

APPLICATION FOR PERMIT
TYPE I MUNICIPAL SOLID WASTE FACILITY
MSW PERMIT NO. 2374
PESCADITO ENVIRONMENTAL
RESOURCE CENTER
RANCHO VIEJO WASTE MANAGEMENT, LLC
SOLID WASTE DISPOSAL FACILITY
LAREDO, WEBB COUNTY, TEXAS

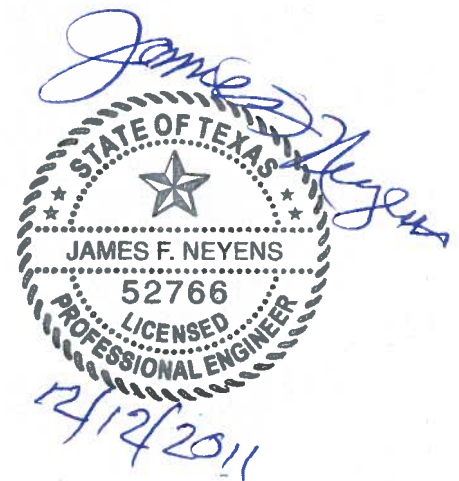
March 28, 2011
Revised May 20, 2011
Revised September 14, 2011
Revised December 14, 2011

Prepared By:



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December 14, 2011

Teres McCaine, P.E., Project Manager
Municipal Solid Waste Permits Section / MC 124
Waste Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

**Reference: Pescadito Environmental Resource Center – Webb County
Municipal Solid Waste (MSW) – Proposed Permit No. 2374
Response to Second Notice of Deficiency (NOD)
Tracking No. 14669041; CN603835489/RN106119639**

Dear Ms. McCaine:

On behalf of Rancho Viejo Waste Management, LLC, I am pleased to submit an original and three copies of the permit application revisions in response to your continued technical review of the referenced MSW permit application. Comments summarizing our individual revisions follow in the order listed in your November 14, 2011 letter. We are enclosing a new signature page that is signed, dated, and notarized. Individual pages are hole-punched for insertion into three-ring binders. To facilitate review, we have repeated below TCEQ's NOD comments in italicized font and employed a standard font for our responses.

- 1. Please note that redline/strike out documents should reflect changes that are made to the application since the previous redline/strike out version was submitted. In addition, every item in the NOD response letter should identify the section of the application that was changed to address the NOD item. Furthermore, any information that is provided in the cover letter in support of the application should be included in the application itself.*

We have complied with this item.

- 2. The correspondence to Webb County's Planning Department pertaining to the Conditional Letter of Map Revision was included at the front of the application. Please incorporate it into the application and on the Table of Contents.*

The correspondence to Webb County's Planning Department has been incorporated into the permit application at Attachment G in Part II. This attachment includes the signature page indicating Webb County Planning Department has reviewed and approved the document. This attachment has been added to the Part II, Table of Contents.

- 3. The Core Data Form submitted with the response to NOD #1 contains changes such as identifying the reason for submitting the form, changed from, "New Permit" to "Other – Updating Customer Information." Within a permitting action, the Core Data Form will remain static. Any changes requested will be for the purpose of obtaining an accurate form. Please return the Core Data Form to its original form, including changes requested in NOD #1.*

We have restored the Core Data Form to its original content and are enclosing copies in its original form.

- 4. Throughout the application, reference is made to activities that are being considered for possible, future implementation. Please review application language and consider either providing appropriate information to identify the intent to authorize an activity or deleting the information all together. In cases where the activity would not require an MSW authorization, it would be best to remove these discussions from the application. Please reconsider language in the application such as the facility "may" conduct certain activities since such language generally lends itself to confusion.*

References in the application to activities that are being considered for possible future implementation were included for the sole purpose of providing a full and complete disclosure of such activities to the TCEQ and the general public. We understand this disclosure could result in possible confusion over what activities are actually being proposed in the pending application. Therefore we have either removed those references or clarified our intent to request authorization. These changes are shown in Part I, pages 9, 10 and 11.

- 5. In Part I Section 1.4.2, the application lists the types of waste that are proposed to be accepted, including scrap tires. The management of waste tires requires authorization from the Texas Commission on Environmental Quality (TCEQ). TCEQ Form 10297 is available for this purpose. Please incorporate language into Part I stating that documentation of authorization through the TCEQ Tire Program will be provided in a full permit application if the land-use application is determined to be appropriate and a full permit application is submitted. (Title 30 of the Texas Administrative Code (30 TAC) Section (§)330.5(a)(6))*

We have removed references to scrap tire processing from Part I, pages 11 and 12. The owner or operator may file TCEQ Form 10297 in the future if this activity is to be added to facility operations.

- 6. Please revise or remove the language in Part II Section 1.4.2 which states, "... to the extent allowed by then-current TCEQ rules..." in reference to the acceptance of Class I Industrial Waste.*

This phrase has been removed from Part I (not Part II) Section 1.4.2, page 12.

- 7. Pertaining to the list in Part II Section 1.4.2 of types of wastes that are proposed to be accepted for landfill disposal, please add language to the line item describing the estimated acceptance rate for non-hazardous industrial waste, stating the limitation on the acceptance of Class I waste of no more than 20% of the total amount of waste accepted during the current or previous year. (30 TAC §330.173(e))*

A statement to this effect has been added to Part I (not Part II) Section 1.4.2, page 12.

8. *Please revise language in Part II, Section 3.0 that refers to the application as a registration application since the subject application is for a land-use determination on a potential, future permit.*

We have changed the reference to state permit application instead of registration application in Part I, Section 3.0, page 15 and in Part II, Section 3.0, page 15.

9. *(Item 19 from NOD #1) The table for Personnel Experience or Licenses in Section F of the Part I Form includes qualifications for landfill manager, supervisor, and equipment operator. However, this conflicts with text in the last paragraph in Part I Section 6.0 which states that the facility may operate with a minimum of a landfill manager who holds a Class A license. Please correct this discrepancy.*

We have corrected the discrepancy between the table for Personnel Experience or Licenses in Section F of the Part I Form and the last paragraph in Part I, Section 6.0 by deleting extraneous qualifications from the Part I form.

10. *(Item 28 from NOD #1) Please revise the table in Part II Section 2.3 titled Grease and Grit Trap Waste to reflect maximum receipts in gallons per day and gallons per year. Please note that the requirement for a five-year projection only applies to this maximum receipts data. (30 TAC §330.61(b)(1)(B))*

We have revised the table in Part II, Section 2.3, pages 13 and 14 to express quantities in gallon units.

11. *(Item 28 from NOD #1) In Part II Section 2.3, please state the maximum amount of solid waste to be stored, otherwise referred to as the total storage capacity for the Type V Grease and Grit Trap operation. (30 TAC §330.61(b)(1)(B))*

We have provided a statement of maximum amount of solid waste to be stored in Part II, Section 2.3, page 14.

12. *(Item 28 from NOD #1) Please revise language in Part II Section 2.3 referring to grease and grit trap waste in terms of tons as permit limits will be stated in terms of gallons. (30 TAC §330.61(b)(1)(B))*

We have revised the language in Part II, Section 2.3 for grease and grit trap waste so that all quantities are expressed in gallons and not in tons.

13. *(Item 28 from NOD #1) Please incorporate into Part II Section 2.3, the proposed maximum daily waste acceptance rate in gallons per day for the Type V Grease and Grit Trap operation. This limit will become the permitted limit and may be greater than that stated in the projection for the initial five-year period. Please note that the total storage capacity must be adequate to accommodate this proposed limit. (§305.62(j)(1)(C))*

We have incorporated the proposed maximum daily waste acceptance rate for grease and grit trap waste, in gallons per day, in Part II, Section 2.3, page 13. We understand this acceptance rate will become the permitted limit and that this quantity may be greater than the initial 5-year projected amount. We agree that the total storage capacity must be adequate to accommodate this proposed limit, but would point out that treatment or

processing capacity needs to be considered also. In general, the maximum daily waste acceptance limit is a function of both storage plus daily treatment or processing capacity.

14. *(Item 28 from NOD #1) Please provide in Part II Section 2.3, the maximum and average lengths of time that solid waste is to remain at the facility. This should include all storage time prior to processing, processing time, and any storage time after processing. (30 TAC §330.61(b)(1)(B))*

We have provided the maximum and average time periods that grease and grit trap waste will remain at the facility in the table on pages 13 & 14 in Part II, Section 2.3. We added a statement about storage time for municipal solid waste on page 13.

15. *(Item 28 from NOD #1) Language in Part II Section 2.3 indicates that landfill gas will be recovered. Please note that 30 TAC §330.9(k) allows a registration by rule for a Type IX facility that recovers landfill gas for beneficial use if the conditions of that subsection are met. If the intent is to propose authorization of this activity with the full permit application, please appropriately address the activity throughout the current land-use application. Otherwise, please consider removing this language.*

Since landfill gas recovery will not begin for a least several years after waste is received, we have elected to remove this language from Part II, Section 2.3, page 13. Registration of a Type IX facility will be sought at an appropriate time in the future. Mentioning this future activity was intended only for full disclosure of intent.

16. *(Item 28 from NOD #1) Please delete language in Part II Section 2.3 stating that grease or grit trap waste may be land applied or used for dust control on the working face of the landfill.*

The Statement about potential use of liquid resulting from processing grease and grit trap waste for dust control was removed from Part II, Section 2.3, page 13.

