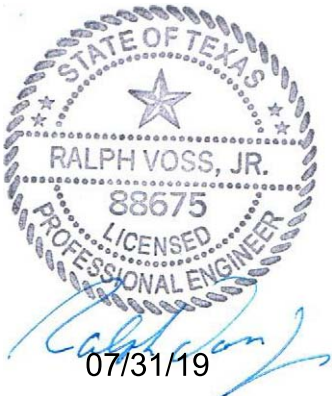
Section 9.0

APPLICATION FEE FORM AND FEE

Application Fee Form



Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Servtex Quarry, Fordyce Tract
Regulated Entity Location: 21303 FM 2252, Garden Ridge, TX 78123
Name of Customer: Hanson Aggregates, LLC
Contact Person: Lalit Bhatnagar Phone: 972-814-4122
Customer Reference Number (if issued):CN 603475864
Regulated Entity Reference Number (if issued):RN 102541612

Austin Regional Office (3373)

☐ Hays ☐ Travis ☐ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☒ Comal ☐ Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment**. This payment is being submitted to:

☐ Austin Regional Office
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☒ San Antonio Regional Office
☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	695.66± Acres	$ 10,000
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: Ralph Voss Jr. Date: 07/31/19

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 5 < 10 10 < 40 40 < 100 100 < 500 ≥ 500	$1,500 $3,000 $4,000 $6,500 $8,000 $10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 10 < 40 40 < 100	$3,000 $4,000 $5,000 $6,500 $8,000
	≥ 100	$10,000

Organized Sewage Collection Systems and Modifications

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

Section 10.0

CORE DATA FORM

TCEQ Core Data Form

TCEQ Use Only

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. Reason for Submission (If other is checked please describe in space provided.)

☒ New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)

☐ Renewal (Core Data Form should be submitted with the renewal form) ☐ Other

2. Customer Reference Number (if issued): CN 603475864

Follow this link to search for CN or RN numbers in Central Registry**

3. Regulated Entity Reference Number (if issued): RN 102541612

SECTION II: Customer Information

4. General Customer Information | 5. Effective Date for Customer Information Updates (mm/dd/yyyy)

☐ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name (If an individual, print last name first: e.g.: Doe, John) | If new Customer, enter previous Customer below:

7. TX SOS/CPA Filing Number | 8. TX State Tax ID (11 digits) | 9. Federal Tax ID (9 digits) | 10. DUNS Number (if applicable)

11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☐ Yes ☐ No

14. Customer Role (Proposed or Actual) - as it relates to the Regulated Entity listed on this form. Please check one of the following:

☐ Owner ☐ Operator ☐ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:

City | State | ZIP | ZIP + 4

16. Country Mailing Information (if outside USA) | 17. E-Mail Address (if applicable)

18. Telephone Number ( ) - | 19. Extension or Code | 20. Fax Number (if applicable) ( ) -

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 Name ☐ 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.)

SERVTEX QUARRY, FORDYCE TRACT

23. Street Address of the Regulated Entity: (No PO Boxes)							
	City		State		ZIP		ZIP + 4	
24. County	Comal						

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	Located approximately 1 mile east of the FM 2252 and FM 1337 Intersection. Garden Ridge, TX, on the north side of FM 2252.						
26. Nearest City			State		Nearest ZIP Code		
Garden Ridge			TX		78266		
27. Latitude (N) In Decimal:	29.658889		28. Longitude (W) In Decimal:	98.251944			
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		
29	39	32	98	15	07		

29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)	31. Primary NAICS Code (5 or 6 digits)	32. Secondary NAICS Code (5 or 6 digits)
1422		212312	

33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)

Mining and Production of Limestone Aggregates

34. Mailing Address:	Hanson Aggregates LLC						
	300 E. John Carpenter Freeway, Suite 1645						
	City	Irving	State	TX	ZIP	75062	ZIP + 4	2772
35. E-Mail Address:	lalit.bhatnagar@hanson.biz						

36. Telephone Number	37. Extension or Code	38. Fax Number (if applicable)
(972) 814 - 4122		(469) 419 - 1438

39. **TCEQ Programs and ID Numbers** Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Ralph Voss Jr., P.E.	41. Title:	Senior Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(210) 289 - 0580		(NA) -	rvoss@forsterengineering.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:	Forster Engineering	Job Title:	Senior Engineer
Name(*In Print*):	Ralph Voss, Jr. P.E.	Phone:	(210) 289 - 0580
Signature:		Date:	07/31/19

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 16, 2016

RECEIVED
MAY 18
COUNTY ENGINEER

Mr. Lalit Bhatnager, P.E.
Hanson Aggregates LLC
8505 Freeport Parkway, Suite 500
Irving, Texas 75063

Re: Edwards Aquifer, Comal County

NAME OF PROJECT: Servtex Quarry Fordyce Tract; Located approximately 1 mile east of the FM 2252 and FM 1337 intersection; Garden Ridge, Texas

PLAN TYPE: Request for the Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Regulated Entity No. RN102541612; Additional ID No. 13000022

Dear Mr. Bhatnager:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the above-referenced project submitted to the San Antonio Regional Office by Forster Engineering on behalf of Hanson Aggregates LLC on November 16, 2015. Final review of the WPAP was completed after additional material was received on March 17, 2016 and April 29, 2016. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in 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 no later than 23 days after the date of this approval letter. *This approval expires two (2) 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 requested.*

PROJECT DESCRIPTION

The proposed limestone quarry project will have a total area of approximately 685.74 acres. The proposed quarry pit will disturb approximately 485 acres. The proposed

activities for the site include quarrying to an elevation no deeper than 580 feet above mean sea level (a.m.s.l.). No on-site sewage facility is proposed at this time. Project wastewater (domestic) will be collected in portable toilets and disposed of two times per week by a TCEQ registered waste disposal service. Trash generated on-site will be disposed of in a dumpster and handled by a licensed waste service. Blasting agents will be used in the mining process. The site will not include process water. The site is adjacent to the existing limestone quarry (Servtex Quarry Plant) located south at 21303 FM 2252, Garden Ridge, Comal County. The Dry Comal Creek separates the quarries, but will utilize a haul road between the two quarries. Stockpiles of material will be kept at Servtex Quarry Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

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

A 50 foot natural buffer will be maintained along the perimeter of the property and the Dry Comal Creek to reduce soil erosion and runoff velocities.

Expansion of the quarry will occur in phases. Expansion in phases will allow vegetation to remain in place and limit the amount of soil that is disturbed at once.

An earthen berm (safety berm) composed of compacted soil and/or overburden will be constructed. At the full extent of the quarry pit, the earthen berm will encircle the quarry pit. Upgradient storm water will be diverted around the site and onsite flows will be prevented from leaving the site.

Rock berms will be installed on the downgradient side of the earthen berm in areas of concentrated flow.

Refueling and maintenance activities for vehicles and equipment will not be performed on the Servtex Quarry Fordyce Tract except under extenuating circumstances. If emergency maintenance occurs or if refueling on the tract must occur, appropriate protection measures will be implemented. Portable secondary containment will be utilized and will be disposed of according to 30 TAC 335.

An at-grade low-water crossing will cross the Dry Comal Creek on the southern site boundary, connecting the new quarry site with the existing quarry site. None of the Dry Comal Creek 100-year flood plain is proposed to be mined.

GEOLOGY

According to the geologic assessment included with the application, the site is located on the Pecan Gap Chalk, Buda Limestone, Del Rio clay and the Edwards Group-Person Formation. A total of forty-nine (49) geologic features were evaluated by the project geologist, with twenty-eight (28) geologic features having a high probability of rapid infiltration and therefore a sensitive rating. Sensitive features S-1, S-9, S-10, S-11, S-13, and S-44 are located outside the proposed quarry limits and will be protected. The San Antonio Regional Office site assessment conducted on January 15, 2016 revealed that the site was generally as described in the application. Natural buffers were proposed for six (6) natural sensitive features, S-1, S-9, S-10, S-11, S-13, and S-44. No regulated activities (such as

construction or soil disturbing activities) will take place within the natural buffers. The size of the natural buffers are generally based on the drainage area for each sensitive feature, which is a minimum of 50 feet. The remaining sensitive features will be addressed with temporary protection methods until such time the area is mined.

SPECIAL CONDITIONS

I. In addition to the requirements for discovered features, the on-site quarry manager will receive annual training from a licensed Professional Geoscientist on feature identification and protection. Each occurrence of this training must be documented and the documentation must be presented when requested by TCEQ representatives. The on-site quarry manager experienced in feature identification will conduct visual surveys of the pit to ensure adequate identification and reporting of encountered sensitive features. Visual surveys will be conducted monthly. Results of each visual survey conducted by the on-site quarry manager must be documented and must be made available when requested by TCEQ representatives.

II. This approval does not authorize the construction or installation of aboveground storage tanks at the site.

III. The BMPs and measures proposed in the application and/or described in this approval letter must be operational prior to any soil disturbing activities with in a BMP's drainage area.

IV. Prior to initiating construction activities, document the existing conditions of Dry Comal Creek at and below the proposed location of the low water crossing within the project limits. The assessment should include photographic and narrative documentation that will enable future comparisons for the purposes of determining impact from sediment accumulation. The plan holder must install at-grade erosion and sediment controls that have been designed to retain sediment on-site to the extent practicable with consideration for local topography and rainfall. Discharges that would cause or contribute to a violation of water quality standards, or would fail to protect and maintain existing designated areas of receiving waters are not allowed. Routine inspections must be performed following rain events to determine if Dry Comal Creek has accumulated any sediment from the quarrying activity. Accumulations of sediment must be removed before the next rain event and may require coordination with other governmental authorities. Records of inspection, maintenance, and repairs of the crossing's control measures must include the date of the inspection, date of regular maintenance, date(s) of discovery of areas in need of sediment removal, and date(s) that the control measure(s) were returned to full function. Those records must be maintained on site and be available for review by TCEQ.

V. Intentional discharges of sediment laden water from regulated activities are not allowed. If dewatering becomes necessary, appropriate measures must be taken.

VI. Pursuant to 30 TAC §213.4(h)(3) and as stated in the Edwards Aquifer protection plan, this protection plan approval or extension will expire and no extension will be granted if more than 50% of the total construction has not been completed within 10 years from the initial approval of the plan. A new Edwards Aquifer protection plan must be submitted to the TCEQ with the appropriate fees for review and

approval by the executive director prior to commencing or continuing any construction or regulated activities beyond 10 years. The Applicant must submit a status report for the project containing information regarding the percentage of the total project construction completed within 180 days prior to the expiration date of this plan approval. If at that time, the total project construction cannot be demonstrated to be at least 50% complete, the Applicant must submit a new Edwards Aquifer protection plan to the TCEQ for review and approval before continuing any construction or regulated activities beyond 10 years from the date of initial approval of the plan.

VII. If a new Edwards Aquifer protection plan is submitted to TCEQ in compliance with 30 TAC §213.4(h) (3), this approved plan will continue in effect until the executive director makes a determination on the new plan.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.
5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be

submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written 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. The executive director will use the notification to determine if the approved plan is eligible for an extension.

8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, 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. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. 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.

9. 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. 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. Voids may be filled with gravel.

<u>During Construction:</u>

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.

11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.

12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. 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. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

13. One well exists on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

14. 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.

15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.

16. 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.

17. 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:

18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

19. 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 (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Ms. Lillian Butler of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4026.

Sincerely,

Lynn Bumguardner, Water Section Manager
San Antonio Region
Texas Commission on Environmental Quality

LB/LB/eg

Enclosure: Deed Recordation Affidavit, Form TCEQ-0625

cc: Mr. Charles P. Forster, P.E., Forster Engineering
The Honorable Nadine L. Knaus, City of Garden Ridge
Mr. Thomas H. Hornseth, P.E., Comal County
Mr. Roland Ruiz, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC 212

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March 11, 2016

Comal County
RECEIVED
MAR 30 2016
COUNTY ENGINEER

Ms. Lillian Butler
Texas Commission on Environmental Quality (TCEQ)
San Antonio Region 13, Edwards Aquifer Program
14250 Judson Road
San Antonio, Texas 78233
(210) 403-4026

Subject: Hanson Aggregates LLC (Hanson)
Servtex Quarry, Fordyce Tract
Plan type: Water Pollution Abatement Plan (WPAP)
Regulated Entity No. RN102541612; Additional ID No. 13000022
Notice of Deficiency 12/28/15 Response

Dear Ms. Butler:

As requested in your letter dated December 28, 2015 (copy attached), we are providing one (1) original and five (5) copies of responses to Notice of Deficiency 12/28/15 for the Hanson Aggregates LLC Water Pollution Abatement Plan Permit Application. Your comments and our responses are provided below as follows:

Servtex Quarry Fordyce Tract
The project site, Servtex Quarry Fordyce Tract, was submitted as a new WPAP application for a 685.74-acre tract. The TCEQ Core Data Form submitted included regulated entity reference number RN102541612. According to Central Registry, RN102541612 is Servtex Quarry Plant located at the intersection of Nacogdoches Rd and FM 2252. The following Edwards Aquifer Protection Program applications are approved for the above-referenced site:

WPAP, July 16, 2002
TCEQ R-13 2016 MAR 17 1134
Project is a quarry site of 110-acres within an existing 2,000-acre boundary with three existing sedimentation ponds and use of existing limestone and rock roads. No additional impervious cover proposed.

AST, September 4, 2009
Replacement of 9 of the 15 existing tanks, modifications to the existing concrete containment structures and construction of 5 concrete drive slabs (tanker slabs) to existing containment structures.

Exception, November 10, 2000
An exception to submit a WPAP for minor construction of prefabricated steel building and associate concrete to house the particle bonding machines and associated chemicals used for the process water.
WPAP, May 16, 2013- Servtex Quarry Worley/Heitkamp Tracts

Project is a quarry site on 131.5 acres with a 50' setback distance between quarry operations and perimeter of property. The pit will be excavated to an elevation of 699 feet. No impervious cover

Extension, November 17, 2015- Servtex Quarry Worley/Heitkamp Tracts
Extension approved for May 16, 2013 WPAP. The extension expires May 16, 2016.

The proposed project, Servtex Quarry Fordyce Tract will be a modification of the original WPAP, dated July 16, 2002. Please review and submit the following additional documentation:

Form TCEQ-0584, Modification of a Previously Approved Plan (https://www.tceq.texas.gov/field/eapp/mod.html)

The TCEQ Core Data Form we submitted incorrectly included regulated entity reference number RN102541612. Since this is a new and separate project site, we are requesting assignment of a new regulated entity reference number. A revised Core Data Form is attached.

General Information Form (TCEQ-0587)
Best Management Practices for Quarry Operations RG-500

2.1 Separation from Groundwater in the R.Z.

The Greg Mim's well is located within the proposed quarry. The application states the static water level is approximately 215 feet below ground surface according to the State Well Report.

1. Verification could not be completed using the Texas Water Development Board or other groundwater sources. Please provide a well report number for Mr. Greg Mim's well or a copy of the State Well Report.

A copy of the State Well Report for the Greg Mim's well located at 21895 Old Nacogdoches Road, New Braunfels Texas is attached as requested. The well report source is https://www.tceq.texas.gov/gis/waterwellview.html.

2. The application proposes to mine out the well from elevation 770 feet to elevation point of 580 feet. This change is proposed using the water level of 215 feet from surface level. What is the high-water level at this site? Please reference sources.

The surface elevation at the Mim's well location as measured from Google Earth is approximately 764 ft MSL. The depth to water in the Mim's well on May 12, 1997 was 215 ft below land surface, or approximately 549 ft MSL. For Comal County, the closest index well is the Bexar J-17 well.

On May 12, 1997, the water elevation in J-17 was 662 ft MSL. The historic wet-weather high-water level referenced in RG-500 for J-17 is 691.4 ft MSL. The difference between the two comparison dates is 29.4 feet. Adding 29.4 feet to the Mim's well water elevation of 549 ft MSL yields a projected and inferred maximum high-water elevation of 578.4 ft MSL for the Mim's well.

3. According to RG-500 BMP for Quarry Operations, the water level in a well within the project boundary should be measured before submitting the application to the TCEQ for review. Please provide a measurement.

The intent of RG-500 in suggesting a water level be measured from a well within the project boundary is to obtain a water level measurement representative of the project conditions. Although the Mim's well is not located within the project limits, it is located within 200 feet of the project limits, and is therefore representative of water levels within the project limits. Because of its proximity and also because a reliable State Well Report is available for this well, water level data discussed above for the Mim's well are provided to represent project conditions.

2.2.2.1 Caves

Feature S-21 is a cave and S-6 is a cave with an associated solution cavity. According to RG-500 BMP for Quarry Operations, 2.2.2.1 Caves, if caves are identified during the geologic site assessment, maps showing scale or dimensions should be made of their extent, including their openings and subsurface extent and any associated sinkholes.

4. Please provide maps and drawings showing scale and/or dimensions of S-21 and S-6 with the associated solution cavity.

As requested, figures illustrating the physical dimensions of Feature S-6 are attached. Due to safety considerations and small surface opening conditions, it was not possible to enter or map Feature S-21.

2.2.4 Sensitive Features Discovered During Quarrying

5. Steps 1-5 are proposed for the discovery of a geological feature during quarrying. Please review and revise the following conditions:

(1.) It is stated: *Sensitive geologic feature... Results of each visual survey conducted by the on-site quarry manager will be documented and provided to TCEQ upon request.* According to RG-500, if the geologic feature is discovered, it must be reported to TCEQ, unless the feature is a wall void with no surface expression and no drainage area. Please revise the narrative to state, "Results of each visual survey conducted by the on-site quarry manager will be documented

and provided to TCEQ."

The appropriate TCEQ Regional Office will be immediately notified upon discovery of any sensitive features encountered during the quarrying operations. Upon discovery, sensitive features on quarry benches will be protected with material berms, which will be maintained on a daily basis if necessary.

(2.) Please include with the submitted narrative: *activity within the vicinity of the discovered feature will stop, but work is allowed to continue in other areas inside and outside the pit.*

See response in 5. (1.) above.

(3.) – (6.) Items 3-6 are proposed measures taken for features discovered during quarrying activity. The methods of protection proposed depends on location and type of feature. Please note if a sensitive feature is discovered during construction a Texas-licensed professional geologist must evaluate the feature. Work stoppage applies only to activities within the vicinity of the discovered features, but is allowed to continue in other areas inside and outside the pit. Please review and revise items 3 – 6 to emphasize TCEQ written approval is required prior to employing any treatment method.

See response in 5. (1.) above.

2.3 Quarry Berms

6. Please review and revise narrative to include the earthen berms, rock berms and natural vegetation buffers will be designed and constructed consistent with TCEQ guidance RG-348 Edwards Aquifer Rules Technical Guidance on BMPs.

As requested, verbiage in Section 2.3 Quarry Berms has been revised to reflect berm construction consistent with TCEQ guidance RG-348.

Due to changes in pagination, new copies of the entire General Information Form TCEQ-0587 Attachment C, Best Management Practices for Quarry Operations RG-500 are attached herewith.

2.4 Haul Roads, Parking Lots, and Tire Washes

7. The section states: *Hauling will take place along the quarry floor and connect with existing haul roads outside the permit area.* Please review and revise the Site Plan to illustrate where the existing connections will tie into the new propose area.

As requested, the Site Plan (Exhibit 1) has been revised to illustrate where existing connections tie into the new project area.

2.5 Stream Crossing and Buffers

8. The section states: *An at-grade low-water crossing will cross the Dry Comal Creek on the southern site boundary, connecting the new quarry site with the existing quarry site.* Please review and revise the Site Plan to illustrate where crossing will take place.

As requested, the Site Plan (Exhibit 1) has been revised to illustrate the Dry Comal Creek at-grade low-water crossing location.

9. Will the low water crossing be paved?

The low water crossing will not be paved.

2.8 Vehicle and Equipment Maintenance

10. The section states: *Vehicles and equipment will be parked in designated locations...* Please review and revise the Site Plan to illustrate the designated locations. If the location is outside the proposed project site, please review and revise statement to explain specific location.

As requested, the Site Plan (Exhibit 1) has been revised to illustrate designated parking locations for vehicles and mobile equipment.

11. Please include the following statement under section 2.8: Dispose of all used oil, antifreeze, solvents, and other automotive-related chemicals according to manufacturer instructions. These wastes require special handling and disposal. Used oil, antifreeze, and some solvents can be recycled at designated facilities, but other chemicals must be disposed of at a hazardous-waste disposal site.

Section 2.8 has been revised to include the requested language.

Due to changes in pagination, new copies of the entire General Information Form TCEQ-0587 Attachment C, Best Management Practices for Quarry Operations RG-500 are attached herewith.

2.9.2 Fueling Outside the Pit

12. According to RG-500 BMP for Quarry Operations, facilities using mobile fuel trucks should establish a designated fueling area and have secondary containment when transferring fuel from tank truck to fuel tank. Please review and revise the

Site Plan to illustrate where fueling will take place. In addition, please state what type of secondary containment will be implemented during fueling.

Because of distance and operational considerations, fueling is anticipated to take place in the pit on the Fordyce tract. Occasionally, fueling may occur outside the pit at a permanent fuel storage facility located at the main Servtex Quarry. This fuel storage location has permanent concrete aprons for secondary containment to catch any drips or spills during fueling. For fuel transfers within the pit, drip pans will be used when transferring fuel from tank truck to fuel tank.

2.9.3 Fueling of Equipment in the Pit

13. According to RG-500 BMP for Quarry Operations, fuel transferred within the pit must implement drip pans or other appropriate temporary containment devices when transferring fuel from tank truck to fuel tank. Please state what type of secondary containment will be used during fueling while in the pit.

For fuel transfers within the pit, drip pans will be used when transferring fuel from tank truck to fuel tank. Section 2.9.3 has been revised to include the requested information.

Due to changes in pagination, new copies of the entire General Information Form TCEQ-0587 Attachment C, Best Management Practices for Quarry Operations RG-500 are attached herewith

14. Will a containment structure (permanent or temporary) be implemented for the equipment located within the quarry pit?

No permanent or temporary fuel containment structures are proposed to be implemented for the equipment located within the quarry pit. Most, if not all, planned stationary equipment is electrically powered.

3.1 – 3.3.2 BMPs for Areas Discharging to Surface Waters
Section 3 for BMPs referenced Temporary and Permanent Stormwater sections of the application, so comments or questions will be addressed per section.

4 BMP Requirements for Areas within Quarry Pits

15. Will BMPs be implemented within the quarry pit to remove sedimentation from vehicles that have traveled on unpaved areas at the quarry site?

The quarry pit is similar to an active on-going construction site and there are no paved areas. No BMPs will be implemented within the quarry pit to remove sedimentation from vehicles as all vehicles will be traveling only on unpaved areas or roads. The Fordyce pit will connect to the main Servtex Quarry on upaved roads. Equipment travel between the

Fordyce pit and the main Servtex Quarry will be limited because stone quarried in the Fordyce pit will be transported by conveyor, not by trucks or other mobile equipment.

16. Will final stabilization take place as portions of the quarry are permanently abandoned?

In a conventional quarry pit, it is not common practice to permanently abandon parts of the quarry. Portions of the quarry mined to total depth are frequently backfilled with undersized or oversized material. By its nature, the bottom of a quarry is permanently stabilized with compacted base material. Additionally, in the absence of suitable growing medium on the quarry floor, establishment of uniform perennial vegetative cover of at least 70 percent of the native background vegetative cover for the area is not practicable.

5 Management of Process Water

17. The submitted application states process water is not applicable to this site. Please disclose whether aggregate washing operations will be conducted within the site boundaries of this proposed WPAP Modification.

Aggregate washing operations are not proposed to be conducted within the site boundaries of this proposed WPAP application.

Water Pollution Abatement Plan (TCEQ-0584)

18. Please review and revise the Site Plan to include and illustrate the following:

- **Feature S-22, the residential well. All known wells must be labeled on the site plan.**
- **The location of where the existing haul roads will connect to the proposed project site.**
- **The location of the low-water crossing on the southern site boundary on the Dry Comal Creek.**
- **The location of designated parking areas for vehicles and equipment.**
- **The potential location for the above ground storage tank containing diesel fuel.**
- **The location of any construction material storage areas**
- **The location of portable toilets and BMPs used for portable toilets**
- **The location of the construction office. If located outside project area, state where the office is located.**

As requested, the Site Plan (Exhibit 1) has been revised to illustrate the requested information.

A general location of portable toilets is illustrated. However, by their design and purpose, portable toilet locations will vary by need. It is not possible to project every potential portable toilet location over the life of the 685 acre quarry project.

No construction office is proposed to be located on the project site. The site will be operated from the Servtex Quarry offices located at 21303 FM 2252, Garden Ridge, TX 78266.

Temporary Stormwater (TCEQ-0602)

19. Item No. 1 states *possible diesel* fuels will be stored on the site. Please review and revise the exhibits (Attachment G and Exhibit 1) to illustrate the location of the AST. It is beneficial to have the AST approved to be onsite, even if it decided to not put into use.

Exhibit 1 and Attachment G have been revised to illustrate a potential location of aboveground storage tanks with a cumulative storage capacity between 250 and 499 gallons which may be stored on the site for less than one (1) year.

20. Item No. 9 Attachment F – Structural Practices. Please provide details of earthen berms, rock berms, and natural vegetated buffers to include materials, installation, and schematics according to RG-348 Edwards Aquifer Technical Guidance on BMPs. BMPs approved for stormwater treatment are described in RG-348 Edwards Aquifer Rules Technical Guidance on BMPs.

The WPAP Application process requires a Temporary Stormwater Section, which really doesn't consider or address the unique characteristics or operations of a long term quarry project. A quarry project is vastly different than a typical construction site if for no other reason, the extended project duration. Although "temporary" BMPs are discussed and described to fulfill the mandated requirements of the application paperwork, BMPs at a quarry are more "permanent" than "temporary". To meet regulatory requirements, the quarry berms are designed for a 10-year 24-hour rain event. However, in practice, these berms will be "overbuilt" because they also serve as safety barriers around the quarry, and will be left in place for the life of the project and beyond.

As an example, the earthen berms only need to be 2 feet high to meet the regulatory design requirements for a 10-year 24-hour rain event design, for the worst case runoff condition on the project site. However, for safety purposes, earthen berms around the perimeter of the quarry will be constructed to a minimum of 4 feet high, and will be left in place after quarry activities are completed.

Permanent Stormwater Attachment F Drawing provides details of earthen berms and natural vegetated buffers designed in accordance with RG-348 which will initially serve as "Temporary BMPS", and ultimately "Permanent BMPS". Permanent Stormwater

Attachment F Drawing has been revised to include details for construction of rock berms as requested. A copy of Permanent Stormwater Attachment F Drawing is attached herewith.

21. Item No. 10 Attachment G – Drainage Area Map.

Attachment G is labeled Temporary Storm Water for Servtex Quarry, Fordyce Tract WPAP. Please include the following items on Attachment G:

- **The location of where the existing haul roads will connect to the proposed project site and BMPs associated.**
- **The location of the low-water crossing on the southern site boundary on the Dry Comal Creek and BMPs associated.**
- **The location of designated parking areas for vehicles and equipment and BMPs associated.**
- **The potential location for the above ground storage tank containing diesel fuel and BMPs associated.**
- **The location of any construction material storage areas and BMPs associated.**
- **The location of portable toilets and BMPs associated.**

As requested, the Temporary Stormwater Plan (Attachment G) has been revised to illustrate the requested information.

A general location of portable toilets is illustrated. However, by their design and purpose, portable toilet locations will vary by need. It is not possible to project every potential portable toilet location over the life of the 685 acre quarry project.

22. Item No. 12 needs to be marked on page 4 of 5 of the Temporary Stormwater section.

Item No. 12 has been marked and a revised copy of page 4 provided as requested.

23. Item No. 12 Attachment I - Inspection and Maintenance for BMPs

It is stated, *earthen berms, rock berms, and natural vegetated buffers will be inspected on at least a quarterly basis.* The buffer area of a sensitive feature should be inspected twice annually according to RG-500. However, inspections on temporary BMPs should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made according to RG-348 Edwards Aquifer Technical Guidance on BMPs. Please review and revise.

The WPAP Application process requires a Temporary Stormwater Section, which really doesn't consider or address the unique characteristics or operations of a long term quarry project. A quarry project is vastly different than a typical construction site if for no other

reason, the extended project duration. Although "temporary" BMPs are discussed and described to fulfill the mandated requirements of the application paperwork, BMPs at a quarry are more "permanent" than "temporary". To meet regulatory requirements, the quarry berms are designed for a 10-year 24-hour rain event. However, in practice, these berms will be "overbuilt" because they also serve as safety barriers around the quarry, and will be left in place for the life of the project and beyond.

As an example, the earthen berms only need to be 2 feet high to meet the regulatory design requirements for a 10-year 24-hour rain event design, for the worst case runoff condition on the project site. However, for safety purposes, earthen berms around the perimeter of the quarry will be constructed to a minimum of 4 feet high, and will be left in place after quarry activities are completed.

Quarry operations are required to comply with TXR 050000, which includes inspections and also discharge water quality sampling. Because there aren't really any "temporary" BMPs, and the additional layer of water quality sampling required by TXR 050000, equivalent protection to the Edwards Aquifer is provided which makes weekly and daily inspections of temporary BMPs unnecessary.

Permanent Stormwater Section (TCEQ-0600)

24. Item No. 9 Attachment E – Request to Seal Features.

It is stated: *Sensitive features discovered during the geological assessment or during the quarry process will be mined out as the pit will be mined to a depth of approximately 150 feet.* Forty-nine (49) features are listed in the geological assessment and twenty-eight (28) are labeled sensitive. Thirty-six features (combination of sensitive and non-sensitive) are documented to be mined out. Furthermore, it is noted any additional feature discovered during the quarry process will be mined out until the depth of approximately 150 feet is reached. Please review and revise statement to correspond with Best Management Practices for Quarry Operations RG-500 2.2.4 Sensitive Features Discovered during Quarrying.

Attachment E has been revised to correspond with Best Management Practices for Quarry Operations RG-500 2.2.r Sensitive Features Discovered during Quarrying as requested. A copy of Attachment E is attached herewith..

25. Item No. 10 Attachment F – Construction Plans. Please address the following items in regards to the provided construction plans on Attachment F:

It is indicated the site has no impervious cover. Please note according to RG-500 impervious cover includes, but is not limited to, the following:

- **pavement including roadways, driveways, parking lots, etc.**
- **roofs, if not part of a rainwater-harvesting system**
- **compacted road base, such as that used for parking areas**
- **material stockpile areas**
- **other surfaces that prevent the infiltration of water into the soil.**

Will the proposed site have any associated impervious cover with the potential to generate TSS required to be removed?

There are no proposed paved areas, roofs, compacted road base, or material stockpile areas projected for the project site outside of the quarry pit. During quarry operations, a primary crusher will be located inside the quarry pit on the quarry floor. The primary crusher will be removed after quarrying activities are complete. Equipment will also be parked in this area.

26. Item No. 11 Attachment G – Inspection, Maintenance, Repair and Retrofit Plan.

Please review and provide a plan for the inspection, maintenance, repairs, and if necessary, retrofit of the permanent BMPs and measures attached (earthen berm, establish rock berm, and natural vegetated buffer). The plan must include a prepared and certified engineer designed permanent BMP and measures, a signature by the owner/responsible party, procedures for documenting inspections, maintenance, repairs, and if necessary retrofit, and finally a discussion of record keeping procedures.

As noted in the Permanent Stormwater Section of the submitted application, Item 11 is not applicable. There are no permanent BMPs with structural components which will require retrofit. To demonstrate equivalent projection to the Edwards Aquifer, the following is offered:

As discussed previously, in addition to sediment control, the earthen berms will be significantly overbuilt to provide safety barriers around the quarry perimeter and will be left in place after quarry activities are completed. Any rock berms along the perimeter of the quarry will no longer function as sediment control because the drainage area they filtered will have been removed by the quarry activities. Natural vegetated buffers (minimum 50 ft wide) will be left between the safety earthen berms around the quarry perimeter and the projects, and will be inaccessible to other than foot traffic disturbance.

During quarry operations, earthen and rock berms will be inspected quarterly in accordance with RG-500, and natural vegetative filter strips will be inspected semi-annually. These inspections will be documented as part of the Storm Water Pollution Prevention Plan TXR050000. Application for coverage under TXR050000 requires Plan Certification by an individual meeting the requirements of 30 TAC 305.43(a).

If you have any questions or require additional information, please do not hesitate to contact me at your earliest convenience.

Sincerely,
Forster Engineering
(TBPE # F-12385)

Charles P. "Frosty" Forster, P.E., P.G.
Principal



TCEQ
Protecting Texas by Reducing and Preventing Pollution

Fax Cover Sheet

Number of Pages: 8 (including this sheet)

Date:	December 28, 2015
To:	Mr. Lalit Bhatnager, P.E.
Organization:	Hanson Aggregates LLC
Fax:	(469)417-1438
To:	Mr. Charles P. "Frosty" Forster, P.E., P.G.
Organization:	Forster Engineering
Fax:	(210)698-5544
From:	Ms. Lillian Butler
Division :	Edwards Aquifer Protection Program
Agency:	Texas Commission on Environmental Quality
Phone:	210-403-4026
Fax:	210-545-4329

Re: Edwards Aquifer, Comal County

Name of Project: Servtex Quarry Fordyce Tract; located approximately 1 mile east of the FM 2252 and FM 1337 intersection; Shertz, Texas

Plan Type: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213; Edwards Aquifer Protection Program

Regulated Entity ID: RN102541612; Additional ID No.: 13000022

Dear Mr. Bhatnager and Mr. Forster,

We are in the process of technically reviewing the request for the approval of a WPAP application you submitted on the above-referenced project. Before we can proceed with our review, the following comments relating to the application must be addressed.

Servtex Quarry Fordyce Tract

The project site, Servtex Quarry Fordyce Tract, was submitted as a new WPAP application for a 685.74-acre tract. The TCEQ Core Data Form submitted included regulated entity reference number RN102541612. According to Central Registry, RN102541612 is Servtex Quarry Plant located at the intersection of Nacogdoches Rd and FM 2252. The following Edwards Aquifer Protection Program applications are approved for the above-referenced site:

WPAP, July 16, 2002
Project is a quarry site of 110-acres within an existing 2,000-acre boundary with three existing sedimentation ponds and use of existing limestone and rock roads. No additional impervious cover proposed.

AST, September 4, 2009
Replacement of 9 of the 15 existing tanks, modifications to the existing concrete containment structures and construction of 5 concrete drive slabs (tanker slabs) to existing containment structures.

Exception, November 10, 2000
An exception to submit a WPAP for minor construction of prefabricated steel building and associate concrete to house the particle bonding machines and associated chemicals used for the process water.

WPAP, May 16, 2013- Servtex Quarry Worley/Heitkamp Tracts
Project is a quarry site on 131.5 acres with a 50' setback distance between quarry operations and perimeter of property. The pit will be excavated to an elevation of 699 feet. No impervious cover

Extension, November 17, 2015- Servtex Quarry Worley/Heitkamp Tracts
Extension approved for May 16, 2013 WPAP. The extension expires May 16, 2016.

The proposed project, Servtex Quarry Fordyce Tract will be a modification of the original WPAP, dated July 16, 2002. Please review and submit the following additional documentation:

Form TCEQ-0584, Modification of a Previously Approved Plan (https://www.tceq.texas.gov/field/eapp/mod.html)

The comments below address the submitted application

General Information Form (TCEQ-0587)

Best Management Practices for Quarry Operations RG-500

2.1 Separation from Groundwater in the R.Z.

The Greg Mim's well is located within the proposed quarry. The application states the static water level is approximately 215 feet below ground surface according to the State Well Report.

1. Verification could not be completed using the Texas Water Development Board or other groundwater sources. Please provide a well report number for Mr. Greg Mim's well or a copy of the State Well Report.

2. The application proposes to mine out the well from elevation 770 feet to elevation point of 580 feet. This change is proposed using the water level of 215 feet from surface level. What is the high-water level at this site? Please reference sources.

3. According to RG-500 BMP for Quarry Operations, the water level in a well within the project boundary should be measured before submitting the application to the TCEQ for review. Please provide a measurement.

2.2.2.1 Caves

Feature S-21 is a cave and S-6 is a cave with an associated solution cavity. According to RG-500 BMP for Quarry Operations, 2.2.2.1 Caves, if caves are identified during the geologic site assessment, maps showing scale or dimensions should be made of their extent, including their openings and subsurface extent and any associated sinkholes.

4. Please provide maps and drawings showing scale and/or dimensions of S-21 and S-6 with the associated solution cavity.

2.2.4 Sensitive Features Discovered During Quarrying

5. Steps 1-5 are proposed for the discovery of a geological feature during quarrying. Please review and revise the following conditions:

(1.) It is stated: *Sensitive geologic feature... Results of each visual survey conducted by the on-site quarry manager will be documented and provided to TCEQ upon request.* According to RG-500, if the geologic feature is discovered, it must be reported to TCEQ, unless the feature is a wall void with no surface expression and no drainage area. Please revise the narrative to state, "Results of each visual survey conducted by the on-site quarry manager will be documented and provided to TCEQ."

(2.) Please include with the submitted narrative: *activity within the vicinity of the discovered feature will stop, but work is allowed to continue in other areas inside and outside the pit.*

(3.) – (6.) Items 3-6 are proposed measures taken for features discovered during quarrying activity. The methods of protection proposed depends on location and type of feature. Please note if a sensitive feature is discovered during construction a Texas-licensed professional geologist

must evaluate the feature. Work stoppage applies only to activities within the vicinity of the discovered features, but is allowed to continue in other areas inside and outside the pit. Please review and revise items 3 – 6 to emphasize TCEQ written approval is required prior to employing any treatment method.

2.3 Quarry Berms

6. Please review and revise narrative to include the earthen berms, rock berms and natural vegetation buffers will be designed and constructed consistent with TCEQ guidance RG-348 Edwards Aquifer Rules Technical Guidance on BMPs.

2.4 Haul Roads, Parking Lots, and Tire Washes

7. The section states: *Hauling will take place along the quarry floor and connect with existing haul roads outside the permit area.* Please review and revise the Site Plan to illustrate where the existing connections will tie into the new propose area.

2.5 Stream Crossing and Buffers

8. The section states: *An at-grade low-water crossing will cross the Dry Comal Creek on the southern site boundary, connecting the new quarry site with the existing quarry site.* Please review and revise the Site Plan to illustrate where crossing will take place.

9. Will the low water crossing be paved?

2.8 Vehicle and Equipment Maintenance

10. The section states: *Vehicles and equipment will be parked in designated locations...* Please review and revise the Site Plan to illustrate the designated locations. If the location is outside the proposed project site, please review and revise statement to explain specific location.

11. Please include the following statement under section 2.8: Dispose of all used oil, antifreeze, solvents, and other automotive-related chemicals according to manufacturer instructions. These wastes require special handling and disposal. Used oil, antifreeze, and some solvents can be recycled at designated facilities, but other chemicals must be disposed of at a hazardous-waste disposal site.

2.9.2 Fueling Outside the Pit

12. According to RG-500 BMP for Quarry Operations, facilities using mobile fuel trucks should establish a designated fueling area and have secondary containment when transferring fuel from tank truck to fuel tank. Please review and revise the Site Plan to illustrate where fueling will take place. In addition, please state what type of secondary containment will be implemented during fueling.

