

Robert J. Huston, *Chairman*  
R. B. "Ralph" Marquez, *Commissioner*  
John M. Baker, *Commissioner*  
Jeffrey A. Saitas, *Executive Director*



## TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

*Protecting Texas by Reducing and Preventing Pollution*

August 20, 1999

Mr. Randy Taylor  
Taylor Construction  
662 Evergreen Lane  
New Braunfels, TX 78130

Re: EDWARDS AQUIFER, Comal County  
PROJECT: Mission Ridge Subdivision, Project number 1301.00, Located immediately west of the intersection of Kerlick and Valley View Lane, New Braunfels, Texas  
TYPE: Request for Approval of Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) §213.5(b); Edwards Aquifer Protection Program

Dear Mr. Taylor:

The Texas Natural Resource Conservation Commission (TNRCC) has completed its review of the WPAP application for the referenced project that was submitted by Paul Schroeder, P.E. on behalf of Alamo Consulting Engineering & Surveying, Inc. to the San Antonio Regional Office on May 26, 1999. Final review of the WPAP submittal was completed after additional materials were received on July 6, 1999, and August 3, 1999. The WPAP proposed in the application is in general compliance with 30 TAC §213.5(b); therefore, approval of the plan is hereby granted subject to applicable state rules and the conditions in this approval letter. *This approval expires two (2) years from the date of this approval unless, prior to the expiration date, construction has commenced on the project or an extension of time has been requested.*

### PROJECT DESCRIPTION

The proposed residential project will have an area of 26 acres and will consist of the construction of 75 single family residential homes. Project wastewater will be disposed of by conveyance to the New Braunfels Utilities Sewage Treatment Plant owned by the City of New Braunfels. The proposed impervious cover for the development is approximately 9.3 acres (35.8%). The site is located within the City of New Braunfels, and must conform with applicable codes and requirements of the City of New Braunfels.

### GEOLOGY ON SITE

According to the geologic assessment included with the submittal, two (2) features were identified on the proposed project site and assessed were assessed as possibly sensitive. These features consisted of a fractured rock zone located in a stream bed and a solution cavity.

REPLY TO: REGION 13 • 140 HEIMER RD., STE. 360 • SAN ANTONIO, TEXAS 78232-5042 • 210/490-3096 • FAX 210/545-4329

P.O. Box 13087 • Austin, Texas 78711-3087 • 512/239-1000 • Internet address: [www.tnrcc.state.tx.us](http://www.tnrcc.state.tx.us)

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The San Antonio Regional Office site inspection of June 8, 1999, revealed three (3) additional geological features at the proposed site. The features consisted of two (2) solution cavities and a single fractured rock outcropping. The solution features were subsequently assessed by the geologist as possibly sensitive and the fractured rock outcropping as not sensitive.

#### PERMANENT POLLUTION ABATEMENT MEASURES

The following measures will be taken to prevent pollution of stormwater originating on-site or up-gradient from contaminating any sensitive or possibly sensitive features:

Four (4) geologic features on the project site were assessed as being possibly sensitive. These features will be graded, and permanently sealed by the placement of clean fill.

#### SPECIAL CONDITIONS

1. If any potential sensitive features are encountered during construction, a geologist shall evaluate the significance of the features. The evaluation shall include representative photographs and a description of the feature forwarded to the San Antonio office. Construction in the vicinity of the features may only continue with written approval from the TNRCC.
2. Placement of hydrocarbon or hazardous substance storage facilities regulated pursuant to 213.5(d) and 213.5(e), requires submittal of all appropriate applications with appropriate fees and must receive prior approval from the TNRCC.
3. A modification to this application, and associated fees, must be submitted to the San Antonio Regional Office for review and consideration prior commencement of construction of the proposed recreation center.
4. The temporary and permanent best management practices (BMPs) for the proposed project have been reviewed by the Commission's staff. As presented to the TNRCC, the BMPs were designed by a Texas Licensed Professional Engineer to be in accordance with the requirements of 30 TAC §213.5(b). Therefore, based on the Texas Licensed Professional Engineer's certification of compliance, the planning materials for construction of the proposed pollution abatement measures are hereby approved.
5. The TNRCC may monitor stormwater discharges from the site to evaluate the adequacy of permanent erosion and sedimentation (E&S) control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

#### STANDARD CONDITIONS

1. During the course of regulated activities related to this project, the applicant or his 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, upon which that person or entity shall assume responsibility for all provisions and conditions of this approval.