17. *(Item 33 from NOD #1) The last sentence in Part II Section 4.0 identifies buffers as being more than one-quarter mile on three sides and 300 feet on the fourth side. Please revise this language since the identified distances do not consistently appear to be within the proposed permit boundary. Please provide a drawing to show the proposed buffer zone or otherwise appropriately identify the buffer zone. Furthermore, please ensure that the buffer zone is consistent with the requirements to be within and adjacent to the proposed permit boundary and, no less than 125 feet wide. Please be aware that no waste management activities may be authorized within an area designated as a buffer zone. (30 TAC §330.543(b)(1)(B))*

We have clarified the last sentence in Part II, Section 4.0, page 17 regarding buffers. We have added the location of the prescribed 125-foot-wide buffer zone on Part II, Figures 3 and 4.

18. *(Item 36 from NOD #1) Please revise the language in Part II Section 4.0 that refers to an average spacing for groundwater monitoring wells. A discussion on maximum well spacing is more appropriate. (30 TAC §330.61(d)(3))*

We have revised the language in Part II, Section 4.0, page 17 regarding monitoring well spacing.

19. *(Item 44 from NOD #1) Language in Part II Section 6.0 pertaining to the aerial photograph states that no fill area exists and can therefore not be shown. However, the intent of the requirement is that proposed fill areas be shown in addition to any that may exist. Please revise Section 6.0 and Figure 7 to include the proposed fill area. (30 TAC §330.61(f)(1))*

Part II, Section 6.0, page 19 and Figure 7 have been revised regarding the proposed fill area.

20. *(Item 50 & 53 from NOD #1) The Existing Conditions Summary, Part II Section 1.0 includes a sub-section on Soils and Geology and one on Groundwater. Please have these sub-sections sealed by a Professional Geoscientist as required by Texas Geoscience Practice Act, §6.13(b), and in accordance with 22 TAC §851.156 (relating to Geoscientist's Seals). (30 TAC §330.57(f)(2))*

We have complied with your request to expand the seal and signature of the Professional Geoscientist to include Part II, Section 1.0. We re-formatted that section to create Subsections 1.1 and 1.2 and show on the title or cover page and in the Table of Contents that the Professional Geoscientist is responsible for those subsections.

21. *The Existing Conditions Summary, Part II Section 1.0 includes a sub-section on Groundwater, reporting the one water well that is known to exist within a one-mile radius of the facility boundary. Please provide the production interval depths and identify the completion-zone aquifer for this well.*

Information about the only known water well within a one-mile radius was added to Part II, Section 1.1.

22. *(Item 56 from NOD #1) The statement in Part I Section 7.0 intended to provide certification that the TPDES general permit will be obtained when required is stated in a manner that implies that the person signing it is authorized to make such a statement rather than actually making the statement. Please revise this language to clearly provide the statement and provide the authorized signature. Since this statement is a requirement of Part II, please consider providing the statement separate from the appointments statement of 30 TAC §330.59(g), including it as an attachment to Part II, and identifying it on the Part II Table of Contents. (30 TAC §330.61(k)(3)(A))*

We have added Attachment H to Part II, which is a signed certification of intent to obtain coverage under the TPDES general permit at the appropriate time. This attachment was added to the table of contents. We left the statement in Part I, Section 7.0 as is, since it serves to authorize Attachment H.

23. *(Item 57 from NOD #1) For the proposed Class I waste cell, please address the appropriate criteria under which the landfill is proposed to be sited: identify the Unified Soil Classification of the soils within five feet of the base and sides of the proposed landfill excavation; identify the hydraulic conductivity of the soils within five feet of the base and sides of the proposed landfill excavation; provide area data for average annual evaporation and average annual rainfall and determine the number of inches by which evaporation exceeds precipitation; identify the thickness and continuity of the soil unit within five feet of the base and sides of the landfill excavation and discuss whether the*

soil unit, through its thickness and continuity, provides or limits the creation of a significant pathway for waste migration. (30 TAC §335.584(b)(1))

The proposed Class I waste cell will be located in an area that complies with the location restrictions of 30 TAC §335.584(b)(1), including requirements for soil classification and hydraulic conductivity. Discussion on annual average precipitation and evaporation has been added to Part II, Section 1.0, Subsection 1.5. The thickness and continuity of the soil unit is discussed in additional material provided in Management of Industrial and Special Wastes in Part II, Section 2.1.

24. *(Item 57 from NOD #1) Furthermore, for the acceptance of Class I waste in specially designed cells throughout the proposed landfill and with regard to a potential regional aquifer that the facility may overlay, please address whether the regional aquifer is separated from the base of the containment structure by a minimum of ten feet of material with a hydraulic conductivity towards the aquifer not greater than 10E-7 centimeters per second or a thicker interval of more permeable material that provides equivalent or greater retardation to pollutant migration. (30 TAC §335.584(b)(2))*

The base of the containment structure for the proposed Class I waste cell will be separated from the regional aquifer by a minimum of 10 feet of material with a hydraulic conductivity towards the aquifer not greater than 10E-7 centimeters per second or a thicker interval of more permeable material that will provide at least equivalent or greater retardation of pollutant migration. This is discussed in the second and third paragraphs of Management of Industrial and Special Wastes in Section 2.1 of Part II.

25. *(Item 59.b from NOD #1) The application states in the second paragraph of Section 13.0 that all affected reservoirs are owned by the applicant or its parent company. Please clarify whether this ownership includes the reservoir located approximately 2,000 feet south-south west of the proposed permit boundary. If this off-site reservoir is shown to be part of a common drainage area with one that occurs within the permit boundary, a demonstration that there will be no affects to offsite drainage patterns will include this reservoir. (30 TAC §301.33(a)(3))*

The reservoir located approximately 2,000 feet south-southwest of the proposed permit boundary is owned by the applicant's parent company, Rancho Viejo Cattle Company, Ltd. It is part of a common drainage area that occurs within the permit boundary. The ongoing hydraulic and hydrology engineering work being performed by TRC will demonstrate that there will be no affects to off-site drainage patterns, including those associated with this reservoir.

26. *(Item 59.c from NOD #1) In Figure 11 of Part II, the depiction of the Flood Insurance Rate Map (FIRM) delineates a considerable area within the proposed, approximate landfill footprint to be in the 100-year floodplain. Furthermore, in Section 13.0, the application states that several manmade tanks were constructed which were not taken into consideration when the FIRM was compiled. Language in this section appears to dismiss the mischaracterization of the existing conditions by the FIRM, believed to be present at the site. Because the applicant must ultimately demonstrate (Application Part III – 30 TAC §330.63(c)(1)(D)(iii)) that existing drainage patterns will not be adversely*

altered as a result of the proposed landfill development, please provide a discussion identifying the conditions under which the existing drainage patterns will be analyzed for comparison with post-development drainage patterns. Please discuss how the comparison to conditions other than those currently existing is justifiable, if that is the intent. A pre-project design floodwater surface-elevation profile and design flood delineations of the floodplain as they exist under current conditions may be submitted. (30 TAC §301.33(a)(3))

The statement in regard to the man-made structures has been removed from Section 13.0 of the application. Whether or not the current 100-year floodplain boundary (floodplain) is accurate was not a factor in the analysis and design of the hydraulic features to be submitted in the application for a conditional letter of map revision (CLOMR) from FEMA. Instead, it was identified that the floodplain does exist on the site and that any drainage initiating from outside of the project boundary would have to be redirected around the facility. In addition, temporary detention would have to be incorporated in the design.

TRC's proposed design will modify the flow paths but will not adversely alter the existing drainage conditions. The floodplain within the project site appears to have been delineated by FEMA using approximate techniques. Typically there is no documentation of a study performed for streams delineated using this technique. Therefore, without underlying data, the only reasonable characteristic to use for comparing the pre- and post-project effects was the peak 100-year peak discharge. For the comparative analysis, pre- and post-project hydrologic models had to be developed. The U.S. Army Corps of Engineers computer program HEC-HMS was used to simulate the hydrologic conditions at the project. It was decided to select a common point downstream of the modified creeks to define the effects of any work performed for the project.

The two larger tanks on the property were not designed structures and do not have features that allow easy input into the available hydrologic models. However, in order to approximate effects of the tanks, storage and discharge relationships were developed and utilized for simulation of the pre-project conditions. Therefore, all existing features were included in the pre-project conditions analysis. It should be noted that, after reviewing the delineation of the FEMA floodplain with respect to the tanks, the tanks will likely not have any significant attenuation effect on the peak discharge. The 100-year flood is so broad in the vicinity of the tanks it appears there is sufficient area to carry the flows which will bypass the tanks' zones of impact.

27. *(Items 61 & 62 from NOD #1) The application indicates in Part II Section 13.0 that a wetlands determination has been made and, the U.S. Army Corps of Engineers (USACE) concurs that there are jurisdictional wetlands within the proposed landfill footprint. In lieu of addressing the requirements of 30 TAC §330.553 pertaining to wetlands, the applicant will pursue obtaining a USACE permit for the use of any wetlands area. Please be aware that in order for the permit for an MSW landfill to be issued, the facility must have obtained the USACE permit for the use of any wetlands area. (30 TAC §330.61(m)(2))*

Teres McCaine, P.E.
December 14, 2011
Page 8

TRC is presently working on a USACE permit for the use of jurisdictional wetland areas.

After the previous revision to this application was submitted, we received a response to our coordination letter to Texas Parks & Wildlife Department. A copy of that response is enclosed to be part of Part II, Attachment A.