2.9.3 Fueling of Equipment in the Pit

13. According to RG-500 BMP for Quarry Operations, fuel transferred within the pit must implement drip pans or other appropriate temporary containment devices when transferring fuel from tank truck to fuel tank. Please state what type of secondary containment will be used during fueling while in the pit.

14. Will a containment structure (permanent or temporary) be implemented for the equipment located within the quarry pit?

3.1 – 3.3.2 BMPs for Areas Discharging to Surface Waters

Section 3 for BMPs referenced Temporary and Permanent Stormwater sections of the application, so comments or questions will be addressed per section.

4 BMP Requirements for Areas within Quarry Pits

15. Will BMPs be implemented within the quarry pit to remove sedimentation from vehicles that have traveled on unpaved areas at the quarry site?

16. Will final stabilization take place as portions of the quarry are permanently abandoned?

5 Management of Process Water

17. The submitted application states process water is not applicable to this site. Please disclose whether aggregate washing operations will be conducted within the site boundaries of this proposed WPAP Modification.

Water Pollution Abatement Plan (TCEQ-0584)

18. Please review and revise the Site Plan to include and illustrate the following:

- Feature S-22, the residential well. All known wells must be labeled on the site plan.
- The location of where the existing haul roads will connect to the proposed project site.
- The location of the low-water crossing on the southern site boundary on the Dry Comal Creek.
- The location of designated parking areas for vehicles and equipment.
- The potential location for the above ground storage tank containing diesel fuel.
- The location of any construction material storage areas
- The location of portable toilets and BMPs used for portable toilets
- The location of the construction office. If located outside project area, state where the office is located.

Temporary Stormwater (TCEQ-0602)

19. Item No. 1 states *possible diesel* fuels will be stored on the site. Please review and revise the exhibits (Attachment G and Exhibit 1) to illustrate the location of the AST. It is beneficial to have the AST approved to be onsite, even if it decided to not put into use.

20. Item No. 9 Attachment F – Structural Practices. Please provide details of earthen berms, rock berms, and natural vegetated buffers to include materials, installation, and schematics according to RG-348 Edwards Aquifer Technical Guidance on BMPs. BMPs approved for stormwater treatment are described in RG-348 Edwards Aquifer Rules Technical Guidance on BMPs.

21. Item No. 10 Attachment G – Drainage Area Map.

Attachment G is labeled Temporary Storm Water for Servtex Quarry, Fordyce Tract WPAP. Please include the following items on Attachment G:

- The location of where the existing haul roads will connect to the proposed project site and BMPs associated.
- The location of the low-water crossing on the southern site boundary on the Dry Comal Creek and BMPs associated.
- The location of designated parking areas for vehicles and equipment and BMPs associated.
- The potential location for the above ground storage tank containing diesel fuel and BMPs associated.

- The location of any construction material storage areas and BMPs associated.
- The location of portable toilets and BMPs associated.

22. Item No. 12 needs to be marked on page 4 of 5 of the Temporary Stormwater section.

23. Item No. 12 Attachment I - Inspection and Maintenance for BMPs

It is stated, *earthen berms, rock berms, and natural vegetated buffers will be inspected on at least a quarterly basis.* The buffer area of a sensitive feature should be inspected twice annually according to RG-500. However, inspections on temporary BMPs should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made according to RG-348 Edwards Aquifer Technical Guidance on BMPs. Please review and revise.

Permanent Stormwater Section (TCEQ-0600)

24. Item No. 9 Attachment E – Request to Seal Features.

It is stated: *Sensitive features discovered during the geological assessment or during the quarry process will be mined out as the pit will be mined to a depth of approximately 150 feet.* Forty-nine (49) features are listed in the geological assessment and twenty-eight (28) are labeled sensitive. Thirty-six features (combination of sensitive and non-sensitive) are documented to be mined out. Furthermore, it is noted any additional feature discovered during the quarry process will be mined out until the depth of approximately 150 feet is reached. Please review and revise statement to correspond with Best Management Practices for Quarry Operations RG-500 2.2.4 Sensitive Features Discovered during Quarrying.

25. Item No. 10 Attachment F – Construction Plans. Please address the following items in regards to the provided construction plans on Attachment F:

It is indicated the site has no impervious cover. Please note according to RG-500 impervious cover includes, but is not limited to, the following:

- pavement including roadways, driveways, parking lots, etc.
- roofs, if not part of a rainwater-harvesting system
- compacted road base, such as that used for parking areas
- material stockpile areas
- other surfaces that prevent the infiltration of water into the soil.

Will the proposed site have any associated impervious cover with the potential to generate TSS required to be removed?

26. Item No. 11 Attachment G – Inspection, Maintenance, Repair and Retrofit Plan.
Please review and provide a plan for the inspection, maintenance, repairs, and if necessary, retrofit of the permanent BMPs and measures attached (earthen berm, establish rock berm, and natural vegetated buffer). The plan must include a prepared and certified engineer designed permanent BMP and measures, a signature by the owner/responsible party, procedures for documenting inspections, maintenance, repairs, and if necessary retrofit, and finally a discussion of record keeping procedures.

We ask that you submit one original and five copies of the amended materials to supplement the application to this office. If you have any questions or require additional information, please contact Ms. Lillian Butler of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4026.

TCEQ Use Only

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. Reason for Submission *(If other is checked please describe in space provided)*

☒ New Permit, Registration or Authorization *(Core Data Form should be submitted with the program application)*

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other **WPAP**

2. Attachments — Describe Any Attachments: *(ex. Title V Application, Waste Transporter Application, etc.)*

☐ Yes ☐ No — WPAP Permit Application

3. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	4. Regulated Entity Reference Number *(if issued)*
CN 603475864		RN

SECTION II: Customer Information

5. Effective Date for Customer Information Updates (mm/dd/yyyy)

6. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check only one of the following:*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other: _____

7. General Customer Information

☐ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State) ☒ No Change**

If "No Change" and Section I is complete, skip to Section III – Regulated Entity Information.

8. Type of Customer:	☐ Corporation	☐ Individual	☐ Sole Proprietorship- D.B.A
☐ City Government	☐ County Government	☐ Federal Government	☐ State Government
☐ Other Government	☐ General Partnership	☐ Limited Partnership	☐ Other:

9. Customer Legal Name *(If an individual, print last name first: ex: Doe, John)*	*If new Customer, enter previous Customer below*	*End Date:*

10. Mailing Address:

City		State		ZIP		ZIP + 4	

11. Country Mailing Information *(if outside USA)*	12. E-Mail Address *(if applicable)*

13. Telephone Number	14. Extension or Code	15. Fax Number *(if applicable)*
( ) -		( ) -

16. Federal Tax ID *(9 digits)*	17. TX State Franchise Tax ID *(11 digits)*	18. DUNS Number *(if applicable)*	19. TX SOS Filing Number *(if applicable)*

20. Number of Employees
☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

21. Independently Owned and Operated?
☐ Yes ☐ No

SECTION III: Regulated Entity Information

22. 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 Name ☐ Update to Regulated Entity Information ☒ No Change** *(See below)*

**If "NO CHANGE" is checked and Section I is complete, skip to Section IV, Preparer Information.

23. Regulated Entity Name *(name of the site where the regulated action is taking place)*

SERVTEX QUARRY, FORDYCE TRACT

24. Street Address of the Regulated Entity: *(No P.O. Boxes)*								
	City		State		ZIP		ZIP + 4	
25. Mailing Address:								
	City		State		ZIP		ZIP + 4	
26. E-Mail Address:								
27. Telephone Number		28. Extension or Code		29. Fax Number *(if applicable)*				
( ) -				( ) -				
30. Primary SIC Code (4 digits)	31. Secondary SIC Code (4 digits)	32. Primary NAICS Code (5 or 6 digits)		33. Secondary NAICS Code (5 or 6 digits)				
34. What is the Primary Business of this entity? *(Please do not repeat the SIC or NAICS description.)*								

Questions 34 – 37 address geographic location. Please refer to the instructions for applicability.

35. Description to Physical Location:					
36. Nearest City		County		State	Nearest ZIP Code
37. Latitude (N) In Decimal:			38. Longitude (W) In Decimal:		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form or the updates may not be made. If your Program is not listed, check other and write it in. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Industrial Hazardous Waste	☐ Municipal Solid Waste
☐ New Source Review – Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS	☐ Sludge
☐ Stormwater	☐ Title V – Air	☐ Tires	☐ Used Oil	☐ Utilities
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Charles P. "Frosty" Forster, P.E., P.G.	41. Title:	Principal
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(210) 698-5544		( ) -	fforster@forsterengineering.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 9 and/or as required for the updates to the ID numbers identified in field 39.

(See the Core Data Form instructions for more information on who should sign this form.)

Company:	Forster Engineering	Job Title:	Principal
Name *(In Print)*:	Charles P. "Frosty" Forster, P.E., P.G.	Phone:	(210) 698-5544
Signature:	Charles P. Forster	Date:	03/14/16

Send original copy by certified mail to: TNRCC, P.O. Bo[illegible]87, Austin, TX 78711-3087

Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

1) OWNER Greg Mim's (Name) ADDRESS 21895 Old Nacogdoches San Antonio TX 78230 (Street or RFD) (City) (State) (Zip)

2) ADDRESS OF WELL: County Comal 21895 Old Nacogdoches Rd New Braunfels TX 78130 (Street, RFD or other) (City) (State) (Zip) GRID # 68-22-9

3) TYPE OF WORK (Check): [X] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

4) PROPOSED USE (Check): [ ] Monitor [ ] Environmental Soil Boring [X] Domestic [ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell
If Public Supply well, were plans submitted to the TNRCC? [ ] Yes [ ] No

5)

6) WELL LOG:
Date Drilling:
Started 5-3 1997
Completed 5-10 1997

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
10"	Surface	180
180'	180	285

7) DRILLING METHOD (Check): [ ] Driven [X] Air Rotary [ ] Mud Rotary [ ] Bored [ ] Air Hammer [ ] Cable Tool [ ] Jetted [ ] Other

From (ft.)	To (ft.)	Description and color of formation material
0	1	BLACK DIRT
1	15	HARD ROCK
15	20	HARD ROCK & FLINT
20	22	FLINT ROCK
22	25	ORANGE LIMESTONE
25	40	ORANGE LIME STONE W/CLAY
40	58	WHITE LIMESTONE
58	60	ORANGE CLAY
60	78	WHITE LIME STONE
78	97	YELLOW LIME STONE
97	122	WHITE LIME STONE
122	285	ORANGE HONEYCOMB EDWARDS

(Use reverse side if necessary)

RECEIVED JUN - 4 1997

8) Borehole Completion (Check): [ ] Open Hole [X] Straight Wall [ ] Underreamed [ ] Gravel Packed [ ] Other
If Gravel Packed give interval ... from ____ ft. to ____ ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
10	Used	8 5/8" STEEL	-1	10	
6"	New	PLASTIC	-1	184'	
4 1/2	New	PLASTIC	-1	285	

9) CEMENTING DATA [Rule 338.44(1)]
Cemented from 305 ft. to 225 ft. No. of sacks used 2 Kolorite
0 ft. to 11 ft. No. of sacks used 20 Reg
Method used 30TAC § 238.44-(3)
Cemented by Driller
Distance to septic system field lines or other concentrated contamination ____ ft.
Method of verification of above distance Property Plat

10) SURFACE COMPLETION
[ ] Specified Surface Slab Installed [Rule 338.44(2)(A)]
[X] Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
[ ] Pitless Adapter Used [Rule 338.44(3)(b)]
[X] Approved Alternative Procedure Used [Rule 338.71]

11) WATER LEVEL:
Static level 215 ft. below land surface Date 5-12-97
Artesian flow ____ gpm. Date ____

12) PACKERS:

	Type	Depth
RUBBER	CONE	
RUBBER	CONE	10'

13) TYPE PUMP:
[ ] Turbine [ ] Jet [X] Submersible [ ] Cylinder
[ ] Other
Depth to pump bowls, cylinder, jet, etc., 252 ft.

14) WELL TESTS:
Type test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: 50 gpm with 0 ft. drawdown after 2 hrs.

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [X] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ____ Depth of strata ____
Was a chemical analysis made? [ ] Yes [ ] No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Newborn Water Well Ser (Type or print) WELL DRILLER'S LICENSE NO. 1999WPKL

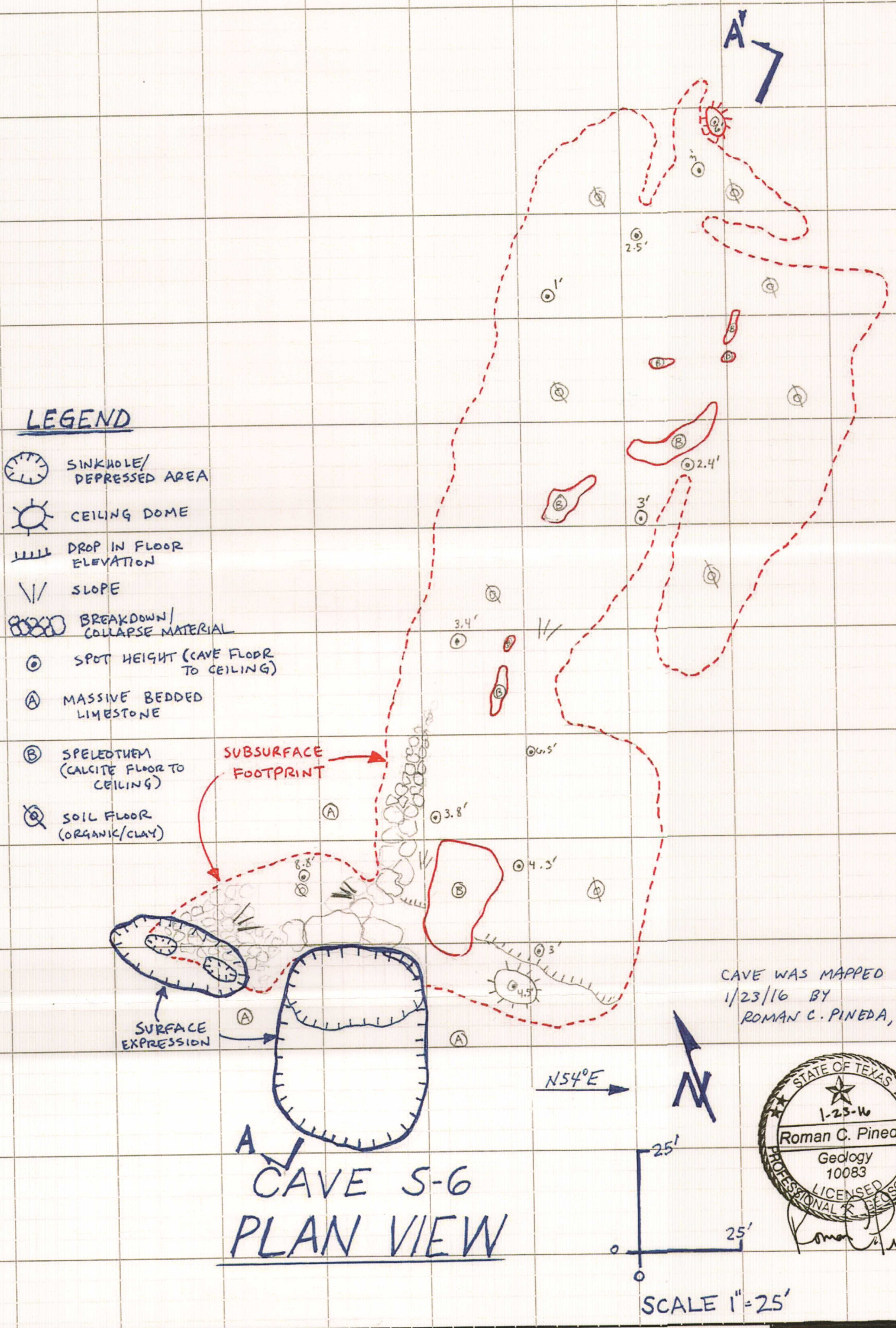
ADDRESS 8015 Jethro Lane (Street or RFD) San Antonio TX 78264 (City) (State) (Zip)

(Signed) J E Newborn (Licensed Well Driller) (Signed) [signature] (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TNRCC-0199 (Rev. 11-01-94)

TNRCC COPY



LEGEND

- SINKHOLE/ DEPRESSED AREA
- CEILING DOME
- DROP IN FLOOR ELEVATION
- SLOPE
- BREAKDOWN/ COLLAPSE MATERIAL
- SPOT HEIGHT (CAVE FLOOR TO CEILING)
- (A) MASSIVE BEDDED LIMESTONE
- (B) SPELEOTHEM (CALCITE FLOOR TO CEILING)
- SOIL FLOOR (ORGANIC/CLAY)

CAVE S-6
PLAN VIEW

CAVE WAS MAPPED ON 1/23/16 BY ROMAN C. PINEDA, P.G.

STATE OF TEXAS
1-23-16
Roman C. Pineda
Geology
10083
LICENSED
PROFESSIONAL GEOSCIENTIST

SHEET 1 OF 2

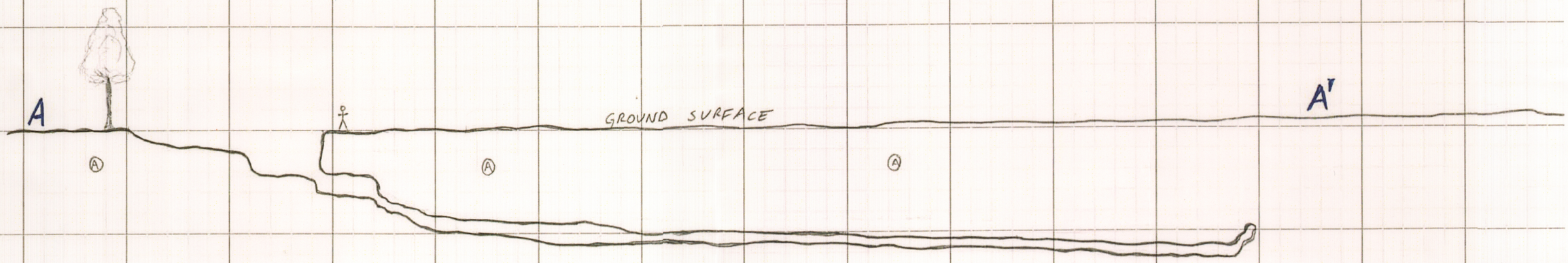
PROJECT: SERVTEX QUARRY, FORDYCE TRACT (CAVE S-6 SKETCH) DATE: 1-23-16

[redacted]

PROJECT: SERVTEX QUARRY, FORDYCE TRACT (CAVE S-6 SKETCH)

SHEET 2 of 2

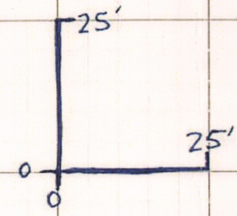
DATE: 1-23-16



CAVE OPENING HAS BEEN EXPOSED BY A COLLAPSE SINKHOLE. SUBSURFACE VOID SPACE IS LATERALLY EXTENSIVE WITH MOSTLY ORGANIC/CLAY FLOOR IN A MAJORITY OF THE CAVE. SOME MEASUREMENTS MAY HAVE BEEN APPROXIMATED DUE TO INACCESSIBILITY. CAVE WAS MAPPED ON 1/23/16 BY ROMAN C. PINEDA, P.G.

STATE OF TEXAS
1-23-16
Roman C. Pineda
Geology
10083
LICENSED
PROFESSIONAL GEOSCIENTIST

CROSS SECTION A-A'



SCALE 1"=25'

2.1 Separation from Groundwater in the Recharge Zone

The Greg Mim's Well is located at 21895 Old Nacodoches Road, and is adjacent to the southern boundary of the proposed quarry. Based on the State Well Report for this well, the static water level is approximately 215 feet below ground surface. The surface elevation at the well location is approximately 770 feet MSL, which makes the water level approximately 555 feet MSL.

The quarry will be mined to an elevation of 580 feet MSL to maintain an approximate 25 foot buffer above the recorded water table data.

2.2 Sensitive Features

2.2.2 Setbacks and Buffers for Sensitive Features

A total of 49 geologic features were identified by the Geological Assessment on the subject site, of which 28 were rated as sensitive. Within the proposed quarry limits, there are a total of 40 features, of which 22 are rated as sensitive.

The geologic features within the proposed quarry limits will be excavated and mined out. Prior to quarry excavation of the features, the sensitive features will be protected by earthen berms or natural vegetation buffers until such time as the area of the quarry containing the sensitive feature will be mined.

The geologic features outside the proposed quarry limits will be protected by earthen berms or natural vegetation buffers.

2.2.3 Sensitive Features Identified in the Geological Assessment

A total of 49 geologic features were identified by the Geological Assessment on the entire site, of which 28 were rated as sensitive. Within the proposed quarry excavation limits, there are a total of 40 features, of which 22 are rated as sensitive. These 22 features will be excavated by quarry activities.

2.2.4 Sensitive Features Discovered During Quarrying

Sensitive geologic features discovered in the active pit during quarrying operations will be addressed as follows:

1. Sensitive geologic feature recognition training for plant and quarry operators will be conducted. An on-site quarry manager experienced in feature identification will conduct visual surveys to ensure adequate identification and reporting of sensitive features. The on-site quarry manager will receive annual training from a licensed Professional Geologist on feature identification and protection. Results of each visual survey conducted by the on-site quarry manager will be documented and provided to TCEQ upon request.

2. The appropriate TCEQ Regional Office will be immediately notified upon discovery of any sensitive features encountered during the quarrying operations. Upon discovery, sensitive features on quarry benches will be protected with material berms, which will be maintained on a daily basis if necessary.
3. Sensitive features located on the ultimate quarry floor, which will not be excavated or mined out by further quarry activities, will be sealed with flowable fill before regulated activities near the sensitive feature may proceed. Sensitive features located on the quarry floor of intermediate benches above the ultimate quarry floor, will not be sealed, but will be protected by material berms until such time as this area of the quarry containing the sensitive feature will be mined.
4. Sensitive features located in the highwalls, which are well above the level of potential water ponding in the quarry pit and unlikely to receive contamination from any other logical or recognized source, will not be sealed.
5. If sensitive features located in the highwalls are below the level of potential water ponding in the quarry pit, or likely to receive contamination from any other logical or recognized source, they will be sealed with flowable fill before regulated activities near the sensitive feature may proceed.
6. Large features may be first filled with gravel or large rocks before placement of flowable fill. A minimum of 18-inches of flowable fill will placed above the gravel or rocks. Flowable fill is to be used to provide a reliable seal throughout the sensitive feature as it's characteristics allow it to flow around and between the gravel and large rocks and conform to irregular limits of a sensitive feature. As structural integrity and bearing capacity is not a design concern in these applications, concrete is not recommended or required.

2.2.5 Inspection and Maintenance of Sensitive Features

The geologic features within the proposed quarry limits will be excavated and mined out. Prior to quarry excavation of the features, the sensitive features will be protected by earthen berms or natural vegetation buffers until such time as the area of the quarry containing the sensitive feature will be mined.

The geologic features outside the proposed quarry limits will be protected by earthen berms or natural vegetation buffers.

Sensitive features, protective earthen berms, and natural vegetation buffers will be inspected on an annual basis. If necessary, maintenance will be performed to restore the earthen berms to their original condition.

2.3 Quarry Berms

Earthen berms surrounding the disturbed areas of the site, rock berms, and natural vegetation buffers will either filter or prevent any on-site surface water from flowing off site untreated. The earthen berms and rock berms will be constructed in stages in advance of and in coordination with quarry disturbances. Once the quarry pit and earthen berms are established, there will be no significant or untreated discharges from this site. By containing

the sediment and solids within the site, they will not enter surface streams and/or sensitive features which may exist down-gradient of the site.

Earthen berms, rock berms, and natural vegetation buffers will be designed and constructed consistent with TCEQ guidance RG-348 Edwards Aquifer Rules Technical Guidance on BMPs.

2.4 Haul Roads, Parking Lots, and Tire Washes

There are no proposed parking lots or tire washes in the permit area. Hauling will take place along the quarry floor and connect with existing haul roads outside the permit area.

2.5 Stream Crossings and Buffers

An at-grade low-water crossing will cross the Dry Comal Creek on the southern site boundary, connecting the new quarry site with the existing quarry site. None of the Dry Comal Creek 100-year flood plain is proposed to be mined. Earthen berms and a natural vegetation buffer along the flood plain limits will prevent surface water from flowing off site untreated.

2.6 Dust Control

A water truck will be utilized to control dust in active areas of the quarry. Natural vegetative cover will be left in place as long as practicable to reduce the potential for dust to become airborne. A 50 foot wide natural vegetated buffer around the site will also serve as a wind break to reduce the potential for dust to become airborne.

2.7 Mineral-Exploration Test Holes and Water Wells

There is one existing water well on the subject property, which will be plugged in accordance with applicable regulations prior to mining through the area.

2.8 Vehicle and Equipment Maintenance

Vehicle and equipment maintenance will not be performed on the Fordyce Tract except under extenuating circumstances. Vehicles and equipment will be parked in designated locations, visually checked on a daily basis, and drip pans will be used to catch drips as needed. Chronic drips will be repaired as soon as practicable. When maintenance must be performed, a plastic liner or disposable base pad will be utilized as secondary containment.

Dispose of all used oil, antifreeze, solvents, and other automotive-related chemicals according to manufacturer instructions. These wastes require special handling and disposal. Used oil, antifreeze, and some solvents can be recycled at designated facilities, but other chemicals must be disposed of at a hazardous-waste disposal site.

2.9 Storage and Movement of Petroleum and Fuel

2.9.1 AST Facility Plan

This site will not have an AST Facility.

2.9.2 Fueling Outside the Pit

The Servtex Quarry has an active Spill Prevention Control and Countermeasure (SPCC) plan in accordance with 40 CFR part 112. Heavy equipment is fueled outside the active pit area by mobile fuel trucks in areas where site topography, diversionary structures, and readily available on-site spill response equipment and materials are practical and effective to prevent a discharge of petroleum products from reaching navigable waters at this facility. Additionally, wheels on mobile fuel truck and heavy equipment will be chocked while refueling.

2.9.3 Fueling of Equipment in the Pit

Heavy equipment may be fueled in the active quarry pit when fueling outside the pit is not practical. Wheels on mobile fuel truck and heavy equipment will be chocked while refueling, and the refueling operation will be continuously monitored by refueling personnel.

For fuel transfers within the pit, drip pans will be used when transferring fuel from tank truck to fuel tank.

2.10 Industrial Facilities on-Site

There are no existing or proposed industrial facilities located on site.

2.11 Sanitary Wastewater Disposal

There is no existing or proposed on-site sewage facility located on site. Domestic project wastewater will be collected in portable toilets and disposed of weekly by a TCEQ registered waste disposal service. Portable toilets will be located on level ground surfaces away from high traffic areas. Portable toilets will be routinely inspected and serviced at a frequency sufficient to maintain sanitary conditions. Employees will be trained on waste water discharging prohibitions.

2.11.1 Portable Toilet BMPs

Transport (industrial activity)

- Empty portable toilets before transporting them.
- Securely fasten the toilers to the transport truck.
- Use band trucks, dollies, and power tailgates whenever possible.

Placement (site activity – construction)

- Locate portable toilets at least 20 feet from the nearest storm-drain inlet or sensitive feature buffer area
- Build an earthen berm or sandbag containment around portable toilets for spill containment and protection from leaks.
- Prepare a level ground surface with clear access to the toilets.

- Secure all portable toilets with a stake driven into the ground to prevent tipping by accident, weather, or vandalism.

Maintenance of portable toilets (site activity – industrial and construction)

- Inspect the toilets frequently (daily during the work-week) for leaks and have the units serviced and sanitized at time intervals that will maintain sanitary conditions of each toilet (typically weekly).
- A licensed waste collector should service all the toilets.
- Suppliers should carry bleach for disinfection in the event of a spill or leak.
- Properly store (cover) and handle chemical materials.
- Train employees on these BMPs, prohibitions on discharging storm water, and wastewater-discharge requirements.

2.12 Spill Prevention and Control

Hanson Aggregates maintains the following required plans and permits onsite which address spill prevention and control and are incorporated herewith by reference.

- Spill Prevention Control and Countermeasure (SPCC) Plan (40CFR Part 112)
- TPDES Storm Water Pollution Prevention Plan

3 BMPs for Areas Discharging to Surface Waters

3.1 Introduction

Earthen berms surrounding the disturbed areas of the site, rock berms, and natural vegetation buffers will either filter or prevent any on-site surface water from flowing off site untreated. The earthen berms and rock berms will be constructed in stages in advance of and in coordination with quarry disturbances. Once the quarry pit and earthen berms are established, there will be no significant or untreated discharges from this site. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features which may exist down-gradient of the site.

3.2 BMPs for Temporary Erosion and Sediment Control

A discussion of temporary erosion and sediment control practices and measures is provided in Attachment D of the Temporary Section of this WPAP Application.

3.3 Permanent Structural BMPs

A discussion of permanent structural BMPs is provided in the Permanent Section of this WPAP Application.

3.3.1 General Requirements

A discussion of the general requirements is provided in the Permanent Section of this WPAP Application.

3.3.2 Required Calculations

Any required calculations are provided in the Permanent Section of this WPAP Application.

4 BMP Requirements for Areas within Quarry Pits

4.1 Introduction

During the operational life of the quarry, the pit areas will not drain to surface waters. The primary BMPs for areas within the quarry pit have been previously described and include: watering for dust control; vehicle maintenance to minimize oil drips or leaks; proper placement, utilization, and maintenance of portable toilets; and identification and protection of sensitive features discovered during quarrying.

4.2 Permanent Structural BMPs

Upon termination of quarry activities, storm water that falls in the quarry pits will be retained in the pits and will not discharge to surface streams. For this reason, the quarry pits will not generate more TSS than in the original condition. The quarry pits will be surrounded by earthen berms, rock berms, and natural vegetative buffers which will either filter or prevent any on-site surface water from flowing off site untreated. Additionally, the earthen berms will prevent most upgradient storm water from running into the pits. For this reason, the primary source of storm water entering the pits will be direct rainfall, the majority of which is expected to evaporate.

5 Management of Process Water

5.1.1 Dimension-Stone Facilities (and Other Sites with Minor Water Use)

Not applicable to this site.

5.1.2 Innovative Technology for Aggregate-Production Facilities

If applicable, a discussion of innovative technology is provided in Attachment H of the Permanent Section of this WPAP Application.

☐ 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.

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.

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).

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.

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 J - Schedule of Interim and Permanent Soil Stabilization Practices.** A schedule of the interim and permanent soil stabilization practices for the site is attached.

PERMANENT STORMWATER SECTION FORM TCEQ-0600
ATTACHMENT E
REQUEST TO SEAL FEATURES

This request to mine out naturally-occurring sensitive features is based on the absence of any reasonable or practicable alternatives. Sensitive features discovered during the Geologic Assessment or during the quarry process will be mined out as the pit will be mined to a depth of approximately 150 feet, and it would be unsafe and impractical to preserve a feature and buffer within the quarry pit.

Sensitive geologic features discovered in the active pit during quarrying operations will be addressed as follows:

1. Sensitive geologic feature recognition training for plant and quarry operators will be conducted. An on-site quarry manager experienced in feature identification will conduct visual surveys to ensure adequate identification and reporting of sensitive features. The on-site quarry manager will receive annual training from a licensed Professional Geologist on feature identification and protection. Results of each visual survey conducted by the on-site quarry manager will be documented and provided to TCEQ upon request.
2. The appropriate TCEQ Regional Office will be immediately notified upon discovery of any sensitive features encountered during the quarrying operations. Upon discovery, sensitive features on quarry benches will be protected with material berms, which will be maintained on a daily basis if necessary.
3. Sensitive features located on the ultimate quarry floor, which will not be excavated or mined out by further quarry activities, will be sealed with flowable fill before regulated activities near the sensitive feature may proceed. Sensitive features located on the quarry floor of intermediate benches above the ultimate quarry floor, will not be sealed, but will be protected by material berms until such time as this area of the quarry containing the sensitive feature will be mined.
4. Sensitive features located in the highwalls, which are well above the level of potential water ponding in the quarry pit and unlikely to receive contamination from any other logical or recognized source, will not be sealed.
5. If sensitive features located in the highwalls are below the level of potential water ponding in the quarry pit, or likely to receive contamination from any other logical or recognized source, they will be sealed with flowable fill before regulated activities near the sensitive feature may proceed.
6. Large features may be first filled with gravel or large rocks before placement of flowable fill. A minimum of 18-inches of flowable fill will placed above the gravel or rocks. Flowable fill is to be used to provide a reliable seal throughout the sensitive feature as it's characteristics allow it to flow around and between the gravel and large rocks and conform to irregular limits of a sensitive feature. As structural integrity and bearing capacity is not a design concern in these applications, concrete is not recommended or required.
7.

Sensitive features identified during the Geologic Assessment which are within the quarry excavation limits are identified in the following table.

Feature No.	Feature Type	Relative Infiltration Rate (refer to Geologic Assessment	Feature Sensitivity	Permanent Pollution Abatement Measure
S-1	Solution Cavity	Intermediate	Sensitive	
S-2	Solution Cavity	Intermediate	Sensitive	Mine out
S-3	Solution Cavity/Solution-Enlarged Fractures	Intermediate	Sensitive	Mine out
S-4	Zone	High	Sensitive	Mine out
S-5	Zone	High	Sensitive	Mine out
S-6	Zone	High	Sensitive	Mine out
S-7	Solution-Enlarged Fractures	Low	Non-Sensitive	Mine out
S-8	Sink Hole	High	Sensitive	Mine out
S-9	Sink Hole	Intermediate	Sensitive	
S-10	Solution Cavity	Intermediate	Sensitive	
S-11	Sink Hole	Intermediate	Sensitive	
S-12	Sink Hole	Low	Non-Sensitive	
S-13	Sink Hole	Intermediate	Sensitive	
S-14	Non-Karst Closed Depression	Low	Non-Sensitive	Mine out
S-15	Non-Karst Closed Depression	Low	Non-Sensitive	
S-16	Solution Cavity	Intermediate	Sensitive	Mine out
S-17	Solution Cavity	Intermediate	Sensitive	Mine out
S-18	Solution Cavity	Intermediate	Sensitive	Mine out
S-19	Sink Hole	High	Sensitive	Mine out
S-20	Sink Hole	Intermediate	Sensitive	Mine out
S-21	Cave	High	Sensitive	Mine out
S-22	Manmade feature in bedrock	Low	Non-Sensitive	Mine out
S-23	Non-Karst Closed Depression	Low	Non-Sensitive	
S-24	Sink Hole	Intermediate	Sensitive	Mine out
S-25	Solution Cavity	High	Sensitive	Mine out
S-26	Sink Hole	Intermediate	Sensitive	Mine out
S-27	Sink Hole	Low	Non-Sensitive	Mine out
S-28	Solution Cavity	Intermediate	Sensitive	Mine out
S-29	Solution Cavity/Solution-Enlarged Fractures	Intermediate	Sensitive	Mine out
S-30	Solution-Enlarged Fractures	Low	Non-Sensitive	Mine out
S-31	Solution Cavity	Low	Non-Sensitive	Mine out
S-32	Solution Cavity	Low	Non-Sensitive	Mine out
S-33	Solution Cavity	Intermediate	Sensitive	Mine out
S-34	Sink Hole	Low	Non-Sensitive	Mine out
S-35	Sink Hole	Intermediate	Sensitive	Mine out
S-36	Sink Hole	Low	Non-Sensitive	Mine out
S-37	Sink Hole	Low	Non-Sensitive	

S-38	Sink Hole	Low	Non-Sensitive	
S-39	Sink Hole	Low	Non-Sensitive	Mine out
S-40	Sink Hole	Low	Non-Sensitive	Mine out
S-41	Non-Karst Closed Depression	Low	Non-Sensitive	Mine out
S-42	Sink Hole	Low	Non-Sensitive	Mine out
S-43	Solution-Enlarged Fractures	Low	Non-Sensitive	
S-44	Sink Hole	High	Sensitive	
S-45	Non-Karst Closed Depression	Low	Non-Sensitive	Mine out
S-46	Sink Hole	Intermediate	Sensitive	Mine out
S-47	Solution Cavity	Intermediate	Sensitive	Mine out
S-48	Solution Cavity	Intermediate	Sensitive	Mine out
S-49	Fault	Low	Non-Sensitive	

DRY COMAL CREEK

200 FT NATURAL VEGETATIVE FILTER STRIP

RESIDENTIAL WATER WELL S-22

PRIMARY CRUSHER LOCATION, VEHICLE AND MOBILE EQUIPMENT PARKING, POTENTIAL AST LOCATION, CONSTRUCTION MATERIAL STORAGE, PORTABLE TOILETS

DRY COMAL CREEK AT-GRADE CROSSING

APPROXIMATE CONNECTION TO EXISTING QUARRY ROAD SYSTEM

DRY COMAL CREEK

EDWARDS AQUIFER RECHARGE ZONE

EDWARDS AQUIFER TRANSITION ZONE

COYOTE RUN

FM 2252

Flood area illustrates a combination of Zones X Shaded, Zone A, and Zone AE. Zone X Shaded, definedas: "Other flood hazard areas — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with avege depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees fm 1% annual chance flood." Zone A, defined as: "Special Flood Hazard Areas Subject to Inundation by the1% Annual Chance Flood; No Base Flood Elevations Determined." Zone AE, defined as: "Special flood hazard aas subject to inundation by the 1% annual chance (100-year) flood — Base flood elevations determined." Sed from the Federal Emergency Management Agency (FEMA) published effective Flood Insurance Rate Map Numrs 48091C0420F and 48029C0440F, effective September 2, 2009 for Comal County, Texas and incorporated arec

PROJECT LIMITS

2' MIN. 2' MIN. 2:1 SLOPE 2:1 SLOPE 10' MIN.

