

Barry R. McBee, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
John M. Baker, *Commissioner*
Dan Pearson, *Executive Director*



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APR 21 1997

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION COMM. DEPT.

Protecting Texas by Reducing and Preventing Pollution

April 18, 1997

Mr. J. W. Wood
Westwood Investments
20 Greenway Plaza, Ste. 252
Houston, TX 77046

Re: Edwards Aquifer, Comal County

PROJECT: Lewis Ranch Subdivision, Unit-1. Proposed project is located 1.8 miles north of F.M. 3009 on Schoenthal Road. Comal County, Texas
TYPE: Request for Approval of Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) §213.4; Edwards Aquifer Protection Program

Dear Mr. Wood:

The Texas Natural Resource Conservation Commission (TNRCC) has completed its review of the WPAP application for the referenced project that was submitted by Greg San Marco of Don McCrary & Associates on behalf of Westwood Investments to the San Antonio Regional Office on February 5, 1997. Final review of the WPAP submittal was completed after additional material was received on March 26, 1997. The WPAP proposed in the application is in general compliance with 30 TAC §213.4; 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 approximately 172 acres and will consist of the development of 45 single family residential lots. Project wastewater for each residence will be treated by a private on-site septic system and be installed only on residential properties equal to or greater than one (1) acre in size. According to a December 23, 1996-letter signed by Tom Hornseth, Comal County Engineer, the land in the development is acceptable for the use of private sewage facilities. The proposed impervious cover for the development is approximately 8.71 acres (5.06 %). The site is not located within the City of Garden Ridge, but is located within Comal county and will conform with all applicable codes and requirements of that county.

REPLY TO: REGION 13 • 140 HEIMER RD., SUITE 360 • SAN ANTONIO, TEXAS 78232-5042 • AREA CODE 210/490-3096

P.O. Box 13087 • Austin, Texas 78711-3087 • 512/239-1000

printed on recycled paper using soy-based ink

GEOLOGY ON SITE

According to the geologic assessment included with the submittal, there were "no" significant potential recharge features located on the proposed development.

The San Antonio Regional Office site inspection of March 5, 1997 revealed no "significant" potential recharge during the investigation and is in general agreement with the assessment included in the submittal.

However, the inspection did reveal a substantial amount of clearing and initiation of road construction prior to authorization. Additional clearing of existing buildings and grading had also been conducted and was noted during the inspection.

GEOLOGY DOWNGRADIENT OF SITE

According to the geologic assessment included with the submittal, there was a total of five (5) significant potential recharge features located downgradient from the proposed development site. These features consisted of three (3) vuggy rock outcroppings, one (1) closed depression, and one (1) solution cavity. As indicated by the geologist, each of these features were assessed as having a "moderate" significance with respect to their potential to accept surface infiltration.

SPECIAL CONDITIONS

1. If any potential recharge features are encountered during construction, a geologist will evaluate the significance of the features. The evaluation will include representative photographs and a description of the feature forwarded to the San Antonio Regional 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, requires submittal of all appropriate applications with appropriate fees and must receive prior approval from the TNRCC.
3. All septic systems installed on this project must be installed on lots larger than one acre. Additionally, each of the systems will be reviewed and must be approved by the local regulating agency prior to installation.
4. This approval does not absolve the applicant from enforcement action by the TNRCC as indicated in 30 TAC §213.10.

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 §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 and prior to commencing any regulated activity at the project location. Proof of deed recordation shall be submitted to the San Antonio Regional Office. 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

Mr. J. W. Wood
April 18, 1997
Page 4

has reviewed and approved the methods proposed to protect the feature and the aquifer from potential adverse impacts to water quality.

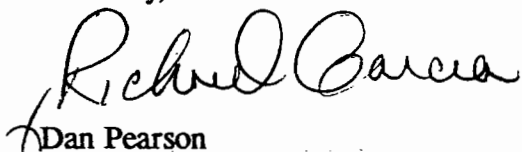
8. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.
9. Approval of the design of the sewage collection system for this proposed project shall be obtained from the TNRCC prior to commencement of construction of any sewage collection system.
10. Three (3) wells exists on the site. Any abandoned wells shall be plugged in accordance with 30 TAC §338 or an equivalent method, as approved by the Executive Director.

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.

If you have any questions or require additional information, please contact Tom Gutierrez of the Edwards Aquifer Protection Program at 210/490-3096.

Sincerely,



Dan Pearson
Executive Director

DP/TG/eg

Enclosure: Deed Recordation Affidavit

cc: Don McCrary, McCrary & Associates
Tom Hornseth, Comal County
Harry Bennett, City of New Braunfels
Clarence Bolner, City of New Braunfels
Mike Shands, City of New Braunfels
Gregory M. Ellis, Edwards Aquifer Authority
Field Operations, Austin

APPLICATION
FOR APPROVAL OF
REGULATED ACTIVITY
ON THE
EDWARDS AQUIFER
RECHARGE
ZONE

FOR

LEWIS RANCH SUBDIVISION
A 3 - 5 ACRE
RURAL SINGLE FAMILY DEVELOPMENT
COMAL COUNTY, TEXAS

FEBRUARY 1997

COPY

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FEB 05 1997
SAN ANTONIO

GENERAL INFORMATION FORM

FOR

CONSTRUCTION OF REGULATED ACTIVITIES/DEVELOPMENTS
ON THE EDWARDS AQUIFER RECHARGE ZONE
AND RELATING TO 30 TAC §313 EFFECTIVE MARCH 21, 1990

PROJECT NAME: Lewis Ranch Subdivision, Unit-1

COUNTY: Comal County

TYPE: ☒ WPAP ☐ AST ☐ EXCEPTION
☐ SCS ☐ UST ☐ MODIFICATION

Do not write in this box. TNRCC use only.	
Received by Region	
Fee Due:	\$
Payment Verified:	
Inspection Date:	
Judged Administratively <input type="checkbox"/> complete <input type="checkbox"/> incomplete	
Written Comments Received From City/County: UWCD within 30 Days:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Approved <input type="checkbox"/> Incomplete and Returned	

APPLICANT INFORMATION

1. Applicant:

Contact Person: J. W. Wood
Entity: Westwood Investments
Mailing Address: 20 Greenway Plaza Suite 252
City, State: Houston, Texas Zip: 77046
Telephone: 713-840-7334 FAX: _____

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2. Agent/Representative (If any):

Contact Person: N/A
Entity: _____
Mailing Address: _____
City, State: _____ Zip: _____
Telephone: _____ FAX: _____

PROJECT LOCATION

3. Site Address: N/A
Street: _____
City: _____ Zip: _____

4. ☐ This project is **inside** the **city limits** of the City of _____.
- ☐ This project is **outside the city limits** but **inside** the **ETJ** (extra-territorial jurisdiction) of the City of _____.
- ☒ This project is not located within any city's limits or ETJ, but is located within Comal County.

5. The location of the project site is described below (Example: "NE corner of Bitters and Heimer Roads", "On east side of Heimer Road, ¼ mile north of Bitters Road").
1.8 miles north of F.M. 3009 on Schoenthal Road to site.
Proposed entrance road Right of Way is adjacent to the north
Right of way of Mickish Lane.