2. Any modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a WPAP to amend this approval, including the payment of appropriate fees and all information necessary for its review and approval.
3. Prior to commencing any regulated activity, the applicant or his agent must notify the San Antonio Regional Office in writing of the date on which the regulated activity will begin.
4. The applicant or his agent shall record this WPAP approval in the county deed records within 30 days of receiving this notice of approval. Proof of deed recordation shall be submitted to the San Antonio Regional Office prior to commencing construction. A suggested format that you may use to deed record the approved WPAP is enclosed.
5. All contractors conducting regulated activities at the 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. 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 TNRCC may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
7. If any significant recharge feature [sensitive feature] 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 potential adverse impacts to water quality.
8. 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.
9. Approval of the design of the sewage collection system for this proposed project shall be obtained from the TNRCC prior to commencement of construction of any sewage collection system.
10. Any abandoned wells shall be plugged in accordance with 16 TAC §76 or an equivalent method, as approved by the Executive Director.


Mr. Randy Taylor  
August 20, 1999  
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Any drill holes resulting from core sampling on-site or down-gradient of the site shall be plugged with native soil, from the bottom of the hole to the top of the hole, so as to not allow water or contaminants to enter the subsurface environment.

11. Pursuant to §26.136 of the Texas Water Code, any violations of the requirements in 30 TAC §213 may result in administrative penalties.

Should clarification of this letter be desired or if we may be of any other assistance, please contact Tom Gutierrez of our San Antonio Regional office at 210/403-4025. Please reference project number 1301.

Sincerely,



Jeffrey A. Saitas, P.E.  
Executive Director

Texas Natural Resource Conservation Commission

JAS/TG/eg

Enclosure: Deed Recordation Affidavit

cc: Paul Schroeder, P.E., Alamo Consulting Engineering & Surveying, Inc.  
Harry Bennett, City of New Braunfels  
Mike Shands, City of New Braunfels  
Tom Hornseth, Comal County  
Greg Ellis, Edwards Aquifer Authority  
TNRCC Field Operations, Austin



Buddy Garcia, *Chairman*

Larry R. Soward, *Commissioner*

Bryan W. Shaw, Ph.D., *Commissioner*

Glenn Shankle, *Executive Director*

## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

February 1, 2008

Mr. Randal Taylor  
Taylor Construction  
672 Ridge Hill Drive  
New Braunfels, TX 78130

Re: EDWARDS AQUIFER, Bexar County  
PROJECT: Mission Ridge Subdivision, Project number 1301.01;  
Regulated Entity No. RN102749595; Investigation No. 615460  
TYPE: Solution Feature/Sensitive Feature; 30 Texas Administrative Code (TAC)  
§213.5(f) (2); Edwards Aquifer Protection Program

Dear Mr. Taylor:

The Texas Commission on Environmental Quality (TCEQ) received a plan which addresses protection of a solution feature encountered on lot 20 of Mission Ridge Subdivision Unit 2 by a City of New Braunfels inspector. There were no trenching activities in the vicinity of the feature at the time of discovery. It was submitted on behalf of Taylor Construction by Mr. Paul A. Schroeder, P.E. of Alamo Consulting Engineering & Surveying, Inc. and received administratively complete by the San Antonio Regional Office on December 12, 2007. Feature location and assessment is outlined in Table I below.