50 FOOT NATURAL VEGETATION BUFFER

TYPICAL BMP SECTION A'-A'

Notes:

1. Contour Data: Texas Natural Resources Information System 10 ft Contours - Bat Cave & New Braunfels West Quadrangles
2. Flood Data: FEMA Flood Insurance Rate Map Numbers 48091C0420F & 48029C0440F, effective September 2, 2009
3. Revised 3/11/16 - Response to NOD1 12/28/15

LOCATION MAP
(NOT TO SCALE)

SITE

GARDEN RIDGE

LEGEND

- PROJECT LIMITS
- QUARRY LIMITS
- NATURAL STREAM
- EXISTING TOPO
- EXISTING FLOW ARROW
- ROCK BERM
- EARTHEN BERM
- FLOODPLAIN BOUNDARY
- S-1 SENSITIVE FEATURES
- NATURAL VEGETATIVE FILTER STRIP

N W E S

400' 200' 0' 400' 800'

SCALE 1"= 400'

SIGNATURE/SEAL

STATE OF TEXAS
CHARLES P. FORSTER
59043
REGISTERED
PROFESSIONAL ENGINEER
03/14/16

FORSTER ENGINEERING

TBPE firm # 12385

19915 WITTENBURG, SAN ANTONIO, TEXAS 78256
PHONE: (210) 698-5544, Fax (210) 698-5544
WWW.FORSTERENGINEERING.COM

PROJECT DESCRIPTION
SERVTEX QUARRY, FORDYCE TRACT WPAP

RECEIVED
MAR 30 2016
COUNTY ENGINEER

DRAWING
SITE PLAN TCEQ f-0584

DATE	3/11/2016	JOB NO.	1085-13
SCALE	1"= 400'	DRG NO	EXHIBIT 1
DRAWN BY	SNF		
CHECKED BY	CPF		

CONSTRUCTION NOTES

1. Written construction notification must be given to the appropriate TCEQ regional office no later than 48 hours prior to commencement of the regulated activity. Information must include the date on which the regulated activity will commence, the name of the approved plan for the regulated activity, and the name of the prime contractor and the name and telephone number of the contact person.
2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.
3. If any sensitive feature is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. The regulated activities near the sensitive feature may not proceed until the TCEQ has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality.
4. No temporary aboveground hydrocarbon and hazardous substance storage tank system is installed within 150 feet of a domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
5. Prior to commencement of construction, all temporary erosion and sedimentation (E&S) control measures must be properly selected, installed, and maintained in accordance with the manufacturers specifications and good engineering practices. Controls specified in the temporary storm water section of the approved Edwards Aquifer Protection Plan are required during construction. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. The controls must remain in place until disturbed areas are revegetated and the areas have become permanently stabilized.
6. 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).
7. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake must be provided that can indicate when the sediment occupies 50% of the basin volume.
8. 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).
9. All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.
10. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.
11. The following records shall 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.
12. The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:
    - A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;
    - B. any change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;
    - C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office		San Antonio Regional Office	
2800 S. IH 35, Suite 100		14250 Judson Road	
Austin, Texas 78704-5712		San Antonio, Texas 78233-4480	
Phone	(512) 339-2929	Phone	(210) 490-3096
Fax	(512) 339-3795	Fax	(210) 545-4329

DRY COMAL CREEK

QUARRY FLOOR ELEVATION 580 FT

COYOTE RUN

FM 2252

EDWARDS AQUIFER RECHARGE ZONE

EDWARDS AQUIFER TRANSITION ZONE

S-1 S-3 S-10 S-11 S-13 S-44

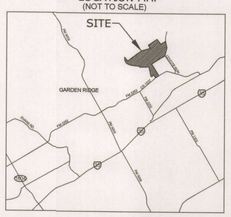
A A'

Flood area illustrates a combination of Zones X Shaded, Zone A, and Zone AE. Zone X Shaded, defined as: "Other flood hazard areas – Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood." Zone A, defined as: "Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood; No Base Flood Elevations Determined." Zone AE, defined as: "Special flood hazard areas subject to inundation by the 1% annual chance (100-year) flood – Base flood elevations determined." Scaled from the Federal Emergency Management Agency (FEMA) published effective Flood Insurance Rate Map Numbers 48091C0420F and 48029C0440F, effective September 2, 2009 for Comal County, Texas and incorporated areas.

Notes:

1. Contour Data: Texas Natural Resources Information System 10 ft Contours - Bat Cave & New Braunfels West Quadrangles
2. Flood Data: FEMA Flood Insurance Rate Map Numbers 48091C0420F & 48029C0440F, effective September 2, 2009
3. Revised 3/11/16 - Response to NOD1 12/28/15

LOCATION MAP
(NOT TO SCALE)



LEGEND

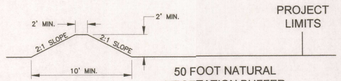
- PROJECT LIMITS
- QUARRY LIMITS
- NATURAL STREAM
- EXISTING TOPO
- EXISTING FLOW ARROW
- ROCK BERM
- EARTHEN BERM
- FLOODPLAIN BOUNDARY
- S-1 SENSITIVE FEATURES
- NATURAL VEGETATIVE FILTER STRIP

N W E S

400' 200' 0' 400' 800'
SCALE 1"= 400'

RUN-OFF DRAINAGE CALCULATIONS	
AREA =	240.8 ACRES
C =	0.2
L =	6618.5 FT
SLOPE =	0.018 FT/FT
Time of Conc (TC) =	367 mins
INTENSITY (10YR) =	0.8 in/hr
FLOW, Q10YR =	37.96 CFS

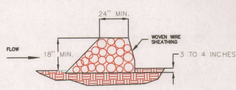
Notes:
1. TxDOT Hydraulic Manual Coefficient
2. TxDOT Rainfall Intensity-Duration -Frequency for Comal County



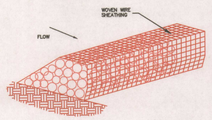
PROJECT LIMITS

50 FOOT NATURAL VEGETATION BUFFER

TYPICAL BMP SECTION A'-A'



CROSS SECTION
N.T.S.

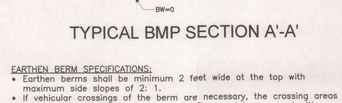


ISOMETRIC PLAN VIEW
N.T.S.

Schematic Diagram of a Rock Berm (NCTCOG, 1993)

BERM SIZING CALCULATIONS		
Site Condition:		
D=	1.4	DEPTH OF FLOW IN FEET
BW=	0	BOTTOM WIDTH IN FEET
LSS=	2	LEFT SIDE SLOPE
RSS=	13.5	RIGHT SIDE SLOPE
SFL=	0.01	FL SLOPE IN FT/FT
N=	0.04	MANNING'S N-VALUE
Vd=	0	V-DEPTH IN CEN. SEC. IN. FT.
Results:		
Qcal=	43.97	DISCHARGE, CFS
Dn=	1.4	FEET
A=	15.19	SQ. FT.
V=	2.89	FPS
Hv=	0.13	FT.
FN=	0.609	FROUDE NO.

Notes:
1. Manning's Formula for Trapizodial Channels Solving for Capacity
2. Manning's n for Channels (Chow, 1959)
3. Dn Measured From Toe of Slope



TYPICAL BMP SECTION A'-A'

EARTHEN BERM SPECIFICATIONS:

- Earthen berms shall be minimum 2 feet wide at the top with maximum side slopes of 2: 1.
- If vehicular crossings of the berm are necessary, the crossing areas shall have a maximum side slope of 3: 1 and be armored with gravel.
- Earthen berms may be constructed of topsoil, subsoil, or random fill material. Well sorted sand or silt material may not be used.
- Material placement by push dozer, front-end-loader, or end-dump truck will achieve minimum compaction of approximately 70 percent. No additional compaction effort is required.
- To promote rapid re-vegetation, the top 2 to 4 inches of the berm surface shall be constructed of on-site or local topsoil, containing a natural and adapted seed bank supply. Non-native vegetation seeding should be avoided unless native vegetation fails to provide a uniform 70 percent cover.

K BERMS
Purpose of a rock berm is to serve as a check dam in areas of
contrated flow, to intercept sediment-laden runoff, detain the sediment and
ase the water in sheet flow. The rock berm should be used when the
ccouting drainage area is less than 5 acres. Rock berms are used in areas
ere the volume of runoff is too great for a silt fence to contain. They are
ieffective for sediment removal than silt fences, particularly for fine
ipates, but are able to withstand higher flows than a silt fence. As such, rock
be are often used in areas of channel flows (ditches, gullies, etc.). Rock
be are most effective at reducing bed load in channels and should not be
alluted for other erosion and sediment control measures further up the
wshed.

MRIALS:
the berm structure should be secured with a woven wire sheathing having
mum opening of 1 inch and a minimum wire diameter of 20 gauge
ylized and should be secured with shoot rings.
(Mean, open graded 3- to 5-inch diameter rock should be used, except in
e where high velocities or large volumes of flow are expected, where 5- to
th diameter rocks may be used.

LLATION:
ay out the woven wire sheathing perpendicular to the flow line. The
eathing should be 20 gauge woven wire mesh with 1 inch openings.
berm should have a top width of 2 feet minimum with side slopes being 2:1
1 or flatter.
(Note the rock along the sheathing as shown in the diagram to a height not
ater than 18".
Wrap the wire sheathing around the rock and secure with tie wire so that
ends of the sheathing overlap at least 2 inches, and the berm retains its
e when walked upon.
berm should be built along the contour at zero percent grade or as near as
ble.
The ends of the berm should be tied into existing upslope grade and the
y should be buried in a trench approximately 3 to 4 inches deep to prevent
t of the control.

ION TROUBLE POINTS:
fficient berm height or length (runoff quickly escapes over the top or
d the sides of berm).
berm not installed perpendicular to flow line (runoff escaping around one
).

CTION AND MAINTENANCE GUIDELINES:
spection should be made weekly and after each rainfall by the responsible
(For installations in streambeds, additional daily inspections should be
r. (2) Remove sediment and other debris when buildup reaches 6 inches and
re of the accumulated silt in an approved manner that will not cause any
ional siltation.
epair any loose wire sheathing.
(e berm should be reshaped as needed during inspection.
(e berm should be replaced when the structure ceases to function as
ded due to silt accumulation among the rocks, washout, construction traffic
e, etc. (6) The rock berm should be left in place until all upstream areas
abilized and accumulated silt removed.

EK BERM

SIGNATURE/SEAL

STATE OF TEXAS
CHARLES P. FORSTER
59043
REGISTERED PROFESSIONAL ENGINEER
03/14/16

RECEIVED
MAR 30 2016
COMAL COUNTY ENGINEER

FORSTER ENGINEERING
TBPE firm # 12385
19915 WITTENBURG, SAN ANTONIO, TEXAS 78256
PHONE: (210) 698-5544, Fax (210) 698-5544
WWW.FORSTERENGINEERING.COM

PROJECT DESCRIPTION
SERVTEX QUARRY, FORDYCE TRACT
WPAP

DRAWING
PERMANENT STORM WATER

DATE	3/11/2016	JOB NO.	1085-13
SCALE	1"= 400'	DRG NO	ATTACHMENT F
DRAWN BY	SNF		
CHECKED BY	CPF		

DRAINAGE AREA
11.8 AC.

DRAINAGE AREA
33.9 AC.

200 FT
NATURAL VEGETATIVE
FILTER STRIP

DRY COMAL CREEK

DRAINAGE AREA
240.8 AC.

RESIDENTIAL
WATER WELL
S-22

PRIMARY CRUSHER
LOCATION, VEHICLE AND
MOBILE EQUIPMENT
PARKING, POTENTIAL AST
LOCATION, CONSTRUCTION
MATERIAL STORAGE,
PORTABLE TOILETS

DRAINAGE AREA
59.1 AC.

DRAINAGE AREA
153.9 AC.

DRY COMAL
CREEK AT-GRADE
CROSSING

APPROXIMATE
CONNECTION TO
EXISTING
QUARRY ROAD
SYSTEM

DRY OMAL CREEK

DRAINAGE AREA
31.4 AC.

DRAINAGE AREA
24.9 AC.

EDWARDS AQUIFER
RECHARGE ZONE

EDWARDS AQUIFER
TRANSITION ZONE

FM 2252

Flood area illustrates a combination of Zones X Shaded, Zone A, and Zone AE. Zone X Shaded, defines: "Other flood hazard areas – Areas of 0.2% annual chance flood; areas of 1% annual chance flood with ave depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees fr 1% annual chance flood." Zone A, defined as: "Special Flood Hazard Areas Subject to Inundation by the Annual Chance Flood; No Base Flood Elevations Determined." Zone AE, defined as: "Special flood hazard a subject to inundation by the 1% annual chance (100-year) flood – Base flood elevations determined." Sd from the Federal Emergency Management Agency (FEMA) published effective Flood Insurance Rate Map Nums 48091C0420F and 48029C0440F, effective September 2, 2009 for Comal County, Texas and incorporated are

2' MIN. 2' MIN.
2:1 SLOPE 2:1 SLOPE
10' MIN.
PROJECT LIMITS
50 FOOT NATURAL VEGETATION BUFFER

TYPICAL BMP SECTION A'-A'

ROCK BERMS
The purpose of a rock berm is to serve as a check dam in areas of concentrated flow, to intercept sediment-laden runoff, detain the sediment and release the water in sheet flow. The rock berm should be used when the contributing drainage area is less than 5 acres. Rock berms are used in areas where the volume of runoff is too great for a silt fence to contain. They are more effective in containing sediment than silt fence because they trap particles, but are able to withstand higher flows than a silt fence. As such, rock berms are often used in areas of channel flows (ditches, gullies, etc.). Rock berms are most effective at reducing bed load in channels and should not be substituted for other erosion and sediment control measures further up the watershed.

MATERIALS:
(1) The berm structure should be secured with a woven wire sheathing having maximum opening of 1 inch and a minimum wire diameter of 20 gauge galvanized and should be secured with shoot rings.
(2) Clean, open graded 3- to 5-inch diameter rock should be used, except in areas of high velocities or large volumes of flow are expected, where 5- to 8-inch diameter rocks may be used.

INSTALLATION:
(1) Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20 gauge woven wire mesh with 1 inch openings.
(2) Berm should have a top width of 2 feet minimum with side slopes being 2:1 (H:V) or flatter.
(3) Place the rock along the sheathing as shown in the diagram to a height not less than 18".
(4) Wrap the wire sheathing around the rock and secure with tie wire so that the ends of the sheathing overlap at least 2 inches, and the berm retains its shape when walked upon.
(5) Berm should be built along the contour at zero percent grade or as near as possible.
(6) The ends of the berm should be tied into existing upslope grade and the sheathing should be keyed in a trench approximately 3 to 4 inches deep to prevent failure of the control.

COMMON TROUBLE POINTS:
(1) Insufficient berm height or length (runoff quickly escapes over the top or around the sides of berm).
(2) Berm not installed perpendicular to flow line (runoff escaping around one side).

INSPECTION AND MAINTENANCE GUIDELINES:
(1) Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made. (2) Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved manner that will not cause any additional siltation.
(3) Repair any loose wire sheathing.
(4) The berm should be reshaped as needed during inspection.
(5) The berm should be replaced when the structure ceases to function as intended due to silt accumulation, displacement of rocks, washout, construction traffic damage, etc. (6) The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

CROSS SECTION
N.T.S.

ISOMETRIC PLAN VIEW
N.T.S.

Schematic Diagram of a Rock Berm (NCTCOG, 1993)

ROCK BERM

Notes:
1. Contour Data: Texas Natural Resources Information System 10 ft Contours - Bat Cave & New Braunfels West Quadrangles
2. Flood Data: FEMA Flood Insurance Rate Map Numbers 48091C0420F & 48029C0440F, effective September 2, 2009
3. Revised 3/11/16 - Response to NOD1 12/28/15

LOCATION MAP
(NOT TO SCALE)

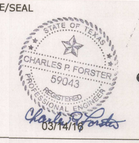


LEGEND

- PROJECT LIMITS
- QUARRY LIMITS
- NATURAL STREAM
- EXISTING TOPO
- EXISTING FLOW ARROW
- ROCK BERM
- EARTHEN BERM
- FLOODPLAIN BOUNDARY
- DRAINAGE AREA BOUNDARY
- S-1 SENSITIVE FEATURES
- NATURAL VEGETATIVE FILTER STRIP

N
W E
S
400' 200' 0' 400' 800'
SCALE 1"= 400'

SIGNATURE/SEAL



03/14/16

RECEIVED
MAR 30 2016
COUNTY ENGINEER

FORSTER ENGINEERING
TBPE firm # 12385
19915 WITTENBURG, SAN ANTONIO, TEXAS 78256
PHONE: (210) 698-5544, Fax (210) 698-5544
WWW.FORSTERENGINEERING.COM

PROJECT DESCRIPTION
SERVTEX QUARRY,
FORDYCE TRACT
WPAP

DRAWING
TEMPORARY STORM WATER

DATE	3/16/2016	JOB NO.	1085-13
SCALE	1"= 400'	DRG NO	ATTACHMENT G
DRAWN BY	SNF		
CHECKED BY	CPF		

Bryan W. Shaw, Ph.D., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

November 17, 2015

RECEIVED
NOV 20 2015
COUNTY ENGINEER

Mr. Thomas H. Hornseth, P.E.
Comal County Engineer
195 David Jonas Drive
New Braunfels TX 78132-3710

Re: Edwards Aquifer, Comal County
PROJECT NAME: Servtex Quarry Fordyce Tract, located approximately 1 mile east of the FM 2252 and FM 1337 intersection, Schertz, Texas

PLAN TYPE: Application for Approval of a Water Pollution Abatement Plan (WPAP) 30 Texas Administration Code (TAC) Chapter 213; Edwards Aquifer Protection Program

Dear Mr. Hornseth:

The referenced application is being forwarded to you pursuant to the Edwards Aquifer Rules. The Texas Commission on Environmental Quality (TCEQ) is required by 30 TAC Chapter 213 to provide copies of all applications to affected incorporated cities and underground water conservation districts for their comments prior to TCEQ approval. More information regarding this project may be obtained from the TCEQ Central Registry website at http://www.tceq.state.tx.us/permitting/central_registry/.

Please forward your comments to this office by December 17, 2015.

The Texas Commission on Environmental Quality appreciates your assistance in this matter and your compliance efforts to ensure protection of the State's environment. If you or members of your staff have any questions regarding these matters, please feel free to contact the San Antonio Region Office at (210) 490-3096.

Sincerely

Todd Jones for
Water Section Work Leader
San Antonio Regional Office

TJ/eg

Lehigh Hanson
HEIDELBERGCEMENT Group

WATER POLLUTION PREVENTION PLAN (WPAP)

SERVTEX QUARRY, FORDYCE TRACT
Comal County, Texas
Project No. 1085-13

TCEQ-R13
NOV 16 2015
SAN ANTONIO

RECEIVED
NOV 20 2015
COUNTY ENGINEER

Prepared for:
Hanson Aggregates LLC
8505 Freeport Parkway, Suite 500
Irving, Texas 75063
(972) 653-5500

Prepared by:
Forster Engineering
TBPE # 12385
19915 Wittenburg
San Antonio, Texas 78256
(210) 698-5544
JUNE 2015



FORSTER ENGINEERING

FORSTER ENGINEERING

19915 Wittenburg
San Antonio, Texas 78256
p (210) 698-5544 c (210) 771-5721
fforster@forsterengineering.com
www.forsterengineering.com

November 13, 2015

Mr. Alex Grant
Texas Commission on Environmental Quality (TCEQ)
San Antonio Region 13
14250 Judson Road
San Antonio, Texas 78233

TCEQ-R13
NOV 16 2015
SAN ANTONIO

Subject: Hanson Aggregates LLC
Servtex Quarry, Fordyce Tract
Water Pollution Prevention Plan (WPAP)
Administrative Review 11/13/15 Response

Dear Mr. Grant:

As requested in your letter dated November 13, 2015 (copy attached), we are providing one (1) original and four (4) copies of responses to Administrative Notice of Deficiency 11/13/15 for the Hanson Aggregates LLC Servtex Quarry, Fordyce Tract, WPAP Application. Your comments and our responses are provided below as follows:

Proof of Signatory Authority

An agent authorization form from Mr. Lalit Bhatnager, of Hanson Aggregates, LLC, and an additional agent authorization form from Mr. Steve Geiger, of Hanson Aggregates, LLC were submitted authorizing Mr. Charles P. "Frosty" Forster, P.E., P.G., of Forster Engineering as the agent on behalf of Hanson Aggregates, LLC. The authority of Mr. Bhatnager and Mr. Geiger could not be verified, specifically, the signature authority required under 30 TAC 213.4(d)(1)(A) could not be verified. 30 TAC 213.4(d)(1)(A) establishes that for a corporation, a principal executive officer (president, vice-president, or a duly authorized representative) must sign the application. A representative must submit written proof of the authorization. Please provide additional documentation that verifies their signatory authority.

An Agent Authorization Form signed by William H. Venema, Vice President of Hanson Aggregates LLC authorizing Charles P. "Frosty" Forster of Forster Engineering as agent is attached herewith.

TCEQ R-13 2015 NOV 16 15:48

If you have any questions or require additional information, please do not hesitate to contact me at your earliest convenience.

Sincerely,
Forster Engineering
(TBPE # F-12385)

Charles P. "Frosty" Forster, P.E., P.G.
Principal



Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I William H. Venema,
Print Name

Vice President,
Title - Owner/President/Other

of Hanson Aggregates LLC,
Corporation/Partnership/Entity Name

have authorized Charles P. "Frosty" Forster, P.E., P.G.
Print Name of Agent/Engineer

of Forster Engineering
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:

William H. Venema 11/13/2015

Applicant's Signature Date

William H. Venema

Vice President

THE STATE OF Texas §

County of Dallas §

William H. Venema, Vice President of Hanson Aggregates LLC

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 November, 2015.

AMY C YI
My Commission Expires
November 12, 2018

NOTARY PUBLIC

Amy C. Yi

Typed or Printed Name of Notary

MY COMMISSION EXPIRES: November 12, 2018

TCEQ
Protecting Texas by Reducing and Preventing Pollution

Fax Cover Sheet

Number of Pages: *(including this sheet)* 2

Date: November 13, 2015
To: Lalit Bhatnager, P.E.
Organization: Hanson Aggregates, LLC
Email: lalit.bhatnager@hanson.biz

To: Charles "Frosty" Forster, P. E.
Organization: Forster Engineering
Email: fforster@forsterengineering.com

From: Mr. Alex Grant
Division : Edwards Aquifer Protection Program
Texas Commission on Environmental Quality
Phone: 210-403-4035
Fax: 210-545-4329

Re: Edwards Aquifer, Comal County

Name of Project: Servtex Quarry, Fordyce Tract; Located on the north side of FM 1337, approximately 1mile east of the intersection of FM 2252 and FM 1337 (Old Nacogdoches Road), Comal County, Texas

Plan Type: Request for approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213;

Dear Mr. Bhatnager:

The TCEQ San Antonio Region Office has received the amended application documents and completed its second administrative review of the subject plan application. The application has been determined to be administratively incomplete. The following comments relating to the application must be addressed before the plan can be resubmitted for administrative review.

Proof of Signatory Authority

An agent authorization form from Mr. Lalit Bhatnager, of Hanson Aggregates, LLC, and an additional agent authorization form from Mr. Steve Geiger, of Hanson Aggregates, LLC were submitted authorizing Mr. Charles P. "Frosty" Forster, P.E., P.G., of Forster Engineering as the agent on behalf of Hanson Aggregates, LLC. The authority of Mr. Bhatnager and Mr. Geiger could not be verified, specifically, the signature authority required under 30 TAC 213.4(d)(1)(A) could not be verified. 30 TAC 213.4(d)(1)(A) establishes that

for a corporation, a principal executive officer (president, vice-president, or a duly authorized representative) must sign the application. A representative must submit written proof of the authorization. Please provide additional documentation that verifies their signatory authority.

If you have any questions or require additional information, please contact Mr. Alex Grant of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4035.

FORSTER ENGINEERING

19915 Wittenburg
San Antonio, Texas 78256
p (210) 698-5544 c (210) 771-5721
fforster@forsterengineering.com
www.forsterengineering.com

November 10, 2015

Mr. Alex Grant
Texas Commission on Environmental Quality (TCEQ)
San Antonio Region 13
14250 Judson Road
San Antonio, Texas 78233

Subject: Hanson Aggregates LLC
Servtex Quarry, Fordyce Tract
Water Pollution Prevention Plan (WPAP)
Administrative Review 7/17/15 Response

TCEQ R-13 2015 NOV 12 03:46

Dear Mr. Grant:

As requested in your letter dated July 17, 2015 (copy attached), we are providing one (1) original and four (4) copies of responses to Administrative Notice of Deficiency 07/17/15 for the Hanson Aggregates LLC Servtex Quarry, Fordyce Tract, WPAP Application. Your comments and our responses are provided below as follows:

Proof of Ownership and Signatory Authority

In accordance with Title 30, Texas Administrative Code, Chapter 213.4(c)(2) only owners, their authorized agent(s), or those persons having the right to possess and control the property that is the subject of the Edwards Aquifer protection plan may submit the plan for review and approval by the executive director. The application was submitted by Hanson Aggregates, LLC and according to Comal County records the site for the proposed application is divided into 9 separate lots owned by 3 separate entities; 8364 Fordyce Property, LLC, Hanson Aggregates Mid Pacific, Inc., and Mr. and Mrs. Rittimann. The ownership and authorization documents submitted to the TCEQ to demonstrate that Hanson Aggregates, LLC could submit the plan application could not be verified. Specifically, the signature authority required under 30 TAC 213.4(d)(1)(A) could not be verified. 30 TAC 213.4(d)(1)(A) establishes that for a corporation, a principal executive officer (president, vice-president, or a duly authorized representative) must sign the application. A representative must submit written proof of the authorization.

Only one of the two deeds that were submitted could be verified in Comal County records. In addition, no authorizations were obtained from 8364 Fordyce Property, LLC. A letter referenced Hanson Aggregates West, Inc. as also being known as 8364 Fordyce Property, LLC, but no corporate documents or other legally binding

information was presented establishing the relationship between the applicant and 8364 Fordyce Property, LLC.

The following exhibits addressing these comments are attached:

1. Letter from William H. Venema, Vice President of 8364 Fordyce Property LLC, granting Hanson Aggregates LLC authorization to possess and control the 335.850 acre tract of land owned by 8364 Fordyce Property LLC.

2. Copy of Warranty Deed of 335.850 acre tract purchased by Hanson Aggregates West, Inc. from The Fordyce Company. (Shown on Comal County records as owned by 8364 Fordyce Property LLC)

3. Letter from William H. Venema, Vice President of Hanson Aggregates LLC, formerly known as Hanson Aggregates West, Inc. and Hanson Aggregates West LLC, confirming Hanson Aggregates LLC has authority as owner of various properties identified or recorded in the Comal County records as owned by Hanson Aggregates West, Inc.

4. Copies of State of Delaware, Secretary of State filings confirming Hanson Aggregates West, Inc. name change to Hanson Aggregates West LLC and confirming Hanson Aggregates West LLC name change to Hanson Aggregates LLC.

5. Letter from William H. Venema, Vice President of Hanson Aggregates Mid-Pacific, Inc. granting Hanson Aggregates LLC authorization to possess and control the 350.194 acre tract owned by Hanson Aggregates Mid-Pacific, Inc.

6. Title Commitment for 350.194 acre tract owned by Hanson Aggregates Mid-Pacific Inc.

7. Agent authorization signed by Steve Geiger, Vice President/General Manager of Hanson Aggregates LLC authorizing Charles P. "Frosty" Forster of Forster Engineering as agent.

Please find attached one (1) original and four (4) copies of the Hanson Aggregates LLC Servtex Quarry, Fordyce Tract, WPAP Application. This WPAP Application has been prepared in accordance with Texas Administrative Code (30 TAC §213) for development over the Edwards Aquifer Recharge Zone.

We are requesting your review and approval of this WPAP application. The required review fee of $10,000 is included herewith. If you have any questions or require additional information, please do not hesitate to contact me at your earliest convenience.

Sincerely,
Forster Engineering
(TBPE # F-12385)

Charles P. "Frosty" Forster, P.E., P.G.
Principal



1085-13

TCEQ
Protecting Texas by Reducing and Preventing Pollution

Fax Cover Sheet

Number of Pages: *(including this sheet)* 2

Date: July 17, 2015
To: Lalit Bhatnager, P.E.
Organization: Hanson Aggregates, LLC
Email: lalit.bhatnager@hanson.biz

To: Charles "Frosty" Forster, P. E.
Organization: Forster Engineering
Email: fforster@forsterengineering.com

From: Mr. Alex Grant
Division : Edwards Aquifer Protection Program
Texas Commission on Environmental Quality
Phone: 210-403-4035
Fax: 210-545-4329

Re: Edwards Aquifer, Comal County

Name of Project: Servtex Quarry, Fordyce Tract; Located on the north side of FM 1337, approximately 1mile east of the intersection of FM 2252 and FM 1337 (Old Nacogdoches Road), Comal County, Texas

Plan Type: Request for approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213;

Dear Mr. Bhatnager:

The TCEQ San Antonio Region Office has completed its administrative review of the subject plan application. The application has been determined to be administratively incomplete. The following comments relating to the application must be addressed before the plan can be resubmitted for administrative review.

Proof of Ownership and Signatory Authority

In accordance with Title 30, Texas Administrative Code, Chapter 213.4(c)(2) only owners, their authorized agent(s), or those persons having the right to possess and control the property that is the subject of the Edwards Aquifer protection plan may submit the plan for review and approval by the executive director. The application was submitted by Hanson Aggregates, LLC and according to Comal County records the site for the proposed application is divided into 9 separate lots owned by 3 separate entities; 8364 Fordyce

Property, LLC, Hanson Aggregates Mid Pacific, Inc., and Mr. and Mrs. Rittimann. The ownership and authorization documents submitted to the TCEQ to demonstrate that Hanson Aggregates, LLC could submit the plan application could not be verified. Specifically, the signature authority required under 30 TAC 213.4(d)(1)(A) could not be verified. 30 TAC 213.4(d)(1)(A) establishes that for a corporation, a principal executive officer (president, vice-president, or a duly authorized representative) must sign the application. A representative must submit written proof of the authorization.

Only one of the two deeds that were submitted could be verified in Comal County records. In addition, no authorizations were obtained from 8364 Fordyce Property, LLC. A letter referenced Hanson Aggregates West, Inc. as also being known as 8364 Fordyce Property, LLC, but no corporate documents or other legally binding information was presented establishing the relationship between the applicant and 8364 Fordyce Property, LLC.

If you have any questions or require additional information, please contact Mr. Alex Grant of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4035.

Lehigh Hanson
HEIDELBERGCEMENT Group

Lehigh Hanson, Inc.
Legal Department
P.O. Box 660225
Dallas, Texas 75266
Phn: (972) 653-6272
Fax: (972) 653-6185
www.hanson.com

November 9, 2015

Mr. Alex D. Grant
Texas Commission on Environmental Quality
Edwards Aquifer Protection Program
TCEQ – San Antonio Region
14250 Judson Road
San Antonio, TX 78233

Subject: **335.850 Acre tract of land owned by 8364 Fordyce Property LLC**
Land purchased from The Fordyce Company
Authorizing Hanson Aggregates LLC to conduct WPAP regulated activities

Dear Mr. Grant:

I, William H. Venema, am a duly designated officer, Vice President of 8364 Fordyce Property LLC.

On behalf of 8364 Fordyce Property LLC, please accept this letter as our expressed consent and approval granting Hanson Aggregates LLC full and unfettered ability to possess and control the property the purpose of conducting regulated activities associated with the proposed WPAP on the 335.850 Acre tract (Tract 4 of enclosed Warranty Deed) of land initially purchased by Hanson Aggregates West, Inc. from The Fordyce Company. A copy of the Warranty Deed is enclosed.

Please contact me by phone at (972) 653-5572 or by mail at 8364 Fordyce Property LLC, 300 E. John Carpenter Freeway, Suite 1645, Irving, TX 75062, for any further assistance.

Sincerely,

William H. Venema
Vice President
8364 Fordyce Property LLC

SEAL

STATE OF TEXAS
COUNTY OF DALLAS

I, Amy C. Yi, a Notary Public, do hereby certify that William H. Venema as Vice President of 8364 Fordyce Property LLC, personally appeared before me this day, known to me to be the person whose name is subscribed on the foregoing instrument and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

WITNESS my hand and official seal this 9th day of November, 2015.

_____ Notary Public

AMY C. YI
My Commission Expires
November 12, 2018

My Commission expires: November 12, 2018

STC GF#92992900 CO| $23.00

GENERAL WARRANTY DEED

THE STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF COMAL §

That **THE FORDYCE COMPANY**, of Victoria County, Texas, hereinafter called "Grantor", for and in consideration of the sum of Ten Dollars ($10.00) cash, and other good and valuable consideration to it in hand paid by **HANSON AGGREGATES WEST, INC.**, whose address is P.O. Box 190999, Dallas, Texas 75219-0999, hereinafter called "Grantee", the receipt and sufficiency of which consideration is herenow acknowledged; has GRANTED, BARGAINED, SOLD AND CONVEYED, and by these presents does GRANT, BARGAIN, SELL AND CONVEY, to the said Grantee all that certain tract or parcel of land lying and being situate in Comal County, Texas, and described as follows, to-wit:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF.

This conveyance and the warranty herein contained are expressly made SUBJECT TO all restrictions, reservations, easements and conditions, and all oil, gas and mineral reservations, if any, that are valid, existing and properly of record and described as follows, to-wit:

1. Grantor hereby reserves unto itself and its successors and assigns, in perpetuity, a non-participating royalty interest equal to one-half (1/2) of any royalty paid under any oil, gas and mineral lease. It is expressly understood that the term "minerals" includes (without limitations, except as herein provided) fissionable materials, metal ores, coal and lignite, even though the recovery of the same may be made by surface operations, but there is excepted from this reservation and GRANTED, SOLD AND CONVEYED to Grantee all sand, gravel, stone or other earthen materials in, on and under the land, even though the same may contain traces of the minerals herein described. It is also agreed and understood that under no circumstances shall the joinder of or approval by Grantor or its successors and assigns be required in connection with any future oil, gas and other mineral leases covering all or any part of the land or pooling agreements. It is further agreed and understood that Grantor and its successors and assigns shall be entitled to a one-half (1/2) share in any future bonus, and any delay or shut-in rentals or any other type of rentals paid in connection with the existing and future oil, gas and mineral leases on the land, whether for the purpose of deferring operations thereon or in connection with the production of oil, gas and/or other minerals therefrom or from lands pooled or unitized therewith or otherwise. Finally, and under no circumstances shall Grantor and its successors and assigns have any right to conduct or cause to be conducted any operations on the land or any lands pooled or unitized therewith for the production of oil, gas and/or any other minerals; its sole and only right being the right to receive the non-participating royalty interest and payments herein reserved.

2. Unlocated Right-of-Way Easement in favor of Magnolia Gas Company as set forth in instrument recorded in Volume 56, Page 483 and Volume 56, Page 484, Deed Records of Comal County, Texas.

3. Unlocated Pipeline Easement in favor of United Gas Pipeline Company as set forth in instrument recorded in Volume 106, Page 251, Deed Records of Comal County, Texas.

4. Unlocated Right-of-Way Easement in favor of United Gas Pipeline Company as set forth in instrument recorded in Volume 113, Page 479, Deed Records of Comal County, Texas.

5. Right-of-Way Easement as set out in Volume P, Page 118, Deed Records of Comal County, Texas.

6. Unlocated Right-of-Way Easement in favor of Comal Power Company as set forth in instrument recorded in Volume 53, Page 337, Deed Records of Comal County, Texas.

7. Permanent easement to engage in production and manufacture of rock and rock materials, Volume 72, Page 629, Deed Records of Comal County, Texas.

8. Partial Release of Easement and Right-of-Way Easement in favor of Wesley Hierholzer as set forth in instrument recorded in Volume 248, Page 272, Deed Records of Comal County, Texas.

9. 100' Right-of-Way Easement in favor of City Public Service Board of San Antonio as set forth in instrument recorded in Volume 292, Page 292, Deed Records of Comal County, Texas.

10. 25' Right-of-Way Ingress/Egress Easement in favor of Gifford-Hill & Company as set forth in instrument recorded in County Clerk's File No. 9706007501, Official Public Records of Comal County, Texas.

11. Unlocated 30' Telephone Easement in favor of Guadalupe Valley Telephone Cooperative, Inc. as set forth in instrument recorded in Volume 656, Page 183, Official Public Records of Bexar County, Texas.

12. 100' non-access easement as shown on survey dated 9/29/99, prepared by William J. Kolodie Surveying, Co.

TO HAVE AND TO HOLD the above described and conveyed property, together with all and singular the rights, improvements and appurtenances to the same in any manner belonging, incident or appertaining unto the said Grantee, its heirs and assigns, forever and in fee simple.

And Grantor does hereby bind itself, its heirs, executors, administrators and assigns, to warrant and forever defend all and singular the said land and premises unto the said Grantee, its heirs and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof.

EXECUTED this the 24th day of January, 2000.

THE FORDYCE COMPANY

By: R. W. Briggs, Jr.
R. W. Briggs, Jr.
Printed Name
President
Title

THE STATE OF TEXAS §

COUNTY OF VICTORIA §

This instrument was acknowledged before me on this the 24th day of January, 2000, by R. W. Briggs, Jr., President of The Fordyce Company, a Texas Corporation, on behalf of said corporation.

PEGGY A. CHAMRAD
Notary Public, State of Texas
My Commission Expires
APRIL 26, 2003

Peggy A. Chamrad
Notary Public, State of Texas

WILLIAM J. KOLODZIE SURVEYING COMPANY

REGISTERED PROFESSIONAL LAND SURVEYORS
197 EAST MILL STREET
NEW BRAUNFELS, TEXAS 78130
830-625-6484 FAX 830-620-6484

WILLIAM J. KOLODZIE, R.P.L.S. 1462 GERARD S. SCHOLLER, R.P.L.S. 1876

416.339

September 29, 1999

Description of The Fordyce Company to Hanson Aggregates West, Inc. a total of 416.339 acres of land, Comal County, Texas, described more particularly in four separate tracts as follows:

TRACT 1:
30.363 acres of land out of the John Nelson Survey No. 97, Abstract 436, Comal County, Texas, and being a portion of that certain 44.593 acre TRACT ONE described in a deed from Allen Hierholzer, et al to The Fordyce Company dated February 23, 1977 and recorded in Volume 249 on pages 207-213 of the Deed Records of Comal County, Texas, and described more particularly by metes and bounds as follows:

BEGINNING at a 1/2" re-bar rod found at a corner post in the point of intersection of the fenced Southwest line of the Valentine Bennett Survey No. 100, Abstract 72, the fenced Northeast line of the John Nelson Survey No. 97, Abstract 436, with the Northwest line of the Union Pacific Railroad R.O.W. (formerly Missouri, Kansas and Texas Railroad, reference Vol. Z, pages 191-193, Comal County, Texas Deed Records), for the South corner of a 10.660 acre tract conveyed to Kermit G. Crenwelge and wife by deed dated April 5, 1972 and recorded in Volume 197 on pages 370-372 of the Deed Records of Comal County, Texas, for the East corner of The Fordyce Company 44.593 acre Tract One, for the East corner of the herein described 30.363 acre Tract 1;

THENCE with the Northwest line of the Union Pacific Railroad R.O.W., the Southeast line of The Fordyce Company 44.593 acre Tract One, S. 69° 01' 25" W. 770.54 feet to a 1/2" re-bar rod set at the beginning of a curve, and Thence in a Southwesterly direction, along the arc of a circular curve to the left, having a Radius of 5,779.58 feet, a length of arc distance of 735.51 feet (chord bears S. 66° 35' 46" W. 735.02 feet) to a 1/2" re-bar rod found for the East corner of a 99.281 acre Tract 3 conveyed by Servtex Materials Co. to Gifford Hill & Co., Inc. as referenced in Volume 659 on pages 28-37 of the Official Public Records of Comal County, Texas, for the South corner of The Fordyce Company 44.593 acre Tract One, for the South corner of this 30.363 acre Tract 1;

THENCE with the Northeast line of the Gifford Hill & Co., Inc. 99.281 acre Tract 3, the Southwest line of The Fordyce Company 44.593 acre Tract One, N. 29° 40' 05" W. 186.21 feet to a 1/2" re-bar rod set for the South corner of a called 6.087 acre tract (re-surveyed and found to contain 5.740 acres) conveyed by The Fordyce Company to the Missouri Pacific Railroad Company (now Union Pacific Railroad Company) by deed dated January 10, 1986 and recorded in Volume 495 on page 544 of the Official Public Records of Comal County, Texas, for the West corner of this 30.363 acre Tract 1;

THENCE with the Southeast line of the Union Pacific Railroad Company called 6.087 acre tract, as follows:
In a Northeasterly direction, along the arc of a circular curve to the left, having a Radius of 1,984.86 feet, a length of arc distance of 496.83 feet (chord bears N. 19° 33' 11" E. 495.53 feet) to a 1/2" re-bar rod set at the end of said curve;
THENCE N. 12° 22' 59" E. 216.32 feet to a 1/2" re-bar rod set at the beginning of a curve;
THENCE in a Northeasterly direction, along the arc of a circular curve to the right, having a Radius of 1,834.86 feet, a length of arc distance of 1,128.35 feet (chord bears N. 30° 00' 00" E. 1,110.65 feet to a 1/2" re-bar rod set in the fence, at the point of intersection of the the fenced Southwest line of the Valentine Bennett Survey, the fenced Northeast line of the John Nelson Survey, the Southwest line of a 7.500 acre tract conveyed to Kermit G. Crenwelge and wife by deed dated October 20, 1982 and recorded in Volume 335 on pages 735-736 of the Deed Records of Comal County, Texas, the Northeast line of The Fordyce Company 44.593 acre Tract One, with the Southeast line of the called 6.087 acre tract, for the East corner of The Union Pacific Railroad Company 5.740 acre tract, for the North corner of this 30.363 acre Tract 1, from said rod, a 1/2" re-bar rod set at a corner post in the South line of the Union Pacific Railroad Company (former Missouri Pacific Railroad Company), for the North corner of The Fordyce Company 44.593 acre tract, bears N. 30° 12' 45" W. 50.71 feet;

THENCE with the fence, the fenced Southwest line of the Valentine Bennett Survey, the fenced Northeast line of the John Nelson Survey, the Southwest line of the Kermit G. Crenwelge 7.500 acre tract and 10.660 acre tract, the Northeast line of The Fordyce Company 44.593 acre Tract One, S. 30° 12' 45" E. 1,428.09 feet to the Place of Beginning.