PROJECT DESCRIPTION

6. ☒ A detailed narrative description of the proposed project is provided **directly behind this page**.
7. 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 (With woods and meadows)
☐ Other: _____

Item 6 - This project includes the development of approximately 172 acres of land in Comal County for residential use. It includes approximately 11,000 linear feet of 22 ft of pavement in a 60 foot R.O.W. This road will be constructed of base and asphalt and is to be privately owned and maintained. This road will provide access to 45, 3 to 5 acre tracts. Of the total 172 acres, approximately 15.3 acres will be disturbed by road construction activities.

HAZARDOUS AND MUNICIPAL WASTES

8. Municipal solid waste, and/or hazardous waste:

- ☐ There are areas of trash, debris or other municipal solid waste or hazardous waste on this property which will be disposed of properly at an authorized landfill prior to commencing construction.
- ☒ There are no areas of trash, debris or other municipal solid waste or hazardous waste existing on this property.
- ☐ Other. A narrative description is provided **directly behind this page**.

9. Will there be any on-site land **disposal** of Municipal Solid Waste as defined in 30 TAC §330?

- ☐ Yes
- ☒ No

ROAD AND RECHARGE ZONE MAPS

10. ☒ A **Road Map** is attached behind this sheet showing location of project site.
11. ☒ A copy of the official 7½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached behind this sheet. The map(s) should clearly show:
- ☒ Project site.
 - ☒ USGS Quadrangle Name(s).
 - ☒ Boundaries of the Recharge Zone (and Transition Zone, if applicable).
 - ☒ Drainage path from the project to the boundary of the Recharge Zone.

Maps are available from:

Accugraphics 512/459-4929
Barton Springs/Edwards Aquifer Con. Dist. 512/282-8441
Edwards Underground Water District 210/222-2204
Ferguson Map Company 210/341-6277

PROHIBITED ACTIVITIES

12. ☒ 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 §321.32:
a concentrated, confined livestock or poultry facility operated for meat, milk, or egg production, growing, stabling, or housing, in pens or houses wherein livestock or poultry are fed at the place of confinement and crop or forage growth or production of feed is not sustained in the area of confinement.
- (3) land disposal of Class I wastes, as defined in 30 TAC §335.1; and
- (4) the use of sewage holding tanks as parts of organized collection systems.

13. X 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 §331 (relating to Underground Injection Control); and
- (2) land disposal of Class I wastes, as defined in 30 TAC §335.1.

ADMINISTRATIVE INFORMATION

14. Pursuant to 30 TAC §313.25, application fees are due and payable at the time the application is filed. I understand that if the correct fee is not submitted, the TNRCC 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:

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

15. X One (1) original and three (3) copies of the completed application shall be submitted to the appropriate Regional Office for distribution by the TNRCC to the local municipality or county, underground water conservation district, and the TNRCC's Central Office.

16. X All items required for this development, as listed in the **APPLICATION GUIDELINES**, are attached.

17. As applicant for the proposed project I am aware:

 X If money from any Federal Agency (Housing and Urban Development, Department of Transportation, Federal Highway Assistance, Bureau of Land Management, U.S. Army Corps of Engineers, etc.) is used on this project located on the Edwards Aquifer Recharge Zone, the Clean Water Act requires that a report (environmental site assessment, impact statement, etc.) is to be submitted to the U.S. EPA for review prior to construction.

 X No person shall commence any regulated activity within any regulated development after the effective date of these rules until a Water Pollution Abatement Plan for such activity has been filed with and approved by the TNRCC.

18. The items I have marked signify that the information required is hereby provided and that, to the best of my knowledge, it accurately reflects the proposed project. This **GENERAL INFORMATION FORM** was prepared by:

Don McCrary & Associates, Inc.
Print Name of Preparer

Signature of Preparer

Date

GEOLOGIC ASSESSMENT
FOR
REGULATED ACTIVITIES/DEVELOPMENTS
ON THE EDWARDS AQUIFER RECHARGE/TRANSITION ZONES
AND RELATING TO 30 TAC \$313.4 EFFECTIVE MARCH 21, 1990

PROJECT NAME:

187.3 ACRE LEWIS RANCH ESTATES UNIT 1

PROJECT INFORMATION

1. Project is on the: ☒ Recharge Zone ☐ Transition Zone
2. ☒ This project is part of a multi-phase development. The Geologic Assessment is **site specific** and covers only that area undergoing review at this time.
☐ This is not a multi-phase development.
3. ☒ Potential recharge features are described and evaluated using the attached EDWARDS AQUIFER RECHARGE FEATURE ASSESSMENT TABLE.
4. Soil cover on the project site is 0.5 to 2.0 feet thick. In general, the soil present appears to have the ability to:
☐ transmit fluid flow into the subsurface.
☒ impede fluid flow into the subsurface.
5. ☒ A stratigraphic column(s) is attached directly behind this page. The outcropping unit is at the top of the stratigraphic column.

GEOLOGIC AND DOWNGRAIDENT MAP SCALES

A Geologic Map of the site and the area downgradient of the site is required. **Note:** The SITE Geologic Map for the project site **must** be the same scale as the applicant's Site Plan.

- | | |
|------------------------------------|-------------------|
| 6. Applicant's Site Plan Scale | 1" = <u>400</u> ' |
| 7. Site Geologic Map Scale | 1" = <u>400</u> ' |
| 8. Downgradient Geologic Map Scale | 1" = <u>400</u> ' |

**SITE SPECIFIC
STRATIGRAPHIC COLUMN
187.3 ACRE LEWIS RANCH ESTATES UNIT I**

System	Group	Formation	Function	Member or Informal Unit	Function	Thickness Feet	Lithology	Hydrostratigraphy
Cretaceous	Washita Group	Buda Limestone	CB			60	Dense, hard nodular limestone	May yield sufficient water near the outcrop for wells.
		Del Rio Clay				40-60	Calcareous shale weathering to clay	Not water bearing
		Georgetown Limestone (unit is within the Edwards Aquifer)	CB			20-60	Dense argillaceous limestone: contains pyrite	Deep water limestone with negligible porosity and little permeability.
	Edwards Group	Person (Edwards Aquifer)	AQ	Marine	AQ	90-150	Limestone and dolomite; honeycombed limestone interbedded with chalky porous limestone and massive, recrystallized limestone	Reefal limestone and carbonate deposits under normal open marine conditions. Zones with significant porosity and permeability are laterally extensive. Karstified unit.
				Leached and collapsed members	AQ	60-90	Limestone and dolomite. Recrystallized limestone occurs predominantly in the freshwater zone of the Edwards Aquifer. Dolomite occurs in the saline zone.	Tidal land supratidal deposits, conforming porous beds of collapsed breccias and burrowed biomicrites. Zones of honeycombed porosity are laterally extensive
				Regional dense bed	CB	20-30	Dense argillaceous limestone.	Deep water limestone. Negligible permeability and porosity. Laterally extensive bed that is a barrier to vertical flow in the Edwards Aquifer.
	Edwards Group	Kainer (Edwards Aquifer)	AQ	Grainstone	AQ	50-60	Limestone, hard, millolid grainstone with associated beds of marly mudstones and wackestones.	Shallow water, lagoonal sediment deposited in a moderately high energy environment. A cavernous honeycombed layer commonly occurs near the middle of the subdivision. Interparticle porosity is locally significant.
				Dolomitic (includes Kirschberg evaporite)	AQ	150-200	Limestone, calcified dolomite, and dolomite. Leached, evaporitic rocks with breccias toward top. Dolomite occurs principally in the saline zone of the aquifer.	Supratidal deposits towards top. Mostly tidal to subtidal deposits below. Very porous and permeable zones formed by boxwork porosity in breccias or by burrowed zones.
				Basal Nodular Bed	CB	40-70	Limestone, hard, dense clayey; nodular, mottled stylolitic.	Subtidal deposits. Negligible porosity and permeability.
	Trinity Group	Glen Rose	CB	Upper part of Glen Rose	CB	300-400	Limestone, dolomite, shale and marl. Alternating beds of carbonates and marls. Evaporites and dolomites toward top variable bedding.	Supratidal and shoreline deposits towards top. Tidal to subtidal deposits below. Unit has little vertical permeability but has moderate lateral permeability.
				Lower part of Glen Rose	AQ	200-250	Massive limestone with few thin beds of marl.	Marine deposits - caprinid reef zones and porous and permeable honeycomb porosity near the base.