Type of Solution Feature	Location	Case*/ Sensitivity
Solution Cavity (No. 1)	Mission Ridge Subdivision Lot 20 (1.5'x 1'x 4')	Sensitive (40)

A representative of the San Antonio Region office did not conduct an on site investigation. The engineered resolution submitted for this feature is in the enclosed Solution Feature Discovery Notification Form, attachments and drawings. Based on the information provided, and its certification by Mr. Paul A. Schroeder, P.E., your protection plan is approved with the following conditions:

1. The location of the solution feature shall be shown on the "as-built" plans.

REPLY TO: REGION 13 • 14250 JUDSON RD. • SAN ANTONIO, TEXAS 78233-4480 • 210-490-3096 • FAX 210-545-4329

P.O. Box 13087 • Austin, Texas 78711-3087 • 512-239-1000 • Internet address: [www.tceq.state.tx.us](http://www.tceq.state.tx.us)

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Mr. Randal Taylor

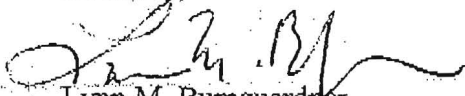
February 1, 2008

Page 2

2. Within 30 days of receiving written approval of this solution feature 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. The location of the solution feature shall be included in the deed recordation in the county deed records.

Should clarification of this letter be desired or if we may be of any other assistance, please contact Agnieszka Hobson of our San Antonio Regional office at 210/403-4075. Please reference project number 1301.01.

Sincerely,



Lynn M. Bumgardner

Water Section Work Leader

Texas Commission on Environmental Quality

LMB/AMH/eg

Enclosures: Table II (Minimum Standards for Closing Solution Features in Sewer Line Trenches)  
Attachment 1, Location Map, Solution Cavity Profile & Photos (4 pages)  
Attachment 3, Executive Summary, Original Notification Letter (3 pages)  
Deed Recordation Affidavit, TCEQ-0625

cc with Enclosures:

Mr. Paul A. Schroeder, P.E., Alamo Consulting Engineering & Surveying, Inc.

Mr. Tom Hornseth, P.E., Comal County

Ms. Velma Reyes Danielson, Edwards Aquifer Authority

TCEQ Central Records, Building F, MC-212

TABLE II

**EDWARDS AQUIFER PROTECTION PROGRAM - TCEQ**  
**Minimum Protective Standards for Sewer Line and Storm Sewer Trenches**  
 (from Edwards Aquifer Guidance Document 96.004, Effective 8/11/98)

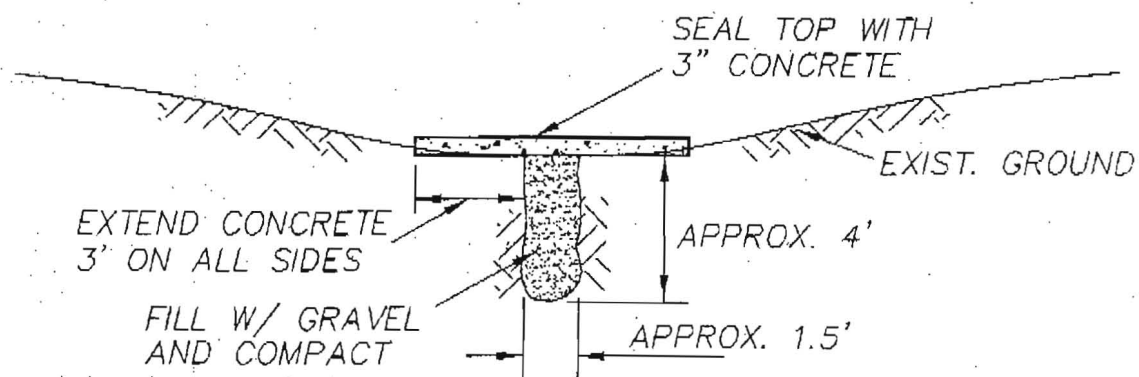
Case	Description	Concern	Treatment	Notification/Approval
1	Sensitive feature is less than or equal to six (6) inches in all directions and is located above the embedment of the pipe. All rock within and surrounding the feature is sound.	Not environmental nor pipe integrity	No abatement required.	None required.
2	Sensitive feature is either larger than six (6) inches in at least one direction or is located within the level of the pipe embedment. No portion of the sensitive feature may intersect the plane of trench floor. All rock within and surrounding the feature is sound.	Environmental	The sensitive feature shall be filled with concrete. Gravel to "fist sized" rock or sacks of gravel may be placed in feature prior to placement of the concrete as long as a minimum of eighteen (18) inches of concrete is used to close the feature. minimum).	Requires notification and prior written approval from TCEQ.
3	Sensitive feature intersects the plane of the trench floor is less than four (4) feet in any direction. All rock within and surrounding the feature is sound.	Environmental	Sensitive feature shall be filled with concrete. Gravel to "fist sized" rock or sacks of gravel may be placed in feature prior to placement of concrete at least eighteen (18) inches of concrete is used to close the feature. The sewer line or storm sewer lines shall be concrete encased for width of the sensitive feature plus a minimum of five (5) feet on either end. The encasement shall provide a minimum of six (6) inches of concrete on all sides of the pipe and shall have a compression strength of at least two thousand five hundred (2,500) psi (28-day strength). The concrete may be steel reinforced.	Requires notification and prior written approval from TCEQ.
4	Sensitive feature intersects the plane of the trench floor and any opening in trench floor is greater than four (4) feet in any direction or the trench floor is unstable.	Environmental & Structural	Requires an engineered resolution at least as protective as Case 3 above. Additional protective measures, including rerouting of line, may be required.	Requires notification and prior written approval from TCEQ.