TRACT 2:
Being an 8.458 acre tract of land out of the John Nelson Survey No. 97, Abstract 436, and being a portion of that certain 44.593 acre TRACT ONE described in a deed from Allen Hierholzer, et al to The Fordyce Company dated February 23, 1977 and recorded in Volume 249 on pages 207-213 of the Deed Records of Comal County, Texas, and described more particularly by metes and bounds as follows:

FROM a 1/2" re-bar rod found at a corner post in the point of intersection of the fenced Southwest line of the Valentine Bennett Survey No. 100, Abstract 72, the fenced Northeast line of the John Nelson Survey No. 97, Abstract 436, with the Northwest line of the Union Pacific Railroad R.O.W. (formerly Missouri, Kansas and Texas Railroad, reference Vol. Z, pages 191-193, Comal County, Texas Deed Records), for the South corner of a 10.660 acre tract conveyed to Kermit G. Crenwelge and wife by deed dated April 5, 1972 and recorded in Volume 197 on pages 370-372 of the Deed Records of Comal County, Texas, for the East corner of The Fordyce Company 44.593 acre Tract One, for the East corner of a 30.363 acre Tract 1 surveyed on even date herewith;
THENCE with the fenced Southwest line of the Valentine Bennett Survey, the fenced Northeast line of the John Nelson Survey, the Southwest line of the Kermit G. Crenwelge and wife 10.660 acre tract and the Kermit G. Crenwelge and wife 7.500 acre tract, the Northeast line of The Fordyce Company 44.593 acre

Tract One, N. 30° 12' 45" W., at 1,428.09 feet crossing the Southeast line of that called 6.087 acre tract conveyed by The Fordyce Company to the Missouri Pacific Railroad Company (now Union Pacific Railroad) by deed dated January 10, 1986 and recorded in Volume 495 on page 544 of the Official Public Records of Comal County, Texas, in all a total distance of 1,478.80 feet to a 1/2" re-bar rod set at a corner post in the South line of the Union Pacific Railroad Company R.O.W. (formerly Missouri Pacific Railroad, reference Volume P, page 118, Comal County, Texas Deed Records), for the West corner of the Kermit G. Crenwelge and wife 7.500 acre tract, for the North corner of The Fordyce Company 44.593 acre Tract 1; THENCE with the Southeast line of the Union Pacific Railroad Company R.O.W., the Northwest line of The Fordyce Company 44.593 acre Tract 1, the Northwest line of the Missouri Pacific Railroad called 6.087 acre tract, S. 55° 34' 51" W. 421.33 feet to a 1/2" re-bar rod set for a West corner of the said 6.087 acre tract, for the Northeast corner and POINT OF BEGINNING of the herein described 8.458 acre Tract 2;

THENCE with the Northwest line of the Missouri Pacific Railroad Company called 6.078 acre tract, establishing the Southeast line of this 8.458 acre Tract 2, as follows:
In a Southwesterly direction, along the arc of a circular curve to the left, having a Radius of 1,984.86 feet, a length of arc distance of 811.13 feet (chord bears S. 24° 05' 15" W. 805.50 feet) to a 1/2" re-bar rod set at the end of said curve;
THENCE S. 12° 22' 59" W. 216.32 feet to a 1/2" re-bar rod set at the beginning of a curve;
THENCE in a Southwesterly direction, along the arc of a circular curve to the right, having a Radius of 1,834.86 feet, a length of arc distance of 357.68 feet (chord bears S. 17° 57' 58" W. 357.11 feet) to a 1/2" re-bar rod set in the Northeast line of a 99.281 acre Tract 3 conveyed by Servtex Materials Co. to Gifford Hill & Co., Inc. as refenced in a deed recorded in Volume 659 on pages 28-37 of the Official Public Records of Comal County, Texas, in the Southwest line of The Fordyce Company 44.593 acre Tract 1, for the Southwest corner of the Missouri Pacific Railroad Company called 6.078 acre tract, for the South corner of the of this 8.458 acre Tract 2;

THENCE with the Northeast line of the Gifford Hill Co., Inc. 99.281 acre Tract 3, the Southwest line of The Fordyce Company 44.493 acre Tract 1, N. 29° 40' 25" W. 789.54 feet to a 1/2" re-bar rod set in the Southeast line of the Union Pacific Railroad Company R.O.W., for the North corner of the Gifford Hill Co., Inc. 99.281 acre Tract 3, for the West corner of The Fordyce Company 44.493 acre Tract 1, for the West corner of this 8.458 acre Tract 2, from said rod, a 1/2" re-bar rod set in the Northwest line of the Union Pacific Railroad Company R.O.W. for the South corner of The Fordyce Company 41.660 acre Tract 2, for the South corner of a 41.668 acre Tract 3 surveyed on even date herewith bears N. 30° 19' 00" W. 100.00 feet;

THENCE with the Southeast line of the Union Pacific Railroad Company R.O.W., the Northwest line of The Fordyce Company 44.593 acre Tract 1, N. 55° 34' 51" E. 1,062.03 feet to the Place of Beginning.

TRACT 3:
1.668 acres of land out of the John Nelson Survey No. 97, Abstract 436, Comal County, Texas, and being all of that certain 41.660 acre TRACT TWO described in a deed from Allen Hierholzer, et al to The Fordyce Company dated February 23, 1977 and recorded in Volume 249 on pages 207-213 of the Deed Records of Comal County, Texas, and described more particularly by metes and bounds as follows:

BEGINNING at a 1/2" re-bar rod found at the point of intersection of the fenced Southwest line of the Valentine Bennett Survey, the Northeast line of the John Nelson Survey, with the Northwest line of The Union Pacific Company R.O.W. (former Missouri Pacific Railroad, reference Volume P, page 118, Comal County, Texas Deed Records) for the South corner of a 20 acre Tract No. 1 conveyed to Louis L. Schneider and wife by deed dated November 3, 1970 and recorded in Volume 182 on pages 556-558 of the Deed Records of Comal County, Texas, for the East corner of The Fordyce Company 41.660 acre Tract Two, for the East corner of the herein described 41.668 acre Tract 3;

THENCE with the Northwest line of the Union Pacific Railroad Company R.O.W., the Southeast line of The Fordyce Company 41.660 acre Tract Two, S. 55° 35' 35" W. 1,486.00 feet to a drill hole set in a concrete bridge for the East corner of a 138.274 acre Tract 2 conveyed by Servtex Materials Co. to Gifford Hill & Co., Inc. as referenced in Volume 659 on pages 28-37 of the Official Public Records of Comal County, Texas, for the South corner of The Fordyce Company 41.660 acre Tract Two, for the South corner of this 41.668 acre Tract 3;

THENCE with the common boundary line between the Gifford Hill & Co., Inc. 138.274 acre Tract 2, and The Fordyce Company 41.660 acre Tract Two, N. 20° 17' 13" E. 564.45 feet and N. 34° 35' 53" W. 1,298.95 feet to a 1/2" re-bar rod found at a corner post in the Southeast line of Old Nacogdoches Road, for the North corner of the Gifford Hill Co., Inc. 138.274 acre Tract 2, for the West corner of The Fordyce Company 41.660 acre Tract Two, for the West corner of this 41.668 acre Tract 3;

THENCE with the Southeast line of Old Nacogdoches Road, the Northwest line of The Fordyce Company 41.660 acre Tract 2, as follows:
N. 58° 38' 30" E. 724.41 feet to a 1/2" re-bar rod set at a fence post,
N. 53° 40' 32" E. 131.19 feet to a 1/2" re-bar rod set at a fence post, and
N. 50° 37' 10" E. 293.42 feet to a 3/8" re-bar rod found at a fence corner post for the West corner of the Louis L. Schneider and wife 20 acre Tract No. 1, for the North corner of The Fordyce Company 41.660 acre Tract Two, for the North corner of this 41.668 acre Tract 3, from said rod, a 3/8" re-bar rod found in the Northwest line of Old Nacogdoches Road, for the East corner of The Fordyce Company 345.581 acre Tract Three, the East corner of a 335.850 acre tract surveyed on even date herewith, bears N. 31° 46' 58" W. 39.76 feet;

THENCE with the fence, the fenced Southwest line of the Valentine Bennett Survey, the fenced Northeast line of the John Nelson Survey, the Southwest line of the Louis L. Schneider and wife 20 acre Tract No. 1, the Northeast line of The Fordyce Company 41.660 acre Tract Two, S. 30° 15' 46" E. 1,620.71 feet to the Place of Beginning.

TRACT 4:
335.850 acres of land and being approximately 51.428 acres out of the John Nelson Survey No. 97, Abstract 436, approximately 208.092 acres out of the Nathaniel Conner Survey No. 100 1/2, Abstract 114, approximately 71.670 acres out of the Valentine Bennett Survey No. 104, Abstract 78, and approximately 4.660 acres out of the Joseph Thompson Survey No. 752, Abstract 609, Comal County, Texas, and being the greater portion of that certain 345.581 acre Tract Three as described in a deed from Allen Hierholzer, et al to The Fordyce Company dated February 23, 1977 and recorded in Volume 249 on pages 207-213 of the Deed Records of Comal County, Texas, and described more particularly by metes and bounds as follows:

BEGINNING at a 3/8" re-bar rod found at the point of intersection of the fenced Southwest line of the Valentine Bennett Survey, the fenced Northeast line of the John Nelson Survey, with the Northwest line of Old Nacogdoches Road, for the South corner of a 30 acre Tract No. 2 conveyed to Louis L. Schneider and wife by deed dated November 3, 1970 and recorded in Volume 182 on pages 556-558 of the Deed Records of Comal County, Texas, for the East corner of The Fordyce Company 345.581 acre Tract Three, for the East corner of the herein described 335.850 acre Tract 4, from said rod, a 3/8" re-bar rod found in the Southeast line of Old Nacogdoches Road, the North corner of The Fordyce Company 41.660 acre Tract Two, the North corner of a 41.668 acre Tract 3, surveyed on even date herewith, bears S. 31° 46' 58" E. 39.76 feet;

THENCE with the Northwest line of Old Nacogdoches Road, the Southeast line of The Fordyce Company 345.581 acre Tract Three, S. 51° 44' 11" W. 419.59 feet to a 1/2" re-bar rod set at a post and S. 59° 56' 25" W. 373.22 feet to a 5/8" re-bar rod found for the East corner of 10.00 acre Mims Subdivision, plat recorded in Volume 10 on page 291 of the Map and Plat Records of Comal County, Texas, for a South corner of this 335.850 acre Tract 4;

THENCE with the common boundary line between this tract and the 10.00 acre Mims Subdivision, N. 37° 02' 57" W. 704.46 feet to a 5/8" re-bar rod found and S. 53° 00' 04" W. 649.71 feet to a 5/8" re-bar rod found in the fence, the Northeast line of a 66.16 acre Tract 1B conveyed by Servtex Materials Co. to Gifford Hill & Co., Inc. as referenced in Volume 659 on pages 28-37 of the Official Public Records of Comal County, Texas, the Southwest line of The Fordyce Company 345.581 acre Tract Three, for the West corner of 10.00 acre Mims Subdivision, for a South corner of this 335.850 acre Tract 4;

THENCE with the fence, the Southwest line of The Fordyce Company 345.581 acre Tract Three, the Northeast line of the Gifford Hill & Co., Inc. 66.16 acre Tract 1B, as follows:
N. 37° 04' 34" W. 149.21 feet to a 1/2" re-bar rod found at a post,
N. 24° 39' 41" W. 26.75 feet to a 1/2" re-bar rod found at a post, and
N. 11° 07' 11" W. 2,043.64 feet to a 1/2" re-bar rod found at a post for the Northeast corner of the Gifford Hill & Co., Inc. 66.16 acre Tract 1B, for the Southeast corner of a 676.787 acre Tract 1A conveyed by Servtex Materials Company to Gifford Hill & Co., Inc. as referenced in Volume 659 on pages 28-37 of the Official Public Records of Comal County, Texas;

THENCE with the fence, the Northeast line of the Gifford Hill & Co., Inc. 676.787 acre Tract 1A, the Southwest line of The Fordyce Company 345.581 acre Tract Three, as follows:
N. 89° 27' 17" W. 729.95 feet to a 1/2" re-bar rod found,
S. 84° 28' 57" W. 755.18 feet to a nail found in a 20" Live Oak,
S. 81° 06' 27" W. 444.31 feet to a nail found in a 16" Cedar Tree,
S. 62° 44' 00" W. 58.20 feet to a nail found,
S. 48° 48' 22" W. 16.44 feet to a nail found in a Cedar Tree,
N. 28° 46' 48" W. 65.88 feet to a 1/2" re-bar rod found,
N. 29° 52' 52" W. 143.01 feet to a 1/2" re-bar rod found,
N. 29° 56' 52" W. 115.99 feet to a 1/2" re-bar rod found,
N. 34° 38' 03" W. 64.12 feet to a 1/2" re-bar rod found,
N. 58° 40' 37" W. 12.08 feet to a 1/2" re-bar rod found,
N. 81° 28' 47" W. 170.18 feet to a 1/2" re-bar rod found,
S. 89° 27' 55" W. 26.54 feet to a 1/2" re-bar rod found,
N. 88° 10' 49" W. 53.78 feet to a 1/2" re-bar rod found,
N. 79° 24' 21" W. 151.12 feet to a 1/2" re-bar rod found,
N. 88° 01' 52" W. 25.13 feet to a 1/2" re-bar rod found,
S. 77° 58' 51" W. 25.25 feet to a 1/2" re-bar rod found,
N. 81° 47' 12" W. 29.18 feet to a 1/2" re-bar rod found,
N. 57° 25' 48" W. 34.48 feet to a 1/2" re-bar rod found,
N. 72° 33' 33" W. 77.89 feet to a 1/2" re-bar rod found,
N. 79° 56' 13" W. 48.21 feet to a 1/2" re-bar rod found,
N. 85° 41' 35" W. 81.85 feet to a 1/2" re-bar rod found,
S. 45° 00' 46" W. 42.98 feet to a 1/2" re-bar rod found,
S. 29° 30' 48" W. 11.57 feet to a 1/2" re-bar rod found,
S. 82° 47' 09" W. 39.33 feet to a 1/2" re-bar rod found,
N. 74° 51' 30" W. 49.50 feet to a 1/2" re-bar rod found,
N. 76° 37' 04" W. 95.65 feet to a 1/2" re-bar rod found,
N. 88° 27' 14" W. 37.44 feet to a 1/2" re-bar rod found,
N. 80° 41' 00" W. 89.45 feet to a 1/2" re-bar rod found,
N. 73° 54' 44" W. 38.95 feet to a 1/2" re-bar rod found,
N. 76° 51' 31" W. 1,148.80 feet to a 1/2" re-bar rod found, and
N. 59° 04' 34" W. 301.82 feet to a 1/2" re-bar rod found for the North corner of the Gifford Hill & Co., Inc. 676.787 acre Tract 1A, for the East corner of a 40.000 acre Tract 1C conveyed by Servtex Materials Company to Gifford Hill & Co., Inc. as referenced in Volume 659 on pages 28-37 of the Official Public Records of Comal County, Texas;

THENCE with the Northeast line of the Gifford Hill & Co., Inc. 40.000 acre Tract 1C, the Southwest line of The Fordyce Company 345.581 acre Tract Three, as follows:
N. 57° 29' 47" W. 121.52 feet,
N. 47° 38' 47" W. 248.07 feet,
N. 37° 01' 36" W. 125.18 feet,
N. 37° 38' 06" W. 49.40 feet,
N. 28° 10' 45" W. 212.81 feet,
N. 09° 54' 22" W. 167.36 feet,
N. 05° 53' 33" W. 186.03 feet, and
N. 01° 55' 39" W. 388.50 feet to a 1/2" re-bar rod found on top of a bluff, in the approximate Southwest line of the Geo. W. B. Simmons Survey No. 497, Abstract 533, in the approximate Northeast line of the Valentine Bennett

rvey No. 104, in the Southwest line of a 320 acre Tract I conveyed by Eldor Dierks and wife to Raymond Dierks by deed dated March 24, 1972 and recorded in Volume 194 on pages 415-419 of the Deed Records of Comal County, Texas, for the Northeast corner of the Gifford Hill & Co., Inc. 40.000 acre Tract 1C, for the Northwest corner of The Fordyce Company 345.581 acre Tract Three, for the Northwest corner of this 335.850 acre Tract 4;

THENCE with a fence, the approximate Southwest line of the Simmons Survey No. 497, the approximate Northeast line of the Valentine Bennett Survey No. 104, the Southwest line of the Raymond Dierks 320 acre Tract I, a Northeast line of The Fordyce Company 345.581 acre Tract Three, S. 35° 41' 12" E. 983.45 feet to a 1/2" re-bar rod found at a corner post for the approximate South corner of the Simmons Survey, for a re-entrant corner of the Bennett Survey, for the South corner of the Raymond Dierks 320 acre Tract I, for a re-entrant corner of The Fordyce Company 345.581 acre Tract Three, for a re-entrant corner of this 335.850 acre Tract 4;

THENCE with the fence, the approximate Southeast line of the Simmons Survey, the approximate Northwest line of the Bennett Survey, the Southeast line of the Raymond Dierks 320 acre Tract I, the Northwest line of The Fordyce Company 345.581 acre Tract Three, as follows:
N. 52° 17' 44" E. 2,109.08 feet to a 1/2" re-bar rod found, top of a bluff,
N. 56° 43' 26" E. 165.99 feet to a 1/2" re-bar rod found, bottom of a bluff,
N. 50° 59' 57" E. 1,421.31 feet, crossing a deep canyon, to a 1/2" re-bar rod found at top of a bluff, and
N. 84° 54' 49" E. 76.97 feet to a 1/2" re-bar rod set at a corner post for the approximate Northwest corner of the Joseph Thompson Survey No. 752, for the approximate North corner of the Bennett Survey No. 104;

THENCE continuing with the fence, the approximate South line of the Simmons Survey, the approximate North line of the Joseph Thompson Survey, the South line of the Raymond Dierks 320 acre Tract I, the North line of The Fordyce Company 345.581 acre Tract Three, N. 73° 39' 37" E. 169.28 feet to a 1/2" re-bar rod found at a corner post for the West corner of a tract of land conveyed by Leroy E. Kunz and wife to The Fordyce Company by deeds recorded in Volume 254 on pages 310-311 and Volume 254 on pages 304-309 of the Deed Records of mal County, Texas, for the North corner of The Fordyce Company 345.581 acre act Three, for the North corner of this 335.850 acre Tract 4;

THENCE with the fence, the Southwest line of the Leroy E. Kunz and wife to The Fordyce Company tract, the Northeast line of The Fordyce Company 345.581 acre Tract Three, as follows:
S. 16° 24' 28" E. 176.39 feet to a 1/2" re-bar rod found at a post,
S. 54° 37' 56" E. 764.67 feet to a 1/2" re-bar rod set at a post,
S. 37° 07' 50" E. 10.41 feet to a 1/2" re-bar rod set at a post,
S. S. 32° 05' 04" E. 220.82 feet to a nail set in a 14" Cedar,
S. 30° 26' 11" E. 546.75 feet to a 1/2" re-bar rod set at a post,
S. 31° 07' 58" E. 1,492.89 feet to a railroad spike found,
S. 23° 44' 02" E. 278.44 feet to a nail set in an 18" Cedar, and
S. 08° 43' 24" E. 14.88 feet to a 3/8" re-bar rod found for the South corner of the Leroy E. Kunz and wife to The Fordyce Company tract, for the West corner of the aforesaid 30 acre Tract No. 2 conveyed to Louis L. Schneider and wife;

HENCE with the fence, the Southwest line of the 30 acre Tract No. 2 conveyed
o Louis L. Schneider and wife, the Northeast line of The Fordyce Company
345.581 acre Tract Three, as follows:
S. 15° 43' 15" E. 11.31 feet to a nail set in an 8" Cedar,
S. 31° 59' 24" E. 25.25 feet to a nail set in a 15" Cedar,
S. 25° 04' 42" E. 69.04 feet to a nail set in an 18" Cedar,
S. 26° 31' 55" E. 63.59 feet to a railroad spike found in an 18" Elm,
S. 29° 30' 56" E. 252.17 feet, crossing creek, to a 1/2" re-bar rod found,
S. 24° 32' 13" E. 63.20 feet to a 1/2" re-bar rod found in an 8" Elm,
S. 35° 53' 15" E. 262.93 feet to a nail set in a 24" Spanish Oak,
S. 23° 43' 48" E. 17.16 feet to a nail set in a 10" Cedar,
S. 42° 45' 30" E. 35.24 feet to a 1/2" re-bar rod found,
S. 39° 18' 24" E. 82.12 feet to a 1/2" re-bar rod found in an 18" Cedar,
S. 33° 08' 08" E. 325.33 feet to a 1/2" re-bar rod found in a 15" Cedar,
S. 29° 55' 02" E. 127.54 feet to a 3" steel pipe post,
S. 27° 58' 42" E. 108.74 feet to a post,
S. 36° 40' 23" E. 147.05 feet to a 3" steel pipe post,
S. 32° 52' 16" W. 19.54 feet to a 3" steel pipe post,
S. 33° 19' 30" E. 781.83 feet to a 3" steel pipe post,
S. 50° 02' 04" E. 42.61 feet to a 1/2" re-bar rod found in a 24" Cedar, and
S. 30° 32' 51" E. 635.10 feet to the Place of Beginning.

I hereby state that this survey was made on the ground and completed on September 20, 1999, and is true and correct to the best of my knowledge and belief.

Gerard S. Scholler

GERARD S. SCHOLLER
R.P.L.S. 1876

STATE OF TEXAS
REGISTERED
G. S. SCHOLLER
1876
PROFESSIONAL
LAND SURVEYOR

Lehigh Hanson
HEIDELBERGCEMENT Group

Lehigh Hanson, Inc.
Legal Department
P.O. Box 660225
Dallas, Texas 75266
Phn: (972) 653-6272
Fax: (972) 653-6185
www.hanson.com

November 9, 2015

Mr. Alex D. Grant
Texas Commission on Environmental Quality
Edwards Aquifer Protection Program
TCEQ – San Antonio Region
14250 Judson Road
San Antonio, TX 78233

Subject: **Hanson Aggregates West, Inc., Comal County Properties**
Hanson Aggregates LLC TCEQ Applications

Dear Mr. Grant:

I, William H. Venema, am a duly designated officer, Vice President of Hanson Aggregates LLC, formerly known as Hanson Aggregates West, Inc. On December 31, 2008, Hanson Aggregates West, Inc. converted and changed its name to Hanson Aggregates West LLC. Also, on December 31, 2008, Hanson Aggregates West LLC changed its name to Hanson Aggregates LLC. Copies of the filings filed on record with the Delaware Secretary of State are attached.

Therefore, Hanson Aggregates LLC, formerly Hanson Aggregates West, Inc., has full possession and control of the various properties identified or recorded in the Comal County records as owned by Hanson Aggregates West, Inc. by virtue of ownership. Accordingly, Hanson Aggregates LLC has the authority, as owner, to apply for any and all permits required by the Texas Commission on Environmental Quality (TCEQ) for said properties.

Please contact me by phone at (972) 653-5572 or by mail at Hanson Aggregates LLC, 300 E. John Carpenter Freeway, Suite 1645, Irving, TX 75062, for any further assistance.

Sincerely,

William H. Venema
Vice President
Hanson Aggregates LLC

STATE OF TEXAS
COUNTY OF DALLAS

I, Amy C. Yi, a Notary Public, do hereby certify that William H. Venema as Vice President of Hanson Aggregates LLC, formerly Hanson Aggregates West, Inc., personally appeared before me this day, known to me to be the person whose name is subscribed on the foregoing instrument and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

WITNESS my hand and official seal this 9th day of November, 2015.

_____ Notary Public

My Commission expires: November 12, 2018

AMY C YI
My Commission Expires
November 12, 2018

Delaware

The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE DO HEREBY CERTIFY THAT THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF CONVERSION OF A DELAWARE CORPORATION UNDER THE NAME OF "HANSON AGGREGATES WEST, INC." TO A DELAWARE LIMITED LIABILITY COMPANY, CHANGING ITS NAME FROM "HANSON AGGREGATES WEST, INC." TO "HANSON AGGREGATES WEST LLC", FILED IN THIS OFFICE ON THE TWENTY-NINTH DAY OF DECEMBER, A.D. 2008, AT 6:52 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF CONVERSION IS THE THIRTY-FIRST DAY OF DECEMBER, A.D. 2008, AT 9:45 O'CLOCK P.M.



Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

0693918 8100V

AUTHENTICATION: 7057716

081235422

DATE: 01-02-09

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 06:44 PM 12/29/2008
FILED 06:52 PM 12/29/2008
SRV 081235422 - 0693918 FILE

STATE OF DELAWARE
CERTIFICATE OF CONVERSION
FROM A CORPORATION TO A
LIMITED LIABILITY COMPANY PURSUANT TO
SECTION 18-214 OF THE LIMITED LIABILITY COMPANY ACT

Hanson Aggregates West, Inc., a corporation formed and existing under the General Corporation Law of the State of Delaware (the "***Corporation***"), for purposes of converting the Corporation into a limited liability company existing under the Limited Liability Company Act of the State of Delaware (the "***Limited Liability Company***"), hereby certifies as follows:

1. The jurisdiction where the Corporation was first formed is Delaware.

2. The jurisdiction of the Corporation immediately prior to filing this Certificate is Delaware.

3. The date the Corporation was first formed is November 27, 1968.

4. The name of the Corporation immediately prior to filing this Certificate is Hanson Aggregates West, Inc.

5. The name of the Limited Liability Company as set forth in the Certificate of Formation is Hanson Aggregates West LLC.

6. The conversion is to be effective as of 9:45 p.m., Eastern Time, on December 31, 2008.

IN WITNESS WHEREOF, the undersigned has executed this Certificate as of the 15th day of December, A.D., 2008.

HANSON AGGREGATES WEST, INC.

By: _____
Authorized Person

Name: Michael H. Hyer

Delaware

The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE DO HEREBY CERTIFY THAT THE ATTACHED IS A TRUE AND CORRECT COPY OF CERTIFICATE OF FORMATION OF "HANSON AGGREGATES WEST LLC" FILED IN THIS OFFICE ON THE TWENTY-NINTH DAY OF DECEMBER, A.D. 2008, AT 6:52 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF FORMATION IS THE THIRTY-FIRST DAY OF DECEMBER, A.D. 2008, AT 9:45 O'CLOCK P.M.

Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

0693918 8100V

081235422

AUTHENTICATION: 7057716

DATE: 01-02-09

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 06:44 PM 12/29/2008
FILED 06:52 PM 12/29/2008
SRV 081235422 - 0693918 FILE

STATE OF DELAWARE
LIMITED LIABILITY COMPANY
CERTIFICATE OF FORMATION

This Certificate of Formation of Hanson Aggregates West LLC is being duly executed and filed by the undersigned, as an authorized person, to form a limited liability company under the Delaware Limited Liability Company Act (6 Del. C. §18-101 et seq.).

First: The name of the limited liability company formed hereby is Hanson Aggregates West LLC (the "***Company***").

Second: The address of the Company's registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

Third: The name and address of the registered agent for service of process on the Company in the State of Delaware is The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

Fourth: The Company is being formed in conjunction with the conversion of Hanson Aggregates West, Inc., a Delaware corporation (the "***Converting Entity***"), to a limited liability company.

Fifth: The conversion of the Converting Entity and formation of the limited liability company will be effective as of 9:45 p.m. on December 31, 2008 (the "***Effective Time***").

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Formation as of the 15th day of December, 2008, to be effective as of the Effective Time.

By: _____
Authorized Person

Name: Michael H. Hyer

Delaware

The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "HANSON AGGREGATES WEST LLC", CHANGING ITS NAME FROM "HANSON AGGREGATES WEST LLC" TO "HANSON AGGREGATES LLC", FILED IN THIS OFFICE ON THE TWENTY-NINTH DAY OF DECEMBER, A.D. 2008, AT 6:44 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF AMENDMENT IS THE THIRTY-FIRST DAY OF DECEMBER, A.D. 2008, AT 9:45 O'CLOCK P.M.

Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

0693918 8100

AUTHENTICATION: 7059294

081235465

DATE: 01-02-09

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 06:44 PM 12/29/2008
FILED 06:44 PM 12/29/2008
SRV 081235465 - 0693918 FILE

STATE OF DELAWARE
CERTIFICATE OF AMENDMENT

1. Name of Limited Liability Company: Hanson Aggregates West LLC.

2. The Certificate of Formation of the limited liability company is hereby amended as follows:

> The First Article of the Certificate of Formation is deleted in its entirety and the following provision is substituted in its place and stead:
>
> **First:** The name of the limited liability company is Hanson Aggregates LLC (the "***Company***").

3. This Amendment shall be effective at 9:45 p.m., Eastern Time, on December 31, 2008.

IN WITNESS WHEREOF, the undersigned has executed this Certificate on behalf of the limited liability company as of the 29th day of December, A.D. 2008.

By: _____
Authorized Person

Name: Michael H. Hyer
Print or Type

Lehigh Hanson
HEIDELBERGCEMENT Group

Lehigh Hanson, Inc.
Legal Department
P.O. Box 660225
Dallas, Texas 75266
Phn: (972) 653-6272
Fax: (972) 653-6185
www.hanson.com

November 9, 2015

Mr. Alex D. Grant
Texas Commission on Environmental Quality
Edwards Aquifer Protection Program
TCEQ – San Antonio Region
14250 Judson Road
San Antonio, TX 78233

Subject: **350.194 Acre tract of land owned by Hanson Aggregates Mid-Pacific, Inc.**
Land purchased from Fordyce Holdings, Inc.
Authorizing Hanson Aggregates LLC to conduct WPAP regulated activities

Dear Mr. Grant:

I, William H. Venema, am a duly designated officer, Vice President of Hanson Aggregates Mid-Pacific, Inc.

On behalf of Hanson Aggregates Mid Pacific, Inc., please accept this letter as our expressed consent and approval granting Hanson Aggregates LLC full and unfettered ability to possess and control the property the purpose of conducting regulated activities associated with the proposed WPAP on the 350.194 Acre tract of land purchased by Hanson Aggregates Mid-Pacific, Inc. from Fordyce Holdings, Inc. A copy of the Title Commitment is enclosed.

Please contact me by phone at (972) 653-5572 or by mail at Hanson Aggregates Mid-Pacific, Inc., 300 E. John Carpenter Freeway, Suite 1645, Irving, TX 75062, for any further assistance.

Sincerely,

William H. Venema
Vice President
Hanson Aggregates Mid-Pacific, Inc.



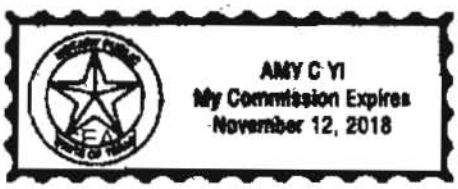
STATE OF TEXAS
COUNTY OF DALLAS

I, Amy C. Yi, a Notary Public, do hereby certify that William H. Venema as Vice President of Hanson Aggregates Mid-Pacific, Inc., personally appeared before me this day, known to me to be the person whose name is subscribed on the foregoing instrument and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

WITNESS my hand and official seal this 9th day of November, 2015.

_____ Notary Public

My Commission expires: November 12, 2018



stewart title of san antonio

TITLE COMPANY DISCLOSURES

FILE NO.: 20654

SELLER (whether one or more): Fordyce Holdings, Inc. successor in interest to Fordyce, Ltd., a Texas Limited partnership

BUYER (whether one or more): Hanson Aggregates Mid-Pacific, Inc.

LENDER:

PROPERTY:

TRACT 1: Fee simple estate

Being a 350.194 acre tract of land, being approximately 228.07 acres out of the Joseph Thompson Survey No. 752, Abstract No. 609, approximately 79.5 acres out of the M. Ziller Survey No. 494, Abstract No. 689, approximately 0.16 acres out of the Nathaniel Comer Survey No. 100 ½, Abstract No. 114, and approximately 42.464 acres out of the Val Pfeuffer Survey No. 492, Abstract No. 463, Comal County, Texas, said 350.194 acre tract being the same tract, called 350.67 acres, described in Deed recorded in Volume 254, Pages 304-311 of the Deed Records of Comal County, Texas, and all bearings referred to in this description are taken from GPS Observations, Texas South Central Zone, NAV83, said 350.194 acre tract of land surveyed under the supervision of Richard A. Goodwin, RPLS #4069, S. Craig Hollmig, Inc., and being more particularly described as follows:

BEGINNING: At a ½" iron pin found at fence corner on a Southerly line of the Dierks original 1,022.21 acre tract recorded in Volume 194, Page 415 of the Deed Records of Comal County, Texas, for a Northerly corner of that certain tract, called Tract 4, 335.850 acres, to Hanson Aggregates West, Inc., recorded in Doc# 200006003102 of the Official Public Records of Comal County, Texas, for the West corner of the above referenced 350.67 acre tract, for the West corner of this tract;

THENCE: With the Southerly line of the remainder of the Dierks Tract, generally with fence, N 73° 21' 59" E 1773.91 feet to an 8" corner post for a Southeast corner of the Dierks Tract, an interior corner of the above referenced 350.67 acre tract, for a corner of this tract;

THENCE: With a Westerly line of the remainder of the Dierks Tract, N 30° 04' 17" W 749.23 feet to a corner post found for the Southerly corner of the remainder of a 300 acre tract recorded in Volume 211, Page 522 of the Deed Records of Comal County, Texas, for a Westerly corner of the above referenced 350.67 acre tract, for a Westerly corner of this tract;

THENCE: With a Southerly line of the remainder of said 300 acre tract, generally with fence, N 52° 56' 30" E 500.02 feet, N 53° 59' 29" E 797.31 feet, and N 54° 39' 34" E 786.65 feet to a 3" pipe corner post in same, for a Westerly corner of the remainder of the Rittiman 37.11 acre tract recorded in Volume 227, Page 347 of the Map and Plat Records of Comal County, Texas, for a Northerly corner of the above referenced 350.67 acre tract, for a Northerly corner of this tract;

THENCE: With a Southwesterly line of the Rittiman Tract, S 42° 06' 47" E 1,414.96 feet to a 3" pipe corner post, for the Southerly corner of said Rittiman Tract, an interior corner of the above referenced 350.67 acre tract, for an interior corner of this tract;

THENCE: With a Southeasterly line of said Rittiman Tract, N 59° 46' 52" E 1,225.47 feet to a 3/8" iron pin found at fence corner, situated on a called 30 foot roadway easement (Volume 227, Page 347) (Volume 311, Page 862) and corrected in Volume 228, Page 245 of the Deed Records of Comal County, Texas, for a Northerly corner of the above referenced 350.67 acre tract, for a Northerly corner of this tract;

THENCE: With the Southwest line of said 30 foot roadway easement, S 12° 35' 45" E 1,367.65 feet to a 12" corner post and continuing partially with the Southwest line of said 30 foot roadway easement, S 14° 24' 39" W 1,746.75 feet to the centerline of a rock wall, being the Southeasterly line of the Joseph Thompson Survey No. 752, Abstract No. 609, the Northwesterly line of the V. Bennett Survey, Abstract No. 72, for a Southeasterly corner of this tract, same being situated on a Northwesterly line of the remainder of a 26.544 acre tract recorded in Volume 311, Page 862 of the Deed Records of Comal County, Texas;

THENCE: With the Northwest line of said remainder of 26.544 acre tract, the Northwest line of the Wilson Tract recorded in Volume 230, Page 519 of the Deed Records of Comal County, Texas, the Northwest line of the remainder of the Givens Family 157 acre tract recorded in Volume 750, Page 250 and the Northwest line of a 49.990 acre tract recorded in Doc# 200606049620, both of the Official Public Records of Comal County, Texas, generally along the centerline of a meandering rock wall, as follows:

S 56° 30' 23" W	389.36 feet
S 58° 47' 23" W	910.92 feet
S 59° 44' 52" W	420.04 feet
S 67° 31' 54" W	89.69 feet
S 58° 57' 01" W	485.52 feet
S 60° 00' 20" W	451.86 feet
S 60° 10' 13" W	146.94 feet
S 59° 15' 46" W	82.09 feet
S 58° 26' 50" W	428.30 feet, to a "T" post found (broken), for the

Northwest corner of said 49.990 acre tract, situated on the Easterly line of the said Tract 4 (335.850 acre tract), for the South corner of the above referenced 350.67 acre tract, for the South corner of this tract;

THENCE: Generally with fence, along the Northeast line of said Tract 4 (335.850 acre tract), the Southwest line of the above referenced 350.67 acre tract, as follows:

N 12° 58' 48" W	15.97 feet, a P.K. nail found in tree
N 25° 52' 04" W	291.54 feet, 3" pipe post corner
N 30° 49' 41" W	2,245.82 feet, a ½" iron pin found
N 54° 22' 22" W	776.50 feet, a 3" steel corner post
N 16° 10' 22" W	174.59 feet to the Point of Beginning and

containing 350.194 acres of land, more or less.