We believe this response and the revisions to the referenced permit application are fully responsive to your request for addition information dated November 14, 2011. We further believe this response is consistent with the applicable rules.

Please contact me if you have any questions.

Very truly yours,

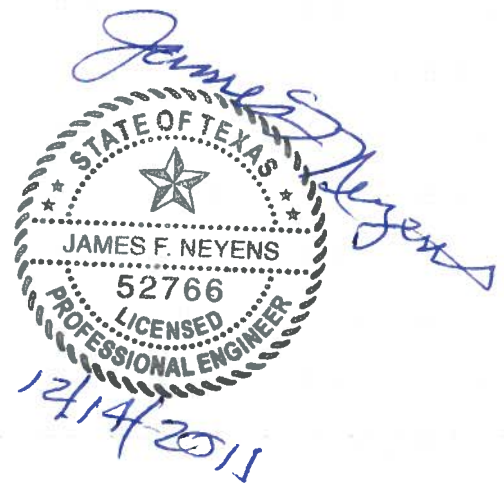


James F. Neyens, P.E.

cc: TCEQ-Laredo Region Office

Enclosure:

1. Cover
2. Core Data Form
3. Part I Form, pp 8 and 10
4. Permit Application dated December 14, 2011 – Final
5. Permit Application dated December 14, 2011 – Track Changes
6. Attachment A – TPWD Response
7. Attachment G – CLOMR Documents
8. Attachment H – TPDES Certification





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)			
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application)			
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)		<input type="checkbox"/> Other	
2. Attachments Describe Any Attachments: (ex. Title V Application, Waste Transporter Application, etc.)			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Municipal Solid Waste Permit Application Part I Form and Parts I & II	
3. Customer Reference Number (if issued)		4. Regulated Entity Reference Number (if issued)	
CN 603835489		RN 106119639	
Follow this link to search for CN or RN numbers in Central Registry**			

SECTION II: Customer Information

5. Effective Date for Customer Information Updates (mm/dd/yyyy)		3/28/2011	
6. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check only <u>one</u> of the following:			
<input type="checkbox"/> Owner	<input type="checkbox"/> Operator	<input checked="" type="checkbox"/> Owner & Operator	
<input type="checkbox"/> Occupational Licensee	<input type="checkbox"/> Responsible Party	<input type="checkbox"/> Voluntary Cleanup Applicant	<input type="checkbox"/> Other: _____
7. General Customer Information			
<input checked="" type="checkbox"/> New Customer		<input type="checkbox"/> Update to Customer Information	
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State)		<input type="checkbox"/> Change in Regulated Entity Ownership	
<input type="checkbox"/> No Change**			
**If "No Change" and Section I is complete, skip to Section III – Regulated Entity Information.			
8. Type of Customer:			
<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual	<input type="checkbox"/> Sole Proprietorship- D.B.A	
<input type="checkbox"/> City Government	<input type="checkbox"/> County Government	<input type="checkbox"/> Federal Government	<input type="checkbox"/> State Government
<input type="checkbox"/> Other Government	<input type="checkbox"/> General Partnership	<input type="checkbox"/> Limited Partnership	<input checked="" type="checkbox"/> Other: Limited Liability Company
9. Customer Legal Name (If an individual, print last name first: ex: Doe, John)			End Date:
Rancho Viejo Waste Management, LLC			
10. Mailing Address:			
1116 Calle del Norte			
City	Laredo	State	TX
ZIP	78041	ZIP + 4	
11. Country Mailing Information (if outside USA)		12. E-Mail Address (if applicable)	
		ccitollroad@aim.com	
13. Telephone Number		14. Extension or Code	
(956) 523-1400		0	
		15. Fax Number (if applicable)	
		(956) 523-1401	
16. Federal Tax ID (9 digits)		17. TX State Franchise Tax ID (11 digits)	
27-450625		32042449358	
		18. DUNS Number (if applicable)	
		N/A	
		19. TX SOS Filing Number (if applicable)	
		801306787	
20. Number of Employees			21. Independently Owned and Operated?
<input checked="" type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)			
<input checked="" type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information <input type="checkbox"/> 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)			
Pescadito Environmental Resource Center			

24. Street Address of the Regulated Entity: (No P.O. Boxes)	Pescadito Environmental Resource Center						
	2864 Jordan Road						
	City	Laredo	State	TX	ZIP	78043	ZIP + 4
25. Mailing Address:	Rancho Viejo Waste Management, LLC						
	1116 Calle del Norte						
	City	Laredo	State	TX	ZIP	78041	ZIP + 4
26. E-Mail Address:	cba@stx.rr.com						
27. Telephone Number	28. Extension or Code		29. Fax Number (if applicable)				
(956) 523-1400			(956) 523-1401				
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)			
4953		562212		562920			
34. What is the Primary Business of this entity? (Please do not repeat the SIC or NAICS description.)							
Solid Waste Recycling and Disposal							

Questions 34 – 37 address geographic location. Please refer to the instructions for applicability.

35. Description to Physical Location:	From Loop Hwy 20, go east on SH 359 approximately 15 miles to Jordan Road; go north approx. 5.1 miles to entrance to Yugo Ranch, go approx. 2 miles northward on ranch road.					
36. Nearest City	County		State		Nearest ZIP Code	
Laredo	Webb		TX		78043	
37. Latitude (N) In Decimal:	27.559 N		38. Longitude (W) In Decimal:	99.160 W		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
27	33	32.4	99	9	35.9994	

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.

<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Industrial Hazardous Waste	<input checked="" type="checkbox"/> Municipal Solid Waste
				2374
<input type="checkbox"/> New Source Review – Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS	<input type="checkbox"/> Sludge
<input type="checkbox"/> Stormwater	<input type="checkbox"/> Title V – Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil	<input type="checkbox"/> Utilities
<input type="checkbox"/> Voluntary Cleanup	<input type="checkbox"/> Waste Water	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

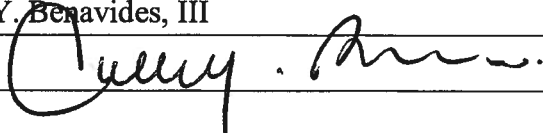
SECTION IV: Preparer Information

40. Name:	James F. Neyens, P.E.		41. Title:	Consulting Engineer	
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address		
(512) 684-3156	N/A	(512) 329-8750	jneyens@trcsolutions.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:	Rancho Viejo Waste Management LLC	Job Title:	Manager		
Name (In Print):	C. Y. Benavides, III		Phone:	(956) 523-1400	
Signature:			Date:	12-13-2011	

Landfilling/Earthmoving Equipment Types	Personnel Experience or Licenses
Landfill compactor, Cat 836G or equal (minimum of one)	Landfill Manager – Class A MSW Facility Supervisor License, or equivalent.
Bulldozer, Cat D-9R or equal (min. of one)	
Hydraulic excavator (Cat 330B); Truck (Cat 730) or equal (min. of one each)	

For mobile liquid waste processing units, submit a list of all solid waste, liquid waste, or mobile waste units that the owner and operator have owned or operated within the past five years. Submit a list of any final enforcement orders, court judgments, consent decrees, and criminal convictions of this state and the federal government within the last five years relating to compliance with applicable legal requirements relating to the handling of solid or liquid waste under the jurisdiction of the commission or the United States Environmental Protection Agency. Applicable legal requirement means an environmental law, regulation, permit, order, consent decree, or other requirement.

Solid waste, liquid waste, or mobile waste units owned or operated within past 5 years	Texas and federal final enforcement orders, court judgments, consent decrees, and criminal convictions
N/A	

G. Appointments

Provide documentation that the person signing the application meets the requirements of 30 TAC §305.44, Signatories to Applications. If the authority has been delegated, provide a copy of the document issued by the governing body of the owner or operator authorizing the person that signed the application to act as agent for the owner or operator.

H. Application Fees

For a new permit, registration, amendment, modification, or temporary authorization, submit a \$150 application fee.

For authorization to construct an enclosed structure over an old, closed municipal solid waste landfill in accordance with 30 TAC 330 Subchapter T, submit a \$2,500 application fee.