AQ - Aquifer

CB - Confining Bed

(Modified from Maclay and Small, 1984)

SITE GEOLOGIC MAP

Items 9 through 14 shall be included on the Site Geologic Map.

9. ☒ The Project Site is shown and labeled.
10. ☒ Surface Geologic Units are shown and labeled.
11. Potential recharge features which are located within the project site or within 200 feet downgradient of the project site and within the 5-year floodplain:
- ☒ Potential recharge 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 EDWARDS AQUIFER RECHARGE FEATURE ASSESSMENT TABLE.
- ☐ No potential recharge features were discovered on the project site during the field investigation.
12. Boundary of the Recharge Zone:
- ☐ The Recharge Zone boundary is located on the project site and is shown and labeled.
- ☒ The Recharge Zone boundary is located downgradient of the project site.
13. 100-year floodplain boundaries:
- ☒ Some part(s) of the project site is located within the 100-year floodplain and 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) source(s):

100 YEAR
FLOODPLAIN BOUNDARY CALCULATED BY DON McCARRY AND
ASSOCIATES, INC.; 12/96.

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

- ☒ There are 3 (#) wells present on the project site and the locations are shown and labeled.
- ☐ 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 30 TAC §338.
- ☐ There are no wells or test holes of any kind known to exist on the project site.

DOWNGRADIANT GEOLOGIC MAP

Items 15 through 19 shall be included on the Downgradient Geologic Map.

The area downgradient from the site includes all areas of sheet flow off of the project site. When sheet flow becomes influenced by drainage pathways (i.e. draws, tributaries, creeks) confine your investigation to those drainage pathways. The drainage pathways may or may not lie within a 100-year floodplain. All downgradient areas within the 100-year flood must be included in the Geologic Assessment.

The downgradient area extends for a distance of one (1) mile or to the edge of the Recharge Zone, whichever is less.

15. ☒ Surface Geologic Units are shown and labeled.

16. Potential recharge features:

- ☒ Potential recharge features were discovered within the downgradient area. Potential recharge features are shown and labeled on the DOWNGRADIANT Geologic Map and described in the Attached Edwards Aquifer Recharge Feature Assessment Table.
- ☐ No potential recharge features were discovered within the downgradient area.

17. Boundary of the Recharge Zone:

- ☐ The Recharge Zone boundary is located within the downgradient area and is shown and labeled on the DOWNGRADIANT Geologic Map.
- ☒ The Recharge Zone boundary is not located within the downgradient area.

18. 100-year floodplain boundaries:

- ☒ Some part(s) of the project site is located within the 100-year floodplain and 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):

100 YEAR
FLOODPLAIN BOUNDARY CALCULATED BY DON MCCRARY AND
ASSOCIATES, INC.; 12/96.

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

- ☐ There are ____ (#) wells present in the area downgradient and the locations are shown and labeled.
- ☐ 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 30 TAC §338.
- ☒ There are no wells or test holes of any kind known to exist in the area downgradient.

ADMINISTRATIVE INFORMATION

20. ☒ One (1) original and three (3) copies of the following forms, in the order listed below, have been provided.
- * THIS FORM
 - * RECHARGE FEATURE ASSESSMENT TABLE
 - * SITE GEOLOGIC MAP
 - * DOWNGRADIENT GEOLOGIC MAP, if needed

21. The items I have marked signify that the information required is hereby provided and, to the best of my knowledge, it accurately reflects the conditions at the subject site.

Date(s) Geologic Assessment was performed:

January 3, 10, 1997

Timothy Jay Duduit
Print Name of Geologist

(210) 590-8393
Telephone


Signature of Geologist



(210) 590-9380
FAX

1/14/97
Date

Representing:

Fugro Environmental, Inc.
Geologic Consulting Company

EDWARDS AQUIFER RECHARGE FEATURE ASSESSMENT TABLE (30 TAC 313) Project Name: 187.3 ACRE LEWIS RANCH ESTATES UNIT 1

FEATURE ID.			FEATURE CHARACTERISTICS														PHYSICAL SETTING					ASSESSMENT															
LOCATION	TYPE	POINTS	GEOLOGIC FORMATION	VERTICAL FEATURE (FEET)			HORIZONTAL FEATURE (FEET)			LENGTH & WIDTH (FEET)	TREND (C, CD, FR, FZ, SC, SH)		DENSITY (FR, VR)		APERTURE (FR, VR)		INFILLING (CD, FR, SC, SH, VR)				RELATIVE INFILTRATION RATE			DRAINAGE AREA (ACRES)	TOPOGRAPHY					COMBINED ASSESSMENT		COMMENTS					
(1A)	(1B)	(1C)	(2)	(3)			(4)			(5)	(6)		(7)		(8)		(9)				(10)				(12)	(13)					(15)		(16)				
				C	CD	SC	SH																	0	5	10	15	0	5	10	15	20					

I HAVE READ THE TNRCC'S INSTRUCTIONS TO GEOLOGISTS. THE INFORMATION HERE COMPLIES WITH THE DIRECTION PROVIDED IN TNRCC'S INSTRUCTIONS TO GEOLOGISTS.
TNRCC - 0629 (1/1/96)

Timothy J. Dudit
GEOLOGIST SIGNATURE

1/14/97
DATE



SHEET 1 OF 2

EDWARDS AQUIFER RECHARGE FEATURE ASSESSMENT TABLE (30 TAC 313)

Project Name: 187.3 ACRE LEWIS RANCH ESTATES UNIT 1

[illegible]

I HAVE READ THE TNRCC'S INSTRUCTIONS TO GEOLOGISTS. THE INFORMATION HERE
COMPLIES WITH THE DIRECTION PROVIDED IN TNRCC'S INSTRUCTIONS TO GEOLOGISTS.
TNRCC - 0629 (1/1/96)

GEOLOGIST SIGNATURE

DATE _____

SHEET 2 OF 2



ADDITIONAL COMMENTS

187.3 ACRE LEWIS RANCH ESTATES UNIT I COMAL COUNTY, TEXAS

In general, this property had very little exposed rock and a well developed soil profile due to the outcropping of the Del Rio Clay and the fact that the very top of the Edwards Group, the Georgetown Formation, is beneath the property. The thick soil profile is due to the location of the property on a local topographic high and the past erosion of the overlying Del Rio Clay. The area on the geologic map in this assessment identified as Buda Limestone may not be continuous bedrock, but enough exposures were available to confirm the presence of the Buda throughout the area indicated.