The foregoing field notes represent the results of an on-the-ground survey made under my supervision, August 30, 2007. Reference plat prepared of this 350.194 acre tract.

R A Goodwin

Richard A. Goodwin, RPLS #4069

STATE OF TEXAS REGISTERED RICHARD A. GOODWIN 4069 PROFESSIONAL LAND SURVEYOR

Job #07-631

TRACT 2: Ingress and egress easement

Ingress and egress easement established by instruments recorded in Volume 227, Page 347, as corrected in Volume 2:

By initialing some or all of the following items as may be appropriate for this transaction, each SELLER and/or BUYER acknowledges their understanding of the disclosures being made by Stewart Title of San Antonio (hereinafter called "TITLE COMPANY"). Each disclosure is being made to BUYER and SELLER on behalf of both TITLE COMPANY and its title insurance underwriter.

Buyer's Initials

_____

_____

1) **WAIVER OF INSPECTION.** In consideration of the issuance by TITLE COMPANY to BUYER of either an Owner Policy of Title Insurance (T-1) or a Residential Policy of Title Insurance (T-1R) - (in this document either such policy, unless specifically referred to otherwise, is referred to as the "Owner Title Policy") insuring good and indefeasible title to the Property, except as to be shown in Schedule B of the Owner Title Policy and subject to the terms and conditions of such Owner Title Policy, BUYER hereby waives any obligation on the part of TITLE COMPANY to inspect the Property.

BUYER agrees to accept an Owner Title Policy containing the Schedule B exception for "RIGHTS OF PARTIES IN POSSESSION". "Rights of Parties in Possession" shall mean one or more persons or entities who are themselves actually physically occupying the property or a portion thereof under a claim or right, adverse to the insured owner of the Property as shown on Schedule A of the Owner Title Policy. Within the meaning of this exception, "possession" includes open acts or visible evidence of occupancy and any visible and apparent roadway or easement on or across all or any part of the Property, but this exception does not extend to any right, claim, or interest evidenced by a document recorded in the real estate records maintained by the County Clerk of the county in which the Property is located.

However, if the BUYER does not initial this paragraph, the BUYER is indicating the BUYER'S refusal to accept an Owner Title Policy containing an exception as to "RIGHTS OF PARTIES IN POSSESSION". The TITLE COMPANY may then require an inspection of the Property and additional charges may be assessed for the reasonable and actual costs of such an inspection. TITLE COMPANY may make additional exceptions in Schedule B of the Owner Title Policy for matter as revealed by such inspection.

Buyer's Initials

_____

_____

2) **RECEIPT OF COMMITMENT.** BUYER hereby acknowledges having received and reviewed a copy of the Commitment for Title Insurance issued in connection with the above referenced transaction and any copies of the documents described therein requested by BUYER. BUYER understands that the Owner Title Policy will contain the exceptions set forth in Schedule B of the Commitment for Title Insurance, together with any additional exceptions to title resulting from the final down date search of the public records and from the documents involved in this transaction and any additional exceptions for items shown in Schedule C of the Commitment for Title Insurance which have not been resolved.

Buyer's Initials

_____

_____

3b) **FLOOD HAZARD.** TITLE COMPANY has not attempted to determine if the Property lies in a special flood hazard area, and TITLE COMPANY has not made an representation concerning proximity of the Property in relation to any flood-plain or flood hazard area. BUYER is advised that information concerning special flood hazard areas may be available from county or municipal offices, a qualified surveyor or land-engineering company, or a private flood-plain consultant.

Buyer's Initials

_____

_____

4a) **ACCEPTANCE OF SURVEY.** BUYER has received and reviewed a copy of the survey of the Property made in connection with this transaction and acknowledges being aware of the following mattes of encroachment, protrusion, conflict, or discrepancy disclosed by the survey:

Buyer's Initials

_____

_____

4b) **BOUNDARY COVERAGE.** As proposed to be issued, BUYER'S Owner Policy will contain a general exception to any discrepancies or conflicts in area or boundary lines, and any encroachments, protrusions, or overlapping of improvements. On payment of an additional 5% (T-1R) or 15% (T-1) of the Owner Policy premium, policy coverage against these matter is available, subject to TITLE COMPANY'S approval of a current survey of the Property and without limiting specific exceptions to matters disclosed by the survey. BY INITIALING THE DESIRED LINE IMMEDIATELY BELOW, BUYER-BORROWER DOES SET FORTH TO TITLE COMPANY HIS/HER DESIRES AND INSTRUCTIONS.

____x___ BUYER/BORROWER desires the coverage set out above and agrees to pay the promulgated premium for such coverage.

_____ BUYER/BORROWER rejects the coverage set out above and does not agree to pay the premium for such coverage.

Seller's Initials | Buyer's Initials

5) **PROPERTY TAX PRORATIONS.** Property taxes for the current year have been prorated between BUYER and SELLER, who each acknowledge and understand that these prorations are based upon (a) the sales price or the most current appraised value available and the most current tax rate available or (b) some other common method of estimation. SELLER warrants and represents that there are no past due taxes owed on the Property and if such warranty and representation is untrue, the SELLER shall reimburse TITLE COMPANY, on demand, for any sums paid by the TITLE COMPANY to pay such taxes, and any related penalty and interest.

BUYER and SELLER each agree that, when the amount of the current year's taxes become known and payable they will adjust any changes of the proration and reimbursement between themselves and the TITLE COMPANY shall have no liability or obligation with respect to these prorations.

Buyer's Initials

6) **TAX RENDITION AND EXEMPTIONS.** Although the Tax Appraisal District may independently determine BUYER'S new ownership and billing address, BUYER is still obligated by law to "render" the Property for taxation by notifying the Tax Appraisal District of the change in the Property's ownership and of BUYER'S proper address for tax billing. BUYER is advised that current year's taxes may have been assessed on the basis of various exemptions obtained by SELLER (i.e., homestead or over-65).

It is the BUYER'S responsibility to qualify for BUYER'S own tax exemptions and to meet any requirements prescribed by the taxing authorities. BUYER acknowledges and understands these obligations and the fact that TITLE COMPANY assumes no responsibility for future accuracy of Tax Appraisal District records concerning ownership, tax-billing address, or status of exemptions.

Seller's Initials | Buyer's Initials

8) **CLOSING DISCLAIMER.** SELLER and BUYER each acknowledge and understand that the above referenced transaction has not yet "closed". Any change in the possession of the Property takes place AT BUYER'S AND SELLER'S OWN RISK. THIS TRANSACTION IS NOT "CLOSED" UNTIL:

A) ALL TITLE REQUIREMENTS ARE COMPLETED TO THE SATISFACTION OF TITLE COMPANY;

B) ALL NECESSARY DOCUMENTS ARE PROPERLY EXECUTED, REVIEWED, AND ACCEPTED BY THE PARTIES TO THIS TRANSACTION AND BY TITLE COMPANY; AND,

C) ALL FUNDS ARE COLLECTED AND DELIVERED TO AND ACCEPTED BY THE PARTIES TO WHOM THEY ARE DUE.

Buyer's Initials

9) **ARBITRATION.** This paragraph does not apply to the Residential Owner Policy (T-1R). The parties may later agree to arbitrate under the Residential Owner Policy (T-1R).

You may require deletion of the arbitration provision of the Owner Title Policy. If you do not delete this provision, either you or the Company may require arbitration, if the law allows. There is no charge to delete this provision. IF YOUR POLICY IS NOT A TEXAS RESIDENTIAL OWNER POLICY (T-1R), YOU MAY REQUIRE DELETION OF THE ARBITRATION PROVISION BY MARKING OUT THIS PARAGRAPH 9.

Seller's Initials

10) **IRS REPORTING.** SELLER acknowledges having received at closing a copy of the HUD-1 Settlement Statement as a Substitute Form 1099-S. In accordance with federal tax regulations, information from the HUD-1 Statement will be furnished to the Internal Revenue Service.

Seller's Initials | Buyer's Initials

11) **ERRORS AND OMISSIONS.** In the event that any of the documents prepared in connection with the closing of this transaction contain errors which misstate or inaccurately reflect the true and correct terms , conditions and provisions of this closing, and the inaccuracy or misstatement is due to a clerical error or to a unilateral mistake on the part of the TITLE COMPANY, or to a mutual mistake on the part of the TITLE COMPANY and/or the SELLER and/or the BUYER, the undersigned agree to execute, in a timely manner, such correction documents as TITLE COMPANY may deem necessary to remedy such inaccuracy or misstatement.

Buyer's Initials

12) **ATTORNEY REPRESENTATION AND NOTICE.** BUYER may wish to consult an attorney to discuss the matters shown on Schedule B or C of the Commitment for Title Insurance that was issued in connection with this transaction. These matters will affect the title and use of the Property. The Title Insurance Policy will be a legal contract between BUYER and the underwriter. Neither the Commitment for Title Insurance nor the Title Insurance Policy is an abstract of title, title reports or representations of title. They are contracts of indemnity. No representation is made that your intended use of the Property is allowed under law or under the restrictions or exceptions affecting the property.

SELLER SIGNATURE

Fordyce Holdings, Inc. successor in interest to Fordyce, Ltd., a Texas Limited partnership

By: Robert Wright Briggs
Robert Wright Briggs, President

STATE OF TEXAS)
) SS
COUNTY OF VICTORIA)

This instrument was acknowledged before me on the Nov. 14, by, of Fordyce Holdings, Inc. successor in interest to Fordyce, Ltd., a Texas Limited partnership.

WANDA ULREY
Notary Public
State of Texas
Comm. Exp. 10-27-2009

Wanda Ulrey
Notary Public, State of

BUYER SIGNATURE

Hanson Aggregates Mid-Pacific, Inc.

By: _____
Michael H. Hyer, President

STATE OF)
) SS
COUNTY OF)

This instrument was acknowledged before me on the _____, Michael H. Hyer, President of Hanson Aggregates Mid-Pacific, Inc..

_____
Notary Public, State of

Fordyce Holdings, Inc. successor in interest to Fordyce, Ltd., a
Texas Limited partnership

By: _____
Robert Wright Briggs, President

STATE OF)
) SS
COUNTY OF)

This instrument was acknowledged before me on the _____, by, of Fordyce Holdings, Inc. successor in interest to Fordyce, Ltd., a Texas Limited partnership.

_____
Notary Public, State of

BUYER SIGNATURE

~~Hanson Aggregates Mid-Pacific, Inc.~~
1031 Services, Inc.

By: _____
~~Michael H. Hyer, President~~
Karen S. King, Exchange Coordinator

STATE OF WASHINGTON)
) SS
COUNTY OF KING)

This instrument was acknowledged before me on the 13th of Nov 2007, Karen S. King ~~Michael H. Hyer, President of Hanson Aggregates Mid-Pacific, Inc.~~ as Exchange Coordinator of 1031 Services, Inc.

_____
Notary Public, State of Washington
Jessica C. Kelly
Residing at: Bellevue, WA
My Commission Exp: 3-9-09

Approval:
Hanson Aggregates Mid-Pacific, Inc.

_____
Michael H. Hyer, Vice President

JESSICA C KELLY
NOTARY PUBLIC
STATE OF WASHINGTON
COMMISSION EXPIRES
MARCH 9, 2009

File No.: 20654

stewart title of san antonio

DELETION OF ARBITRATION PROVISION
(Not applicable to the Texas Residential Owner Policy)

ARBITRATION is a common form of alternative dispute resolution. It can be a quicker and cheaper means to settle a dispute with your Title Insurance Company. However, if you agree to arbitrate, you give up your right to take the Title Company to court and your rights to discovery of evidence may be limited in the arbitration process. In addition, you cannot usually appeal an arbitrator's award.

Your policy contains an arbitration provision (shown below). It allows you or the Company to require arbitration if the amount of insurance is $1,000,000 or less. If you want to retain your right to sue the Company in case of a dispute over a claim, you must request deletion of the arbitration provision before the policy is issued. You can do this by signing this form and returning it to the Company at or before the closing of your real estate transaction or by writing to the Company.

The Arbitration provision in the Policy is as follows:

> "Unless prohibited by applicable law or unless this arbitration section is deleted by specific provision in Schedule B of this policy, either the Company or the Insured may demand arbitration pursuant to the Title Insurance Arbitration Rules of the American Arbitration Association. Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the Insured arising out of or relating to this Policy, and service of the Company in connection with its issuance or the breach of a policy provision or other obligation. All arbitrable matters when the Amount of Insurance is $1,000,000 or less SHALL BE arbitrated at the request of either the Company or the Insured, unless the insured is an individual person (as distinguished from a Corporation, trust, partnership, association or other legal entity). All arbitrable matters when the Amount of Insurance is in excess of $1,000,000 shall be arbitrated only when agreed to by both the Company and the Insured. Arbitration pursuant to this Policy and under the Rules in effect on the date the demand for arbitration is made or, at the option of the Insured, the rules in effect at the Date of Policy shall be binding upon the parties. The award may include attorney's fees only if the laws of the state in which the land is located permit a court to award attorneys' fees to a prevailing party. Judgment upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.
>
> The law of the situs of the land shall apply to arbitration under the Title Insurance Arbitration Rules.
>
> A copy of the Rules may be obtained from the Company upon request."

I request deletion of the Arbitration provision.

SIGNATURE: HANSON AGGREGATES MID-PACIFIC, INC.

Michael H. Hyer
Vice President

DATE: November 7, 2007

Stewart Title Guaranty Company

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Steve Geiger,
Print Name

VP/GM,
Title - Owner/President/Other

of Hanson Aggregates LLC,
Corporation/Partnership/Entity Name

have authorized Charles P. "Frosty" Forster, P.E., P.G.
Print Name of Agent/Engineer

of Forster Engineering
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:

Applicant's Signature

10/26/15
Date

THE STATE OF Texas §

County of Harris §

BEFORE ME, the undersigned authority, on this day personally appeared Shea Geiger 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 26th day of October, 15.

NOTARY PUBLIC

JAZMIN RUVALCABA
Notary Public, State of Texas
My Commission Expires
May 29, 2019

Jazmin Ruvalcaba
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: May 29th, 2019

Lehigh Hanson
HEIDELBERGCEMENT Group

Lehigh Hanson Inc.
300 E. John Carpenter Frwy
Suite 1645
Irving, TX 75062

Address inquiries to the accounts payable customer response line at:
E-Mail: lh_vendorsupport@lehighhanson.com
TEL: 855-663-6738

Vendor Name	Vendor Number	Check Date	Check Number
EXAS COMMISSION	6391639	10/08/2015	21304059

Invoice Date	Invoice Number	Remarks	Gross Amount	Discount	Net Amount
05/17/2015	MCR05172015		10,000.00		10,000.00
		TOTALS	$10,000.00	$0.00	$10,000.00

THIS IS WATERMARKED PAPER - DO NOT ACCEPT WITHOUT NOTING WATERMARK - HOLD TO LIGHT TO VERIFY WATERMARK

Lehigh Hanson
HEIDELBERGCEMENT Group

Bank of America, N.A.
Dallas, TX 75201

64-1278
611 GA

DATE	CHECK NO.
10/08/2015	21304059

Lehigh Hanson Inc.
300 E. John Carpenter Frwy
Suite 1645
Irving, TX 75062

PAY TEN THOUSAND AND 00/100**********

AMOUNT
$**10,000.00**
Void after 180 days

TO THE ORDER OF
TEXAS COMMISSION ENVIRONMENTAL QUALITY
CASHIERS OFFICE MC 214
PO BOX 13088
AUSTIN TX 78711-3088

Daniel M. Harrington

Authorized Signatures

⑈021304059⑈ ⑆061111278⑆ 33591680 13⑈

FORSTER ENGINEERING

19915 Wittenburg
San Antonio, Texas 78256
p (210) 698-5544 c (210) 771-5721
fforster@forsterengineering.com
www.forsterengineering.com

June 19, 2015

Mr. Todd Jones
Texas Commission on Environmental Quality (TCEQ)
San Antonio Region 13
14250 Judson Road
San Antonio, Texas 78233

Subject: Hanson Aggregates LLC
Servtex Quarry, Fordyce Tract
Water Pollution Prevention Plan (WPAP)

Dear Mr. Jones:

Hanson Aggregates is planning to expand their current Servtex Quarry northeast onto their Fordyce Tract. This tract is not covered by or subject to a prior WPAP. Because of the proposed quarry expansion, Hanson Aggregates is submitting this WPAP application to comply with the Edwards Aquifer Program Regulations under Texas Administrative Code (30 TAC §213).

Please find attached one (1) original and four (4) copies of the Hanson Aggregates LLC Servtex Quarry, Fordyce Tract, WPAP Application. This WPAP Application has been prepared in accordance with Texas Administrative Code (30 TAC §213) for development over the Edwards Aquifer Recharge Zone.

We are requesting your review and approval of this WPAP application. The required review fee of $10,000 is included herewith. If you have any questions or require additional information, please do not hesitate to contact me at your earliest convenience.

Sincerely,
Forster Engineering
(TBPE # F-12385)

Charles P. "Frosty" Forster, P.E., P.G.
Principal



1085-13

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 30 TAC 213.

Administrative Review

1. Edwards Aquifer applications 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: http://www.tceq.texas.gov/field/eapp.

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 if not withdrawn the application will be denied and 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 to you:

- You can withdraw your application, and your fees will be refunded or credited for a resubmittal.
- 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 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 effected 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: Servtex Quarry, Fordyce Tract						**2. Regulated Entity No.:** RN 102541612				
3. Customer Name: Hanson Aggregates LLC						**4. Customer No.:** CN 603475864				
5. Project Type: (Please circle/check one)	New		Modification			Extension		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. Site (acres):**		685.74		
9. Application Fee:	$10,000.00		**10. Permanent BMP(s):**			Rock Berms & Earth Berms				
11. SCS (Linear Ft.):	0		**12. AST/UST (No. Tanks):**			0				
13. County:	Comal		**14. Watershed:**			Dry Comal Creek				

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.)	1	1	1
Region (1 req.)	1	1	1
County(ies)	1	1	1
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.)	1	1	1	1	1
Region (1 req.)	1	1	1	1	1
County(ies)	1	1	1	1	1
Groundwater Conservation District(s)	__ Edwards Aquifer Authority __Trinity-Glen Rose	1 __Edwards Aquifer Authority	__Kinney	__EAA __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 1 Garden Ridge __New Braunfels __Schertz	NA	__San Antonio ETJ (SAWS)	NA

1 + 4

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.
Charles P. "Frosty" Forster, P.E., P.G. ~~Print Name of Customer~~/Authorized Agent Charles P. Forster
Signature of Customer/Authorized Agent Date 06/19/15

FOR TCEQ INTERNAL USE ONLY				
Date(s)Reviewed:		Date Administratively Complete:		
Received From:		Correct Number of Copies:		
Received By:		Distribution 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):		Fee Check:	Payable to TCEQ (Y/N):	
Core Data Form Complete (Y/N):			Signed (Y/N):	
Core Data Form Incomplete Nos.:			Less than 90 days old (Y/N):	



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2.0 General Information Form (TCEQ-0587)
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Attachment C – Project Description & Best Management Practices for Quarry Operations **(RG-500)**
3.0 Geologic Assessment Form (TCEQ-0585)
4.0 Water Pollution Abatement Plan Application (TCEQ-0584)
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7.0 Agent Authorization Form (*TCEQ-0599*)
8.0 Application Fee Form (*TCEQ-0574*) and Fee
9.0 Core Data Form (*TCEQ-10400*)

Section 1.0

WPAP PLAN CHECKLIST

Water Pollution Abatement Plan Checklist

X **Edwards Aquifer Application Cover Page (TCEQ-20705)**

X **General Information Form (TCEQ-0587)**

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

X **Geologic Assessment Form (TCEQ-0585)**

Attachment A - Geologic Assessment Table (TCEQ-0585-Table)
Comments to the Geologic Assessment Table
Attachment B - Soil Profile and Narrative of Soil Units
Attachment C - Stratigraphic Column
Attachment D - Narrative of Site Specific Geology
Site Geologic Map(s)
Table or list for the position of features' latitude/longitude (if mapped using GPS)

X **Water Pollution Abatement Plan Application Form (TCEQ-0584)**

Attachment A - Factors Affecting Water Quality
Attachment B - Volume and Character of Stormwater
Attachment C - Suitability Letter from Authorized Agent (if OSSF is proposed)
Attachment D - Exception to the Required Geologic Assessment (if requesting an exception)
Site Plan

X **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 sealing a feature
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

X **Permanent Stormwater Section (TCEQ-0600)**

Attachment A - 20% or Less Impervious Cover Waiver, if project is multi-family residential, a school, or a small business and 20% or less impervious cover is proposed for the site
Attachment B - BMPs for Upgradient Stormwater

Attachment C - BMPs for On-site Stormwater
Attachment D - BMPs for Surface Streams
Attachment E - Request to Seal Features (if sealing a feature)
Attachment F - Construction Plans
Attachment G - Inspection, Maintenance, Repair and Retrofit Plan
Attachment H - Pilot-Scale Field Testing Plan, if BMPs not based on Complying with the Edwards Aquifer Rules: Technical Guidance for BMPs
Attachment I -Measures for Minimizing Surface Stream Contamination

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

Section 2.0

GENERAL INFORMATION FORM

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 Customer/Agent: Charles P. "Frosty" Forster, P.E., P.G.

Date: June 15, 2015

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Servtex Quarry, Fordyce Tract
2. County: Comal
3. Stream Basin: Dry Comal Creek
4. Groundwater Conservation District (If applicable): Edwards Aquifer Authority
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☒ Transition Zone

6. Plan Type:

   ☒ WPAP
   ☐ SCS
   ☐ Modification
   ☐ AST
   ☐ UST
   ☐ Exception Request

7. Customer (Applicant):

Contact Person: Lalit Bhatnager, P.E.
Entity: Hanson Aggregates LLC
Mailing Address: 8505 Freeport Parkway, Suite 500
City, State: Irving, TX Zip: 75063
Telephone: (972) 814-4122 FAX: (469) 417-1438
Email Address: lalit.bhatnagar@hanson.biz

8. Agent/Representative (If any):

Contact Person: Charles P. "Frosty" Forster, P.E., P.G.
Entity: Forster Engineering
Mailing Address: 19915 Wittenburg
City, State: San Anotnio, TX Zip: 78256
Telephone: (210) 698-5544 FAX: (210) 698-5544
Email Address: fforster@forsterengineering.com

9. Project Location:

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

The project site is located approximately 1 mile east of the intersection of FM 2252 and FM 1337 (Old Nacogdoches Road) on the north side of FM 1337. This is approximately 7.25 miles northeast of the Loop 1604/FM 2252 intersection.

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.

☒ Survey staking will be completed by this date: July 30, 2015

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
- ☐ Existing industrial site
- ☒ Existing residential site
- ☐ Existing paved and/or unpaved roads
- ☐ Undeveloped (Cleared)
- ☒ 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
- ☐ 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. ☒ 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.

HANSON FORDYCE
WPAP

FORSTER ENGINEERING



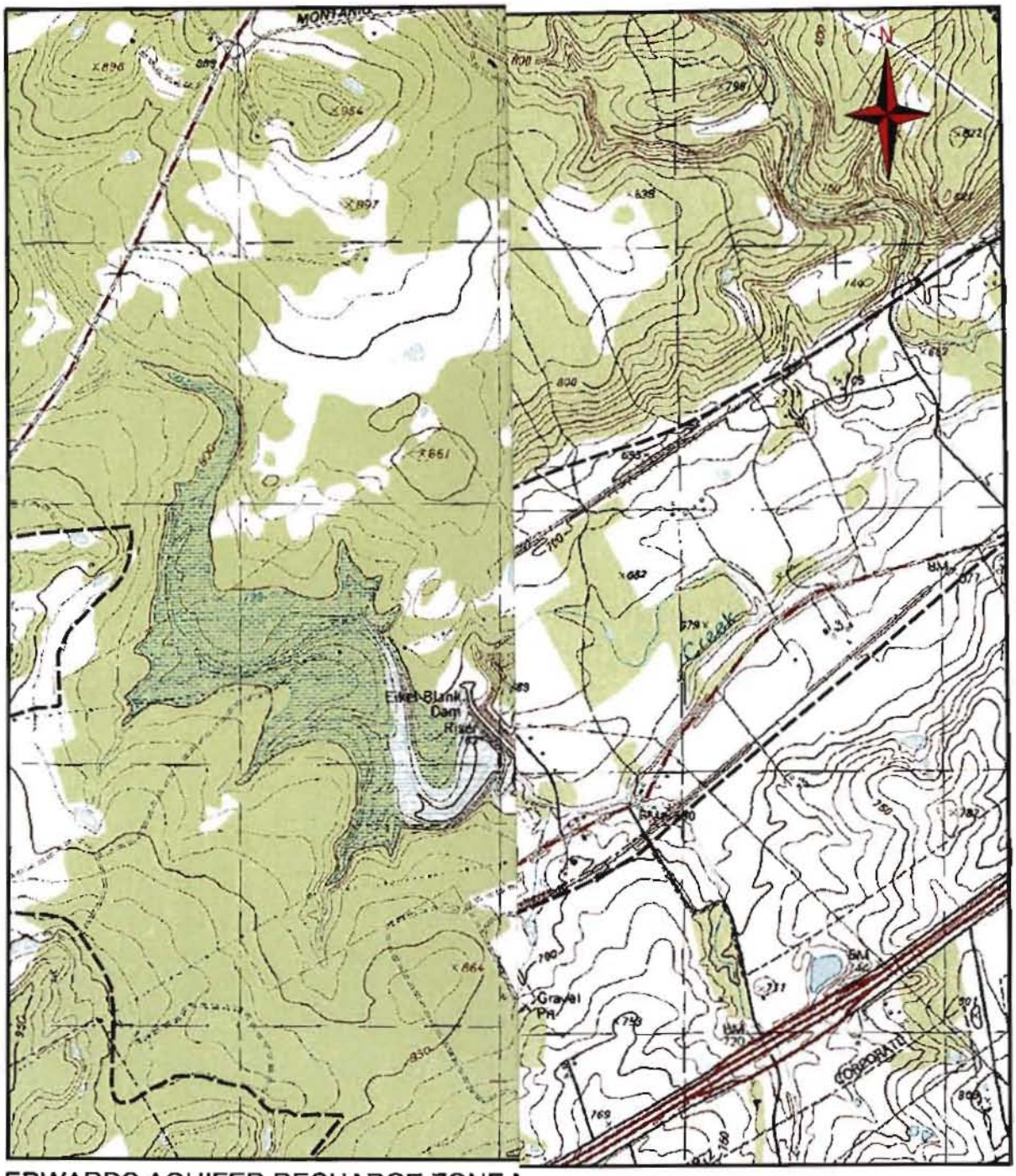
SITE LOCATION MAP
(Base Map: Google Map - 2013)

0' 2,500' 5,000' 10,000'

SCALE: 1" = 5,000'

HANSON FORDYCE
WPAP

FORSTER ENGINEERING



EDWARDS AQUIFER RECHARGE ZONE M

(BASE MAP: USGS TOPOGRAPHIC MAPS *BAT C*
& NEW BRAUNFELS WEST, TEXAS 7

LEGEND

- PROJECT LIMITS
- DRAINAGE WAY
- EDWARDS AQUIFER RECHARGE ZONE BOUNDARY

SCALE: 1" = 2,000'

0' 1,000' 2,000' 4,000'

1085-13

GENERAL INFORMATION FORM TCEQ-0587
ATTACHMENT C
PROJECT DESCRIPTION

Hanson Aggregates LLC (Hanson) operates the Servtex Quarry in Comal County near Garden Ridge, Texas. The Servtex Quarry is an existing limestone quarrying and crushing operation which has been in operation since the late 1930's. Hanson has plans to expand the quarry into adjacent areas northeast of the existing quarry. The expansion area is comprised of approximately 685.74± acres known as the Fordyce Tract. The Fordyce Tract was acquired in 2000 and 2007, has not been previously quarried, and is not currently subject to a WPAP. The Fordyce Tract has historically been utilized as ranchland and a rural homestead. No other previous developments were identified.

Quarry activities in the expansion area will be similar to existing quarry activities and include blasting, loading, and hauling. An existing residence in the northeastern portion of the tract will be demolished.

The expansion area will be quarried, but will not include impervious cover, sewage facilities, settling ponds or Above Ground Storage Tanks (AST). Quarry pit excavation limits will be maintained fifty feet from property lines and 100-year flood plain boundaries. To the extent possible, upgradient storm water will be diverted around the proposed mine area and on-site storm water will be captured within the quarry, or maintained on site by perimeter berms.

Temporary BMPs will utilize earthen berms constructed of topsoil material, rock berms, and vegetated buffer areas to control and treat storm water runoff. The earthen berms will be advanced incrementally around the active quarry perimeter in sequence with surface disturbance to control surface runoff. Permanent BMPs will include earthen berms constructed around the ultimate site perimeter.

Offsite areas will not be affected by the project. Adjacent properties consist of the Servtex Quarry to the adjacent southwest and ranchland with rural homesteads on remaining adjacent properties.

2.1 Separation from Groundwater in the Recharge Zone

The Greg Mim's Well is located at 21895 Old Nacodoches Road, and is adjacent to the southern boundary of the proposed quarry. Based on the State Well Report for this well, the static water level is approximately 215 feet below ground surface. The surface elevation at the well location is approximately 770 feet MSL, which makes the water level approximately 555 feet MSL.

The quarry will be mined to an elevation of 580 feet MSL to maintain an approximate 25 foot buffer above the recorded water table data.

2.2 Sensitive Features

2.2.2 Setbacks and Buffers for Sensitive Features

A total of 49 geologic features were identified by the Geological Assessment on the subject site, of which 28 were rated as sensitive. Within the proposed quarry limits, there are a total of 40 features, of which 22 are rated as sensitive.

The geologic features within the proposed quarry limits will be excavated and mined out. Prior to quarry excavation of the features, the sensitive features will be protected by earthen berms or natural vegetation buffers until such time as the area of the quarry containing the sensitive feature will be mined.

The geologic features outside the proposed quarry limits will be protected by earthen berms or natural vegetation buffers.

2.2.3 Sensitive Features Identified in the Geological Assessment

A total of 49 geologic features were identified by the Geological Assessment on the entire site, of which 28 were rated as sensitive. Within the proposed quarry excavation limits, there are a total of 40 features, of which 22 are rated as sensitive. These 22 features will be excavated by quarry activities.

2.2.4 Sensitive Features Discovered During Quarrying

Sensitive geologic features discovered in the active pit during quarrying operations will be addressed as follows:

1. Sensitive geologic feature recognition training for plant and quarry operators will be conducted. An on-site quarry manager experienced in feature identification will conduct visual surveys to ensure adequate identification and reporting of sensitive features. The on-site quarry manager will receive annual training from a licensed Professional Geologist on feature identification and protection. Results of each visual survey conducted by the on-site quarry manager will be documented and provided to TCEQ upon request.

2. The appropriate TCEQ Regional Office will be immediately notified upon discovery of any sensitive features encountered during the quarrying operations. Upon discovery, sensitive features on quarry benches will be protected with material berms, which will be maintained on a daily basis if necessary.
3. Sensitive features located on the ultimate quarry floor, which will not be excavated or mined out by further quarry activities, will be sealed with flowable fill before regulated activities near the sensitive feature may proceed. Sensitive features located on the quarry floor of intermediate benches above the ultimate quarry floor, will not be sealed, but will be protected by material berms until such time as this area of the quarry containing the sensitive feature will be mined.
4. Sensitive features located in the highwalls, which are well above the level of potential water ponding in the quarry pit and unlikely to receive contamination from any other logical or recognized source, will not be sealed.
5. If sensitive features located in the highwalls are below the level of potential water ponding in the quarry pit, or likely to receive contamination from any other logical or recognized source, they will be sealed with flowable fill before regulated activities near the sensitive feature may proceed.
6. Large features may be first filled with gravel or large rocks before placement of flowable fill. A minimum of 18-inches of flowable fill will placed above the gravel or rocks. Flowable fill is to be used to provide a reliable seal throughout the sensitive feature as it's characteristics allow it to flow around and between the gravel and large rocks and conform to irregular limits of a sensitive feature. As structural integrity and bearing capacity is not a design concern in these applications, concrete is not recommended or required.

2.2.5 Inspection and Maintenance of Sensitive Features

The geologic features within the proposed quarry limits will be excavated and mined out. Prior to quarry excavation of the features, the sensitive features will be protected by earthen berms or natural vegetation buffers until such time as the area of the quarry containing the sensitive feature will be mined.

The geologic features outside the proposed quarry limits will be protected by earthen berms or natural vegetation buffers.

Sensitive features, protective earthen berms, and natural vegetation buffers will be inspected on an annual basis. If necessary, maintenance will be performed to restore the earthen berms to their original condition.

2.3 Quarry Berms

Earthen berms surrounding the disturbed areas of the site, rock berms, and natural vegetation buffers will either filter or prevent any on-site surface water from flowing off site untreated. The earthen berms and rock berms will be constructed in stages in advance of and in coordination with quarry disturbances. Once the quarry pit and earthen berms are established, there will be no significant or untreated discharges from this site. By containing

the sediment and solids within the site, they will not enter surface streams and/or sensitive features which may exist down-gradient of the site.

2.4 Haul Roads, Parking Lots, and Tire Washes

There are no proposed parking lots or tire washes in the permit area. Hauling will take place along the quarry floor and connect with existing haul roads outside the permit area.

2.5 Stream Crossings and Buffers

An at-grade low-water crossing will cross the Dry Comal Creek on the southern site boundary, connecting the new quarry site with the existing quarry site. None of the Dry Comal Creek 100-year flood plain is proposed to be mined. Earthen berms and a natural vegetation buffer along the flood plain limits will prevent surface water from flowing off site untreated.

2.6 Dust Control

A water truck will be utilized to control dust in active areas of the quarry. Natural vegetative cover will be left in place as long as practicable to reduce the potential for dust to become airborne. A 50 foot wide natural vegetated buffer around the site will also serve as a wind break to reduce the potential for dust to become airborne.

2.7 Mineral-Exploration Test Holes and Water Wells

There is one existing water well on the subject property, which will be plugged in accordance with applicable regulations prior to mining through the area.

2.8 Vehicle and Equipment Maintenance

Vehicle and equipment maintenance will not be performed on the Fordyce Tract except under extenuating circumstances. Vehicles and equipment will be parked in designated locations, visually checked on a daily basis, and drip pans will be used to catch drips as needed. Chronic drips will be repaired as soon as practicable. When maintenance must be performed, a plastic liner or disposable base pad will be utilized as secondary containment.

2.9 Storage and Movement of Petroleum and Fuel

2.9.1 AST Facility Plan

This site will not have an AST Facility.

2.9.2 Fueling Outside the Pit

The Servtex Quarry has an active Spill Prevention Control and Countermeasure (SPCC) plan in accordance with 40 CFR part 112. Heavy equipment is fueled outside the active pit area by mobile fuel trucks in areas where site topography, diversionary structures, and readily available on-site spill response equipment and materials are practical and effective to prevent a discharge of petroleum products from reaching navigable waters at this facility.

Additionally, wheels on mobile fuel truck and heavy equipment will be chocked while refueling.

2.9.3 Fueling of Equipment in the Pit

Heavy equipment may be fueled in the active quarry pit when fueling outside the pit is not practical. Wheels on mobile fuel truck and heavy equipment will be chocked while refueling, and the refueling operation will be continuously monitored by refueling personnel.

2.10 Industrial Facilities on-Site

There are no existing or proposed industrial facilities located on site.

2.11 Sanitary Wastewater Disposal

There is no existing or proposed on-site sewage facility located on site. Domestic project wastewater will be collected in portable toilets and disposed of weekly by a TCEQ registered waste disposal service. Portable toilets will be located on level ground surfaces away from high traffic areas. Portable toilets will be routinely inspected and serviced at a frequency sufficient to maintain sanitary conditions. Employees will be trained on waste water discharging prohibitions.

2.11.1 Portable Toilet BMPs

Transport (industrial activity)

- Empty portable toilets before transporting them.
- Securely fasten the toilers to the transport truck.
- Use band trucks, dollies, and power tailgates whenever possible.

Placement (site activity – construction)

- Locate portable toilets at least 20 feet from the nearest storm-drain inlet or sensitive feature buffer area
- Build an earthen berm or sandbag containment around portable toilets for spill containment and protection from leaks.
- Prepare a level ground surface with clear access to the toilets.
- Secure all portable toilets with a stake driven into the ground to prevent tipping by accident, weather, or vandalism.

Maintenance of portable toilets (site activity – industrial and construction)

- Inspect the toilets frequently (daily during the work-week) for leaks and have the units serviced and sanitized at time intervals that will maintain sanitary conditions of each toilet (typically weekly).
- A licensed waste collector should service all the toilets.
- Suppliers should carry bleach for disinfection in the event of a spill or leak.
- Properly store (cover) and handle chemical materials.

- Train employees on these BMPs, prohibitions on discharging storm water, and wastewater-discharge requirements.

2.12 Spill Prevention and Control

Hanson Aggregates maintains the following required plans and permits onsite which address spill prevention and control and are incorporated herewith by reference.

- Spill Prevention Control and Countermeasure (SPCC) Plan (40CFR Part 112)
- TPDES Storm Water Pollution Prevention Plan

3 BMPs for Areas Discharging to Surface Waters

3.1 Introduction

Earthen berms surrounding the disturbed areas of the site, rock berms, and natural vegetation buffers will either filter or prevent any on-site surface water from flowing off site untreated. The earthen berms and rock berms will be constructed in stages in advance of and in coordination with quarry disturbances. Once the quarry pit and earthen berms are established, there will be no significant or untreated discharges from this site. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features which may exist down-gradient of the site.

3.2 BMPs for Temporary Erosion and Sediment Control

A discussion of temporary erosion and sediment control practices and measures is provided in Attachment D of the Temporary Section of this WPAP Application.

3.3 Permanent Structural BMPs

A discussion of permanent structural BMPs is provided in the Permanent Section of this WPAP Application.

3.3.1 General Requirements

A discussion of the general requirements is provided in the Permanent Section of this WPAP Application.

3.3.2 Required Calculations

Any required calculations are provided in the Permanent Section of this WPAP Application.

4 BMP Requirements for Areas within Quarry Pits

4.1 Introduction

During the operational life of the quarry, the pit areas will not drain to surface waters. The primary BMPs for areas within the quarry pit have been previously described and include: watering for dust control; vehicle maintenance to minimize oil drips or leaks; proper

placement, utilization, and maintenance of portable toilets; and identification and protection of sensitive features discovered during quarrying.

4.2 Permanent Structural BMPs

Upon termination of quarry activities, storm water that falls in the quarry pits will be retained in the pits and will not discharge to surface streams. For this reason, the quarry pits will not generate more TSS than in the original condition. The quarry pits will be surrounded by earthen berms, rock berms, and natural vegetative buffers which will either filter or prevent any on-site surface water from flowing off site untreated. Additionally, the earthen berms will prevent most upgradient storm water from running into the pits. For this reason, the primary source of storm water entering the pits will be direct rainfall, the majority of which is expected to evaporate.