All plans submitted to the TCEQ regional office shall have a signed and dated seal of a Texas licensed Professional Engineer. All plans will be reviewed on a case-by-case basis and additional protective measures or additional information may be required.

**ATTACHMENT 1**  
**LOCATION MAP, SOLUTION CAVITY PROFILE**  
**& PHOTOS**







MISSION RIDGE SUBDIVISION UNIT 2  
PROFILE "SOLUTION CAVITY"

NTS



ALAMO CONSULTING  
ENGINEERING &  
SURVEYING, INC.

140 HEIMER RD., STE. 617, SAN ANTONIO, TX. 78232  
PHONE:(210)828-0691 FAX:(210)824-3055







**ATTACHMENT 3**  
**EXECUTIVE SUMMARY, ORIGINAL NOTIFICATION**  
**LETTER**



## EXECUTIVE SUMMARY

The solution feature is referenced throughout this report as a "solution cavity". The solution cavity was found within an undeveloped lot by a City of New Braunfels inspector on December 21, 2006. TCEQ was notified by letter, dated February 22, 2007 (see letter in this attachment).

The owner placed temporary erosion/sedimentation measures around the solution cavity as instructed by the engineer. These measures include silt fencing and plywood.

No trenching of any kind is in the vicinity of the solution cavity, therefore it is the recommendation of the engineer that the solution cavity be filled with compacted gravel to provide a solid foundation for a residential structure. The opening will be sealed with a three inch concrete "slab" extending three feet from the edges of the opening in all directions prior to construction of the residential slab (see Profile in Attachment 1).

RECEIVED  
FEB 08 2008  
COUNTY ENGINEER

SOLUTION FEATURE DISCOVERY NOTIFICATION  
FOR  
**MISSION RIDGE UNIT 2**  
COMAL COUNTY, TEXAS  
NOVEMBER 2007

2007 DEC -4 AM 11:17

RECEIVED TOEG  
SAN ANTONIO  
REGION



PAUL A. SCHROEDER, P.E., R.P.L.S.