If paying by check, send payment to:

Texas Commission on Environmental Quality
 Financial Administration Division, MC 214
 P. O. Box 13087
 Austin, Texas 78711-3087

Payment maybe made online using TCEQ e-pay at www.tceq.state.tx.us/e-services/	
E-pay confirmation number	

Signature Page

I, Carlos Y. Benavides, III, Manager
(Operator) (Title)

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: [Handwritten Signature] Date: 12/12/2011

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

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

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

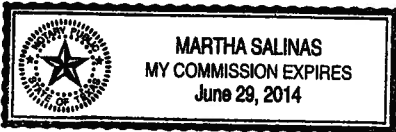
Printed or Typed Name of Operator or Principal Executive Officer

Signature

SUBSCRIBED AND SWORN to before me by the said CARLOS Y. BENAVIDES III

On this 12th day of DECEMBER, 2011

My commission expires on the 29th day of JUNE, 2014



[Handwritten Signature]

Notary Public in and for

WEBB County, Texas

(Note: Application Must Bear Signature & Seal of Notary Public)

PART I

APPLICATION FOR PERMIT

TYPE I MUNICIPAL SOLID WASTE FACILITY

MSW PERMIT NO. 2374

**PESCADITO ENVIRONMENTAL
RESOURCE CENTER**

**SOLID WASTE MANAGEMENT AND
DISPOSAL FACILITY**

**RANCHO VIEJO WASTE MANAGEMENT, LLC
LAREDO, WEBB COUNTY, TEXAS**

March 28, 2011

Revised May 20, 2011

Revised September 14, 2011

Revised December 14, 2011

Prepared By:



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TRC Environmental Corporation

TBPE Firm Registration No. 3775

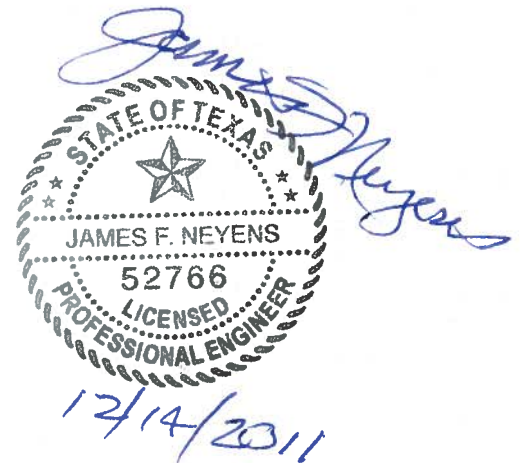


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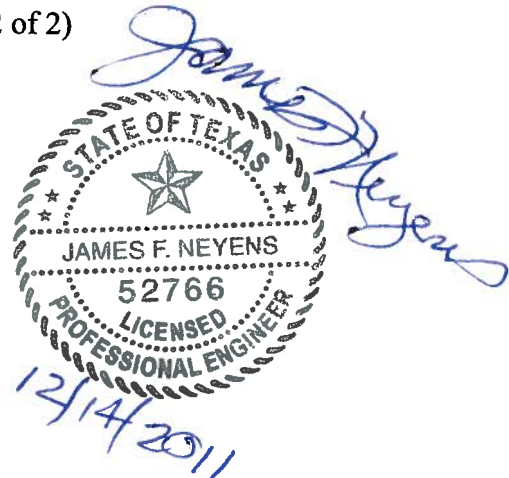
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generated in the City of Laredo, as that city's existing landfill is reported to have less than 10 years of remaining capacity and is not likely to be expanded. The City of Laredo landfill received 378,000 tons of solid waste in FY 2008, and waste receipts should increase over the near future as the Laredo population continues to grow. For planning purposes, it is assumed that PERC will receive approximately half of Laredo's solid waste when its landfill closes in the future, and that the amount of future waste will be about 235,000 tpy, or about 750 tpd (six days per week basis). This waste will be brought to the site by trucks. PERC intends to offer the City of Laredo the opportunity to deliver its solid waste to a proposed transfer station that PERC would construct and operate in or near the city, to facilitate transportation of the City's waste to the facility. Additionally, municipal solid waste, construction and demolition (C&D) waste, and water and wastewater treatment sludge are expected to be between 1,250 and 4,000 tpd, and various industrial wastes are estimated to average about 750 tpd, all transported by rail. Industrial waste from the maquiladora industries in Mexico will also be rail-hauled to the site. KCS owns and operates the rail line on the International Bridge between Laredo and Nuevo Laredo, Tamaulipas.

Waste from Laredo will be trucked to the site via Hwy 359. It is anticipated that a waste transfer station will be established in the city, so that the city waste collection trucks will not need to drive to and from the facility. Instead, waste will be hauled by semi-tractor trailer units dedicated to the transfer station operation. About 30 to 35 transfer truck trips per day are anticipated to carry the 750 tpd to the site. The transfer station will be subject to obtaining a permit or registration from TCEQ. Until the permit or registration is issued, waste collection trucks would haul waste directly to the landfill.

Rail-hauled waste will be transported by several methods. The most common transportation method for the municipal solid waste will involve loading the waste into intermodal shipping containers at the waste generators' transfer stations. Once they are filled, either the containers will be directly loaded onto flat-bed rail cars if the transfer station has rail access, or they will be transported on flatbed trucks to an intermodal rail yard for loading onto rail cars. This method of shipment is commonly used for shipping a wide variety of commodities across the country and internationally, and is also used in most waste-by-rail operations. Some bulk-type industrial wastes, coal combustion waste, most municipal and industrial sludges, and many C&D waste streams may be hauled by gondola cars, provided the particular waste is not subject to odors, wind-blown release of waste, or has similar restrictions. Some generators may establish waste transfer stations that employ balers. Baled waste is readily transportable, as a baler produces a cube of highly compressed waste wrapped in wires. Baled waste is quite stable, and can be moved and stacked inside intermodal containers by conventional fork-lifts, in the same manner as many commodities. Some waste baling operations include wrapping the bale

in polyethylene film which seals in odors and any liquids that might be present, and keeps out rainwater and insects, making shipping the waste to the landfill very secure and unobjectionable.

Initially, PERC may receive waste in intermodal shipping containers at the new KCS container facility east of Laredo. If this option is employed, the intermodal containers with waste will be off-loaded from rail cars to flatbed tractor trailers that will be driver to the landfill. As the volume of waste received increases over time, PERC will construct a rail siding along the KCS main line on Yugo Ranch. The facility will employ a container moving equipment to off-load the intermodal containers from rail cars to flat bed tractor-trailer units which will haul the containers to the working face area of the landfill. A long boom crane with a container lifting mechanism will remove each container from the truck and place it near the working face, where a worker will unseal and open the doors. The crane operator will then tip the container to dump the waste into the working face, where the waste will be compacted into the landfill. The crane operator will remove the container for cleaning, and then replace the empty container on the truck bed so it can be returned to the rail car and eventually returned to a waste generator for re-use. As waste volume increases, a rail spur may be constructed into the landfill area to eliminate the step of off-loading containers onto flat-bed trailers. Also, if the disposal market offers sufficient opportunity for accepting waste in gondola cars, a rail car tipper will be added to the rail siding or spur. Car tippers are commonly used to unload coal at power plants, and are also used for waste transfer at waste-by-rail landfill sites, such as at the ECDC landfill near East Carbon, Utah.

The landfill will include a conventional RCRA Subtitle D design with a composite liner and leachate collection system. Provisions will be made for leachate recirculation, to create a bioreactor that will speed the decomposition of organics in the waste and encourage the production of landfill gas. If landfill gas recovery is authorized by a future registration, the landfill gas will be collected and treated to the degree necessary for sale of the gas into one of the natural gas collection systems that exist in the general area of the site. Gas treatment is anticipated to include drying to remove excessive water vapor and treatment to remove carbon dioxide to increase its BTU content.

Ancillary facilities proposed for PERC may include a processing facility for recyclable materials, often called a clean materials recovery facility or “clean MRF. This facility will function to separate and recover all re-usable or recyclable components that have economic value from their respective source streams. The source stream for the clean MRF will be materials collected in curbside recycling programs and citizen drop-off centers offered in most cities. The MRF will use a combination of manual picking and mechanical sorting to produce as many recyclable commodities as possible. The

recovered commodities will be baled or containerized and shipped to markets for these commodities. The site's rail access will provide economical transport of the incoming recyclables and shipment of the recovered commodities to their markets. Unrecoverable materials, or materials that have no use or value as recycled commodities will be landfilled. In addition, it is proposed that grease and grit wastes from the Laredo area will be processed to reduce the water content and then landfilled, with the expectation that recovered grease may be used for energy recovery in the form of methane gas production, depending on volumes and the availability of suitable equipment or technology. Landfill gas recovery will only occur after a future registration through TCEQ to authorize this activity.

PERC will seek a permit from the Railroad Commission of Texas (RRC) to construct and operate a Class 2 underground injection well at the site. This type of injection well is limited to the injection of liquids originating in oil and gas exploration and production, which basically is limited to condensate, produced water and brine. Plans for this facility are still being formed, but the injection facility is expected to include one or more above-grade storage tanks, a pre-injection filter system to remove solid matter, an injection pump, and the well itself. The application for this injection well permit, and further details of the plans and specifications for the system, are being prepared as a separate regulatory process through the RRC. Discussion of this aspect of PERC is included here in the interests of providing a complete picture of the total anticipated development of the site. The Class 2 well, or a separate Class 5 well may also be used for the disposal by underground injection of shallow groundwater produced during the construction and initial operation of the landfill.

1.4.2 Volumes, Rates and Characteristics of Wastes

Types of wastes that will be accepted for landfill disposal, along with their volume or rate include:

Municipal solid waste by rail – estimated to be between 1,250 and 4,000 tpd,

Municipal solid waste by truck – estimated to be 750 tpd,

Non-hazardous industrial waste – estimated to be 750 tpd,

Construction and demolition waste – included with municipal solid waste,

Coal combustion ash and pollution control sludges – included with industrial waste,

Filter cake and process sludge from industrial and municipal water and wastewater treatment plants – included with municipal solid waste,

Non-hazardous industrial waste from maquiladora industries in Mexico – included with industrial waste, and

Event-type waste from disaster clean-ups – varies from none to occasionally up to 2,000 tpd.

The types of materials that will be received for processing, along with their volume or rate, may include:

Unsorted or mixed recyclables for processing and recovery of commodities – up to 500 tpd, and

Grease trap and grit trap wastes for processing and beneficial reuse – up to 50,000 gallons per day.

The characteristics of these wastes and materials are provided in the definitions found at 30 TAC §330.3 (1) through (181). No regulated hazardous wastes will be accepted. Special wastes as defined by 30 TAC §330.3 (148) and Class 2 and Class 3 industrial wastes will be accepted, except for any such wastes that cannot be effectively processed, handled or disposed at this facility. Class 1 non-hazardous wastes will also be accepted. Class I Industrial Waste amounts will not exceed 20 percent of the total amount of all other waste accepted for disposal during the current or previous year.