Some geologic features occurred within the outcrops of the Buda Limestone and Del Rio Clay on the property. These features were not identified as "significant recharge features" because they did not fit the definition found in 30TAC §313.3. There is no evidence that these features allowed rapid infiltration to the subsurface and there is no potential for hydraulic interconnectedness between surface water and the Edwards Aquifer.

The additional comments below pertain to geologic features assessed on the attached table. The comments below are identified by the location designation found on the table and on the geologic map.

- S-1 This closed depression is the result of hillside sheetflow erosion processes.
- S-2 This closed depression is the result of hillside sheetflow erosion processes.
- S-3 This closed depression is a knickpoint resulting from streamflow erosion.
- S-5 This closed depression is a knickpoint resulting from streamflow erosion.
- S-6 This closed depression is the result of stream scour.
- S-7 This closed depression is a knickpoint resulting from streamflow erosion.
- S-8 This closed depression is a knickpoint resulting from streamflow erosion.
- S-12 This closed depression is the result of stream scour.
- S-13 This closed depression is the result of stream scour.
- S-15 This closed depression is the result of stream scour.
- S-16 This closed depression is the result of stream scour.
- S-17 This closed depression is the result of stream scour.

S-18 The trace of the fault is not visible on the surface. The position of the fault was determined from rock outcrops and an aerial photograph lineation.

S-19 The trace of the fault is not visible on the surface. The position of the fault was determined from rock outcrops and an aerial photograph lineation.

A-3 This closed depression is the result of stream scour.

A-5 This closed depression is the result of stream scour.

A-7 This closed depression is the result of stream scour.

A-8 This closed depression is the result of stream scour.

A-9 This closed depression is the result of stream scour.

A-13 This closed depression is the result of stream scour and was partially full of water at the time of the field mapping.



100 YEAR FLOODPLAIN
(100-YEAR FLOODPLAIN BOUNDARY CALCULATED
BY DON MCCRARY & ASSOCIATES, INC. 12/96)

SCALE : 1"=400'

- LEGEND**
- ⊗ CLOSED DEPRESSION
 - ////// FRACTURED ROCK OUTCROP
 - U/D FAULT. U AND D INDICATE UPTHROWN AND DOWN-THROWN SIDES, RESPECTIVELY.
 - s⊗ SOLUTION CAVITY
 - Kbu BUDA LS
 - Kdr DEL RIO CLAY
 - Kep PERSON LS
 - S-1 SITE POTENTIAL RECHARGE FEATURE
 - A-1 DOWNSTREAM POTENTIAL RECHARGE FEATURE
 - ⊕ WATER WELL
 - VUGULAR ROCK

FUGRO ENVIRONMENTAL, INC.	
SITE AND DOWNSTREAM GEOLOGIC MAP 187.3 ACRE LEWIS RANCH ESTATES UNIT 1 SCHOENTHAL ROAD COMAL COUNTY, TEXAS	
DATE: January 9, 1997	JOB NUMBER: 0564-9053
SCALE: 1 INCH = 400 FEET	SHEET 1 OF 1
DRAWN BY: TJD	APPROVED BY: TJD
CLIENT REVIEW:	REVISION/DATE:

REVISION

DATE

LEWIS RANCH UNIT - 1

GEOLOGICAL ASSESSMENT

COMAL COUNTY, TEXAS

DON MCCRARY & ASSOCIATES, INC.

ENGINEERS & SURVEYORS

323 BREESEPORT

SAN ANTONIO, TEXAS 78216

(210)349-2651

DM

SHEET 1

OF 1

DATE

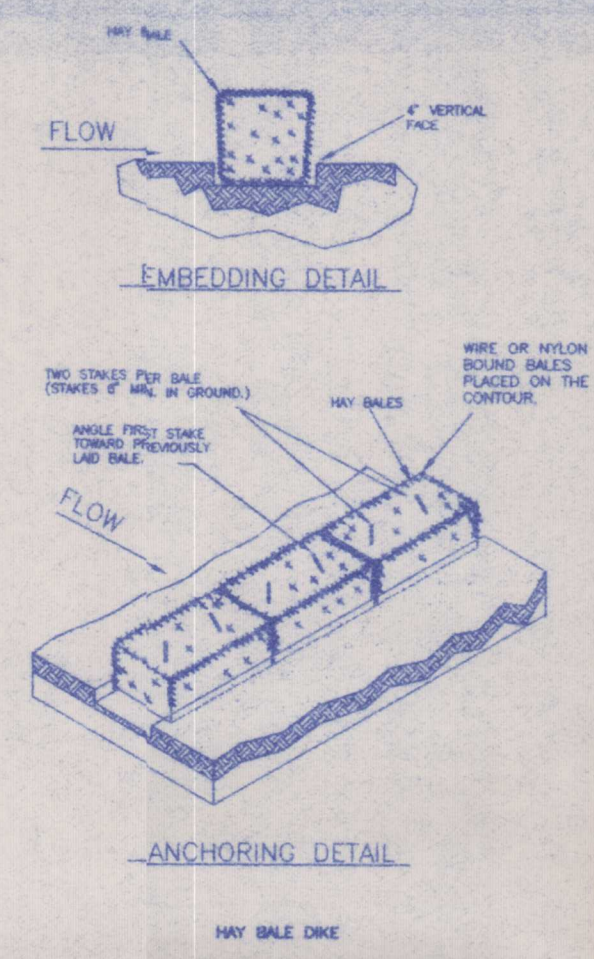
JOB NO.

12-19-96

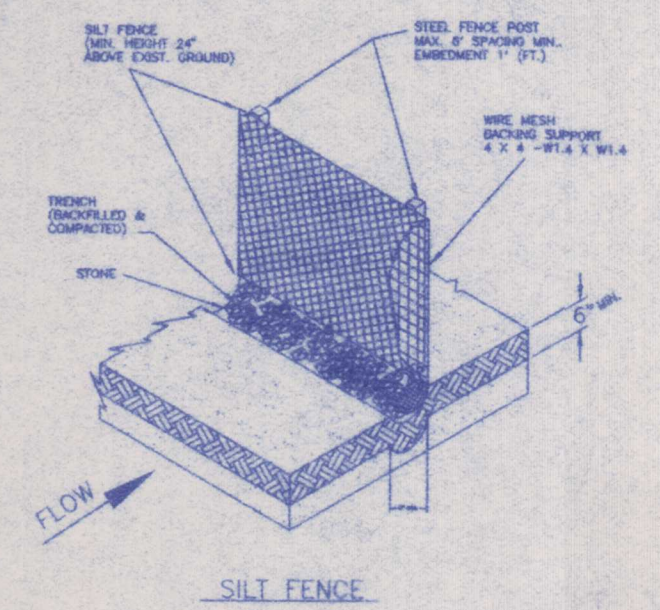
96049



100 YEAR FLOODPLAIN
(100-YEAR FLOODPLAIN BOUNDARY CALCULATED
BY DON MCCRARY & ASSOCIATES, INC. 12/98)



- GENERAL NOTES
1. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF FOUR INCHES.
 2. BALES SHALL BE SECURELY ANCHORED IN PLACE BY 3/8 INCH BARS STAKES DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANCHORED TOWARD PREVIOUSLY Laid BALE TO FORCE BALES TOGETHER.
 3. INSPECTION SHALL BE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
 4. WHEN SILT REACHES A DEPTH OF 6 INCHES, IT SHALL BE REMOVED AND DEPOSITED OF IN AN APPROVED SITE AS TO NOT CREATE A SILTATION PROBLEM.
 5. AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE BALES AND ACCUMULATED SILT SHALL BE REMOVED AND DEPOSITED OF AT AN APPROVED SPILL DISPOSAL SITE.