ALAMO CONSULTING ENGINEERING & SURVEYING, INC.  
140 HEIMER ROAD, STE. 617 SAN ANTONIO, TEXAS 7823  
PHONE: 828-0691

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- I. SOLUTION FEATURE DISCOVERY NOTIFICATION FORM (TCEQ-10256)
  - ATTACHMENT 1 - LOCATION MAP, SOLUTION CAVITY PROFILE & PHOTOS
  - ATTACHMENT 2 - GEOLOGIST DATA
  - ATTACHMENT 3 - EXECUTIVE SUMMARY, ORIGINAL NOTIFICATION LETTER

**SOLUTION FEATURE DISCOVERY NOTIFICATION  
FORM (TCEQ-10256)**

**Solution Feature Discovery Notification Form**  
 Edwards Aquifer Protection Program  
 For Regulated Activities on the Edwards Aquifer Recharge Zone and Transition Zone  
 And Relating to 30 TAC 213.5(f)(2) Effective June 1, 1999

When reporting a solution feature encountered during construction activities please provide the following information:

Regulated Entity Name:	MISSION RIDGE SUBDIVISION UNIT 2 RN104686803	EAPP ID #:	13-05070604
Project Type:	<u>WPAP</u> SCS    UST    AST	Approval Date:	August 20, 1999
Regulated Entity Location:	NE OF LANDA ST & LOOP 337 INTER. NEW BRAUNFELS, COMAL CO., TX	Approval Dates/ID#'s of any Modifications:	
Date Feature(s) Discovered:	DECEMBER 21, 2006	Date TCEQ Notified:	FEBRUARY 22, 2007
Holder of Approved Plan:	TAYLOR CONSTRUCTION	Solution Feature Plan Submitted By:	PAUL A. SCHROEDER, P.E., R.P.L.S.
Contact:	RANDY TAYLOR	Title:	PRESIDENT
Title:	OWNER	Company:	ALAMO CONSULTING ENG. & SURVEYING, INC.
Mailing Address:	672 RIDGE HILL DRIVE NEW BRAUNFELS, TX 78130	Mailing Address:	140 HEIMER RD. #617 SAN ANTONIO, TX 78232
Phone:	(830)625-4655	Phone:	(210)828-0691
Fax:	(830)625-8655	Fax:	(210)824-3055

Feature No.	Feature Dimensions	Location of Feature (Reference features related to a SCS by Line and Station)	Case*/Sensitivity**
1	1.5' x 1' x 4'	LOT 20 MISSION RIDGE SUBDIVISION UNIT 2	40
		APPROXIMATELY 200' EAST OF THE INTERSECTION OF	
		MISSION TRAIL AND CEDAR TRAIL, NEW BRAUNFELS, COMAL	
		COUNTY, TEXAS	

\* per TCEQ Guidance Document 96.004

\*\* per Geologic Assessment Table

- Plan, profile, cross section sketches, and photos for each feature are found as **ATTACHMENT 1**.
- Geologic Assessment Table (if applicable) is found as **ATTACHMENT 2**.
- Drawings and narrative descriptions of the proposed protection measures are found as **ATTACHMENT 3**.
- If the discovery is related to a sewage collection system, a Texas Registered Professional Engineer is required to submit the protection plan.

Submitted by: ALAMO CONSULTING ENG. & SURVEYING, INC. Date: 11-09-2007

Printed name: PAUL A. SCHROEDER, P.E., R.P.L.S.

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.

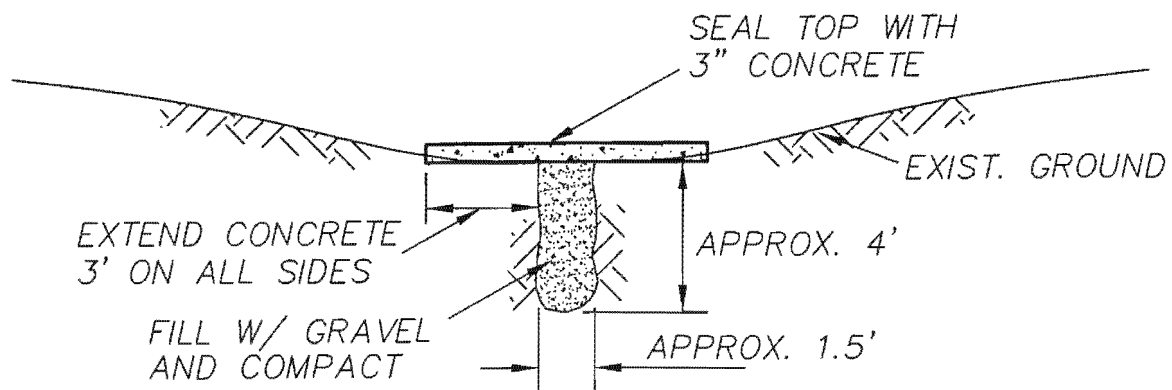
Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