Materials that will be received for deep well injection include liquids from oil and gas exploration and production under the regulatory jurisdiction of the RRC.

Waste for landfill disposal at PERC is anticipated to be between 1,000,000 and 2,000,000 tons per year (tpy) in the first few years after the landfill is permitted and constructed. This is between about 2,750 and 5,500 tons per day (tpd), based on receiving waste seven days per week. The facility expects to receive a higher rate of waste, and will have ample capacity to accept larger quantities. The landfill has a total disposal capacity currently estimated to be about 300-350,000,000 tons, and have a capacity to receive and dispose of as much as 10,000 tpd.

The above volumes and rates are estimates, and it should be understood that it is difficult to accurately estimate what the future volumes and rates of waste receipts may be. Almost all incoming waste will be received based on multi-year contracts with various waste generators, which will be a combination of local governmental entities, private waste companies with local hauling contracts but no local landfill, and industries.

1.4.3 Other Information

This permit application has been prepared to demonstrate compliance with the requirements established in 30 TAC 330.57 through 330.65, and related or referenced

rules that are in effect as of the date of this application. The application is formatted to be in general conformance with these rules.

3.0 MAPS [330.59 (c)]

The maps presented as figures in Parts I and II show the elements required by §305.45, as discussed in Section 1.2 above. The General and Detailed Location Maps, the Land Ownership Map, and the Metes and Bounds drawing are presented in Figures 1, 2, 3, and 4 of Part I, respectively. The landowners' list corresponding to Figure 3 is presented below.

Following is a list of all owners of record of real property located within ¼ mile of the proposed facility site boundary, along with a numeric key that identifies the property they own. This key is the same as shown on the Land Ownership Map, Figure 3. This list of landowners and those shown on the Land Ownership Map were obtained from the Webb County Appraisal District deed records, and are the most current available records as of the date of this permit application. Parcel 1 is the proposed PERC site. This parcel is owned by the Applicant, Rancho Viejo Waste Management, LLC.

Parcel 1 - Rancho Viejo Waste Management, LLC
1116 Calle del Norte
Laredo, TX 78041

Parcel 2 - Rancho Viejo Cattle Company, LTD
1116 Calle del Norte
Laredo, TX 78041

Parcel 3 - Volz Arthur C. Jr.
4072 Sucia Dr.
Ferndale, WA 98248-9506

Volz James Richard
310 Westmont Dr.
Laredo TX 78041-2745

Zuck Sally Ann Volz
1609 Matamoros St.
Laredo, TX 78040-7714

Martin Margaret Lucille
215 W. Bandera Rd. Ste 114-619
Boerne, TX 78006-2820

8.0 APPLICATION FEE [330.59 (h)]

The application fee for this registration application was submitted separately to the TCEQ Office of Finance and Administration. A copy of the payment documentation is provided as Attachment C.

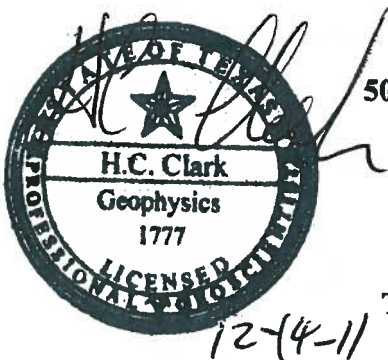
PART II
APPLICATION FOR PERMIT
TYPE I MUNICIPAL SOLID WASTE FACILITY
MSW PERMIT NO. 2374
PESCADITO ENVIRONMENTAL
RESOURCE CENTER
SOLID WASTE MANAGEMENT AND
DISPOSAL FACILITY
RANCHO VIEJO WASTE MANAGEMENT, LLC
LAREDO, WEBB COUNTY, TEXAS

March 28, 2011
Revised May 20, 2011
Revised September 14, 2011
Revised December 14, 2011

Sections 1.1, 1.2, 10.1—10.4, 11.1

Prepared By:

Except for 1.1, 1.2, 10.10.4, 11.1



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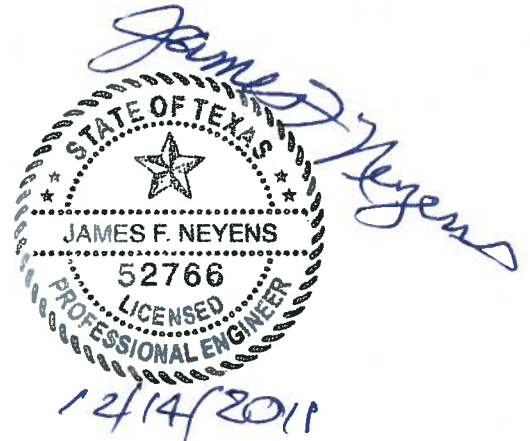
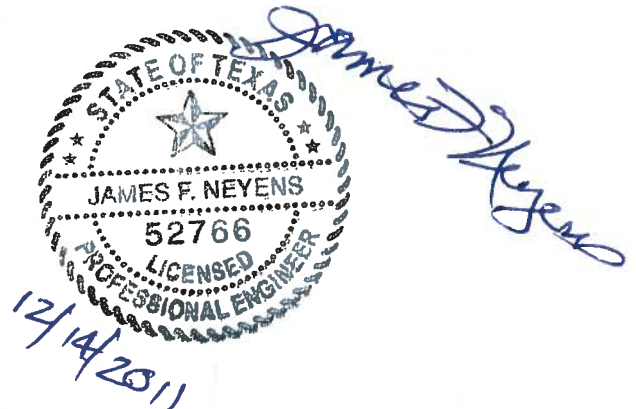


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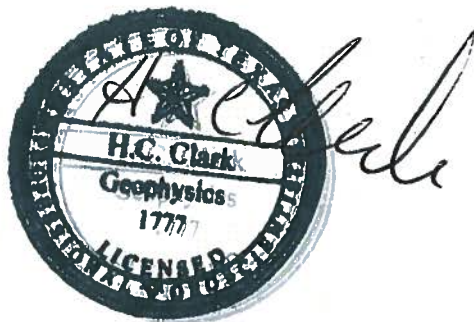
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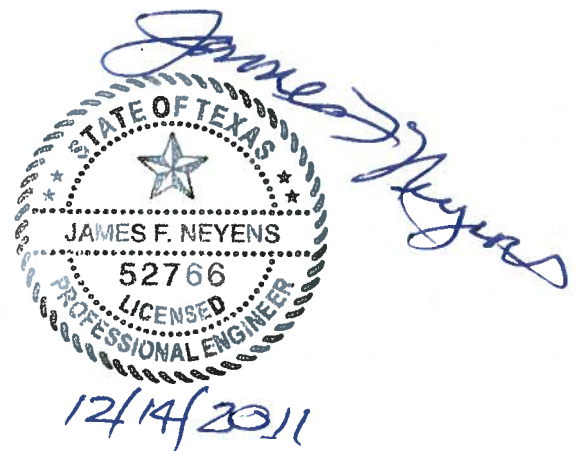
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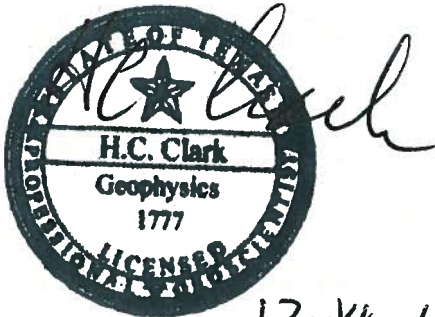
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Except for 1.1, 1.2, 10.1—10.4, 11.1



1.0 EXISTING CONDITIONS SUMMARY – [330.61 (a)]

This section discusses site-specific conditions that require special design considerations and mitigation of conditions that exist at the site of the proposed 1,110-acre Pescadito Environmental Resource Center (PERC), located about 20 miles east of Laredo in Webb County, Texas (see Figure 1, Part I and Figure 1, Part II).

1.1 Soils and Geology

A series of 56 soil borings were completed to evaluate the characteristics of soil encountered in the upper 160 feet at the site. These soils are predominantly clays, with some interbedded sand, sandstone, and claystone or shale. Based on review of published reports and geophysical logs, these or similar soils are believed to extend to much greater depths. Laboratory testing of these soils confirms that they are well suited for the location of a solid waste landfill and to be used for the construction of the proposed landfill's liners and cover systems, and for storm water management structures such as channels, detention ponds and dikes. These soils have very low permeability characteristics and are resistant to erosion, both in the natural or *in situ* condition and when constructed into compacted clay liner systems. These soils also are resistant to erosion.

The geology of the site area is also suitable for landfill development, as the soil strata are laterally very extensive with relatively thick layers of very low permeability soils that prevent vertical migration of water. Consequently, the area geology is very protective of the quality of water in the aquifers that lie below the proposed facility. There are no recognized geological hazards at the site, as there are no geologic faults in the immediate area, the risk of seismic activity is extremely low, and there is no known incidence of instability due to subsidence, poor foundation conditions, or karst terrains.