- GENERAL NOTES
1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
 2. THE TOP OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPAD OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPWILL SIDE TO PREVENT FLOW UNDER FENCE.
 3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE Laid IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
 4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOODEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 6" DOUBLE OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
 5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL, REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
 6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPED STORM FLOW OR DRAINAGE.
 7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DEPOSITED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

LEGEND	
	CLOSED DEPRESSION
	FRACTURED ROCK OUTCROP
	FAULT. U AND D INDICATE UPTHROWN AND DOWN-THROWN SIDES, RESPECTIVELY.
	SOLUTION CAVITY
	BUDA LS
	DEL RIO CLAY
	PERSON LS
	SITE POTENTIAL RECHARGE FEATURE
	DOWNSTREAM POTENTIAL RECHARGE FEATURE
	WATER WELL
	VUGULAR ROCK
	CONSTRUCTION EXIT (TYPE 1)
	SILT FENCE
	FILTER DAM
	BALED HAY
	POINT OF CONCENTRATION
	ENERGY DISSIPATORS

RECEIVED
FEB 06 1997
SAN ANTONIO

PROJECT INFORMATION

- | Impervious Cover of Proposed Project | Sq. Ft. | Sq. Ft./Acre | Acres |
|--|---------|--------------|--------|
| Structures/Rooftops | 135,000 | ÷ 43,560 = | 3.10 |
| Parking/Paved Surfaces | 244,370 | ÷ 43,560 = | 5.61 |
| Other: | | ÷ 43,560 = | |
| Total Impervious Cover | 379,370 | ÷ 43,560 = | 8.71 |
| Total Impervious Cover ÷ Total Acreage x 100 = | | | 5.06 % |

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

Page 1

6. Wastewater will be treated by:

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

An on-site sewage facility will be used to treat and dispose of wastewater. The **appropriate licensing authority's written approval is attached directly behind this page.** It states that the land is suitable for the use of an on-site sewage facility or identifies areas that are not suitable.

 X I verify that 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 registered engineer or sanitarian and installed by a licensed installer in compliance with 30 TAC §285.**

 Sewage Collection System (Sewer Lines):

The sewage collection system will convey the wastewater to the _____ (name) Treatment Plant.

 If the system is **proposed**, a SCS application will be submitted for review and approval.

7. For sewer lines, all private service laterals will be inspected as required in 30 TAC 313.5(c)(9) by: (No sewer service; individual septic systems.)

Entity Name:	<u>Comal County Sanitarium</u>
Address:	<u>4931 Hwy 46 West, #100</u>
City, State, Zip:	<u>New Braunfels, Texas 78132</u>
Telephone:	<u>210/608-2090</u>
FAX:	<u>210/608-2096</u>

SITE PLAN

Items 8-15 shall be included on the Site Plan.

8. The Site Plan shall have a minimum scale of 1" = 400'.

Site Plan Scale: 1" = 400'.

9. X **Layout of the development** (Location of lots, recreation centers, buildings, roads, etc.) is **shown and labeled.**

10. X This site will **not** contain a recreation facility.

 This site will contain a **recreation facility.** The location of the recreation facility is **shown and labeled.** A narrative description of any on-site chemical storage is provided

APPLICATION FOR LICENSING AUTHORITY RECOMMENDATION FOR PRIVATE SEWERAGE
FACILITIES A PROPOSED SUBDIVISION

RECEIVED

RCPT #3381
CK # 3019

Date: December 23, 1996

Subdivision Name: Lewis Ranch

Owner's Name : J.W. Wood

Address: P.O. Box 27445 Houston, Texas 77227

Phone #: 713-846-7334

Subdivision Fees: 5 or less lots

/tracts: \$20.00 per lot/tract
6 or more lots/tracts: \$100.00

Basic Fee plus \$5.00 per lot or
tract. Total Fee: \$330.00

Make check payable to:

COMAL COUNTY TREASURER

TO DEVELOPERS OF SUBDIVISIONS:

All waterwells, both public and private, located on-site, shall be at least one hundred fifty feet (150') from all on-site sewerage facilities and contained within the lot or tract property lines. All abandoned waterwells be properly plugged according to Waterwell Driller's Rules, Section 287.40, Standards for Plugging Wells. Call this department for inspections of such wells.

That each prospective purchaser, lessee or renter be informed in writing: Per order of Commissioners' Court, March 13, 1989, any transfer of property after January 1, 1989, which resulted from the partitioning of land, will be classified as an illegal subdivision. No county permits will be issued to owners of such tracts. Permits will not be issued for lots divided in platted subdivisions regardless of when it was divided unless the property is replatted in accordance to the subdivision regulations.

INSTRUCTIONS: All information required shall be supplied to the Licensing Authority before approval.

Attached is Chapter 7, Subdivisions, of the Rules for Comal County, Texas For Private Sewerage Facilities, in it's entirety and appropriate sections from the Construction Standards for On-Site Sewerage Facilities.

Section 7.02 explains the information that must be supplied. A U.S.G.S. map is also recommended to provide some of the information required.

Section 7.03 gives the critical information required for determining lot size and layout. It is important that a lot can accommodate a sewerage facility after natural features and land improvements are considered and after soil and site evaluation has been performed.

Section 7.04 is a public requirement.

1. An organized disposal system is not feasible for this subdivision due to:
~~is not economically feasible to service this subdv. by means of an organized disposal system.~~

2. List the type and maximum size of the proposed construction for each lot.
(Example: 3 Bedroom average)
Residential, 4 bedroom average

The information provided is complete to the best of my knowledge as required in Chapter 7.

G. S. Harris P.E. for J. W. Wood.

Signature of Applicant/Agent

* * * OFFICE USE * * *

APPROVED

APPROVED WITH CONDITIONS

Individual septic

system permits shall be required for the lots within this subdivision.

[Signature]

County Engineer

11. **Potential recharge features** which are located within the project site or within 200 feet downgradient of the project site in the 5-year floodplain:

☐ All recharge features identified in the Geologic Assessment are **shown and labeled**.

☒ **No recharge** features were identified in the Geologic Assessment.

☐ A Geologic Assessment was not required, however, potential recharge features have been found and are **shown and labeled**.

☐ A Geologic Assessment was **not required** and no potential recharge features have been found.

12. ☒ **Existing topographic contours** are **shown and labeled**. The contour interval is 5 feet. (Contour interval shall not be greater than 5 feet).

13. ☐ **Finished topographic contours** are **shown and labeled**. The contour interval is _____ feet. (Contour interval shall not be greater than 5 feet).

☒ Finished topographic contours **will not differ** from the existing topographic configuration and are not shown.

14. **100-year floodplain boundaries**

☒ **Some part(s)** of the project site is located within the 100-year floodplain and 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):

Field surveyed and calculated by Don McCrary and Associates.

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

☒ There are 3 (#) wells present on the project site and the locations are **shown and labeled**.

☐ 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 30 TAC §285.