TCEQ-10256 (10/01/04)

**ATTACHMENT 1**  
**LOCATION MAP, SOLUTION CAVITY PROFILE**  
**& PHOTOS**







MISSION RIDGE SUBDIVISION UNIT 2  
PROFILE "SOLUTION CAVITY"

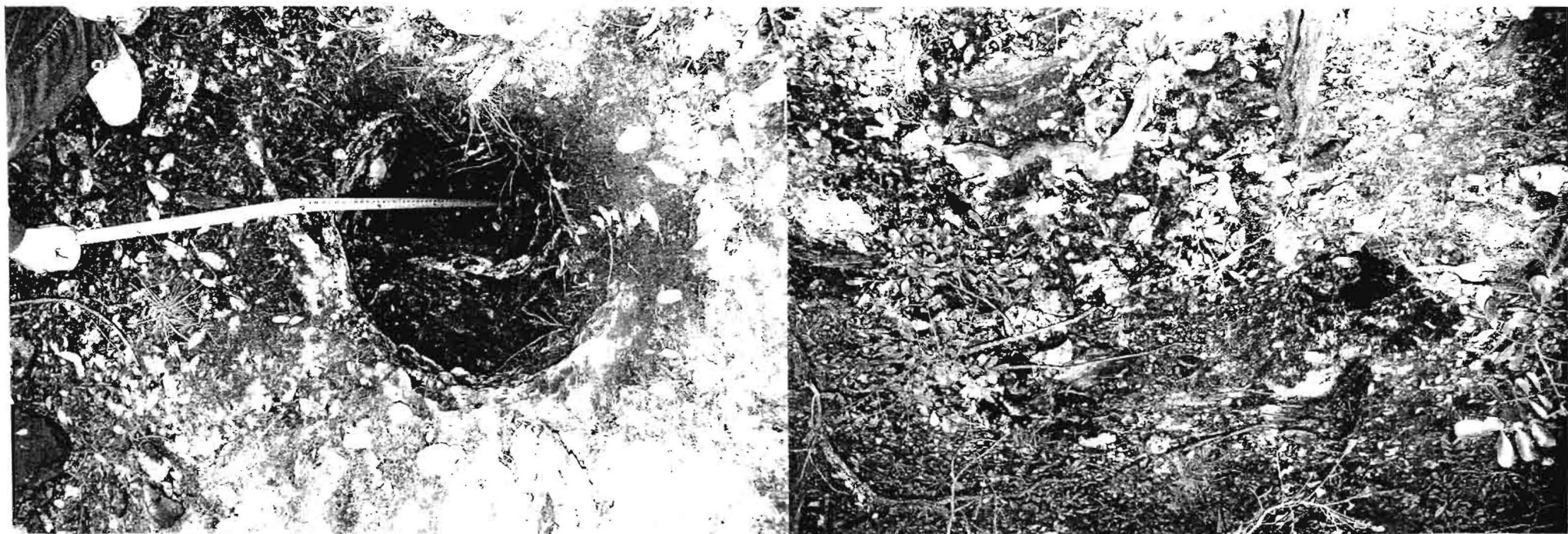
NTS



ALAMO CONSULTING  
ENGINEERING &  
SURVEYING, INC.