1.2 Groundwater

Groundwater was encountered beneath the site within soils of the Jackson and Yegua Groups. These soils are part of the Jackson-Yegua Aquifer, which is classified as a minor aquifer by the Texas Water Development Board (TWDB). This classification is due to the relatively low yield and marginal quality of water in the aquifer. The ground water below the site was encountered in several water-bearing zones or layers that are generally characterized by gradational changes to sandy or silty soil classifications. These water-bearing zones are generally on the order of several feet thick and are found at several depth intervals across the site. These water-bearing zones may also be found layered as a transition between two highly impermeable layers of clay soil or at the top of a relatively impermeable layer of rock-like indurate material, and may also be associated with secondary porosity in the over-consolidated clay soils. These water bearing zones exhibit the characteristics of a confined aquifer. However, the hydraulic characteristics or

relative thinness of these zones severely limit their ability to produce water in potentially useful quantities. The quality of this water is very poor to unacceptable for most domestic or agricultural uses. Regional aquifers exist beneath the site, but at significant depth. The Laredo Aquifer is expected to occur at a depth of about 1,000 feet or more below the ground surface. Water in this aquifer is generally slightly saline, with total dissolved solids in the range of 1,000-2,500 milligrams per liter (mg/l), about two to five times the U.S. EPA's secondary drinking water regulation (SDWR) standard of 500 mg/l. Published reports indicate the groundwater produced by some wells contain some metals and trace elements in excess of SDWR limits. This and other deeper aquifers in south central Webb County dip towards the southeast towards the Gulf of Mexico and generally crop out in relatively narrow bands that trend northeast-southwest.

Groundwater usage in the general area of the site is very limited. Only one water well is known to exist within a one-mile radius of the facility boundary. This is the private water well that is located near the Yugo Ranch headquarters buildings and serves the general needs of the ranch. This well is located roughly 900 feet southwest of the proposed facility. The ranch well was geophysically logged as part of this study and the caliper log indicates that the well is screened in the Yegua from about 1020 feet to 1136 feet where the diameter is reduced to final log depth [1160 feet], suggesting a smaller screen or sediment trap. According to TWDB records and information developed during the preparation of this permit application, there are only 6 water wells within a five-mile radius of the facility, including this ranch well. The next closest well is about 2.5 miles northwest of the facility. Four wells are located between 4.3 and 5 miles northwest of the facility, in the community of Ranchitos Las Lomas. One of these is a well located nearly 5 miles away that is owned and operated by Webb County. This well was intended as a public water supply well to make dispensed water available to the residents of Ranchitos Las Lomas. Water quality from this well is so poor that the majority of the water dispensed at this site is hauled by tanker trucks from the Webb County maintenance facility near U.S. Highway 59 and Loop 20 in Laredo. The source of this hauled water is the Laredo public water system. Of the total quantity of water Webb County dispenses at this location, relatively little water comes from this well, and that follows extensive treatment.

1.3 Site Size and Topography

The site contains approximately 1,110 acres and is roughly rectangular in shape, as shown on Figure 3, Part II. It is nearly one mile measured east to west and less than two miles measured north to south. For the most part, the site topography is gently sloped from north to south at about 0.5 to 1 percent. Several shallow swales gather storm water runoff and convey it southward. Several stock tanks have been constructed within the site

to collect and store runoff for livestock watering. The relative uniformity of the terrain will facilitate design and construction of the landfill and supporting features, particularly management of storm water.

1.4 Rainfall, Hydrology and Storm Water Runoff

According to the *Soil Survey of Webb County, Texas*, published by the U.S. Department of Agriculture, Soil Conservation Service (1985), rainfall at Laredo averaged 19.8 inches per year between 1931 and 1979. Monthly averages ranged from 3.2 inches in September to 0.5 inches in March. An average of 13.9 inches, or 70 percent of the annual amount, fell in the 6 month period from May through October. Since Laredo is only about 20 miles west of the site, it is believed this rainfall data is also representative of the site.

Because the site slopes rather gently from north to south at about 0.5 to 1 percent, near-surface soils have very low permeability, and the site is uniformly covered with native vegetation consisting of brush, forbs and grass, surface water hydrology is relatively consistent. Storm water runoff historically has not eroded bed-and-bank features into the shallow swales that convey drainage from the site. In recent times, several impoundments have been created on site by shallow excavation and embankment construction across the swales to create livestock watering tanks. Patterns of storm water runoff have thus been significantly altered by the capture of rainfall by these tanks.

The *Texas Water Atlas* (Estaville, Lawrence & Earl, Richard A., River Systems Institute at Texas State University, Texas A&M Press, 2008) provides the following site-specific hydrologic information:

- Average Annual Precipitation is 22-23 inches (period 1971-2000).
- Annual Potential Evapotranspiration (Priestly Taylor Method) is 76 inches.
- Annual Potential Evapotranspiration (Penman Method) is 106 inches.
- Annual Gross Lake Surface Evaporation is 79 inches (period 1950-1979).

The site is considered an arid location and is located at the boundary of the “Subtropical Subhumid” and “Subtropical Steppe” climates. Currently-published information documents that average annual evaporation exceeds average annual rainfall by more than 40 inches.

1.5 Floodplains

Because the swales that convey drainage across the site are so wide and shallow, they are quite inefficient at conveying runoff. As a result, relatively wide areas of the site are inundated by runoff from the 100-year rainfall event. The flood insurance rate map (FIRM) for the site, as prepared by the Federal Emergency Planning Agency (FEMA), indicates a significant portion of the site to be within Zone A, the 100-year floodplain.

This floodplain is depicted in Figure 11, Part II. The FIRM can also be found in Attachment G of Part II. It is important to realize that the surface topography used to create the FIRM does not appear to include the existing dikes and surface impoundments at the site and in the watershed upslope from the site. TRC is engaged in engineering studies of the actual surface topography as it currently exists. TRC is also performing an engineering analysis of drainage at the site and all watersheds above and immediately below the site. TRC will design a series of drainage channels and detention structures that will result in the removal of the proposed landfill area from the 100-year floodplain. Furthermore, TRC will submit to FEMA a Conditional Letter of Map Revision (CLOMR), requesting correction of the existing FIRM to take into account the related drainage and floodplain improvements. We expect this action will result in documentation that construction of the proposed watershed improvements at and adjacent to the site will remove the landfill from the 100-year floodplain.

1.6 Threatened and Endangered Species

TRC has performed an initial assessment of threatened and endangered (T&E) species at the site, and subsequently conducted a more detailed biological evaluation. These studies will assure compliance with federal and state requirements for the protection of T&E species and their habitats. These studies have been submitted to the Texas Parks and Wildlife Department (TPWD) and the U.S. Fish and Wildlife Survey (USFWS), as discussed in Section 4.0.

1.7 Land Use

Land use at and within one mile of the facility is exclusively devoted to cattle ranching and oil and gas exploration and production. This same land use extends generally for many miles in every direction. The only exceptions are an area of residential land use about four miles to the northwest and two transportation corridors. The residential land use is in the community of Ranchitos Las Lomas, which is located along Highway 59 and had a population of 334 in the 2000 census. The transportation corridors include U.S. Highway 59, which passes through Ranchitos Las Lomas four miles to the northwest, and the Kansas City Southern Railroad about two miles to the south of the facility, which will provide rail service to the site.

1.8 Oil and Gas Production

While some oil but mostly gas production has been prevalent in the area, very little has actually occurred on the proposed site of the facility. Several wells were attempted on or adjacent to the site, but have been sealed and abandoned. The width of the landfill was selected to allow possible future development of gas reserves beneath the landfill by using directional drilling methods. Existing practices employed by energy companies in

this area of Webb County were reviewed to identify the appropriate well spacing and horizontal departure allowances.

Recovery of landfill-generated gas is planned for the facility. At an appropriate time in the future, the owner or operator may apply to TCEQ for a registration to allow for recovery of landfill gas. The existing infrastructure of gathering pipelines, valves, and separators is expected to be useful to or at least compatible with the landfill gas recovery. The landfill gas will be processed on-site, to the degree necessary to make this gas marketable. Processing may include drying and/or removal of carbon dioxide or trace gases. The landfill gas will then be metered and pumped into the existing natural gas delivery system.

The oil and gas production at and around the site has resulted in a number of wells and pipelines being installed. Every production well has a certain useful or productive life, which ends when the oil or gas reserves it tapped is no longer recoverable. Some wells and pipelines in the site area are no longer active and have been abandoned in place, while others continue in service. Many of these pipelines exist within easements. The easement agreements allow the landowner (the Applicant for this permit) to reroute the pipelines as may become necessary in the future, as long as the replacement pipelines meet industry standards. Also, ownership of the easement and pipelines typically reverts to the landowner if the pipeline operator abandons the line. Similarly, ownership of abandoned wells reverts to the landowner. For these reasons, the proposed landfill is fully compatible with the existing oil and gas production. As the landfill grows in size over several decades in the future, the existing active oil and gas wells will transition into abandonment. New wells can be drilled if desired, because they can be located where they can access hydrocarbons beneath the landfill with directional drilling, and not interfere with the construction and operation of the landfill.

2.0 WASTE ACCEPTANCE PLAN [330.61 (b)]

2.1 General

Type of Facility and Wastes to be Accepted – The facility will be a Type I municipal solid waste landfill, with several additional waste management units. As a Type I landfill, the facility will be designed for and will accept certain types of non-hazardous industrial wastes that are compatible with landfill disposal, and may accept liquid industrial wastes in the future. Waste management units for liquid industrial wastes may include solidification (prior to landfill disposal) or underground injection by means of a Class 1 injection well. Design considerations will be made to ensure that storm water and wastewater management are in compliance with TCEQ regulations. All contaminated liquids resulting from the operation of the facility will be disposed of in a manner that will not cause surface water or groundwater pollution. Grease trap and grit trap wastes will be accepted for processing. Processing of recyclables, such as those collected by residential curbside collection programs, may be provided. This process will seek to recover all recyclable commodities that have a market or reuse value, coupled with landfill disposal of non-recyclable residuals.