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

- _____ The wells are in use and comply with 30 TAC §285.
_____ There are no wells or test holes of any kind known to exist on the project site.

ADMINISTRATIVE INFORMATION

16. X One (1) original and three (3) copies of the following forms, in the order listed below, have been provided.
- * GENERAL INFORMATION FORM
 - * GEOLOGIC ASSESSMENT
 - * THIS FORM
 - * TEMPORARY STORMWATER SECTION
 - * PERMANENT STORMWATER SECTION
 - * SIGNATURE FORM, if applicable
 - * FEE FORM
17. Any modification of this WPAP will require TNRCC approval, prior to construction, and may require submission of a revised application, with appropriate fees.
18. The items I have marked signify that the information required is hereby provided and that, to the best of my knowledge, it accurately reflects the proposed project. This WATER POLLUTION ABATEMENT PLAN application was prepared by:

Don McCrary & Associates, Inc.
Print Name of Preparer

Greg Sant'Anna
Signature of Applicant/Owner/Agent, etc.

1-30-97
Date

TEMPORARY STORMWATER SECTION

FOR

CONSTRUCTION OF REGULATED ACTIVITIES/DEVELOPMENTS
ON THE EDWARDS AQUIFER RECHARGE ZONE
AND RELATING TO 30 TAC §313 EFFECTIVE MARCH 21, 1990

PROJECT NAME: Lewis Ranch Subdivision Unit-1

PROJECT DESCRIPTION

1. Recharge features identified on the project site in the geologic assessment are shown below:

# ¹	Feature Type	Relative Infiltration Rate (refer to Geologic Assessment)	Temporary Pollution Abatement Measures (Design attached at the end of this form)
S-1	CD	None/low	See Temporary Pollution Abatement Plan
S-2	CD	"	"
S-3	CD	"	"
S-4	CD	"	"
S-5	CD	"	"
S-6	CD	"	"
S-7	CD	"	"
S-8	CD	"	"
S-9	CD	"	"
S-10	SC	"	"
S-11	SC	"	"
S-12	CD	"	"
S-13	CD	"	"
S-14	FR	"	"
S-15	CD	"	"
S-16	CD	"	"
S-17	CD	"	"
S-18	FZ	"	"
S-19	FZ	"	"
A-1	SC	"	"
A-2	FR	"	"
A-3	CD	"	"
A-4	FR	"	"

1 If there are no features present, enter NONE in this column.

POTENTIAL SOURCES OF CONTAMINATION

2. If asphalt is to be used for paving, roofing, etc. describe measures that will be taken during construction to prevent "seal coat", emulsion, or other asphaltic products from washing off the project site.

 No asphalt products will be used on this project.

 X Asphalt products will be used on this project. After placement of asphalt, emulsion or coatings, the applicant will be responsible for immediate clean-up should an unexpected rain occur. For the duration of the asphalt product curing time, the applicant should maintain standby emergency personnel and equipment to contain any asphalt wash-off should an unexpected rain occur.

 Other Measures. A narrative description is provided **directly behind this page.**

3. X Construction equipment fuels will either be temporarily stored on the project site (for less than one (1) year) or supplied by an off-site facility. A lined earthen berm providing 150% containment is recommended for temporary above-ground fuel storage.
4. X Construction equipment/vehicles will be limited, where possible, to traveling within the limits of the project site. Any soil, mud, etc. on public roads will be cleaned up within 24 hours.
5. X All soil, sand, gravel and excavated materials stockpiled on-site will have appropriately sized erosion and sedimentation controls placed downgradient.
6. X Disposal of spoil materials. A narrative description is provided **directly behind this page.**
7. X Purposeful release of vehicle or equipment fluids onto the ground is prohibited. Contaminated soil resulting from accidental spills will be removed and disposed of properly.
8. X All construction material/debris will be placed in an on-site container and disposed of properly at an authorized landfill. The building contractor(s) shall be notified of this requirement in writing and a copy will be kept on file at the Owner's office.
9. Other potential sources of contamination. A narrative description is provided **directly behind this page.**
- X There are no other potential sources of contamination.

Item 6 - All spoil materials shall be disposed of off-site.

SITE PLAN

Items 10 through 14 shall be included on the Site Plan.

10. ☒ Layout of development (Location of lots, buildings, roads, etc.) is **shown and labeled**.
11. Temporary pollution abatement measures for Recharge Features:
- ☒ Recharge features and temporary pollution abatement measures are **shown and labeled**.
 - ☐ There are no recharge features associated with this project.
 - ☐ No geologic assessment was required.
12. ☒ Stabilized Construction Exits are **shown and labeled**.
13. Appropriate erosion and sedimentation controls are **shown and labeled**:
- ☒ Silt fences (for drainage areas <2 acres)
 - ☒ Rock berms (for drainage areas <5 acres)
 - ☒ Sedimentation basins (drainage <100 acres)
 - ☐ Other measures. A narrative description is provided **directly behind this page**.
14. Measures to be taken to prevent pollution of stormwaters **originating on-site or upgradient** of the site.
- ☐ Stormwater will be directed **around** the project site with diversion berms/channels/swales labeled on the Temporary WPAP Site Plan. Approval has been obtained from the appropriate regulating authority.
 - ☒ Stormwater flow from upgradient will **flow across** the project site. A narrative description is provided **directly behind this page**.
 - ☐ Other measures. **Shown and labeled** on the TEMPORARY WPAP Site Plan. A narrative description is provided **directly behind this page**.

Item 14 - All stormwater flowing in or across the disturbed Right of Way will be intercepted and/or diverted by the road section and released downgradient into existing drainageways. All drainageways will be protected by silt fence in and along the disturbed areas, and all major drainageways crossing the site will be protected downgradient by rock berms/silt traps.

ADMINISTRATIVE INFORMATION

15. X All employees involved in construction activities on the project site will be informed of the provisions of the Water Pollution Abatement Plan and the requirements for controlling employee generated wastes and proper disposal of waste building materials.
16. X If any potential recharge features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TNRCC regional office shall be immediately notified. Regulated activities shall not continue until the TNRCC has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
17. X Contractor shall construct silt fences and/or diversion berms as appropriate to help prevent pollutants from entering significant recharge features found during construction.
18. Individual responsible for maintenance of all temporary pollution abatement measures:

Contact Person: Brant Day
Entity: V.K. Knowlton Paving Contractor Inc.
Mailing Address: 18225 FM 2252
City, State: San Antonio, Texas Zip: 78266
Telephone: 210/651-6860 FAX: 651-5435

19. The items I have marked signify that the information required is hereby provided and that, to the best of my knowledge, it accurately reflects the proposed project. This **TEMPORARY STORMWATER SECTION** was prepared by:

Don McCrary & Associates, Inc.
Print Name of Preparer

Greg San Marco
Signature of Preparer

1-30-97
Date

PERMANENT STORMWATER SECTION

FOR
CONSTRUCTION OF REGULATED ACTIVITIES/DEVELOPMENTS
ON THE EDWARDS AQUIFER RECHARGE ZONE
AND RELATING TO 30 TAC §313 EFFECTIVE MARCH 21, 1990