140 HEIMER RD., STE. 617, SAN ANTONIO, TX. 78232  
PHONE: (210) 828-0691 FAX: (210) 824-3055







**ATTACHMENT 2**  
**GEOLOGIST DATA**

October 22, 2007

Alamo Consulting, Engineering & Surveying Inc.  
140 Heimer Road, Ste. 617  
San Antonio, Tx. 78232

RE: "Solution Cavity"  
Mission Ridge Subd. U-2 L-20  
Cedar Trail Drive (Comal County)

A "solution Cavity" was uncovered at the above referenced site (see plat for location). The top of the cavity is exposed at grade and is approximately two feet in diameter. The cavity extends downward to a depth of approximately 4 to 4.5 feet with the diameter narrowing to approximately one foot in width. At the base of the cavity there is a perpendicular extension trending north-south (approximate). Both directions of the extension appear to further narrow to less than one foot in diameter. The lateral extent could not be ascertained. Overall, this feature is evaluated as sensitive with a minimum of 40 points being assigned to it. Catchment area is less than 1.6 acres.

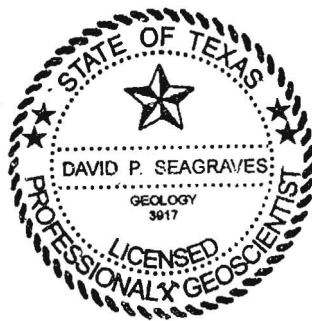
This feature is located within a proposed residential lot, it is recommended to fill and cap this feature. This will prevent potential fluid movement into the subsurface.

If there are any questions, please feel free to contact me at (210) 377-1603.

Respectfully,



David Seagraves, P.G.