General Prohibitions- The following wastes will not be accepted for landfill disposal at this facility:

- (1) Lead acid storage batteries.
- (2) Do-it-yourself used motor vehicle oil
- (3) Used oil filters from internal combustion engines.
- (4) Whole used or scrap tires, unless processed prior to disposal in a manner acceptable to the executive director.
- (5) Refrigerators, freezers, air conditioners, and any other items containing chlorinated fluorocarbon (CFC).
- (6) Liquid waste, except as allowed in 30 TAC §330.177 (relating to Leachate and Gas Condensate Recirculation), and/or except household liquid waste as allowed by 30 TAC §330.15(e)(6) will not be accepted for disposal in any MSW landfill unit.
- (7) Regulated hazardous waste as defined in 30 TAC §330.3.
- (8) Polychlorinated biphenyls (PCB) wastes, as defined under 40 Code of Federal Regulations Part 761, unless authorized by the United States Environmental Protection Agency and the MSW permit.
- (9) Radioactive materials as defined in 30 TAC Chapter 336 (relating to Radioactive Substance Rules), except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services.

Management of Industrial and Special Wastes – The facility will accept certain Class 1 non-hazardous, Class 2 and Class 3 industrial wastes, as well as many special wastes

that are regulated as municipal solid waste (MSW). Only those Class 1 non-hazardous wastes that are allowed to be disposed into Type I MSW landfills in restricted locations will be accepted, with the understanding that the facility may in the future provide on-site stabilization or solidification of certain types of industrial sludge to render these wastes suitable for landfill disposal. Grease and grit trap wastes will be accepted for processing from commercial sources (restaurants, fast food facilities, car wash and vehicle maintenance facilities), industrial sources (food processing plants, manufacturing plants) and institutional sources (hospitals, schools, prisons). Class I Industrial Waste amounts will not exceed 20 percent of the total amount of all waste accepted for disposal. Special design considerations will be made in accordance with 30 TAC §330.173 to properly manage any Class I waste that is proposed to be accepted for disposal at the landfill. Before accepting wastes that require stabilization, the facility will obtain a permit modification or amendment to add an on-site solidification facility. Special wastes will be accepted only to the extent that any given category or type of special waste can be properly managed by the facility and/or readily disposed into the landfill.

Class I Industrial Waste will be disposed only in landfill cells lined with the industrial waste default design composite liner. The upper component shall consist of a minimum 30-mil (0.75 mm) flexible membrane liner and the lower component shall consist of at least a three-foot layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec. Flexible membrane liner components consisting of high density polyethylene shall be at least 60-mil thick. The flexible membrane liner component shall be installed in direct and uniform contact with the compacted soil component. Class I Industrial Waste cells shall have a leachate-collection system designed and constructed to maintain less than a 30-cm depth of leachate over the liner.

While the bottom and sides of the landfill excavation could encounter thin, isolated sand/silt units with a Unified Soil Classification of “SM” or “SP,” these soil units do not appear to be sufficiently thick and laterally continuous to provide a significant pathway for waste migration. In addition, most of these units will not exhibit hydraulic conductivity greater than 1×10^{-5} cm/sec. However, any effect of the sand/silt units is minimized because the average annual evaporation exceeds average annual rainfall by more than 40 inches. The nearest “regional aquifer” is located approximately 1,000 feet below the site. As a consequence of the prevailing soil conditions, the aquifer is protected by approximately 900 feet of soil with a predominant hydraulic conductivity towards the aquifer not greater than 1×10^{-7} cm/sec.

2.2 Sources and Characteristics of Waste

The proposed facility will be a comprehensive waste treatment and disposal facility that serves municipal and industrial customers by means of truck and rail transportation.

Municipal solid wastes transported by truck are expected to originate in Webb and nearby counties. The use of tractor-trailers loaded at transfer stations could extend the service area to more distant areas of South Texas such as Corpus Christi and San Antonio. Grease trap and grit trap wastes processed at this facility are expected to be generated in the same service area. Industrial wastes are expected to be generated from this service area plus the industries in the Houston-Beaumont region. Wastes transported by rail can be economically shipped from greater distances, because the transportation cost per ton-mile is much less by rail than by truck. In regions of the country where the cost of landfill disposal is relatively high and landfills are some distance away and served by trucks, the cost of solid waste disposal by rail-hauling to this facility could be less. Thus, the service area for rail-hauled waste may essentially be unlimited.

Sources of non-industrial waste that are intended to be managed at the proposed facility include local governmental entities (cities, towns, waste management districts or authorities, and counties), state institutions, federal agencies that generate waste from disaster response, commercial solid waste collection companies, and similar generators of municipal solid waste. Wastes to be received other than industrial waste can be characterized as garbage, rubbish, ashes, street sweepings, incidental dead animals, and non-recyclable residuals following the removal of recyclables from source-separated recyclable materials. Solids resulting from processing grease and grit trap wastes may also be disposed in the landfill.

A main line of the Kansas City Southern Railroad (KCS) passes within about two miles of the landfill facility and is accessible by all-weather roads on private property. Rail service to the site can be accomplished without having to transport waste over public roads. However, in the initial period of operation, waste may be transported in sealed, steel containers through the KCS intermodal shipping yard in Laredo.

KCS is an international railroad company with extensive track mileage and service in Mexico. The facility intends to provide waste disposal services to industrial generators in Mexico. Both the *maquiladora* industries along the U.S. border and other industries in Mexico will be served by the facility.

2.3 Quantity of Waste

Estimated Maximum Annual Waste Acceptance Rate - The facility estimates that it will receive the following maximum annual quantities of waste for landfill disposal during the first five years of its operation, and the population equivalent represented by these quantities:

Year 1 – 1,000,000 tons (1.1 million)

Year 2 – 1,200,000 tons	(1.3 million)
Year 3 – 1,400,000 tons	(1.6 million)
Year 4 – 1,600,000 tons	(1.75 million)
Year 5 – 1,800,000 tons	(2.0 million)

It must be noted that these figures are estimates only at this time, and should not be considered either as a firm commitment of quantities to be received or as a limitation on the amount of waste to be received in any of the years shown. The actual quantities to be received are expected to be determined by contracts the owner or operator anticipates securing from waste generators after the facility is closer to being in operation. The facility will be constructed to have sufficient processing and disposal capacity available and sufficient numbers of personnel and equipment, to properly manage the waste streams that are brought to the facility. Maximum and average storage times are expected to be 2 days and 1 day.

The grease and grit trap (G&G) waste processing facility is expected to receive a maximum of 30,000 gallons per day in the first year of operation. The maximum and average lengths of time this waste will remain at the facility prior to disposal, are summarized in the following table. G&G waste will typically be delivered in commercial vacuum trucks and off-loaded into a series of storage tanks. This waste will be transferred to mixing tanks for processing, where treatment chemicals (typically polymers and flocculating agents) and possibly compressed air will be added. Following the reaction time in the mixing tanks, the G&G waste will be transferred to separation tanks, where the grease will float and the grit will settle. Grease may be shipped off-site for processing for energy recovery or dewatered on-site and landfilled. Grease decomposes to produce landfill gas. Grit will be dewatered and landfilled. Remaining water will be managed as contaminated water and treated on site by solar evaporation or solidification (in accordance with TCEQ rules). This water may be hauled off-site for disposal at a wastewater treatment plant under authorization of the plant owner. All aspects of the management of G&G waste will be in accordance with TCEQ rules (and U.S. EPA rules if offsite disposal is employed).

GREASE AND GRIT TRAP WASTE

Year after opening	Maximum Receipts, gallons per day	Maximum Receipts, gallons per year	Maximum Storage, days	Average Storage, days

1	30,000	10,800,000	5	3
2	33,000	11,900,000	5	3
3	36,000	13,000,000	5	3
4	39,000	14,000,000	5	3
5	42,000	15,100,000	5	3

The maximum amount of grease and grit trap waste to be stored, or total storage capacity, will be 50,000 gallons. The proposed maximum daily waste acceptance rate is 50,000 gallons per day.

3.0 GENERAL LOCATION MAPS [330.61 (c)]

The General Location Map is presented as Figure 1 in Part II. This map is used to present the following described features, to the extent they exist within the distances from the proposed facility as defined by 30 TAC 330.61(c). For clarity, certain of these features are presented elsewhere in this permit application. The prevailing wind direction with a wind rose is presented on Figure 2 of Part II.

There are no water wells on the proposed site or within 500 feet of the proposed permit boundary, except for temporary piezometers and / or groundwater monitoring wells that were installed as part of the development of this permit application. There is one water well within two miles of the proposed site, located about 900 feet southwest of the site. This is the water supply well for the ranch. Its location is shown on Figure 1 in Part II.

There are no structures and inhabitable buildings within 500 feet of the proposed facility. There are several structures and inhabitable buildings about 2,100 feet from the facility; these are shown on Figure 1 of Part II. These include one house, one mobile home, and several ranch buildings (one machine storage building and two sheds used as stables). On occasion, one travel trailer may also be temporarily parked in this area. All residents of these structures are ranch workers employed by Yugo Ranch.