PROJECT NAME: Lewis Ranch Subdivision Unit-1

PROJECT DESCRIPTION

1. Recharge features identified on the project site in the geologic assessment are shown below:

# ¹	Feature Type	Relative Infiltration Rate (refer to Geologic Assessment)	Temporary Pollution Abatement Measures (Design attached at the end of this form)
S-1	CD	None/low	See Temporary Pollution Abatement Plan
S-2	CD	"	"
S-3	CD	"	"
S-4	CD	"	"
S-5	CD	"	"
S-6	CD	"	"
S-7	CD	"	"
S-8	CD	"	"
S-9	CD	"	"
S-10	SC	"	"
S-11	SC	"	"
S-12	CD	"	"
S-13	CD	"	"
S-14	FR	"	"
S-15	CD	"	"
S-16	CD	"	"
S-17	CD	"	"
S-18	FZ	"	"
S-19	FZ	"	"
A-1	SC	"	"
A-2	FR	"	"
A-3	CD	"	"
A-4	FR	"	"

1 If there are no features present, enter NONE in this column.

2 If the relative infiltration is NONE/LOW, no permanent measures are required.

POTENTIAL SOURCES OF CONTAMINATION

2. List any potential sources of contamination associated with this project after construction is complete:

1. Home Building Activities
2. _____
3. _____
4. _____
5. _____

MULTI-FAMILY, COMMERCIAL, INDUSTRIAL DEVELOPMENTS

3. Measures to be taken to prevent pollution of stormwaters originating on-site or upgradient of the site.

_____ Stormwater will be directed around the project site with diversion berms/channels/swales labeled on the Permanent WPAP Site Plan. Approval has been obtained from the appropriate regulating authority.

_____ Stormwater flow from upgradient will flow across the project site and will be included in sizing calculations for any **pollution abatement measures**. A narrative description is provided **directly behind this page**.

X Other measures. **Shown and labeled** on the Permanent WPAP Site Plan. A narrative description is provided **directly behind this page**.

4. For multi-family residential, commercial, or industrial projects permanent stormwater pollution controls will be:

_____ **Sedimentation/Filtration basins** designed to capture the first $\frac{1}{2}$ " of stormwater runoff. The criteria used for design of the permanent stormwater controls is from:

_____ City of Austin Environmental Criteria Manual

_____ **Full** sedimentation/filtration basin system

_____ **Partial** sedimentation/filtration basin system

_____ Lower Colorado River Authority Lake Travis Nonpoint Source Pollution Control Ordinance Technical Manual

_____ **Full** sedimentation/filtration basin system

_____ **Partial** sedimentation/filtration basin system

_____ Other. A detailed explanation of the design criteria is provided **directly behind this page**.

- ____ Vegetated filter strips (Buffer Zone) designed to treat stormwater runoff. The criteria used for design of the vegetated filter strips is from:
- ____ City of Austin Environmental Criteria Manual
 - ____ Lower Colorado River Authority Lake Travis Nonpoint Source Pollution Control Ordinance Technical Manual
 - ____ Other. A detailed explanation of the design criteria is provided **directly behind this page.**
- ____ **Alternative method.** A detailed explanation of the design criteria, including calculations showing pollutant removal rates, is provided **directly behind this page.** All submittals shall be signed and sealed by a registered professional engineer.
- X This is a single-family residential subdivision and does not require permanent pollution abatement measures.
5. ____ Scaled plans, profiles, and details are included which illustrate that the proposed treatment system is sized appropriately. Supporting calculations are shown on the plan sheet, including:
- ____ Volume of stormwater to be treated
 - ____ Sizing of permanent pollution abatement measures.

RESIDENTIAL DEVELOPMENTS

- 6 For Residential Developments the following Best Management Practices (BMPs) for fertilizer and pesticide use will be provided to each homeowner:
- X "What's Bugging You?" guide to pest control (Edwards Underground Water District, 1994)
 - ____ "Protection of Groundwater from Fertilizers and Pesticides", (Texas Agricultural Extension Service)
 - ____ Other Information. A narrative description is provided **directly behind this page.**
 - ____ This project is not a single-family residential subdivision.

OPERATION AND MAINTENANCE PROCEDURES

7. ____ The maintenance plan and schedule for each permanent pollution abatement structure or measure required for multi-family, commercial or industrial projects is provided **directly behind this page.**
- X The proposed project is a residential subdivision.

Permanent pollution abatement measures will be the Best Management Practices. A narrative description is provided directly behind this page.

Item 3 - All areas disturbed during the road construction will be revegetated to provide a soil retention and vegetative filtration groundcover.

Item 7 - All revegetation will be done with native grasses that will require no supplemental fertilization.

SITE PLAN

Items 8 through 14 shall be included on the Site Plan.

8. ☒ Layout of development (Location of lots, buildings, roads, etc.) is **shown and labeled**.
9. ☒ Recharge features are **shown and labeled**.
☐ There are no recharge features associated with this project.
10. ☒ Vegetated filter areas are **shown and labeled**.
☐ There are no vegetated filter areas associated with this project.
11. ☐ Sedimentation/filtration basins are **shown and labeled**.
☒ There are no sedimentation/filtration basins associated with this project.
12. ☐ Berms, channels, etc. showing velocity controls are **shown and labeled**.
☒ There are no berms, channels, etc. associated with this project.
13. ☒ Areas of concentrated runoff with appropriately sized energy dissipators at each outfall are **shown and labeled**.
☐ There are no areas of concentrated runoff (channels, culverts, drainage pipe discharges, etc.) associated with this project.
14. ☐ Other pollution abatement measures are **shown and labeled**. A narrative description is provided **directly behind this page**.

ADMINISTRATIVE INFORMATION

15. ☒ All employees involved in operation and maintenance activities on the project site will be informed of the provisions of the Water Pollution Abatement Plan and the requirements for controlling employee generated wastes and proper disposal of waste building materials.
16. ☒ If any potential recharge features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TNRCC regional office shall be immediately notified. Regulated activities shall not continue until the TNRCC has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

17. Individual responsible for maintenance of all permanent pollution abatement measures: N/A

Contact Person: _____
Entity: _____
Mailing Address: _____
City, State: _____ Zip: _____
Telephone: _____ FAX: _____

18. The items I have marked signify that the information required is hereby provided and that, to the best of my knowledge, it accurately reflects the proposed project. This **PERMANENT STORMWATER SECTION** was prepared by:

Don McCrary & Associates, Inc.
Print Name of Preparer

Greg Santoro
Signature of Preparer

1-30-97
Date

SUGGESTED MAINTENANCE PLAN AND SCHEDULE FOR SEDIMENTATION AND FILTRATION BASINS

PROJECT NAME: Lewis Ranch Subdivision Unit-1

ADDRESS: _____

CITY, STATE ZIP: _____

SEDIMENTATION BASINS

Monthly: The vegetative growth in the basin shall be checked. The growth shall not exceed 18 inches in height.

Quarterly: The level of accumulated silt shall be checked. If depth of silt exceeds 6 inches, it shall be removed and disposed of "properly".

The basin shall be checked for accumulation of debris and trash. The debris and trash shall be removed if excessive. All debris and trash shall be removed at least every six months.

Annually: The basin shall be inspected for structural integrity and repaired if necessary.

After Rainfall: The basin shall be checked after each rainfall occurrence to insure that it drains within 60 hours after the storm is over. If it does not drain within this time, corrective maintenance will be accomplished.

FILTRATION BASINS

Monthly: The vegetative growth shall be checked. Vegetation in the basin shall not exceed 18 inches in height.