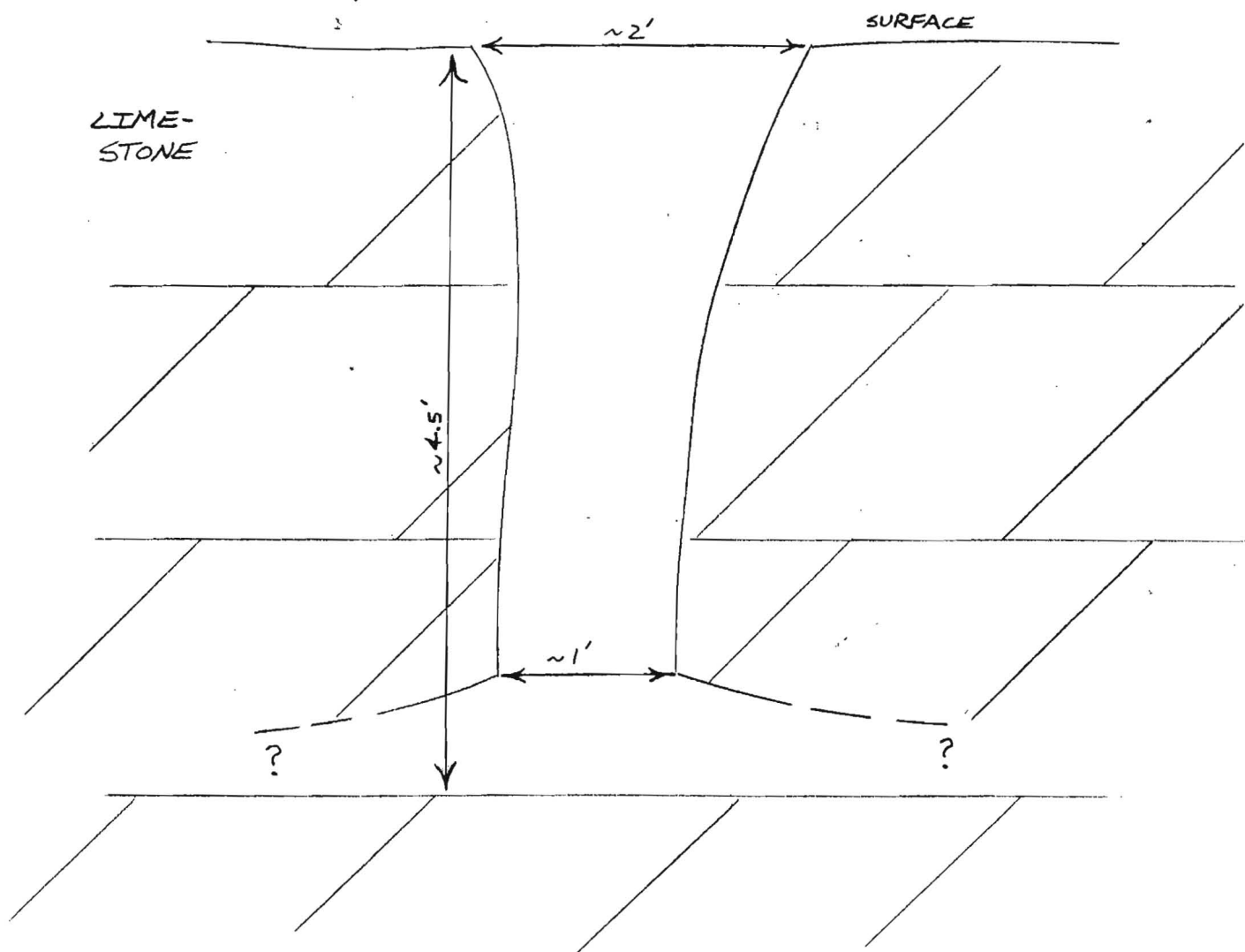


"SOLUTION CAVITY"  
MISSION RIDGE  
U-2 L-20  
CEDAR TRAIL DRIVE  
(COMAL COUNTY)

SCALE: 1" = 1'  
(VERTICAL & HORIZONTAL)

NORTH

SOUTH



**ATTACHMENT 3**  
**EXECUTIVE SUMMARY, ORIGINAL NOTIFICATION**  
**LETTER**

## EXECUTIVE SUMMARY

The solution feature is referenced throughout this report as a "solution cavity". The solution cavity was found within an undeveloped lot by a City of New Braunfels inspector on December 21, 2006. TCEQ was notified by letter, dated February 22, 2007 (see letter in this attachment). The owner placed temporary erosion/sedimentation measures around the solution cavity as instructed by the engineer. These measures include silt fencing and plywood.

No trenching of any kind is in the vicinity of the solution cavity, therefore it is the recommendation of the engineer that the solution cavity be filled with compacted gravel to provide a solid foundation for a residential structure. The opening will be sealed with a three inch concrete "slab" extending three feet from the edges of the opening in all directions prior to construction of the residential slab (see Profile in Attachment 1).



February 22, 2007 **ALAMO CONSULTING ENGINEERING & SURVEYING, INC.**

140 HEIMER RD., SUITE 617

SAN ANTONIO, TX 78232

John Mauser

PHONE: (210) 828-0691

T.C.E.Q.

FAX NO.: (210) 824-3055

14250 Judson Road

San Antonio, TX 78233-4480

**RE: Mission Ridge Subdivision WPAP  
RN104686803**

Dear Mr. Mauser:

It has come to the attention of this office that a possible recharge feature was discovered on the above referenced site. This feature was not previously found during the project geologic investigation. Said feature was discovered/created by an inspector for the City of New Braunfels. It is impossible to determine at this time the condition of the feature prior to excavation by said inspector. As demonstrated by the attached photos, the surface opening is approximately 18" x 12" and approximately 4' deep. Observation of the attached photos also indicate the extent of earthen material and tree roots, which were removed from said feature. The feature is currently protected by covering the opening with plywood and silt fence placed around the perimeter of the feature to prevent contamination. The feature is not within the work zone of the current project and is, therefore, protected from any storm water runoff which may contain pollutants from the disturbed construction areas.

Therefore, I believe this feature is protected from possible contamination at this time. A geologist will be contacted to review said feature and a recommendation on treatment of this feature will be provided.

If additional information is required, please contact this office.

Sincerely,

ALAMO CONSULTING ENGINEERING  
& SURVEYING, INC.

Paul A. Schroeder, P.E., R.P.L.S.



ATTACHMENT

XC: Randy Taylor, Taylor Construction  
David Seagraves, Geologist  
Job No. 88920.00

DOC:F\WORD\LTRS\2007\013101.ps