5 Management of Process Water

5.1.1 Dimension-Stone Facilities (and Other Sites with Minor Water Use)

Not applicable to this site.

5.1.2 Innovative Technology for Aggregate-Production Facilities

If applicable, a discussion of innovative technology is provided in Attachment H of the Permanent Section of this WPAP Application.

Section 3.0

GEOLOGIC ASSESSMENT FORM

FORSTER ENGINEERING

19915 Wittenburg
San Antonio, Texas 78256
p (210) 698-5544 c (210) 771-5721
fforster@forsterengineering.com
www.forsterengineering.com

August 26, 2013

Mr. Lalit Bhatnagar
Hanson Aggregates, LLC.
21303 FM 2252
San Antonio, Texas 78266

Re: Servtex Quarry, Fordyce Tract
Geologic Assessment

Dear Mr. Bhatnagar:

Forster Engineering has completed the Geologic Assessment for the above-referenced site. A copy of the Geologic Assessment report is attached on current Texas Commission on Environmental Quality (TCEQ) forms.

The surface reconnaissance was performed in two phases in May and June 2013. Transect spacing utilized during the surface reconnaissance was approximately 50-feet. Areas within the flood plain and areas not intended for future quarrying activities were generally not mapped. Geologic and man-made features were identified in the project area as discussed herein.

We appreciate the opportunity to be of service to Hanson Aggregates, LLC. Please contact us should you need further assistance, require additional services or have any questions.

Sincerely,

Charles P. "Frosty" Forster, P.E., P.G.
Principal
Forster Engineering
TBPE #12385

Attachments



Jennifer R. Lela, P.G.
Project Geologist



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.

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: Charles P. "Frosty" Forster, P.E., P.G.

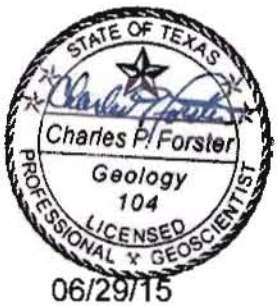
Telephone: (210) 698-5544

Fax: (210) 698-5544

Date: June 29, 2015

Representing: Forster Engineering TBPE #12385 (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



06/29/15

Regulated Entity Name: Servtex Quarry, Fordyce Tract

Project Information

1. Date(s) Geologic Assessment was performed: May 29th & 31st; June 4th, 5th, 6th, 10th, 12th, 13th, 14th & 17th, July 3rd of 2013
2. Type of Project:
   - ☒ WPAP
   - ☐ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☒ Recharge Zone
   - ☒ Transition Zone

☐ Contributing Zone within the Transition Zone

4. ☒ **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.

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
Comfort-Rock outcrop complex, undulating (CrD)	D	0-2
Eckrant-Rock outcrop complex, steep (ErG)	D	0-2
Krum clay, 0 to 1 percent slopes (KrA)	D	0-7

Soil Name	Group*	Thickness(feet)
Krum clay, 1 to 3 percent	D	0-7
See attached for additional soil types		

** 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" = 400'
   Site Geologic Map Scale: 1" = 400'

Site Soils Map Scale (if more than 1 soil type): 1" = 1000'

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 1 (#) 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.
    ☐ The wells are not in use and will be properly abandoned.
    ☒ 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.

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.

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

REGULATED ENTITY NAME: ***Servtex Quarry, Fordyce Tract***

TYPE OF PROJECT: ✓ WPAP ___ AST ___ SCS ___ UST

LOCATION OF PROJECT: ✓ Recharge Zone ✓ Transition Zone ___ Contributing Zone within the Transition Zone

PROJECT INFORMATION

1. ✓ Geologic or manmade features are described and evaluated using the attached **GEOLOGIC ASSESSMENT TABLE *(Attachment A)***.

2. 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.

Soil Units, Infiltration Characteristics & Thickness		
Soil Name	Group*	Thick-ness (feet)
Comfort-Rock outcrop complex, undulating (CrD)	***D***	***0-2***
Eckrant-Rock outcrop complex, steep (ErG)	***D***	***0-2***
Krum clay, 0 to 1 percent slopes (KrA)	***D***	***0-7***
Krum clay, 1 to 3 percent slopes (KrB)	***D***	***0-7***
Medlin-Eckrant association, undulating (MEC)	***D***	***0-7***
Orif soils, frequently flooded (Or)	***A***	***0-5***
Rumple-Comfort association, undulating (RUD)	***C-D***	***0-3***

* 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.

3. ✓ A **STRATIGRAPHIC COLUMN *(Attachment C)*** is attached at the end of this form that shows formations, members, and thicknesses. The outcropping unit should be at the top of the stratigraphic column.

4. ✓ A **NARRATIVE DESCRIPTION OF SITE SPECIFIC GEOLOGY *(Attachment D)*** is attached at the end of this form. The description must include a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure, and karst

characteristics of the site.

5. ✓ Appropriate **SITE GEOLOGIC MAP(S)** ***(Attachment B)*** are attached:

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" = ***400***
Site Geologic Map Scale	1" = ***400***
Site Soils Map Scale (if more than 1 soil type)	1" = ***1000***

6. Method of collecting positional data:
   - ✓ Global Positioning System (GPS) technology.
   - ___ Other method(s).

7. ✓ The project site is shown and labeled on the Site Geologic Map.

8. ✓ Surface geologic units are shown and labeled on the Site Geologic Map.

9. ✓ 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.

10. ✓ The Recharge Zone boundary is shown and labeled, if appropriate.

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

- ✓ There ~~are~~ ***is*** 1 (#) well~~s~~ present on the project site and the location~~s~~ ~~are~~ ***is*** shown and labeled. (Check all of the following that apply.)
  - ___ The wells are not in use and have been properly abandoned.
  - ___ The wells are not in use and will be properly abandoned.
  - 1 The well~~s~~ ~~are~~ ***is*** in use and ~~comply~~ ***complies*** with 16 TAC Chapter 76.
- ___ There are no wells or test holes of any kind known to exist on the project site.

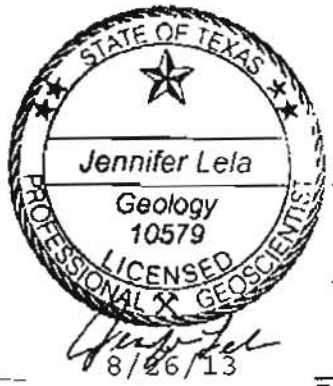
ADMINISTRATIVE INFORMATION

12. ✓ 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.

Date(s) Geologic Assessment was performed: ***May 29th & 31st; June 4th, 5th, 6th 10th, 12th, 13th, 14th, & 17th; July 3rd***

Date(s)

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.



Jennifer R. Lela, P.G.
Print Name of Geologist

Telephone

(210) 698-5544
Fax

Signature of Geologist

Date

Representing: ***Forster Engineering***
(Name of Company)

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

GEOLOGIC ASSESSMENT TABLE	PROJECT NAME: *Servtex Quarry, Fordyce Tract*

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL 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	DIMENSIONS (FEET)			TREND (DEGREES)	DIP (DEGREES)	DENSITY (#/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z								<40	≥40	<1.0	≥1.0	
S-1	29°39'39.9"	98°15'08.5"	SC	20	Kep	3	3	1.5	N70°W	0			O	20	40		X	X		Hillside
S-2	29°39'41.2"	98°15'09.8"	SC	20	Kep	0.8	2.5	1.5	N30°E	0			O	20	40		X	X		Hillside
S-3	29°39'43.8"	98°15'21.4"	SC/SF	20	Kep	5	6	1	N45°W	0			O	20	40		X	X		Hillside
S-4	29°39'50.0"	98°15'15.8"	Z	30	Kep	50	50	1	Varies	0	1	1	O	30	60		X		X	Hillside
S-5	29°39'49.1"	98°15'12.1"	Z	30	Kep	50	50	1	varies	0	1	1	O	30	60		X		X	Hillside
S-6	29°39'48.2"	98°15'08.0"	Z	30	Kep	50	75	20	N50°E	10			C,R	35	75		X	X		Hillside
S-7	29°39'51.7"	98°15'08.1"	SF	20	Kep	1.5	2	1.3	N85°E	0			C,O	5	25	X		X		Hillside
S-8	29°39'47.2"	98°15'07.3"	SH	20	Kep	11	15	2	N85°E	0			C,O	35	55		X	X		Hillside
S-9	29°39'37.8"	98°15'29.8"	SH	20	Kep	5	5	2	--	0			C,O	25	45		X	X		Hillside
S-10	29°39'36.7"	98°15'35.3"	SC	20	Kep	2	5.5	2	N70°E	10			O	25	55		X	X		Hillside
S-11	29°39'36.7"	98°15'35.3"	SH	20	Kep	3	3	0.5	--	0			O	25	45		X	X		Hillside
S-12	29°39'35.5"	98°15'39.3"	SH	20	Kep	6	6	0.5	--	0			F	5	25	X		X		Hillside
S-13	29°39'34.1"	98°15'43.0"	SH	20	Kep	7	7	0.5	--	0			C,O	20	40		X	X		Hillside
S-14	29°39'11.8"	98°16'11.3"	CD	5	Kep	7	7	0.7	--	0			F	5	10	X		X		Hillside
S-15	29°39'09.0"	98°16'13.2"	CD	5	Kep	80	80	5	--	0			F	5	10	X		X		Hillside
S-16	29°39'29.5"	98°15'44.1"	SC	20	Kep	1.2	2.0	1.2	N25°E	0			O	25	45		X	X		Hillside
S-17	29°39'43.9"	98°15'07.5"	SC	20	Kep	1	3	1	N10°E	0			O	20	40		X	X		Hillside

* DATUM: NAD 83

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	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	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	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
X	Other materials

12 TOPOGRAPHY
Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

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

_____ Date _____

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Jennifer Lela
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10579
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8/26/13

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

ATTACHMENT A
Sheet 1 of 3

GEOLOGIC ASSESSMENT TABLE | **PROJECT NAME:** *Servtex Quarry, Fordyce Tract*

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL 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	DIMENSIONS (FEET)			TREND (DEGREES)	MOD	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	≥40	<1.6	≥1.6	
S-18	29°39'31.0"	98°14'56.1"	SC	20	Kep	1	2	0.9	N10°W	0			O	20	40		X	X		Hillside
S-19	29°39'27.7"	98°14'57.5"	SH	20	Kep	13	25	5	N65°W	0			C	35	55		X	X		Hillside
S-20	29°39'27.8"	98°14'58.2"	SH	20	Kep	5	5	2	--	0			C	25	45		X	X		Hillside
S-21	29°39'31.6"	98°14'59.7"	C	30	Kep	6	16	20	N70°E	10			N	35	75		X	X		Hillside
S-22	29°39'33.5"	98°15'08.3"	MB	30	Kbu	--	--	--	--	0			X	5	35	X		X		Hilltop
S-23	29°39'04.6"	98°16'01.1"	CD	5	Kep	50	50	2	--	0			F	5	10	X			X	Floodplain
S-24	29°39'14.54	98°16'0.0"	SH	20	Kep	7	7	0.5	--	0			C,O	25	45		X	X		Hillside
S-25	29°39'09.0"	98°15'57.7"	SC	20	Kep	0.5	2	4.5	N45°W	0			N	30	50		X	X		Hillside
S-26	29°39'10.4"	98°15'49.2"	SH	20	Kep	6	6	0.5	--	0			C,O	25	45		X	X		Hillside
S-27	29°39'22.0"	98°15'45.6"	SH	20	Kep	5	5	0.8	--	0			F	10	30	X		X		Hillside
S-28	29°39'18.1"	98°15'42.3"	SC	20	Kep	1	1.8	2	N13°W	0			O	30	50		X	X		Hillside
S-29	29°39'18.3"	98°15'42.0"	SC/SF	20	Kep	4	6	1.5	N5°W	0			O	25	45		X	X		Hillside
S-30	29°39'23.2"	98°15'39.8"	SF	20	Kep	0.2	3	1.3	N30°E	0			F	5	25	X		X		Hillside
S-31	29°39'24.0"	98°15'39.4"	SC	20	Kep	1	3	1	N45°W	0			F	5	25	X		X		Hillside
S-32	29°39'14.3"	98°15'42.3"	SC	20	Kep	7	8	2	E/W	0			N	5	25	X			X	Drainage
S-33	29°39'13.8"	98°15'35.6"	SC	20	Kep	1	17	2	N/S	0			C,O	20	40		X	X		Hillside
S-34	29°39'12.5"	98°15'24.0"	SH	20	Kep	7	7	0.8	--	0			F	5	25	X		X		Hillside

* DATUM: NAD 83

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	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	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	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
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X	Other materials

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Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

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8/26/13

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

ATTACHMENT A
Sheet 2 of 3

GEOLOGIC ASSESSMENT TABLE | **PROJECT NAME:** *Servtex Quarry, Fordyce Tract*

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL 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	DIMENSIONS (FEET)			TREND (DEGREES)	ROSE	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
S-35	29°39'18.5"	98°15'20.4"	SH	20	Kep	6	7	1	N70°W	0			C,O	30	50		X	X		Hillside
S-36	29°39'20.6"	98°15'18.3"	SH	20	Kep	6	6	0.5	--	0			F	5	25	X		X		Hillside
S-37	29°39'13.1"	98°15'09.9"	SH	20	Kep	6	6	0.8	--	0			F	5	25	X		X		Hillside
S-38	29°39'13.6"	98°15'09.1"	SH	20	Kep	5	5	0.7	--	0			F	5	25	X		X		Hillside
S-39	29°39'20.8"	98°15'14.3"	SH	20	Kep	5	6	0.7	N70°W	0			F	6	26	X		X		Hillside
S-40	29°39'29.4"	98°15'22.1"	SH	20	Kep	30	75	3	N75°W	0			F	15	35	X		X		Hillside
S-41	29°39'17.9"	98°15'05.0"	CD	20	Kep	16	16	2	--	0			F	6	25	X			X	Drainage
S-42	29°39'30.4"	98°15'15.0"	SH	20	Kep	5	6	1	N/S	0			F	5	25	X		X		Hillside
S-43	29°39'17.5"	98°15'00.7"	SF	20	Kep	11.5	17.5	0.7	N80°E	0	0.3	0.5	F	5	25	X		X		Hillside
S-44	29°39'24.2"	98°14'50.7"	SH	20	Kep	5	5.7	4.5	N50°W	0			C	35	55		X	X		Hillside
S-45	29°39'37.8"	98°15'09.9"	CD	5	Kdr	120	250	10	N60°E	10			F	5	20	X		X		Hillside
S-46	29°39'37.8"	98°15'02.3"	SH	20	Kep	11	13	1.5	N75°E	0			O	20	40		X	X		Hillside
S-47	29°39'48.7"	98°14'47.3"	SC	20	Kep	3	2	1.5	N75°E	0			O	20	40		X	X		Hillside
S-48	29°39'40.4"	98°14'53.2"	SC	20	Kep	1	1.5	2	N70°E	10			O	25	55		X	X		Hillside
S-49	29°38'39.4"	98°15'07.7"	F	20	Kep/Kpg	--	800	--	N55°E	10			F	5	35	X		X		Hillside

* DATUM: NAD 83

2A TYPE	TYPE	2B POINTS
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SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
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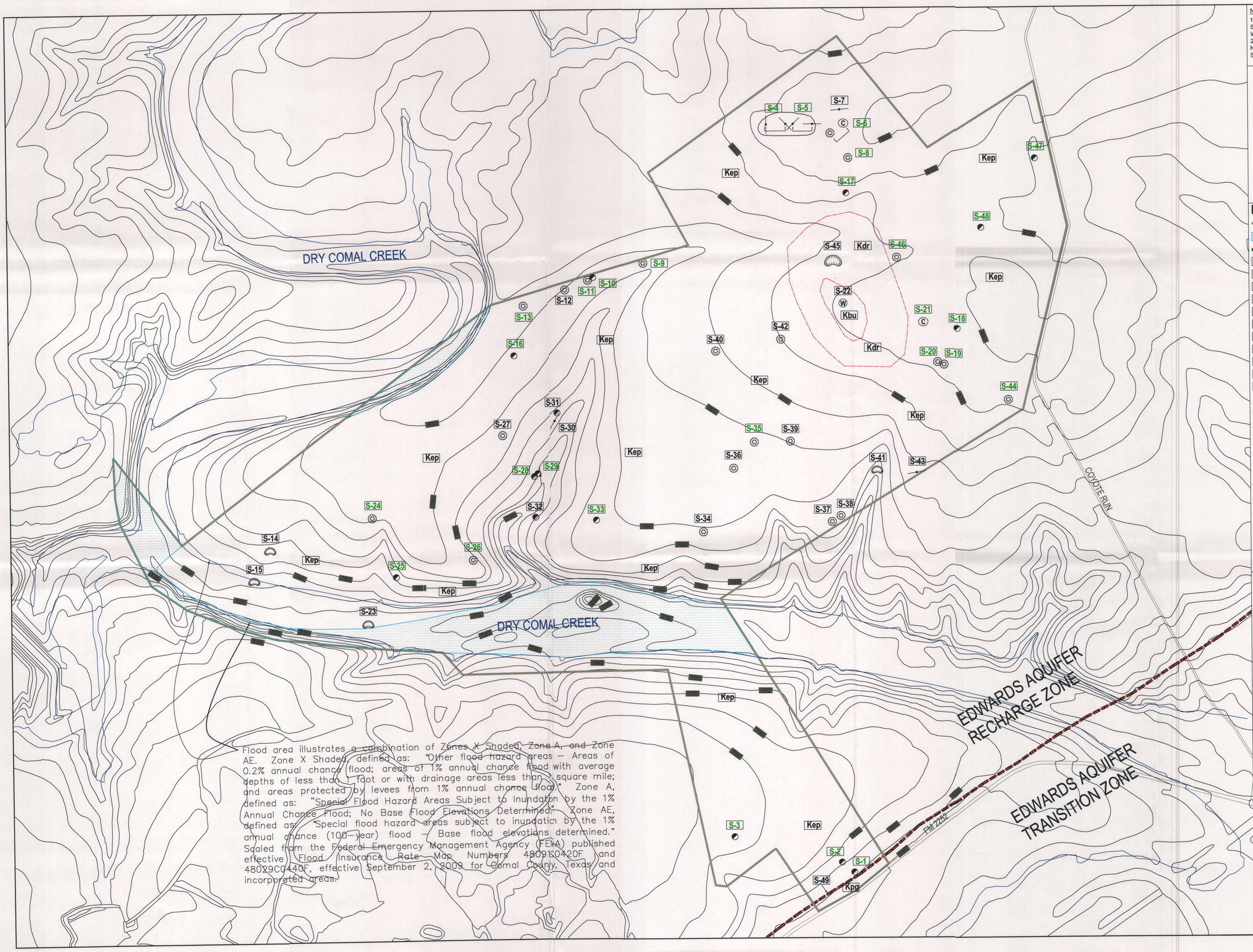
TCEQ-0585-Table (Rev. 10-01-04)

ATTACHMENT A
Sheet 3 of 3

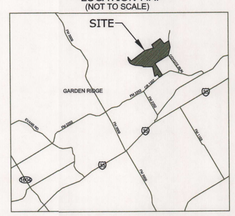


Flood area illustrates a combination of Zones X Shaded, Zone A, and Zone AE. Zone X Shaded, defined as: "Other flood hazard areas – Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood." Zone A, defined as: "Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood; No Base Flood Elevations Determined." Zone AE, defined as: "Special flood hazard areas subject to inundation by the 1% annual chance (100-year) flood – Base flood elevations determined." Scaled from the Federal Emergency Management Agency (FEMA) published effective Flood Insurance Rate Map Numbers 48091C0420F and 48029C0440F, effective September 2, 2009 for Comal County, Texas and incorporated areas.

Notes:

1. Contour Data: Texas Natural Resources Information System 10 ft Contours - Bat Cave & New Braunfels West Quadrangles
2. Flood Data: FEMA Flood Insurance Rate Map Numbers 48091C0420F & 48091C0420F, effective September 2, 2009

LOCATION MAP
(NOT TO SCALE)



LEGEND

- PROJECT LIMITS
- APPROXIMATE AREA NOT MAPPED
- EDWARDS AQUIFER RECHARGE ZONE BOUNDARY
- Qal ALLUVIUM
- Kpg PECAN GAP CHALK
- Kau AUSTIN CHALK
- Kef EAGLE FORD GROUP
- Kbu BUDA LIMESTONE
- Kdr DEL RIO CLAY
- Kgt GEORGETOWN FORMATION
- Kep PERSON FORMATION
- Kek KAINER FORMATION
- S-1 GEOLOGIC OR MAN-MADE FEATURE (NON-SENSITIVE)
- S-1 GEOLOGIC OR MAN-MADE FEATURE (SENSITIVE)
- FORMATION CONTACT (LOCATION APPROXIMATE)
- FAULT - LOCATION ACCURATE
- FAULT - LOCATION APPROXIMATE
- FAULT - LOCATION INFERRED
- UPTHROWN AND DOWNTHROWN SIDES OF FAULT
- VERTICAL JOINT SHOWING STRIKE
- C CAVE
- SINKHOLE
- NON-KARST CLOSED DEPRESSION
- SOLUTION CAVITY
- OTHER NATURAL BEDROCK FEATURES
- ZONE
- W WATER WELL
- MB MAN-MADE FEATURE IN BEDROCK

N
W E
S

400' 200' 0' 400' 800'
SCALE 1"= 400'

SIGNATURE/SEAL

STATE OF TEXAS
Jennifer Leia
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10/22/13

FORSTER ENGINEERING
TBPE firm # 12385
19915 WITTENBURG, SAN ANTONIO, TEXAS 78256
PHONE: (210) 698-5544, Fax (210) 698-5544
WWW.FORSTERENGINEERING.COM

PROJECT DESCRIPTION
SERVTEX QUARRY,
FORDYCE TRACT
GEOLOGIC ASSESSMENT

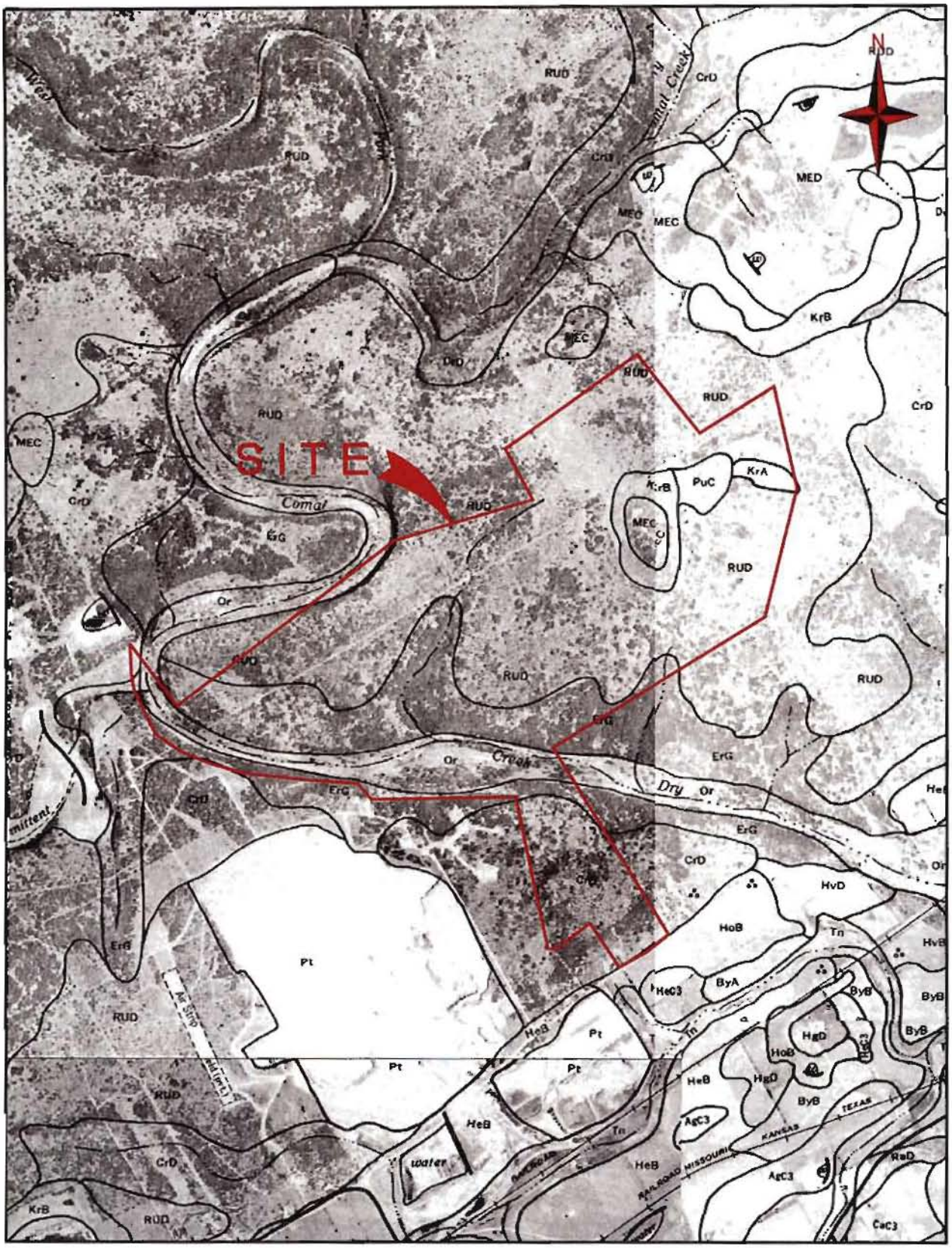
DRAWING
SITE GEOLOGIC MAP

DATE	10/22/2013	JOB NO.	1085-13
SCALE	1"= 400'	DRG NO	ATTACHMENT B
DRAWN BY	JRL		
CHECKED BY	CPF		

SERVTEX QUARRY, FORDCYE TRACT

SITE SOILS MAP

FORSTER ENGINEERING



SOURCE: UNITED SATES DEPARTMENT OF AGRICULTURE, 1984, SOIL SURVEY-COMAL COUNTY, TEXAS, USDA, SHEETS 92, 98, 92 & 102

0' 1000' 2000' 4000'

SCALE: 1" = 2000'

ATTACHEMENT B
SHEET 2 OF 2

1085-13

SERVTEX QUARRY, FORDYCE TRACT

Stratigraphic Column

Hydrogeologic subdivision			Group, formation, or member			Hydrologic function	Thickness (feet)	Lithology	Field Identification	Cavern development	Porosity/ permeability type
Upper Cretaceous	Upper confining units		Pecan Gap Chalk (Kpg)			CU	100-400	Chalk and chalky marl	Seldom exposed; weathers to form moderately deep soil	None	Low porosity/low permeability
			Austin Chalk (Kau)			CU	200-225	Limestone and argillaceous chalky limestone	Glauconitic; fossiliferous, Gryphaea ancella	Caves related to structure	Some fracture plane and bedding plane
			Eagle Ford Group (Kef)			CU	30-50	Brown, flaggy shale and argillaceous limestone	Thin flagstone, petrohferous	None	Primary porosity lost/low permeability
			Buda Limestone (Kbu)			CU	40-50	Buff, light gray, dense mudstone	Porcelaneous limestone with calcite-filled veins	Minor surface karst	Low porosity/low permeability
			Del Rio Clay (Kdr)			CU	40-50	Blue-green to yellow-brown clay	Fossiliferous; Ilymatogyra arietina	None	None/primary upper confining unit
Lower Cretaceous	I	*Edwards Aquifer*	Georgetown Formation (Kgt)			Karst AQ; no karst CU	2-20	Reddish-brown, gray to light tan marly limestone	Marker fossil; *Waconella wacoensis*	None	Low porosity/low permeability
	II		*Edwards Group*	*Person Formation (Kep)*	Cyclic and marine members, undivided	AQ	80-90	Mudstone to packstone, *miliolid* grainstone; chert	Thin graded cycles; massive beds to relatively thin beds; crossbeds	Many subsurface; might be associated with earlier karst development	Laterally extensive; both fabric and not fabric/water-yielding
	III				Leached and collapsed members, undivided	AQ	70-90	Crystalline limestone; mudstone to grainstone, chert; collapsed breccia	Bioturbated iron-stained beds separated by massive limestone beds, stromatolitic limestone	Extensive lateral development; large rooms	Majority not fabric/one of the most permeable
	IV				Regional dense member	CU	20-24	Dense, argillaceous mudstone	Wispy iron-oxide stains	Very few; only vertical fracture enlargement	Not fabric/low permeability; vertical barrier
	V			*Kainer Formation (Kek)*	Grainstone member	AQ	50-60	*Miliolid* grainstone, mudstone to wackestone, chert	White crossbedded grainstone	Few	Not fabric/ recrystallization reduces permeability
	VI				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 permeable
	VII				Dolomitic member	AQ	110 -130	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

ATTACHMENT C

	VIII			Basal nodular member	Karst AQ; not karst CU	50-60	Shaly, nodular limestone mudstone and *miliolid* grainstone	Massive, nodular and mottled, *Exogyra texana*	Large lateral caves at surface; a few caves near Cibolo Creek	Fabric; stratigraphically controlled/large conduit flow at surface, no permeability in subsurface
	Lower confining unit	Upper member of the Glen Rose Limestone (Kgru)			CU; evaporite beds AQ	350-500	Yellowish tan, thinly bedded limestone and marl	Stair-step topography; alternating limestone and marl	Some surface cave development	Some water production at evaporite beds / relatively impermeable

Reference: U.S.G.S. Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Recharge Zone, Bexar County, Texas; Water-Resources Investigations Report 95-4030

SERVTEX QUARRY, FORDYCE TRACT

Narrative of Site Specific Geology

The overall potential of recharge to the Edward Aquifer at the site is moderate. Twenty-eight sensitive geologic features were identified on site. The dominant trend for the site is approximately N55°E, based on the trend of a major on-site fault mapped by the BEG (Barnes, 1983) and BEG (Collins, 1993). On-site outcropping units include the Pecan Gap Chalk (Kpg), Buda Limestone (Kbu), Del Rio Clay (Kdr), and the cyclic and marine (Kepcm) member of the Person Formation.

The Pecan Gap Chalk formation consists of chalk and chalky marl, is bluish gray in the subsurface and weathers to tan, gray, and buff. The Pecan Gap Chalk has a blocky structure with closely spaced joints, often filled with calcite and gypsum. The Buda Limestone is characterized by buff, light gray, dense mudstone. The Del Rio clay is a blue-green to yellow-brown waxy clay. There is generally only minor to no karst development in the Kpg, Kbu, and Kdr. The cyclic and marine member is characterized by a mudstone to packstone milliolid grainstone, with chert. Karst development in the Kekcm is characterized by small sinkholes, and caves developed as vertical shafts as well as lateral rooms.

Feature S-1
Feature S-1 is a possible solution cavity. Bedrock surrounds the opening forming a slightly dissolutioned "V" and animal burrowing is evident. Hand excavation and probing of the feature revealed loose, organic soil and rock. Due to the possible karst origin, absence of observable fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-2
Feature S-2 is a possible solution cavity. The cavity exists between two adjoining bedrock slabs with slightly dissolutioned edges. Animal burrowing is evident. Hand excavation and probing of the feature revealed loose, organic soil and rock. Due to the possible karst origin, absence of observable fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-3
Feature S-3 consists of a zigzagging fracture between two slabs of bedrock. The total length of the fracture is approximately eight feet long. The fracture has a maximum aperture of approximately one foot, at which point a solution cavity has formed. A persimmon tree was observed growing in the fracture. Hand excavation and probing of the feature revealed loose, organic soil and rock. Due to the interpreted karst origin, absence of observable fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Features S-4 & S-5
Features S-4 and S-5 are large zones of fractured rock that exhibit increased permeability. Sapping of fines was observed throughout these areas, and greener vegetation was observed in the field and on aerial photographs. The trend of the fractures was highly variable. No distinct points of recharge were observed; however, it is our professional opinion that the probability of rapid infiltration is high due to the interpreted karst origin, sapping of fines, and large catchment area. These zones are ranked as sensitive.

Feature S-6
Feature S-6 is a zone of three large cobble-filled sinkholes. The sinkholes occur in a lineation, which mimics the dominant trend. Two openings within the northeastern-most sinkhole lead to a cave. The cave consists of a large room, with three small extending cavities. One of the cavities extends laterally toward the southwest, toward the vicinity of the other sinkholes. Although impassible, daylight was observed within the cavity. Another impassible cavity extends laterally toward the northeast. A third cavity extends at a downward angle toward the northwest. This cavity leads to an extensive, disc-shaped, lateral room. The full extents of this room were not observable, as the ceiling and floor became too narrow to safely pass. Due to the karst origin and direct evidence of rapid infiltration, the probability of rapid infiltration is high. This feature is ranked as sensitive.

Feature S-7
Feature S-7 is a single solution-enlarged fracture located on a hillside. The feature consists of several perpendicularly-oriented blocks of bedrock on each side of a linear depression. Hand excavation and probing revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-8
Feature S-8 is a large cobble-filled sinkhole. The lack of soil infilling indicates increased flow. Due to the karst origin and direct evidence of rapid infiltration, the probability of rapid infiltration is high. This feature is ranked as sensitive.

Feature S-9
Feature S-9 is a small circular sinkhole with rim rock observed around the perimeter. Animal burrowing is evident. Hand excavation revealed loose, organic soil and rock. Due to the interpreted karst origin, absence of fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-10
Feature S-10 is a solution cavity that has two openings, one of which has a smooth solutioned surface. Prior to hand excavation, the feature was filled with loose organic soil and leaves. Hand excavation revealed loose, organic soil. Due to the interpreted karst origin, indirect evidence of rapid infiltration, and the location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-11
Feature S-11 is a small sinkhole. Hand excavation revealed very loose organic infilling. Due to the interpreted karst origin, absence of fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-12
Feature S-12 is a small sinkhole with abundant tree roots. Hand excavation and probing revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-13
Feature S-13 is a small sinkhole. Hand excavation revealed very loose organic infilling and rock. Due to the interpreted karst origin, absence of fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-14
Feature S-14 is a non-karst closed depression. The feature is located within an apparent area of disturbance and possible historic tree removal. A slight berm was observed at one end of the depression. Hand excavation revealed fine infilling. Due to the interpreted non-karst origin and fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-15
Feature S-15 is a non-karst closed depression. The depression consists of a dry, shallow, stock tank located just within the floodplain. Due to the interpreted non-karst origin and presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-16
Feature S-16 is a solution cavity with solutioned bedrock around the entire opening. A persimmon tree was observed growing within the feature. The cavity was filled with organic infilling to approximately one foot below the ground surface. Hand excavation of the feature revealed loose, organic soil. Due to the interpreted karst origin, indirect evidence of rapid infiltration, and the location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-17
Feature S-17 is a possible solution cavity. The cavity exists below one slab of bedrock with a slightly dissolutioned edge and extends downward at an angle. Hand excavation and probing of the feature revealed loose, organic soil. Due to the possible karst origin, absence of observable fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-18
Feature S-18 is a possible solution cavity. The cavity exists between two adjoining bedrock slabs with slightly dissolutioned edges. Several persimmon trees were observed near the feature. Hand excavation and probing of the feature revealed loose, organic soil. Due to the possible karst origin, absence of observable fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-19
Feature S-19 is a large cobble-filled sinkhole with rim rock present around part of the perimeter. Voids were observed below the rim rock and between the cobble infilling. The voids and lack of soil infilling indicates increased flow. Due to the karst origin and direct evidence of rapid infiltration, the probability of rapid infiltration is high. This feature is ranked as sensitive.

Feature S-20
Feature S-20 is a small sinkhole filled with several cobbles. Hand excavation revealed loose organic infilling and rock. Due to the interpreted karst origin, absence of fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-21
Feature S-21 is a cave developed as a vertical shaft. The cave is located within a tear-drop shaped, cobble-filled sinkhole. The sinkhole is approximately 16 foot long and follows the dominant trend. The cave opening is approximately 3 feet wide. The cave extends vertically for a few feet and then extends at a downward angle toward the southwest for a measurable 16 more feet. Due to the karst origin and open nature of the feature, the probability of rapid infiltration is high. This feature is ranked as sensitive.

Feature S-22
Feature S-22 is a residential water well. The well has steel casing that extends above the ground surface, is equipped with a submersible pump, and is in operation. The well has a small concrete slab surrounding the casing. Because the well is in operation and has casing that extends above the ground surface, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-23
Feature S-23 is a non-karst closed depression. The depression consists of a dry, shallow, stock tank located within the floodplain. Due to the interpreted non-karst origin and presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-24
Feature S-24 is a small sinkhole. Hand excavation revealed very loose organic infilling and rock. Due to the interpreted karst origin, absence of fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-25
Feature S-25 is a solution cavity with two small circular opening that join in the subsurface. Originally, the feature was found as a subtle depression. Hand excavation of some leaf litter at the surface revealed a solid solution cavity with no infilling. The feature extends vertically for approximately 4.5 feet, turns and continues out of sight. Due to the karst origin and open nature of the feature, the probability of rapid infiltration is high. This feature is ranked as sensitive.

Feature S-26
Feature S-26 is a small sinkhole. Hand excavation revealed very loose organic infilling and rock. Due to the interpreted karst origin, absence of fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-27
Feature S-27 is a small sinkhole. Hand excavation and probing of the feature revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-28
Feature S-28 is a solution cavity with solutioned bedrock around the entire opening. The cavity was originally filled with organic infilling to approximately one foot below the ground surface. Hand excavation to approximately two feet deep revealed loose, organic soil. Due to the interpreted karst origin, indirect evidence of rapid infiltration, and the location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-29
Feature S-29 consists of a slab of bedrock with a possible solution cavity on one edge and a possible solution-enlarged fracture on the other edge. The solution cavity exhibits a semi-circular dissolutioned edge. The fracture exhibited void space to approximately 1½ foot deep. Hand excavation revealed loose organic infilling. Due to the possible karst origin, absence of observable fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-30
Feature S-30 is a possible solution-enlarged fracture. The feature is developed between two adjoining bedrock slabs and exhibited void space to approximately 1 foot deep. A depression exists at end of the fracture. Hand excavation and probing revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-31
Feature S-31 is a possible solution cavity. The feature is developed between several adjoining bedrock slabs. Hand excavation and probing revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-32
Feature S-32 is a solution-enlarged discharge plane located within a steep rock bank of a tributary to Dry Comal Creek. Because the feature serves as a discharge feature, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-33
Feature S-33 is a possible solution cavity located on a hillside. The cavity exists below one slab of bedrock with a dissolutioned edge. The cavity extends laterally beneath the slab and may be the result of animal burrowing. Hand excavation and probing of the feature revealed loose, organic soil and rock. Due to the possible karst origin, absence of observable fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-34
Feature S-34 is possibly a small sinkhole. Hand excavation and probing of the feature revealed sticky red clay. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-35
Feature S-35 is a small sinkhole located on a hillside. Hand excavation revealed very loose cobbles and organic soil infilling. Due to the interpreted karst origin, indirect evidence of rapid infiltration, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Features S-36, S-37, S-38 & S-39
Features S-36, S-37, S-38 and S-39 are possibly small sinkholes. Hand excavation and probing of the features revealed sticky red clay. Due to the presence of fine infilling, the probability of rapid infiltration is low. These features are ranked as non-sensitive.