Quarterly: The level of accumulated silt shall be checked. If depth of silt/pollutants exceeds 1/4 inch, it shall be removed and disposed of "properly".

The accumulation of pollutants/oils shall be checked. If the pollutants have significantly reduced the designed capacity of the sand filter, the pollutants shall be removed.

The basin shall be checked for accumulation of debris and trash. The debris and trash shall be removed if excessive. All debris and trash shall be removed at least every six months.

Annually: The basin shall be inspected for structural integrity and repaired if necessary.

After Rainfall: The basin shall be checked after each rainfall occurrence to insure that it drains within 36 hours after the sedimentation basin has been emptied. If it does not drain within this time, corrective maintenance will be accomplished.

Following any required maintenance, the surface of the filtration basin shall be raked and leveled to restore the system to its designed condition.

"Proper" disposal of accumulated silt shall be accomplished following Texas Natural Resource Conservation Commission and City of Austin guidelines and specifications.

An amended copy of this document will be provided to the Texas Natural Resource Conservation Commission within thirty (30) days of any changes in the following information.

Responsible Party: N/A

Mailing Address: _____

City, State: _____ Zip: _____

Telephone: _____ FAX: _____

Signature of Responsible Party

Date

SIGNATURE FORM
FOR
APPLICATION FOR APPROVAL OF REGULATED
ACTIVITIES/DEVELOPMENTS

ON THE
EDWARDS AQUIFER RECHARGE/TRANSITION ZONES
AND RELATING TO 30 TAC §313 EFFECTIVE MARCH 21, 1990

I J.W. Wood
Print Name

President

Title - Owner/President/Other

of Westwood Investments, Inc.
Corporation/Partnership/Entity Name

have authorized Greg San Marco, P.E.
Print Name of Agent/Engineer, etc.

of Don McCrary & Associates, Inc.
Print Name of Firm

to represent the above referenced Entity and to act on my/our behalf to submit this application to the Texas Natural Resource Conservation Commission (TNRCC) for review and approval consideration for construction on the Edwards Aquifer Recharge Zone (30 TAC §313.23).

I understand:

1. That clearing of vegetation in a 10-foot wide path as is necessary and for the sole purpose of surveying is the only construction activity allowed prior to approval. I understand that fines of up to \$10,000 per violation per day could be levied if unauthorized construction begins before TNRCC approval is granted or if any aspect of the project does not conform to the standard and/or special conditions of approval.
2. Before beginning construction related to an approved regulated development, I shall notify the appropriate TNRCC Regional Office of when the regulated activity will begin. Furthermore, I am aware of State regulations that pertain to the construction on the Edwards Aquifer Recharge Zone (30 TAC §313).
3. Pursuant to 30 TAC 313.25, application fees are due and payable at the time the application is filed. The fee has been sent to the commission's Austin headquarters, accompanied by an Edwards Aquifer Fee Application Form. I understand that if the correct fee is not submitted the commission is not required to consider the application until the correct fee is submitted.

4. If money from any Federal Agency (HUD, DOT, FHwyA, BLM, U.S. Army Corps of Engineers, etc.) is used on this project located on the Edwards Aquifer Recharge Zone, that the Clean Water Act requires that a report (environmental site assessment, impact statement, etc.) is to be submitted to the U.S. EPA for review prior to construction.


Applicant's Signature

1-23-91
Date

Signatories to Applications 30 TAC §313.23

- (a) Required Signature. All applications must be signed as follows.
- (1) For a corporation - by a principal executive officer of at least the level of vice-president or by a duly authorized representative. A representative must submit written proof of the authorization.
 - (2) For a partnership - by a general partner;
 - (3) For a political entity such as a municipality; or a state, federal, or other public agency - by either a principal executive officer or a duly authorized representative. A representative must submit written proof of authorization.
 - (4) For an individual or sole proprietor - by the individual or sole proprietor, as applicable.
- (b) Proof of Authorization to Sign. The executive director may require written proof of authorization to sign any application.

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
EDWARDS AQUIFER PROTECTION PROGRAM
FEE APPLICATION FORM

NAME OF PROPOSED PROJECT: Lewis Ranch Subdivision Unit-1
NAME OF OWNER/DEVELOPER: Westwood Investments
ADDRESS: 20 Greenway Plaza Suite 252, Houston, TX 77046
CONTACT PERSON: J.W. Wood PHONE: 713-840-7334
COUNTY OF PROPOSED PROJECT:

AUSTIN REGIONAL OFFICE

☐ Hays
☐ Travis
☐ Williamson

SAN ANTONIO REGIONAL OFFICE

☐ Bexar ☐ Medina
☒ Comal ☐ Uvalde
☐ Kinney

APPLICATION FEES MUST BE PAID BY CHECK, CERTIFIED CHECK, OR MONEY ORDER, PAYABLE TO THE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION. YOUR CANCELED CHECK WILL SERVE AS YOUR RECEIPT. TO ENSURE CREDIT TO THE PROPER ACCOUNT PLEASE RETURN THIS FORM WITH YOUR FEE PAYMENT TO THE APPROPRIATE REGIONAL OFFICE OR TO:

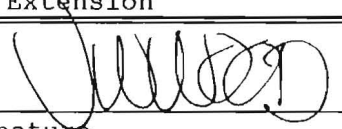
Mailing Address:

TNRCC - Cashier
Financial Admin. Section
P.O. Box 13088
Austin, TX 78711-3088

Overnight Delivery:

TNRCC - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
512/239-0347

Type of Application	Size	Fee Due		
		New (3373)	Modification (3374)	
WPAP	172 Acres	\$2,000.00	\$	PAP
SCS	L.F.	\$	\$	SCS
Lift Stations without sewer lines	Acres	\$	\$	
UST/AST	Tanks	\$	\$	HHS
Piping System(s) (Installed without tanks)		\$	\$	PSM
Extension		\$	\$	EXT


Signature

1-23-97
Date

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
WATER POLLUTION ABATEMENT PLAN
GENERAL CONSTRUCTION NOTES

1. This Regulated Development shall meet all applicable criteria of the Texas Natural Resource Conservation Commission criteria set forth in 30 Texas Administrative Code (TAC) §313.4 - Water Pollution Abatement Plan for Regulated Development located on the Recharge Zone of the Edwards Aquifer.
2. During construction, the storm water runoff from all disturbed areas shall be filtered by silt fences and rock berms. These temporary erosion and sedimentation controls shall remain in place until the disturbed areas are revegetated and the areas have become permanently stabilized. All temporary erosion and sedimentation controls shall be inspected periodically for damage caused by construction activities and following every rainfall. Damaged or obstructed controls shall be repaired/ replaced as necessary to maintain their proper operation.
3. If any significant recharge features are discovered during construction, all construction activity near the significant recharge feature will be immediately suspended. The appropriate Regional Office of the Texas Natural Resource Conservation Commission shall be notified and no activities resumed until a plan to proposed to protect the aquifer from any potential adverse impacts has been submitted, reviewed, and approved.
4. Any modifications to the approved plans for this regulated development must be submitted for approval by the Executive Director of the Texas Natural Resource Conservation Commission before construction of the proposed modification may commence.
5. All contractors conducting regulated activities associated with this proposed regulated project shall be provided with copies of the Water Pollution Abatement Plan submittal and the TNRCC letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors shall be required to keep on-site copies of the submittal and the approval letter.