Feature S-40
Feature S-40 appears to be a large relic sinkhole. The sinkhole is developed as a tear-drop shape on a hillside. The sinkhole exhibits breakdown around portions of the perimeter but is soil filled. Probing in several locations revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-41
Feature S-41 is a non-karst closed depression created by stream scour. Hand excavation and probing of the features revealed red clay. Due to the non-karst origin and presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-42
Feature S-42 is possibly a small sinkhole. A couple of large cobbles and persimmon trees surround the feature. However, hand excavation and probing of the feature revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-43
Feature S-43 is an area of fractured rock on a hillside that exhibits void space between the fractures, possibly resultant from solution-enlargement. However, hand excavation and probing of the feature revealed fine infilling. Due to the presence of fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-44
Feature S-44 is a cobble-filled sinkhole with large breakdown material chocking the entrance to what appears likely to be a cave developed as a vertical shaft. The lack of soil infilling indicates increased flow. Due to the karst origin and direct evidence of rapid infiltration, the probability of rapid infiltration is high. This feature is ranked as sensitive.

Feature S-45
Feature S-45 is a non-karst closed depression. The depression consists of a dry stock tank located within the Del Rio clay. Due to the interpreted non-karst origin and fine infilling, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Feature S-46
Feature S-46 is a large soil-filled sinkhole located on a hillside. Probing of the feature revealed loose organic infilling. Due to the interpreted karst origin, lack of fine infilling, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-47
Feature S-47 is a solution cavity located within a solid slab of bedrock on a hillside. The cavity was originally filled with organic infilling to approximately one foot below the ground surface. Hand excavation to approximately two feet and an additional several feet of probing revealed loose, organic soil infilling. Due to the interpreted karst origin, indirect evidence of rapid infiltration, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-48
Feature S-48 is a solution cavity located within a solid slab of bedrock on a hillside. The cavity was originally filled with organic infilling to approximately ½ foot below the ground surface. Hand excavation to approximately one foot and an additional several feet of probing revealed very loose, organic infilling. Due to the interpreted karst origin, indirect evidence of rapid infiltration, and location of the feature within a small natural catchment area, the probability of rapid infiltration is intermediate. This feature is ranked as sensitive.

Feature S-49

Feature S-49 is an interformational fault identified on two published geologic maps (BEG, Barnes and BEG Collins). The fault juxtaposes the Person Formation to the north and the Pecan Gap Chalk to the south. No karst features or other evidence of enhanced permeability was observed along the fault. Therefore, the probability of rapid infiltration is low. This feature is ranked as non-sensitive.

Section 4.0

WATER POLLUTION ABATEMENT PLAN APPLICATION

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(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 **Water Pollution Abatement Plan Application Form** is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Print Name of Customer/Agent: Charles P. "Frosty" Forster, P.E., P.G.

Date: June 15, 2015

Signature of Customer/Agent:



Regulated Entity Name: Servtex Quarry, Fordyce Tract

Regulated Entity Information

1. The type of project is:

   ☐ Residential: Number of Lots:_____
   ☐ Residential: Number of Living Unit Equivalents:_____
   ☐ Commercial
   ☐ Industrial
   ☒ Other:Quarry

2. Total site acreage (size of property):658.74±

3. Estimated projected population:0

4. The amount and type of impervious cover expected after construction are shown below:

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	0	÷ 43,560 =	0
Parking	0	÷ 43,560 =	0
Other paved surfaces	0	÷ 43,560 =	0
Total Impervious Cover	0	÷ 43,560 =	0

Total Impervious Cover 0 ÷ **Total Acreage** 658.74 **X 100 =** 0**% Impervious Cover**

5. ☒ **Attachment A - Factors Affecting Surface Water Quality.** A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.

6. ☒ Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

For Road Projects Only

Complete questions 7 - 12 if this application is exclusively for a road project.

7. Type of project:

   ☐ TXDOT road project.
   ☐ County road or roads built to county specifications.
   ☐ City thoroughfare or roads to be dedicated to a municipality.
   ☐ Street or road providing access to private driveways.

8. Type of pavement or road surface to be used:

   ☐ Concrete
   ☐ Asphaltic concrete pavement
   ☐ Other: _____

9. Length of Right of Way (R.O.W.): _____ feet.

   Width of R.O.W.: _____ feet.
   L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.

10. Length of pavement area: _____ feet.

    Width of pavement area: _____ feet.
    L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.
    Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = _____% impervious cover.

11. ☐ A rest stop will be included in this project.

    ☐ A rest stop will not be included in this project.

12. ☐ Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

Stormwater to be generated by the Proposed Project

13. ☒ **Attachment B - Volume and Character of Stormwater.** A detailed description of the volume (quantity) and character (quality) of the stormwater runoff which is expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on the area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

Wastewater to be generated by the Proposed Project

14. The character and volume of wastewater is shown below:

_____% Domestic	_____Gallons/day
_____% Industrial	_____Gallons/day
_____% Commingled	_____Gallons/day
TOTAL gallons/day _____	

15. Wastewater will be disposed of by:

☐ On-Site Sewage Facility (OSSF/Septic Tank):

☐ **Attachment C - Suitability Letter from Authorized Agent.** An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.

☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☐ Sewage Collection System (Sewer Lines):

☐ Private service laterals from the wastewater generating facilities will be connected to an existing SCS.

☐ Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

☐ The SCS was previously submitted on_____.

☐ The SCS was submitted with this application.

☐ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

☐ The sewage collection system will convey the wastewater to the _____ (name) Treatment Plant. The treatment facility is:

☐ Existing.
☐ Proposed.

16. ☐ All private service laterals will be inspected as required in 30 TAC §213.5.

Site Plan Requirements

Items 17 – 28 must be included on the Site Plan.

17. ☒ The Site Plan must have a minimum scale of 1" = 400'.

Site Plan Scale: 1" = 400'.

18. 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.
The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA FIRM Map Numbers 48091C0420F and 48091C0400F (September 2, 2009)

19. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, open space, etc. are shown on the plan.

☐ The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, open space, etc. are shown on the site plan.

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

☒ There are 1 (#) 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.
☐ 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.

21. 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 D - Exception to the Required Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

22. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.
23. ☒ Areas of soil disturbance and areas which will not be disturbed.
24. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
25. ☒ Locations where soil stabilization practices are expected to occur.
26. ☒ Surface waters (including wetlands).

    ☐ N/A
27. ☒ Locations where stormwater discharges to surface water or sensitive features are to occur.

    ☐ There will be no discharges to surface water or sensitive features.
28. ☒ Legal boundaries of the site are shown.

Administrative Information

29. ☒ 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.
30. ☒ Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

WPAP APPLICATION FORM TCEQ-0584
ATTACHMENT A
FACTORS AFFECTING WATER QUALITY

The major factor which could potentially affect surface water quality is sediment in storm water runoff after vegetation clearing. Additional factors include fuels and lubricants from vehicles and equipment, trash or debris, and spills or overflows from portable toilets.

The major factor which could potentially affect groundwater quality is migration of suspended solids through bedrock fractures after quarry activities are completed.

WPAP APPLICATION FORM TCEQ-0584
ATTACHMENT B
VOLUME AND CHARACTER OF STORM WATER

In the pre-quarry condition, limited areas of up-gradient surface water sheet flows onto the project area. Prior to disturbing areas of the project site which will receive up-gradient surface water run-on, earthen berms will be constructed to intercept and prevent off-site water from flowing across disturbed areas, and thence off site.

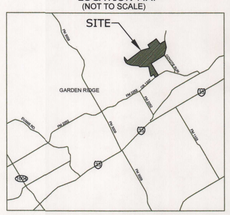
Earthen berms surrounding the disturbed areas of the site, rock berms, and natural vegetation buffers will either filter or prevent any on-site surface water from flowing off site untreated. The earthen berms and rock berms will be constructed in stages in advance of and in coordination with quarry disturbances. The entire site will be surrounded by a 50-foot natural vegetation buffer. Once the quarry pit and earthen berms are established, there will be no significant or untreated discharges from this site. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features which may exist down-gradient of the site.

The runoff coefficient of the site in the pre-construction condition is estimated to be approximately 0.25. The overall runoff coefficient of the site in the post-construction condition is estimated to be approximately 0.75. However, this overall runoff coefficient is heavily weighted by conditions within the excavated quarry pit, and no runoff will occur from the pit itself. The post-construction runoff coefficient outside the limits of the quarry pit will be similar to pre-construction conditions since these areas will be comprised of vegetated earthen berms and natural vegetation buffers.

Notes:

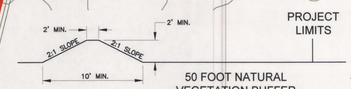
1. Contour Data: Texas Natural Resources Information System 10 ft Contours - Bat Cave & New Braunfels West Quadrangles
2. Flood Data: FEMA Flood Insurance Rate Map Numbers 48091C0420F & 48029C0440F, effective September 2, 2009

LOCATION MAP
(NOT TO SCALE)



LEGEND

- PROJECT LIMITS
- QUARRY LIMITS
- NATURAL STREAM
- EXISTING TOPO
- EXISTING FLOW ARROW
- ROCK BERM
- EARTHEN BERM
- FLOODPLAIN BOUNDARY
- S-1 SENSITIVE FEATURES
- NATURAL VEGETATIVE FILTER STRIP



TYPICAL BMP SECTION A'-A'

DRY COMAL CREEK

200 FT NATURAL VEGETATIVE FILTER STRIP

COYOTE RUN

EDWARDS AQUIFER RECHARGE ZONE

EDWARDS AQUIFER TRANSITION ZONE

FM 2252

Flood area illustrates a combination of Zones X Shaded, Zone A, and Zone AE. Zone X Shaded, defined as: "Other flood hazard areas — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood." Zone A, defined as: "Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood; No Base Flood Elevations Determined." Zone AE, defined as: "Special flood hazard areas subject to inundation by the 1% annual chance (100-year) flood — Base flood elevations determined." Scaled from the Federal Emergency Management Agency (FEMA) published effective Flood Insurance Rate Map Numbers 48091C0420F and 48029C0440F, effective September 2, 2009 for Comal County, Texas and incorporated areas.

N
W E
S

400' 200' 0' 400' 800'
SCALE 1"= 400'

SIGNATURE/SEAL

STATE OF TEXAS
CHARLES P. FORSTER
59043
REGISTERED
PROFESSIONAL ENGINEER
06/19/15

FORSTER ENGINEERING
TBPE firm # 12385
19915 WITTENBURG, SAN ANTONIO, TEXAS 78256
PHONE: (210) 698-5544, Fax (210) 698-5544
WWW.FORSTERENGINEERING.COM

PROJECT DESCRIPTION
SERVTEX QUARRY,
FORDYCE TRACT
WPAP

DRAWING
SITE PLAN TCEQ f-0584

DATE	1/29/2015	JOB NO.	1085-13
SCALE	1"= 400'	DRG NO	EXHIBIT 1
DRAWN BY	SNF		
CHECKED BY	CPF		

Section 5.0

TEMPORARY STORM WATER SECTION

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.

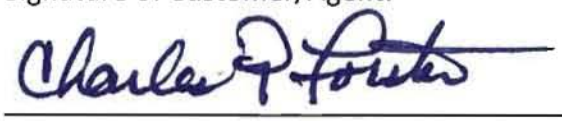
Signature

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: Charles P. "Frosty" Forster, P.E., P.G.

Date: June 15, 2015

Signature of Customer/Agent:





Regulated Entity Name: Servtex Quarry, Fordyce Tract

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: Possible diesel

   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.

   ☒ For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.

   ☒ 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.

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: Dry Comal Creek

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:

☒ 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.

☒ A description of how BMPs and measures will prevent pollutants from entering 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.

10. ☒ **Attachment G - Drainage Area Map.** A drainage area map supporting the following requirements is attached:

☐ 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.

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.

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).

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.

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 J - Schedule of Interim and Permanent Soil Stabilization Practices.** A schedule of the interim and permanent soil stabilization practices for the site is attached.

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.

19. ☒ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. ☒ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.

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.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT A
SPILL RESPONSE ACTIONS

In the event of accidental spills of hazardous materials or hydrocarbons, the following actions will be taken as necessary:

1. In the event of a spill, appropriate actions shall be taken to contain the spill using all available means including absorbent and/or adsorbent materials and readily available mobile equipment. Absorbent and/or adsorbent materials are kept in a readily available location. In the event of an uncontained discharge, available facility equipment shall immediately construct a containment berm down gradient from the discharge and absorb and/or adsorb the discharged material with sand, screenings, and/or other available fines that are on hand. This material shall be properly disposed of in accordance with applicable local, state and federal environmental regulations.

2. After containing the discharge, all media (soil, water, etc.) that came into contact with oil will be collected and stored in such a way that will not continue to affect additional media. Examples of proper materials to use for cleanup include adsorbents and/or absorbents such as: aggregates fines, sand, absorbent pads, booms, socks, etc. Proper cleanup will be deemed complete when all the applicable response requirements are met on all local, state and/or federal levels.

3. Materials that have come into contact with the discharged fluids shall be placed in a temporary staging area until proper methods of disposal can be determined. To prevent additional contamination, impacted materials will be stored on plastic sheets until removal. Plastic sheets will also be used to cover the materials to mitigate contact with rainfall and wind. Sampling of impacted media may be required prior to determining a proper method of disposal. Determining a proper method of disposal will take into consideration all local, state and federal environmental regulatory requirements.

4. In the event of a leak from a tank or piping, as much of the discharge as possible shall be collected manually and stored in an appropriate container until proper disposal or reuse. Immediate action shall be taken to stop or minimize the leak rate. The remaining product in the containment area shall be cleaned up and properly disposed.

5. In the event of a tank, hose or piping failure, arrangements shall be made to empty the tank to a safe level by immediately filling all mobile equipment on the job. The products remaining in the containment shall be handled as previously described.

6. In the event of a fire, the local fire authority shall be contacted immediately.

The following reporting procedures will be implemented after an oil/fuel discharge (of any size) has occurred.

1. Immediately contact the Plant Manager to report the discharge:

Quarry Plant Manager	
Office Phone Number:	(210) 658-7461
Fax Number:	(210) 581-0079
Environmental Contact	
Office Phone Number:	(972) 653-3735
Fax Number:	(469) 417-1438
Mobile Phone Number:	(972) 814-4122

2. Based on the size, nature, and circumstances of the discharge, the Plant Manager shall contact the Environmental Contact who will notify the appropriate regulatory authorities. In addition, federal SPCC regulations require that any discharge with the potential of reaching a navigable waterway in harmful quantities, as defined in 40 CFR 110.3, be immediately reported to the National Response Center (NRC).

   - Any discharge greater than 42 U.S. gallons in volume must be immediately reported to the NRC.

National Response Center:	(800) 424-8802
U.S. EPA, Region 6:	(214) 655-2222

3. Texas State Regulations require that a spill or accidental discharge equal to or greater than the Reportable Quantities listed in Title 30 TAC §327.4 be reported immediately to the TCEQ within 24 hours after the discovery of the spill or discharge. The reportable quantities are listed below:

   - For petroleum product or used oil discharged to land – 25 gallons
   - For petroleum product or used oil discharged to waters in the state – quantity sufficient to cause a sheen

State Emergency Response Center:	(800) 832-8224 (24 hour)
TCEQ Spill Reporting Hotline:	(512) 463-7727 (24 hour)
TCEQ Region 13:	(210) 490-3096 (8am – 5pm)
Edwards Aquifer Authority:	(210) 222-2204
New Braunfels Utility Company	(830) 629-4628

4. If a discharge is too large for facility personnel to handle or the release occurred within a secondary containment structure, the following entity may be contracted to remove oil and oily waste from the facility:

Southwest Land and Marine	(800) 527-9835

5. Pursuant to Texas regulations, the facility must also submit written information, such as a letter, describing the details of the discharge or spill and supporting the adequacy

of the response action, to the appropriate TCEQ regional manager within 30 working days of the discovery of the reportable discharge spill. The written response must document the requirements outlined in 30 TAC §327.5(c).

Regional Director
TCEQ Region 13 Office
14250 Judson Road
San Antonio, TX 78233-4480

6. Transformers located at the facility are the property of New Braunfels Utilities. In the event of a spill related to the failure or explosion of a transformer, New Braunfels Utilities or specialized clean-up contractor will be contacted so that they can remove spilled material and notify the appropriate regulatory agencies.

DETAILED DISCHARGE REPORT FORM

Reporter's Name and Date: _____

Location of Discharge: _____

Date and Time Discharge Occurred: _____

Material and Amount Discharged: _____

Source of the Release: _____

Cause and Circumstances of Release: _____

Countermeasures to Contain and Clean-up Discharge: _____

_____

_____

_____

_____

Personnel/Agency Contacted Regarding Discharge Procedures: _____

_____

_____

Corrective Actions Implemented to Prevent Recurrence of Discharge: _____

_____

_____

_____

_____

Discharge Report Sent To: _____

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT B
POTENTIAL SOURCES OF CONTAMINATION

Potential sources of contamination during operations and preventative measures include the following:

Potential Source – Oil, grease, fuel and hydraulic fluid contamination from equipment and vehicle dripping.
Preventative Measure – Vehicle and equipment maintenance will not be performed on the project site except under extenuating circumstances. Vehicles and equipment will be parked in designated locations, visually checked on a daily basis, and drip pans will be used to catch drips as needed. Chronic drips will be repaired as soon as practicable. When maintenance must be performed, a plastic liner or disposable base pad will be utilized as secondary containment.

Potential Source – Miscellaneous trash and litter from quarry workers.
Preventive Measure – Trash containers will be placed throughout the site to encourage proper trash disposal.

Potential Source - Accidental leaks or spills of oil, petroleum products, or hazardous substances, which are used or stored temporarily on site.
Preventative Measures – Quarry Operator shall incorporate discussions of spill prevention and response actions into regular safety meetings; proper spill prevention and control measures will be adhered to strictly; oil, petroleum products, or hazardous substances will be properly stored, and spill cleanup materials will be stored and readily accessible on site.

Potential Source – Portable toilet spills or overflows
Preventative Measures - Contractor will locate portable toilets on level ground surfaces away from high traffic areas. Portable toilets will be routinely inspected and serviced at a frequency sufficient to maintain sanitary conditions.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
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) including an estimate of the total area of the site to be disturbed by each activity is as follows:

The sequence of major soil disturbance activities is as follows:

- Installation of Temporary BMPs
- Clearing and stripping of the pit area
- Stockpiling topsoil for perimeter berm construction
- Grading as needed
- Construction of perimeter berms
- Quarry pit mining
- Ramp Construction
- Stabilization of disturbed area

Approximately 555± acres of the 685.74± acre site will ultimately be disturbed. Approximately 130± acres will be undisturbed or maintained as a natural vegetation buffer which will not be disturbed.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT D
TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

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.

No groundwater is expected to be encountered on site. In the pre-quarry condition, limited areas of up-gradient surface water sheet flows onto the project area. Prior to disturbing these portions of the project site, earthen berms will be constructed which prevent off-site water from flowing across disturbed areas, and thence off site.

b. 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.

No groundwater is expected to be encountered in the quarry excavation or other activities. Earthen berms surrounding the disturbed areas of the site, rock berms, and natural vegetation buffers will either filter or prevent any on-site surface water from flowing off site untreated. The earthen berms and rock berms will be constructed in stages in advance of and in coordination with quarry disturbances. Once the quarry pit and earthen berms are established, there will be no significant or untreated discharges from this site. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features which may exist down-gradient of the site.

c. A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

BMPs will be in place prior to up-gradient site disturbance. A combination of earthen berms, rock berms, and natural vegetation buffers will filter storm water or prevent storm water which has contacted disturbed areas from leaving the site and entering surface streams, sensitive features, or the aquifer. The entire site will be surrounded by a 50-foot natural vegetation buffer. Earthen berms will store and prevent water from leaving the site and rock berms will filter surface flows. Sensitive features will be protected by earthen berms or natural vegetation buffers.

d. 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.

Flow will be maintained to the natural runoff system, to the maximum extent practicable, by using rock berms and natural vegetated areas. These types of BMPs slow the flow of water allowing for sedimentation, but allow the flow to be maintained. Earthen berms and the quarry pits, which store flows, will be used as pollution prevention measures to mitigate runoff from larger disturbed areas. These larger disturbed areas have a greater potential to contain sediment, therefore retention of these flows will be used to provide a higher level of protection to the water quality of the aquifer.

BMP measures utilized in this plan are intended to allow storm water to continue downstream after passing through the BMPs. This will allow storm water runoff to continue down gradient to streams or features that may exist downstream of the site.

Additional sensitive geologic features discovered in the active pit during quarrying operations will be addressed as follows:

1. Sensitive geologic feature recognition training for plant and quarry operators will be conducted. An on-site quarry manager experienced in feature identification will conduct visual surveys to ensure adequate identification and reporting of sensitive features. The on-site quarry manager will receive annual training from a licensed Professional Geologist on feature identification and protection. Results of each visual survey conducted by the on-site quarry manager will be documented and provided to TCEQ upon request.
2. The appropriate TCEQ Regional Office will be immediately notified upon discovery of any sensitive features encountered during the quarrying operations. Upon discovery, sensitive features on quarry benches will be protected with material berms, which will be maintained on a daily basis if necessary.
3. Sensitive features located on the ultimate quarry floor, which will not be excavated or mined out by further quarry activities, will be sealed with flowable fill before regulated activities near the sensitive feature may proceed. Sensitive features located on the quarry floor of intermediate benches above the ultimate quarry floor, will not be sealed, but will be protected by material berms until such time as this area of the quarry containing the sensitive feature will be mined.
4. Sensitive features located in the highwalls, which are well above the level of potential water ponding in the quarry pit and unlikely to receive contamination from any other logical or recognized source, will not be sealed.
5. If sensitive features located in the highwalls are below the level of potential water ponding in the quarry pit, or likely to receive contamination from any other logical or recognized source, they will be sealed with flowable fill before regulated activities near the sensitive feature may proceed.
6. Large features may be first filled with gravel or large rocks before placement of flowable fill. A minimum of 18-inches of flowable fill will placed above the gravel or rocks. Flowable fill is to be used to provide a reliable seal throughout the sensitive feature as it's characteristics allow it to flow around and between the gravel and large rocks and conform to irregular limits of a sensitive feature. As structural integrity and bearing capacity is not a design concern in these applications, concrete is not recommended or required.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT F
STRUCTURAL PRACTICES

Temporary best management practices proposed for the quarry includes earthen berms and rock berms. The earthen berms are used to store flows and limit runoff discharge of pollutants from exposed areas of the site as well as to divert flows away from exposed soils. Rock berms will be used to limit storm water runoff discharge of sediment from exposed soils. Undisturbed natural vegetation buffers will be preserved around the site perimeter.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT G
DRAINAGE AREA MAP

DRY COMAL CREEK

DRAINAGE AREA
11.8 AC.

DRAINAGE AREA
33.9 AC.

200 FT
NATURAL VEGETATIVE
FILTER STRIP

DRAINAGE AREA
240.8 AC.

DRAINAGE AREA
59.1 AC.

DRAINAGE AREA
153.9 AC.

DRAINAGE AREA
31.4 AC.

DRAINAGE AREA
24.9 AC.

DRY COMAL CREEK

COYOTE RUN

FM 2252

EDWARDS AQUIFER
RECHARGE ZONE

EDWARDS AQUIFER
TRANSITION ZONE

S-1 S-2 S-4 S-5 S-6 S-8 S-9 S-10 S-11 S-13 S-17 S-18 S-19 S-20 S-21 S-24 S-25 S-26 S-29 S-33 S-35 S-44 S-46 S-47 S-48

A' A'

2' MIN. 2' MIN.
2:1 SLOPE 2:1 SLOPE
10' MIN.
PROJECT LIMITS
50 FOOT NATURAL VEGETATION BUFFER

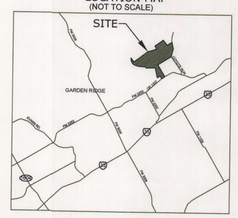
TYPICAL BMP SECTION A'-A'

Flood area illustrates a combination of Zones X Shaded, Zone A, and Zone AE. Zone X Shaded, defined as: "Other flood hazard areas – Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood." Zone A, defined as: "Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood; No Base Flood Elevations Determined." Zone AE, defined as: "Special flood hazard areas subject to inundation by the 1% annual chance (100-year) flood – Base flood elevations determined." Scaled from the Federal Emergency Management Agency (FEMA) published effective Flood Insurance Rate Map Numbers 48091C0420F and 48029C0440F, effective September 2, 2009 for Comal County, Texas and incorporated areas.

Notes:

1. Contour Data: Texas Natural Resources Information System 10 ft Contours - Bat Cave & New Braunfels West Quadrangles
2. Flood Data: FEMA Flood Insurance Rate Map Numbers 48091C0420F & 48029C0440F, effective September 2, 2009

LOCATION MAP
(NOT TO SCALE)



LEGEND

- PROJECT LIMITS
- QUARRY LIMITS
- NATURAL STREAM
- EXISTING TOPO
- EXISTING FLOW ARROW
- ROCK BERM
- EARTHEN BERM
- FLOODPLAIN BOUNDARY
- DRAINAGE AREA BOUNDARY
- S-1 SENSITIVE FEATURES
- NATURAL VEGETATIVE FILTER STRIP

N
W E
S

400' 200' 0' 400' 800'
SCALE 1"= 400'

SIGNATURE/SEAL

STATE OF TEXAS
CHARLES P. FORSTER
59043
REGISTERED
PROFESSIONAL ENGINEER
06/19/15

FORSTER ENGINEERING
TBPE firm # 12385
19915 WITTENBURG, SAN ANTONIO, TEXAS 78256
PHONE: (210) 698-5544, Fax (210) 698-5544
WWW.FORSTERENGINEERING.COM

PROJECT DESCRIPTION
SERVTEX QUARRY,
FORDYCE TRACT
WPAP

DRAWING
TEMPORARY STORM WATER

DATE	1/29/2015	JOB NO.	1085-13
SCALE	1"= 400'	DRG NO	ATTACHMENT G
DRAWN BY	SNF		
CHECKED BY	CPF		

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT I
INSPECTION AND MAINTENANCE FOR BMPS

The Servtex Quarry is authorized to discharge storm water under the TPDES General Permit No. TXR050000 for industrial activities. Requirements of the general permit include maintaining a Storm Water Pollution Prevention Plan, which includes provisions for inspections of storm water best management practices and sampling of storm water discharged from the site. Inspections will be conducted in accordance with the Storm Water Pollution Prevention Plan, which is incorporated herewith by reference. A copy of a typical Storm Water Periodic Inspection (Quarterly) form is attached.

As a minimum, the inspector shall observe: (1) significant disturbed areas for evidence of erosion, (2) storage areas for evidence of leakage from the exposed stored materials, (3) structural controls (earthen berms and rock berms) for evidence of failure or excess siltation, (4) vehicle exit point for evidence of off-site sediment tracking, (5) vehicle storage areas for signs of leaking equipment or spills, (6) embankment, spillways, and outlet of sediment basin (where applicable) for erosion damage, and (7) sediment basins (where applicable) for evidence that basin has accumulated 50% of its volume in silt.

The earthen berms, rock berms, and natural vegetated buffers will be inspected on at least a quarterly basis. Written documentation of these inspections will be kept during the course of mining or construction at the project site. Significant erosion of berms should be backfilled and compacted as soon as possible. If a rock berm is no longer able to properly filter the sediment form storm water due to silt contamination, it should be replaced. The original minimum design dimensions of the rock berm should be maintained. Natural vegetated buffers should be treated for erosion by refilling and reseeding and sediment buildup by removal of sediment to maintain vegetation.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT I (CONTINUED)
INSPECTION AND MAINTENANCE FOR BMPS

Storm Water Periodic Inspection (Quarterly)

Name: _____ Year: _____

Signature: _____ Circle the Appropriate Month

Date: _____ Jan Feb Mar Apr May June

Location: _____ Permit No. TXR050000 July Aug Sep Oct Nov Dec

Describe in detail any "YES" responses to these questions on Page 2 in the Comments section.

YES	NO	General
☐	☐	Is the storm water plan unavailable or at an offsite location?
☐	☐	Is there any water leaving the property that wasn't generated from a rain event?
☐	☐	Are there any raw land clearing activities that will disturb one (1) acre or more?
☐	☐	Are there any new activities at the facility that are not described in the facility's storm water plan? (refer to the Descriptive Narrative and Operation Summary in the facility's storm water plan.)
☐	☐	Does the site map need to be updated? (refer to the site map in Appendix B of the storm water plan)
☐	☐	Is the Storm Water Log incomplete or missing data? (rainfall data should be kept daily.)

YES	NO	Good Housekeeping
☐	☐	Are there any potential sources of pollution in **Loading/Unloading** Areas?
☐	☐	Are there any potential sources of pollution in **Outdoor Storage** Areas? (silos, hoppers, stockpiles, etc.)
☐	☐	Are there any potential sources of pollution in **Outdoor Processing** Areas?
☐	☐	Are there any potential sources of pollution in **Waste Disposal** Areas? (dumpster, trash cans, etc.)
☐	☐	Are there any potential sources of pollution in **Maintenance, Fueling, or Cleaning** Areas?
☐	☐	Are there any potential sources of pollution in **Liquid Storage Tank** Areas? (containers, fuel, etc.)
☐	☐	Are **Dust Producing Activities or Areas** in need of housekeeping, maintenance, or repair?
☐	☐	Are there any potential contaminants (containers, open containers, parts, etc.) exposed to precipitation that can be covered or moved under a cover?
☐	☐	Are there any dumpster/trash bins that are not closed or covered to prevent precipitation from accumulating in them?
☐	☐	Is there any debris, refuse, or garbage in potential contact with stormwater?
☐	☐	Are scrap material/parts areas in need of housekeeping?

YES	NO	Spill Prevention and Response Measures
☐	☐	Are there any tanks, barrels, or other containers that are not tightly **sealed**; have noticable tears, **leaks** or drips; or are not clearly **labeled**?
☐	☐	Does any onsite equipment show signs of leaking fluids? (Equipment Pre-Shift Inspections and Maintenance Activities should also be available for inspection)
☐	☐	Have there been any reportable spills or leaks? (If yes, the storm water plan should reflect the event.)
☐	☐	Does the *Spills and Leaks Log* need to be updated for the month?
☐	☐	Do the spill cleanup supplies need to be restocked? (aggregates, booms, absorbent pads, etc.)
☐	☐	Are there any chemical or oil containers outside of secondary containment structural controls?

YES	NO	
		Erosion Control Measures
☐	☐	Are natural vegetative areas in need of maintenance?
☐	☐	Are there any obvious signs of erosion at the facility?
☐	☐	Are there signs of erosion from stormwater run-on or run-off in stockpile areas?
☐	☐	Do existing erosion control best management practices appear to be ineffective?
☐	☐	Are there any new areas with a high potential for erosion?

YES	NO	
		Maintenance Program for Structural Controls
☐	☐	Are there any structural controls in need of maintenance?

Structural Controls include catch basins, diversion channels, natural vegetation, construction entrances, filter berms, channels, rip rap, silt fences, ground slopes and roughening, brush barriers,sediment trap, grass swales, mobile equipment, etc.

☐ ☐ Is the Preventative Maintenance Log incomplete for structural control repairs/maintenance?

YES	NO	N/A	
			Best Management Practices (BMPs)
☐	☐	☐	Are sweeper / water truck use records missing or incomplete?
☐	☐	☐	Do any filter berms, sediment traps, and other BMPs require maintenance or repair? (Records should be on the *Preventative Maintenance Log* in the stormwater plan.)

YES	NO	
		Employee Training and Education Program
☐	☐	Are there any new employees or has any member of the pollution prevention team changed? (Yes, then call Environmental Services for Training)
☐	☐	Has the facility's required annual training expired? (once a year)

YES	NO	N/A	
			Sampling Requirements
☐	☐		Did a stormwater discharge occur at an authorized outfall during the preceding month?
☐	☐	☐	If a stormwater discharge occurred within the quarter, are required Quarterly Benchmark Monitoring samples pending collection for the quarter?
☐	☐	☐	If a stormwater discharge occurred within the preceding month, are required Monthly Visual Monitoring samples pending collection for the month? (Visual observations of samples should be documented on the Monthly Visual Examination Forms)
☐	☐	☐	If samples have been collected, is sampling documentation missing any of the following required information? date, time, sampling location, name of sampler
☐	☐	☐	Are samples being collected after 30 minutes of discharge? (Samples should be collected within 30 minutes of the beginning of discharge)

Comments: Describe any "Yes" response given above.

Corrective Action: Describe in detail all corrective actions taken.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT J
SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION

Conventional stabilization measures are not applicable in a quarry operation, in particular, in relation to a quarry pit. Continuous interim on-site stabilization measures will be implemented consisting of minimizing soil disturbance outside of the pit area and maximizing the use of natural vegetation as a buffer or TBMP.

As the quarry pit is excavated, loose rock will be removed and transported off the Recharge Zone. Interim stabilization will consist of native bedrock excavation. Ultimate final stabilization of the pit will be removal or compaction of loose rock resulting in a permanent native bedrock floor.

TEMPORARY STORMWATER SECTION FORM TCEQ-0602
ATTACHMENT J (CONTINUED)
SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION

PROJECT MILESTONE DATES

Date when major site grading activities begin:

Construction Activity	Date

Dates when construction activities temporarily or permanently cease on all or a portion of the project:

Construction Activity	Date

Dates when stabilization measures are initiated:

Stabilization Activity	Date

Section 6.0

PERMANENT STORM WATER SECTION

Permanent 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)(C), (D)(Ii), (E), and (5), 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 **Permanent Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Charles P. "Frosty" Forster, P.E., P.G

Date: June 15, 2015

Signature of Customer/Agent

Charles P. Forster



Regulated Entity Name: Servtex Quarry, Fordyce Tract

Permanent Best Management Practices (BMPs)

Permanent best management practices and measures that will be used during and after construction is completed.

1. ☒ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.

   ☐ N/A

2. ☒ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

   ☒ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: _____

☐ N/A

3. ☒ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

   ☐ N/A

4. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

   ☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.
   ☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.
   ☒ The site will not be used for low density single-family residential development.

5. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

   ☐ **Attachment A - 20% or Less Impervious Cover Waiver**. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
   ☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
   ☒ The site will not be used for multi-family residential developments, schools, or small business sites.

6. ☒ **Attachment B - BMPs for Upgradient Stormwater.**

☒ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.

☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.

☐ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

7. ☒ **Attachment C - BMPs for On-site Stormwater.**

☒ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.

☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.

8. ☒ **Attachment D - BMPs for Surface Streams**. A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.

☐ N/A

9. ☒ The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.

☐ The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.

☒ **Attachment E - Request to Seal Features.** A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.

10. ☒ **Attachment F - Construction Plans**. All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:

☒ Design calculations (TSS removal calculations)
☒ TCEQ construction notes
☒ All geologic features
☒ All proposed structural BMP(s) plans and specifications

☐ N/A

11. ☐ **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan**. A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:

    ☐ Prepared and certified by the engineer designing the permanent BMPs and measures
    ☐ Signed by the owner or responsible party
    ☐ Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
    ☐ A discussion of record keeping procedures

    ☒ N/A

12. ☐ **Attachment H - Pilot-Scale Field Testing Plan**. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.

    ☒ N/A

13. ☒ **Attachment I -Measures for Minimizing Surface Stream Contamination**. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.

    ☐ N/A

Responsibility for Maintenance of Permanent BMP(s)

Responsibility for maintenance of best management practices and measures after construction is complete.

14. ☒ The applicant is 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 (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

    ☐ N/A

15. ☒ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

    ☐ N/A

PERMANENT STORMWATER SECTION FORM TCEQ-0600
ATTACHMENT B
BMPS FOR UPGRADIENT STORM WATER

No groundwater is expected to be encountered on site. In the pre-quarry condition, limited areas of up-gradient surface water sheet flows onto the project area. Prior to disturbing these portions of the project site, earthen berms will be constructed which prevent off-site water from flowing across disturbed areas, and thence off site.

PERMANENT STORMWATER SECTION FORM TCEQ-0600
ATTACHMENT C
BMPS FOR ON-SITE STORM WATER

No groundwater is expected to be encountered in the quarry excavation or other activities. Earthen berms surrounding the disturbed areas of the site, rock berms, and natural vegetation buffers will either filter or prevent any on-site surface water from flowing off site untreated. The earthen berms and rock berms will be constructed in stages in advance of and in coordination with quarry disturbances. Once the quarry pit and earthen berms are established, there will be no significant or untreated discharges from this site. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features which may exist down-gradient of the site.

PERMANENT STORMWATER SECTION FORM TCEQ-0600
ATTACHMENT D
BMPS FOR SURFACE STREAMS

BMPs will be in place prior to up-gradient site disturbance. A combination of earthen berms, rock berms, and natural vegetation buffers will filter storm water or prevent storm water which has contacted disturbed areas from leaving the site and entering surface streams, sensitive features, or the aquifer. The entire site will be surrounded by a 50-foot natural vegetation buffer. Earthen berms will store and prevent water from leaving the site and rock berms will filter surface flows. Sensitive features will be protected by earthen berms or natural vegetation buffers.

PERMANENT STORMWATER SECTION FORM TCEQ-0600
ATTACHMENT E
REQUEST TO SEAL FEATURES

This request to mine out naturally-occurring sensitive features is based on the absence of any reasonable or practicable alternatives. Sensitive features discovered during the Geologic Assessment or during the quarry process will be mined out as the pit will be mined to a depth of approximately 150 feet, and it would be unsafe and impractical to preserve a feature and buffer within the quarry pit. Sensitive features identified during the Geologic Assessment which are within the quarry excavation limits are identified in the following table.

Feature No.	Feature Type	Relative Infiltration Rate (refer to Geologic Assessment	Feature Sensitivity	Permanent Pollution Abatement Measure
S-1	Solution Cavity	Intermediate	Sensitive	
S-2	Solution Cavity	Intermediate	Sensitive	Mine out
S-3	Solution Cavity/Solution-Enlarged Fractures	Intermediate	Sensitive	Mine out
S-4	Zone	High	Sensitive	Mine out
S-5	Zone	High	Sensitive	Mine out
S-6	Zone	High	Sensitive	Mine out
S-7	Solution-Enlarged Fractures	Low	Non-Sensitive	Mine out
S-8	Sink Hole	High	Sensitive	Mine out
S-9	Sink Hole	Intermediate	Sensitive	
S-10	Solution Cavity	Intermediate	Sensitive	
S-11	Sink Hole	Intermediate	Sensitive	
S-12	Sink Hole	Low	Non-Sensitive	
S-13	Sink Hole	Intermediate	Sensitive	
S-14	Non-Karst Closed Depression	Low	Non-Sensitive	Mine out
S-15	Non-Karst Closed Depression	Low	Non-Sensitive	
S-16	Solution Cavity	Intermediate	Sensitive	Mine out
S-17	Solution Cavity	Intermediate	Sensitive	Mine out
S-18	Solution Cavity	Intermediate	Sensitive	Mine out
S-19	Sink Hole	High	Sensitive	Mine out
S-20	Sink Hole	Intermediate	Sensitive	Mine out
S-21	Cave	High	Sensitive	Mine out
S-22	Manmade feature in bedrock	Low	Non-Sensitive	Mine out
S-23	Non-Karst Closed Depression	Low	Non-Sensitive	
S-24	Sink Hole	Intermediate	Sensitive	Mine out
S-25	Solution Cavity	High	Sensitive	Mine out
S-26	Sink Hole	Intermediate	Sensitive	Mine out
S-27	Sink Hole	Low	Non-Sensitive	Mine out
S-28	Solution Cavity	Intermediate	Sensitive	Mine out
S-29	Solution Cavity/Solution-Enlarged Fractures	Intermediate	Sensitive	Mine out
S-30	Solution-Enlarged Fractures	Low	Non-Sensitive	Mine out
S-31	Solution Cavity	Low	Non-Sensitive	Mine out
S-32	Solution Cavity	Low	Non-Sensitive	Mine out
S-33	Solution Cavity	Intermediate	Sensitive	Mine out
S-34	Sink Hole	Low	Non-Sensitive	Mine out
S-35	Sink Hole	Intermediate	Sensitive	Mine out
S-36	Sink Hole	Low	Non-Sensitive	Mine out
S-37	Sink Hole	Low	Non-Sensitive	

S-38	Sink Hole	Low	Non-Sensitive	
S-39	Sink Hole	Low	Non-Sensitive	Mine out
S-40	Sink Hole	Low	Non-Sensitive	Mine out
S-41	Non-Karst Closed Depression	Low	Non-Sensitive	Mine out
S-42	Sink Hole	Low	Non-Sensitive	Mine out
S-43	Solution-Enlarged Fractures	Low	Non-Sensitive	
S-44	Sink Hole	High	Sensitive	
S-45	Non-Karst Closed Depression	Low	Non-Sensitive	Mine out
S-46	Sink Hole	Intermediate	Sensitive	Mine out
S-47	Solution Cavity	Intermediate	Sensitive	Mine out
S-48	Solution Cavity	Intermediate	Sensitive	Mine out
S-49	Fault	Low	Non-Sensitive	

PERMANENT STORMWATER SECTION FORM TCEQ-0600
ATTACHMENT F
CONSTRUCTION PLANS

Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information have been signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed permanent BMPs and measures are provided at the end of this form. Design Calculations, TCEQ Construction Notes, all man-made or naturally occurring geologic features, all proposed structural measures, and appropriate details are shown on the construction plans.

PERMANENT STORMWATER SECTION FORM TCEQ-0600
ATTACHMENT I
MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

Any points where discharge from the site is concentrated and erosive velocities exist will include appropriately sized energy dissipaters to reduce velocities to non-erosive levels. BMPs will be in place prior to up-gradient site disturbance. A combination of earthen berms, rock berms, and natural vegetation buffers will filter storm water or prevent storm water which has contacted disturbed areas from leaving the site and entering surface streams. Due to the earthen berms surrounding the quarry operation, erosive discharge points are not anticipated.

CONSTRUCTION NOTES

1. Written construction notification must be given to the appropriate TCEQ regional office no later than 48 hours prior to commencement of the regulated activity. Information must include the date on which the regulated activity will commence, the name of the approved plan for the regulated activity, and the name of the prime contractor and the name and telephone number of the contact person.
2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.
3. If any sensitive feature is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. The regulated activities near the sensitive feature may not proceed until the TCEQ has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality.
4. No temporary aboveground hydrocarbon and hazardous substance storage tank system is installed within 150 feet of a domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
5. Prior to commencement of construction, all temporary erosion and sedimentation (E&S) control measures must be properly selected, installed, and maintained in accordance with the manufacturers specifications and good engineering practices. Controls specified in the temporary storm water section of the approved Edwards Aquifer Protection Plan are required during construction. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. The controls must remain in place until disturbed areas are revegetated and the areas have become permanently stabilized.
6. 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).
7. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake must be provided that can indicate when the sediment occupies 50% of the basin volume.
8. 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).
9. All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Rechage Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.
10. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.
11. The following records shall 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.
12. The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:
    - A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;
    - B. any change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;
    - C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office		San Antonio Regional Office	
2800 S. IH 35, Suite 100		14250 Judson Road	
Austin, Texas 78704-5712		San Antonio, Texas 78233-4480	
Phone	(512) 339-2929	Phone	(210) 490-3096
Fax	(512) 339-3795	Fax	(210) 545-4329

DRY COMAL CREEK

S-13 S-11 S-10 S-9 S-44 S-1

QUARRY FLOOR ELEVATION 580 FT

A A'

COYOTE RUN

DRY COMAL CREEK

EDWARDS AQUIFER RECHARGE ZONE

EDWARDS AQUIFER TRANSITION ZONE

FM 2252

Flood area illustrates a combination of Zones X Shaded, Zone A, and Zone AE. Zone X Shaded, defined as: "Other flood hazard areas – Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood." Zone A, defined as: "Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood; No Base Flood Elevations Determined." Zone AE, defined as: "Special flood hazard areas subject to inundation by the 1% annual chance (100-year) flood – Base flood elevations determined." Scaled from the Federal Emergency Management Agency (FEMA) published effective Flood Insurance Rate Map Numbers 48091C0420F and 48029C0440F, effective September 2, 2009 for Comal County, Texas and incorporated areas.

RUN-OFF DRAINAGE CALCULATIONS

AREA =	240.8 ACRES
C =	0.2
L =	6618.5 FT
SLOPE =	0.018 FT/FT
Time of Conc (TC) =	367 mins
INTENSITY (10YR) =	0.8 in/hr
FLOW, Q10YR =	37.96 CFS

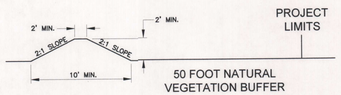
Notes:
1. TxDOT Hydraulic Manual Coefficient
2. TxDOT Rainfall Intensity-Duration -Frequency for Comal County

EARTHEN BERMS ARE CONSERVATIVELY DESIGNED FOR MOST CRITICAL HYDROLOGIC SITE CONDITIONS AND DRAINAGE AREA

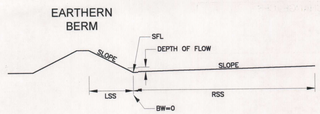
BERM SIZING CALCULATIONS

Site Condition:		
D=	1.4	DEPTH OF FLOW IN FEET
BW=	0	BOTTOM WIDTH IN FEET
LSS=	2	LEFT SIDE SLOPE
RSS=	13.5	RIGHT SIDE SLOPE
SFL=	0.01	FL SLOPE IN FT/FT
N=	0.04	MANNING'S N-VALUE
Vd=	0	V-DEPTH IN CEN. SEC. IN. FT.
Results:		
Qcal=	43.97	DISCHARGE, CFS
Dn=	1.4	FEET
A=	15.19	SQ. FT.
V=	2.89	FPS
Hv=	0.13	FT.
FN=	0.609	FROUDE NO.

Notes:
1. Manning's Formula for Trapizodial Channels Solving for Capacity
2. Manning's n for Channels (Chow, 1959)
3. Dn Measured From Toe of Slope



TYPICAL BMP SECTION A'-A'

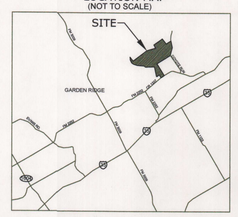


TYPICAL BMP SECTION A'-A'

EARTHEN BERM SPECIFICATIONS:
- Earthen berms shall be minimum 2 feet wide at the top with maximum side slopes of 2: 1.
- If vehicular crossings of the berm are nesary, the crossing areas shall have a maximum side slope of 3: 1d be armored with gravel.
- Earthen berms may be constructed of top, subsoil, or random fill material. Well sorted sand or silt materiay not be used.
- Material placement by push dozer, front-eloader, or end-dump truck will achieve minimum compaction ofproximately 70 percent. No additional compaction effort is require
- To promote rapid re-vegetation, the top 4 inches of the berm surface shall be constructed of on-site ocal topsoil, containing a natural and adapted seed bank supply. Native vegetation seeding should be avoided unless native vegetatiols to provide a uniform 70 percent cover.

Notes:
1. Contour Data: Texas Natural Resources Information System 10 ft Contours - Bat Cave & New Braunfels West Quadrangles
2. Flood Data: FEMA Flood Insurance Rate Map Numbers 48091C0420F & 48029C0440F, effective September 2, 2009

LOCATION MAP
(NOT TO SCALE)



LEGEND

- PROJECT LIMITS
- QUARRY LIMITS
- NATURAL STREAM
- EXISTING TOPO
- EXISTING FLOW ARROW
- ROCK BERM
- EARTHEN BERM
- FLOODPLAIN BOUNDARY
- S-1 SENSITIVE FEATURES
- NATURAL VEGETATIVE FILTER STRIP

N W E S

400' 200' 0' 400' 800'
SCALE 1"= 400'

SIGNATURE/SEAL

STATE OF TEXAS
CHARLES P. FORSTER
59043
REGISTERED PROFESSIONAL ENGINEER
06/19/15

FORSTER ENGINEERING
TBPE firm # 12385
19915 WITTENBURG, SAN ANTONIO, TEXAS 78256
PHONE: (210) 698-5544, Fax (210) 698-5544
WWW.FORSTERENGINEERING.COM

PROJECT DESCRIPTION
SERVTEX QUARRY,
FORDYCE TRACT
WPAP

DRAWING
PERMANENT STORM WATER

DATE	1/29/2015	JOB NO.	1085-13
SCALE	1"= 400'	DRG NO	ATTACHMENT F
DRAWN BY	SNF		
CHECKED BY	CPF		

Section 7.0

AGENT AUTHORIZATION FORM

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Lalit Bhatnagar,
Print Name

Region Director - Environment, Safety & Health,
Title - Owner/President/Other

of Hanson Aggregates LLC,
Corporation/Partnership/Entity Name

have authorized Charles P. "Frosty" Forster, P.E., P.G.
Print Name of Agent/Engineer

of Forster Engineering
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:

Applicant's Signature

4/29/2015
Date

THE STATE OF Texas §

County of Dallas §

BEFORE ME, the undersigned authority, on this day personally appeared Lalit Bhatnagar 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 29th day of April 2015.

Gina Perez
NOTARY PUBLIC

GINA PEREZ
Notary Public, State of Texas
My Commission Expires
April 14, 2019

Gina Perez
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: April 14, 2019

Section 8.0

APPLICATION FEE FORM AND FEE

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Servtex Quarry, Fordyce Tract
Regulated Entity Location: 21303 FM 2252, Garden Ridge, TX 78123
Name of Customer: Hanson Aggregates LLC
Contact Person: Lalit Bhatnagar, P.E. Phone: (972) 814-4122
Customer Reference Number (if issued):CN 603475864
Regulated Entity Reference Number (if issued):RN 102541612
Austin Regional Office (3373)

☐ Hays ☐ Travis ☐ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☒ Comal ☐ Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment**. This payment is being submitted to:

☐ Austin Regional Office
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☒ San Antonio Regional Office
☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☒ Transition Zone

Type of Plan	*Size*	*Fee Due*
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	685.74± Acres	$ 10,000
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: Charles P. Fordyce Date: June 15, 2015

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 5 < 10 10 < 40 40 < 100 100 < 500 ≥ 500	$1,500 $3,000 $4,000 $6,500 $8,000 $10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 10 < 40 40 < 100 ≥ 100	$3,000 $4,000 $5,000 $6,500 $8,000 $10,000

Organized Sewage Collection Systems and Modifications

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

Lehigh Hanson
HEIDELBERGCEMENT Group

Lehigh Hanson Inc.
300 E. John Carpenter Frwy
Suite 1645
Irving, TX 75062

Address inquiries to the accounts payable customer response line at:
E-Mail: lh_vendorsupport@lehighhanson.com
TEL: 972-653-6287

Vendor Name	Vendor Number	Check Date	Check Number
EXAS COMMISSION	6391639	05/21/2015	21275319

Invoice Date	Invoice Number	Remarks	Gross Amount	Discount	Net Amount
05/17/2015	MCR05172015		10,000.00		10,000.00
		TOTALS	$10,000.00	$0.00	$10,000.00

THIS IS WATERMARKED PAPER - DO NOT ACCEPT WITHOUT NOTING WATERMARK - HOLD TO LIGHT TO VERIFY WATERMARK

Lehigh Hanson
HEIDELBERGCEMENT Group

Bank of America, N.A.
Dallas, TX 75201

64-1278
611 GA

DATE	CHECK NO.
05/21/2015	21275319

Lehigh Hanson Inc.
300 E. John Carpenter Frwy
Suite 1645
Irving, TX 75062

PAY TEN THOUSAND AND 00/100**********

AMOUNT
$****10,000.00
Void after 180 days

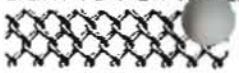
THE ORDER OF TEXAS COMMISSION ENVIRONMENTAL QUALITY
CASHIERS OFFICE MC 214
PO BOX 13088
AUSTIN TX 78711-3088

Daniel M. Harrington
MH Ryan

Authorized Signatures

⑈021275319⑈ ⑆061112788⑆ 3359168013⑈

HOLD TO LIGHT TO VIEW WATERMARK



DO NOT ACCEPT IF WATERMARK IS ABSENT

DO NOT WRITE BELOW THIS LINE

Section 9.0

CORE DATA FORM

TCEQ Use Only

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. Reason for Submission *(If other is checked please describe in space provided)*

☒ New Permit, Registration or Authorization *(Core Data Form should be submitted with the program application)*

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other **WPAP**

2. Attachments — Describe Any Attachments: *(ex. Title V Application, Waste Transporter Application, etc.)*

☐Yes ☐No — WPAP Permit Application

3. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	4. Regulated Entity Reference Number *(if issued)*
CN 603475864		RN 102541612

SECTION II: Customer Information

5. Effective Date for Customer Information Updates (mm/dd/yyyy)

6. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check only one of the following:*

☐Owner ☐Operator ☒Owner & Operator
☐Occupational Licensee ☐Responsible Party ☐Voluntary Cleanup Applicant ☐Other: _____

7. General Customer Information

☐ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State) ☒ No Change**

If "No Change" and Section I is complete, skip to Section III – Regulated Entity Information.

8. Type of Customer:	☐ Corporation	☐ Individual	☐ Sole Proprietorship- D.B.A
☐ City Government	☐ County Government	☐ Federal Government	☐ State Government
☐ Other Government	☐ General Partnership	☐ Limited Partnership	☐ Other:

9. Customer Legal Name *(If an individual, print last name first: ex: Doe, John)*	*If new Customer, enter previous Customer below*	*End Date:*

10. Mailing Address:

City		State		ZIP		ZIP + 4	

11. Country Mailing Information *(if outside USA)*	12. E-Mail Address *(if applicable)*

13. Telephone Number	14. Extension or Code	15. Fax Number *(if applicable)*
( ) -		( ) -

16. Federal Tax ID *(9 digits)*	17. TX State Franchise Tax ID *(11 digits)*	18. DUNS Number *(if applicable)*	19. TX SOS Filing Number *(if applicable)*

20. Number of Employees
☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

21. Independently Owned and Operated?
☐ Yes ☐ No

SECTION III: Regulated Entity Information

22. 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 Name ☐ Update to Regulated Entity Information ☒ No Change** *(See below)*

**If "NO CHANGE" is checked and Section I is complete, skip to Section IV, Preparer Information.

23. Regulated Entity Name *(name of the site where the regulated action is taking place)*

SERVTEX QUARRY, FORDYCE TRACT

24. Street Address of the Regulated Entity: *(No P.O. Boxes)*							
	City		State		ZIP		ZIP + 4	
25. Mailing Address:							
	City		State		ZIP		ZIP + 4	
26. E-Mail Address:							

27. Telephone Number	28. Extension or Code	29. Fax Number *(if applicable)*
( ) -		( ) -

30. Primary SIC Code (4 digits)	31. Secondary SIC Code (4 digits)	32. Primary NAICS Code (5 or 6 digits)	33. Secondary NAICS Code (5 or 6 digits)

34. What is the Primary Business of this entity? *(Please do not repeat the SIC or NAICS description.)*

Questions 34 – 37 address geographic location. Please refer to the instructions for applicability.

35. Description to Physical Location:	

36. Nearest City	County	State	Nearest ZIP Code

37. Latitude (N) In Decimal:			38. Longitude (W) In Decimal:		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form or the updates may not be made. If your Program is not listed, check other and write it in. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Industrial Hazardous Waste	☐ Municipal Solid Waste
☐ New Source Review – Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS	☐ Sludge
☐ Stormwater	☐ Title V – Air	☐ Tires	☐ Used Oil	☐ Utilities
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Charles P. "Frosty" Forster, P.E., P.G.	41. Title:	Principal

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(210) 698-5544		( ) -	fforster@forsterengineering.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 9 and/or as required for the updates to the ID numbers identified in field 39.

(See the Core Data Form instructions for more information on who should sign this form.)

Company:	Forster Engineering	Job Title:	Principal
Name *(In Print)*:	Charles P. "Frosty" Forster, P.E., P.G.	Phone:	(210) 698-5544
Signature:	Charles P. Forster	Date:	06/19/15

FORSTER ENGINEERING

19915 Wittenburg
San Antonio, Texas 78256
p (210) 698-5544 c (210) 771-5721
fforster@forsterengineering.com
www.forsterengineering.com

November 9, 2015

RECEIVED
NOV 16 2015
COUNTY ENGINEER

Mr. Joshua Vacek
Texas Commission on Environmental Quality (TCEQ)
San Antonio Region 13
14250 Judson Road
San Antonio, Texas 78233

Subject: Hanson Aggregates LLC
Servtex Quarry, Worley/Heitkamp Tracts
Water Pollution Prevention Plan (WPAP) Extension Application
Investigation No. 1288798
Response to NOD 1 Dated November 2, 2015

TCEQ R-13 2015 NOV 12 09:39

Dear Mr. Vacek:

As requested in your letter dated November 2, 2015 (copy attached), we are providing one (1) original and five (5) copies of responses to Notice of Deficiency 11/02/15 for the Hanson Aggregates LLC Servtex Quarry, Worley/Heitkamp Tracts WPAP Application Extension. Your comments and our responses are provided below as follows:

1. The application for extension was submitted by Hanson Aggregates Central, Inc. but according to Comal County Records the property is actually owned by Hanson Aggregates West, Inc. In accordance with Title 30, Texas Administrative Code, Chapter 213.4(c)(2) only owners, their authorized agent(s), or those persons having the right to possess and control the property that is the subject of the Edwards Aquifer protection plan may submit the plan for review and approval by the executive director. Please revise the following extension application documents to reflect submission by the current property owner:

- **Extension request form (TCEQ-10260)**
- **Agent Authorization Form (TCEQ-0599)**
- **Application Fee Form (TCEQ-0574)**
- **Core Data Form (TCEQ-10400)**
- **Edwards Aquifer Application Cover Page (TCEQ-20705)**

Attached is a letter from William H. Venema, Vice President, Hanson Aggregates LLC confirming ownership of the property. The requested forms have been modified to reflect Hanson Aggregates LLC as owner/applicant/customer.

2. The signature authority of the persons signing the application and agent authorization form could not be verified. 30 TAC 213.4(d)(1)(A) establishes that for a corporation, a principal executive officer (president, vice-president, or a duly authorized representative) must sign the application. A representative must submit written proof of the authorization. Please provide additional documentation that demonstrates the signature authority of the applicant and the person providing agent authorization to the agent if different from the applicant.

Attached is a letter from William H. Venema, Vice President, Hanson Aggregates LLC confirming ownership of the property.

If you have any questions or require additional information, please do not hesitate to contact me at your earliest convenience.

Sincerely,
Forster Engineering
(TBPE # F-12385)

Charles P. "Frosty" Forster, P.E., P.G.
Principal

1066C-15



TCEQ
Protecting Texas by Reducing and Preventing Pollution

Fax Cover Sheet

Number of Pages: *(including this sheet)* 2

Date: November 2, 2015
To: Charles P. Forster, P.E., P.G.
Organization: Forster Engineering
Email: fforster@forsterengineering.com

To: Lalit Bhatnagar, P.E.
Organization: Hanson Aggregates Central Inc.
Email: Lalit.Bhatnagar@hanson.biz

From: Mr. Joshua Vacek
Division : Edwards Aquifer Protection Program
Texas Commission on Environmental Quality
Phone: 210-403-4028
Fax: 210-545-4329

Re: Edwards Aquifer Protection Program, Comal County

Name of Project: Servtex Quarry, Worley/Heitkamp Tracts; located on the northeast corner of the intersection of FM 2252 and Schneider Lane, Garden Ridge, Comal County, Texas

Plan Type: Request for Extension of Time to Commence Regulated Activities Authorized by a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213;

Investigation No. 1288798; Regulated Entity Number: RN102541612; Additional ID No. 13-15050702

Dear Mr. Forster:

We are in the process of technically reviewing the WPAP application extension you submitted on the above-referenced project. Before we can proceed with our review, the following comments relating to the application must be addressed.

Extension Request Application Form (TCEQ-10260)

1. The application for extension was submitted by Hanson Aggregates Central, Inc. but according to Comal County Records the property is actually owned by Hanson Aggregates West, Inc. In accordance with Title 30, Texas Administrative Code, Chapter 213.4(c)(2) only owners, their authorized agent(s), or those persons having the right to possess and control the property

that is the subject of the Edwards Aquifer protection plan may submit the plan for review and approval by the executive director. Please revise the following extension application documents to reflect submission by the current property owner:

- Extension request form (TCEQ-10260)
- Agent Authorization Form (TCEQ-0599)
- Application Fee Form (TCEQ-0574)
- Core Data Form (TCEQ-10400)
- Edwards Aquifer Application Cover Page (TCEQ-20705)

2. The signature authority of the persons signing the application and agent authorization form could not be verified. 30 TAC 213.4(d)(1)(A) establishes that for a corporation, a principal executive officer (president, vice-president, or a duly authorized representative) must sign the application. A representative must submit written proof of the authorization. Please provide additional documentation that demonstrates the signature authority of the applicant and the person providing agent authorization to the agent if different from the applicant.

We ask that you submit one original and five copies of the amended materials to supplement the application to this office by no later than **14 days from the date of this fax** to avoid denial of the extension application. If the response to this notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, a second notice will be sent to you requiring a response within 14 days from the notice date. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the extension application will be denied unless you provide written notification that the extension is being withdrawn. Please note that the application fee will be forfeited if the extension is not withdrawn. If you have any questions or require additional information, please contact Mr. Joshua Vacek of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4028.

Lehigh Hanson
HEIDELBERGCEMENT Group

Lehigh Hanson, Inc.
Legal Department
P.O. Box 660225
Dallas, Texas 75266
Phn: (972) 653-6272
Fax: (972) 653-6185
www.hanson.com

November 9, 2015

Mr. Alex D. Grant
Texas Commission on Environmental Quality
Edwards Aquifer Protection Program
TCEQ – San Antonio Region
14250 Judson Road
San Antonio, TX 78233

Subject: **Hanson Aggregates West, Inc., Comal County Properties**
Hanson Aggregates LLC TCEQ Applications

Dear Mr. Grant:

I, William H. Venema, am a duly designated officer, Vice President of Hanson Aggregates LLC, formerly known as Hanson Aggregates West, Inc. On December 31, 2008, Hanson Aggregates West, Inc. converted and changed its name to Hanson Aggregates West LLC. Also, on December 31, 2008, Hanson Aggregates West LLC changed its name to Hanson Aggregates LLC. Copies of the filings filed on record with the Delaware Secretary of State are attached.

Therefore, Hanson Aggregates LLC, formerly Hanson Aggregates West, Inc., has full possession and control of the various properties identified or recorded in the Comal County records as owned by Hanson Aggregates West, Inc. by virtue of ownership. Accordingly, Hanson Aggregates LLC has the authority, as owner, to apply for any and all permits required by the Texas Commission on Environmental Quality (TCEQ) for said properties.

Please contact me by phone at (972) 653-5572 or by mail at Hanson Aggregates LLC, 300 E. John Carpenter Freeway, Suite 1645, Irving, TX 75062, for any further assistance.

Sincerely,

William H. Venema
Vice President
Hanson Aggregates LLC

STATE OF TEXAS
COUNTY OF DALLAS

I, Amy C. Yi, a Notary Public, do hereby certify that William H. Venema as Vice President of Hanson Aggregates LLC, formerly Hanson Aggregates West, Inc., personally appeared before me this day, known to me to be the person whose name is subscribed on the foregoing instrument and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

WITNESS my hand and official seal this 9th day of November, 2015.

_____ Notary Public

My Commission expires: November 12, 2018

AMY C YI
My Commission Expires
November 12, 2018

Delaware

The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE DO HEREBY CERTIFY THAT THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF CONVERSION OF A DELAWARE CORPORATION UNDER THE NAME OF "HANSON AGGREGATES WEST, INC." TO A DELAWARE LIMITED LIABILITY COMPANY, CHANGING ITS NAME FROM "HANSON AGGREGATES WEST, INC." TO "HANSON AGGREGATES WEST LLC", FILED IN THIS OFFICE ON THE TWENTY-NINTH DAY OF DECEMBER, A.D. 2008, AT 6:52 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF CONVERSION IS THE THIRTY-FIRST DAY OF DECEMBER, A.D. 2008, AT 9:45 O'CLOCK P.M.



Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

0693918 8100V

AUTHENTICATION: 7057716

081235422

DATE: 01-02-09

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 06:44 PM 12/29/2008
FILED 06:52 PM 12/29/2008
SRV 081235422 - 0693918 FILE

STATE OF DELAWARE
CERTIFICATE OF CONVERSION
FROM A CORPORATION TO A
LIMITED LIABILITY COMPANY PURSUANT TO
SECTION 18-214 OF THE LIMITED LIABILITY COMPANY ACT

Hanson Aggregates West, Inc., a corporation formed and existing under the General Corporation Law of the State of Delaware (the "*Corporation*"), for purposes of converting the Corporation into a limited liability company existing under the Limited Liability Company Act of the State of Delaware (the "*Limited Liability Company*"), hereby certifies as follows:

1. The jurisdiction where the Corporation was first formed is Delaware.

2. The jurisdiction of the Corporation immediately prior to filing this Certificate is Delaware.

3. The date the Corporation was first formed is November 27, 1968.

4. The name of the Corporation immediately prior to filing this Certificate is Hanson Aggregates West, Inc.

5. The name of the Limited Liability Company as set forth in the Certificate of Formation is Hanson Aggregates West LLC.

6. The conversion is to be effective as of 9:45 p.m., Eastern Time, on December 31, 2008.

IN WITNESS WHEREOF, the undersigned has executed this Certificate as of the 15th day of December, A.D., 2008.

HANSON AGGREGATES WEST, INC.

By: _____
Authorized Person

Name: Michael H. Hyer

Delaware

The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE DO HEREBY CERTIFY THAT THE ATTACHED IS A TRUE AND CORRECT COPY OF CERTIFICATE OF FORMATION OF "HANSON AGGREGATES WEST LLC" FILED IN THIS OFFICE ON THE TWENTY-NINTH DAY OF DECEMBER, A.D. 2008, AT 6:52 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF FORMATION IS THE THIRTY-FIRST DAY OF DECEMBER, A.D. 2008, AT 9:45 O'CLOCK P.M.



Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

0693918 8100V

AUTHENTICATION: 7057716

081235422

DATE: 01-02-09

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 06:44 PM 12/29/2008
FILED 06:52 PM 12/29/2008
SRV 081235422 - 0693918 FILE

STATE OF DELAWARE
LIMITED LIABILITY COMPANY
CERTIFICATE OF FORMATION

This Certificate of Formation of Hanson Aggregates West LLC is being duly executed and filed by the undersigned, as an authorized person, to form a limited liability company under the Delaware Limited Liability Company Act (6 Del. C. §18-101 et seq.).

First: The name of the limited liability company formed hereby is Hanson Aggregates West LLC (the "***Company***").

Second: The address of the Company's registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

Third: The name and address of the registered agent for service of process on the Company in the State of Delaware is The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

Fourth: The Company is being formed in conjunction with the conversion of Hanson Aggregates West, Inc., a Delaware corporation (the "***Converting Entity***"), to a limited liability company.

Fifth: The conversion of the Converting Entity and formation of the limited liability company will be effective as of 9:45 p.m. on December 31, 2008 (the "***Effective Time***").

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Formation as of the 15th day of December, 2008, to be effective as of the Effective Time.

By: _____
Authorized Person

Name: Michael H. Hyer

Delaware

The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "HANSON AGGREGATES WEST LLC", CHANGING ITS NAME FROM "HANSON AGGREGATES WEST LLC" TO "HANSON AGGREGATES LLC", FILED IN THIS OFFICE ON THE TWENTY-NINTH DAY OF DECEMBER, A.D. 2008, AT 6:44 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF AMENDMENT IS THE THIRTY-FIRST DAY OF DECEMBER, A.D. 2008, AT 9:45 O'CLOCK P.M.



Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

0693918 8100

AUTHENTICATION: 7059294

081235465

DATE: 01-02-09

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 06:44 PM 12/29/2008
FILED 06:44 PM 12/29/2008
SRV 081235465 - 0693918 FILE

STATE OF DELAWARE
CERTIFICATE OF AMENDMENT

1. Name of Limited Liability Company: Hanson Aggregates West LLC.

2. The Certificate of Formation of the limited liability company is hereby amended as follows:

> The First Article of the Certificate of Formation is deleted in its entirety and the following provision is substituted in its place and stead:
>
> First: The name of the limited liability company is Hanson Aggregates LLC (the "*Company*").

3. This Amendment shall be effective at 9:45 p.m., Eastern Time, on December 31, 2008.

IN WITNESS WHEREOF, the undersigned has executed this Certificate on behalf of the limited liability company as of the 29th day of December, A.D. 2008.

By: _____
Authorized Person

Name: Michael H. Hyer
Print or Type

Extension Request for an Edwards Aquifer Protection Plan

Texas Commission on Environmental Quality

Relating to 30 TAC §213.4(g) Effective June 1, 1999

Regulated Entity Information

If requested by an agent, attach the agent authorization form.

1. Regulated Entity Name: SERVTEX QUARRY, WORLEY/HEITKAMP TRACTS
2. Customer (Applicant):

   Contact Person: Lalit Bhatnagar, P.E.
   Entity: Hanson Aggregates LLC
   Mailing Address: 300 E. John Carpenter Freeway, Suite 1645
   City, State: Irving, TX Zip: 75062
   Telephone: 972-814-4122 Fax: 469-417-1438
   Email Address: Lalit.Bhatnagar@hanson.biz

3. Agent/Representative (if any):

   Contact Person: Charles P. "Frosty" Forster, P.E., P.G.
   Entity: Forster Engineering
   Mailing Address: 19915 Wittenburg
   City, State: San Antonio, TX Zip: 78256
   Telephone: 210-698-5544 Fax: _____
   Email Address: fforster@forsterengineering.com

Extension Request

4. ☒ **Attachment A - Approval Letter or Extension Approval.** A copy of the last approval letter or the last approved extension is attached.

   Date of letter: 05/15/15
   Expiration date: 11/16/15

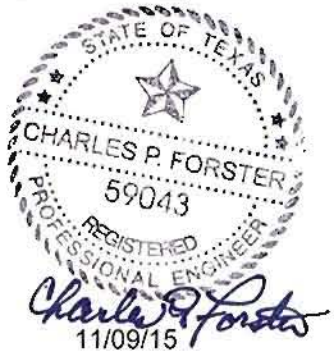
5. ☒ This extension request is submitted not earlier than sixty (60) days prior to the expiration date of an approved Edwards Aquifer protection plan or a previously approved extension.
6. ☒ A completed fee form is attached. The fee for a six-month extension of time is $150.

Signature

Print Name of Customer/Agent: Charles P. "Frosty" Forster, P.E., P.G.

Date: 11/09/15

Signature of Customer/Agent:



Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Steve Geiger,
Print Name

VP IGM,
Title - Owner/President/Other

of Hanson Aggregates LLC,
Corporation/Partnership/Entity Name

have authorized Charles P. "Frosty" Forster, P.E., P.G.
Print Name of Agent/Engineer

of Forster Engineering
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:

Applicant's Signature

10/26/15
Date

THE STATE OF Texas §

County of Harris §

BEFORE ME, the undersigned authority, on this day personally appeared Steve Geiger 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 26th day of October, 15

JAZMIN RUVALCABA
Notary Public, State of Texas
My Commission Expires
May 29, 2019

NOTARY PUBLIC

Jazmin Ruvalcaba
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: May 29th, 2019

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: SERVTEX QUARRY, WORLEY/HEITKAMP TRACTS
Regulated Entity Location: 21303 FM 2252, GARDEN RIDGE, TX 78132
Name of Customer: Hanson Aggregates LLC
Contact Person: Lalit Bhatnagar, P.E. Phone: 972-814-4122
Customer Reference Number (if issued):CN 603475864
Regulated Entity Reference Number (if issued):RN 102541612

Austin Regional Office (3373)

☐ Hays ☐ Travis ☐ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☒ Comal ☐ Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment**. This payment is being submitted to:

☐ Austin Regional Office
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☒ San Antonio Regional Office
☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	*Size*	*Fee Due*
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	$
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	1 Each	$ 150

Signature: Charles D. Fowler Date: 11/09/15

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 5 < 10 10 < 40 40 < 100 100 < 500 ≥ 500	$1,500 $3,000 $4,000 $6,500 $8,000 $10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 10 < 40 40 < 100 ≥ 100	$3,000 $4,000 $5,000 $6,500 $8,000 $10,000

Organized Sewage Collection Systems and Modifications

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

TCEQ Use Only

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. Reason for Submission *(If other is checked please describe in space provided)*

☐ New Permit, Registration or Authorization *(Core Data Form should be submitted with the program application)*

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☒ Other **WPAP EXTENSION**

2. Attachments — Describe Any Attachments: *(ex. Title V Application, Waste Transporter Application, etc.)*

☒ Yes ☐ No — WPAP Renewal Application

3. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	4. Regulated Entity Reference Number *(if issued)*
CN 603475864		RN 102541612

SECTION II: Customer Information

5. Effective Date for Customer Information Updates (mm/dd/yyyy)

6. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check only one of the following:*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other: _____

7. General Customer Information

☐ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State) ☒ No Change**

If "No Change" and Section I is complete, skip to Section III – Regulated Entity Information.

8. Type of Customer:	☐ Corporation	☐ Individual	☐ Sole Proprietorship- D.B.A
☐ City Government	☐ County Government	☐ Federal Government	☐ State Government
☐ Other Government	☐ General Partnership	☐ Limited Partnership	☐ Other:

9. Customer Legal Name *(If an individual, print last name first: ex: Doe, John)*	*If new Customer, enter previous Customer below*	*End Date:*

10. Mailing Address:

City		State		ZIP		ZIP + 4	

11. Country Mailing Information *(if outside USA)*	12. E-Mail Address *(if applicable)*

13. Telephone Number	14. Extension or Code	15. Fax Number *(if applicable)*
( ) -		( ) -

16. Federal Tax ID *(9 digits)*	17. TX State Franchise Tax ID *(11 digits)*	18. DUNS Number *(if applicable)*	19. TX SOS Filing Number *(if applicable)*

20. Number of Employees
☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

21. Independently Owned and Operated?
☐ Yes ☐ No

SECTION III: Regulated Entity Information

22. 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 Name ☐ Update to Regulated Entity Information ☒ No Change** *(See below)*

**If "NO CHANGE" is checked and Section I is complete, skip to Section IV, Preparer Information.

23. Regulated Entity Name *(name of the site where the regulated action is taking place)*

24. Street Address of the Regulated Entity: *(No P.O. Boxes)*							
	City		State		ZIP		ZIP + 4	
25. Mailing Address:							
	City		State		ZIP		ZIP + 4	
26. E-Mail Address:							
27. Telephone Number		28. Extension or Code		29. Fax Number *(if applicable)*			
( ) -				( ) -			
30. Primary SIC Code (4 digits)	31. Secondary SIC Code (4 digits)	32. Primary NAICS Code (5 or 6 digits)		33. Secondary NAICS Code (5 or 6 digits)			
34. What is the Primary Business of this entity? *(Please do not repeat the SIC or NAICS description.)*							

Questions 34 – 37 address geographic location. Please refer to the instructions for applicability.

35. Description to Physical Location:					
36. Nearest City		County		State	Nearest ZIP Code
37. Latitude (N) In Decimal:			38. Longitude (W) In Decimal:		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form or the updates may not be made. If your Program is not listed, check other and write it in. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Industrial Hazardous Waste	☐ Municipal Solid Waste
☐ New Source Review – Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS	☐ Sludge
☐ Stormwater	☐ Title V – Air	☐ Tires	☐ Used Oil	☐ Utilities
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Charles P. "Frosty" Forster, P.E., P.G.	41. Title:	Principal
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(210) 698-5544		( ) -	fforster@forsterengineering.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 9 and/or as required for the updates to the ID numbers identified in field 39.

(See the Core Data Form instructions for more information on who should sign this form.)

Company:	Forster Engineering	Job Title:	Principal
Name *(In Print)*:	Charles P. "Frosty" Forster, P.E., P.G.	Phone:	(210) 698-5544
Signature:	Charles P. Forster	Date:	11/09/15

Extension Request for an Edwards Aquifer Protection Plan

Texas Commission on Environmental Quality

Relating to 30 TAC §213.4(g) Effective June 1, 1999

Regulated Entity Information

If requested by an agent, attach the agent authorization form.

1. Regulated Entity Name: SERVTEX QUARRY, WORLEY/HEITKAMP TRACTS
2. Customer (Applicant):

   Contact Person: Lalit Bhatnagar, P.E.
   Entity: Hanson Aggregates LLC
   Mailing Address: 300 E. John Carpenter Freeway, Suite 1645
   City, State: Irving, TX Zip: 75062
   Telephone: 972-814-4122 Fax: 469-417-1438
   Email Address: Lalit.Bhatnagar@hanson.biz

3. Agent/Representative (if any):

   Contact Person: Charles P. "Frosty" Forster, P.E., P.G.
   Entity: Forster Engineering
   Mailing Address: 19915 Wittenburg
   City, State: San Antonio, TX Zip: 78256
   Telephone: 210-698-5544 Fax: _____
   Email Address: fforster@forsterengineering.com

Extension Request

4. ☒ **Attachment A - Approval Letter or Extension Approval.** A copy of the last approval letter or the last approved extension is attached.

   Date of letter: 05/15/15
   Expiration date: 11/16/15

5. ☒ This extension request is submitted not earlier than sixty (60) days prior to the expiration date of an approved Edwards Aquifer protection plan or a previously approved extension.
6. ☒ A completed fee form is attached. The fee for a six-month extension of time is $150.

Signature

Print Name of Customer/Agent: Charles P. "Frosty" Forster, P.E., P.G.

Date: 11/09/15

Signature of Customer/Agent:

Charles P. Forster

STATE OF TEXAS
CHARLES P. FORSTER
59043
REGISTERED
PROFESSIONAL ENGINEER

Charles P. Forster
11/09/15