There are no schools, licensed day-care facilities, churches, or cemeteries within one mile of the facility. Several man-made ponds (stock tanks) exist within one mile of the site, and these are shown on the map. There are no other residential, commercial or recreational areas within one mile of the facility, so none are shown; there also are no hospitals in this area. The nearest known airport used for commercial or general aviation is the Laredo International Airport, located more than 20 miles west of the facility.

The location and surface type of roads that will be used to access the facility are shown.

The latitude and longitude of the facility is shown.

Area streams are shown.

There are no airports within six miles of the facility, so none can be shown.

The property boundary of the facility is shown.

Easements within or adjacent to the facility cannot be clearly shown on Figure 1 of Part II. Consequently, for the sake of clarity, all known easements are shown on Figure 4 of Part I. Figure 4 was prepared by Mejia Engineering Company, and consists of Sheet 1 of 2 and Sheet 2 of 2.

Facility access control features, including a perimeter security fence located along the facility boundary line and at least one lockable gate, are shown of Figure 4, Part II.

There are no recorded archeological, historical or aesthetic sites within one mile of the facility, so none can be shown.

4.0 FACILITY LAYOUT MAPS [330.61 (d)]

A Facility Layout Map and an Operations Area Layout Map are provided as Figures 3 and 4 of Part II. These maps provide:

The maximum outline of the landfill unit(s);

General locations of main facility access roadways;

General locations of buildings;

Explanatory notes;

Fencing and lockable gates will be provided along the facility boundary, as shown on Figure 4, Part II; and

Natural amenities and plans for screening the facility from public view.

Easements are shown on Figure 4, Sheets 1 and 2, in Part I. These easements will be protected in accordance with TCEQ rules until such time as they may be voided or relocated outside the waste fill area.

The site entrance road can be accessed from public access roads.

An initial Class I waste cell location is shown on Figure 4. Additional Class I waste cells may be designated and constructed throughout the landfill as future landfill cells are designed. All Class I waste cells will be designed, constructed, and operated in accordance with TCEQ rules.

Locations of monitoring wells are generally shown on the Monitoring System and Cell Layout Plan, Figure 5. In accordance with 30 TAC §330.403(a)(2), default spacing for groundwater monitoring wells is a maximum of 600 feet. Figure 5 shows a proposed facility perimeter of approximately 28,000 feet. On this default spacing basis, 48 wells are proposed with a maximum spacing of 600 feet.

Locations of gas monitoring probes are generally shown on Figure 5. In accordance with 30 TAC §330.371(h)(2), permanent gas monitoring probes are required to monitor for subsurface migration of landfill gas. Although, 1,000-foot spacing is typical, 600-foot spacing is recommended along the southwest corner of the perimeter due to habitable structures within 3,000 feet. This spacing can be accommodated at the location shown on Figure 5.

The proposed facility is completely isolated from all land use except cattle ranching and oil and gas production, and is provided with an effective separation distance of more than one-quarter mile on three sides and 300 feet on the fourth side.

5.0 GENERAL TOPOGRAPHIC MAPS [330.61 (e)]

The General Topographic Map is presented as Figure 6. It was derived from the United States Geological Survey 7 ½ minute quadrangle map for the site area, identified as the Burrito Tank map. This map is the most recent such map of the site area and was prepared in 1980. It is at a scale of one inch equals 2,000 feet.

6.0 AERIAL PHOTOGRAPH [330.61 (f)]

An aerial photograph of the required size and scale is provided as Figure 7, Part II. The facility boundary is marked and an area within at least a one-mile radius beyond that boundary is shown. The scale of the aerial photograph is one inch equals 2,000 feet, which is within the required range. This photo shows the facility (or site) boundaries and the area within a one-mile radius of the boundary. The proposed fill areas are shown. There has been no growth for many years in the area covered by the aerial photograph, so a series of photographs to show growth trends is not needed because there are no growth trends to show.

7.0 LAND-USE MAP [330.61 (g)]

The Land-Use Map is presented as Figure 8, and shows the existing land uses within one mile of the facility. The land usage presented on this map was obtained by personal observation and examination of recent aerial photographs, and is believed to be accurate as of the date of this photograph, which was taken in 2008. This land use information was checked by visual observation in June 2010. The current land use is shown on Figure 8, and is as described in the Land Use Map Legend.

Current, recent and historic land use within the facility boundary is the same; cattle ranching and production of natural gas. Figure 9 is provided to show oil and gas wells in the area of the facility. Numerous roads, ranging from all-weather gravel surfaced roads to unimproved lanes, exist in the area, primarily to serve oil and gas exploration and production. This very same land use extends for at least 3 to 5 miles in all directions from the facility.

8.0 IMPACT ON SURROUNDING AREA [330.61 (h)]

The proposed addition of the landfill and related facilities at this site will not have an adverse impact on human health or the environment in the area surrounding the facility. There is no existing zoning that would prohibit this proposed use, and no approval or special permit is required from any local government. There is no existing zoning map of the site or surrounding area, so none can be provided herein.

8.1 Potential Impact on Human Health

The following discussion assesses potential human health impacts on cities, communities, groups of property owners and individuals. Due to demographic factors associated with this particular site, and the nature of the proposed landfill and waste processing operations and type of materials to be processed, the only potentially affected category that should be considered is individuals. This is because the site area has a very low population density, with no residential dwelling units within 500 feet of the proposed facility. Fewer than 10 persons live within a one-mile radius of the facility. The closest residential dwelling units are two structures at the Yugo Ranch headquarters about 2,100 feet southwest of the facility boundary. The next closest residential structures are at another ranch headquarters located approximately 2 miles away to the northwest.

There is no city, community, or group of property owners that are potential target receptors that might be subjected to adverse human health impacts from the proposed facility. This is because of the separation distances that will exist and because of the virtual lack of etiological agents or disease vectors that might result in such impacts. The individuals to be considered in the evaluation of health impacts include nearby residents, facility employees, and visitors. This evaluation will consider the potential modes of transmission of etiological agents or disease vectors that might impact human health. The modes are transport by air, surface water and ground water. Transmission by vectors, such as insects (particularly flies) and rodents (particularly rats and mice), are not being considered any further in this analysis because the waste storage and processing methods to be employed at this facility will prevent the propagation or reproduction of these species in or near the waste, and will essentially deny access to the waste to any existing members of these species. Basically, waste will be in closed containers until placed into the landfill, at which time the waste will be covered with additional waste or cover soil. Transmission by dermal contact or ingestion are not realistic modes because all persons who may come in direct contact with waste will be required to wear gloves and will be specifically trained to avoid dermal contact or ingestion of waste or waste materials.

Air Mode - The two nearby houses and one mobile home in the facility area are located to the southwest of the landfill, as shown on the Aerial Photograph, Figure 7. The prevailing wind direction, as shown by the Wind Rose in Figure 2, is not in this direction. In fact, Figure 2 shows that wind blows from the facility towards these two residences only about 5 percent of the time. The three factors of low incidence of wind blowing towards these residences, lack of etiological agents or vectors, and the separation distance of over 2,100 feet, combine to produce a negligible chance of adverse health effects to these residents due to the facility.

The individuals to be considered with respect to potential human health impacts due to inhalation or ingestion are employees of facility and visitors to the facility.

Potential exposure to employees varies by job assignment. Persons who work in the close proximity to waste or waste processing will be provided with National Institute for Occupational Safety and Health (NIOSH)-approved dust masks and will be required to wear them during operations that expose them to dust. Such employees will also be required to wear hard hats, safety glasses, gloves and protective boots while working in this operation. A water truck will be available as needed throughout the facility and will provide water that will be spray-applied when needed to control dust.

Office workers will not be exposed to materials of concern. A supply of hard hats, safety glasses and dust masks will be maintained at the facility for use by visitors or employees who may occasionally enter the waste processing or disposal areas.

Surface Water – The facility will be designed to contain and properly manage all water that has come into contact with waste, including leachate, clean-up water, and rainfall that comes in contact with exposed waste. All such water will be treated or managed on-site, and will not be discharged off-site. Workers who manage this water will be trained and provided with appropriate personal protection equipment to prevent ingestion or dermal contact with this water.

Groundwater – The landfill will be designed and constructed with a liner and leachate collection system that will act in tandem to prevent the migration of waste or waste constituents to groundwater. An array of groundwater monitoring wells will be designed and installed to check groundwater quality and to make sure the liner and leachate collection system is working to prevent release of contaminants to the groundwater. Should such a release occur, it can be detected and corrective measures can be taken before any adverse health impact can occur.

The facility's geological and hydrogeological setting also provide protection of public health, as water quality in the upper aquifer at the facility is too poor to be used for

human consumption. Deeper aquifers are protected from possible site-related contamination by hundreds of feet of intervening very low permeability soil intervals.

8.2 Potential Impact on the Environment

No adverse impacts on the environment of the area are anticipated from the proposed landfill operation. Debris barriers will be employed to reduce the potential for wind-blown dispersal of debris and litter.

Some noise will be generated by the periodic operation of the motorized equipment including waste compactors, bull dozers, hydraulic backhoes and the trucks used to bring and remove waste containers. The frequency and the intensity of the equipment noise generated on-site will be quite low in all off-site directions. This is due to the buffer zone width and the operation of most equipment within a building. Except for trucks entering and leaving, all on-site noise generation will be limited to areas of the facility that are located on private property at least ¼ mile from neighboring property.

8.3 Compatibility with the Surrounding Area

Zoning - The facility is located more than 5 miles east of the City of Laredo and the area surrounding the site within two miles extends into unincorporated Webb County. No specific approval is required from the City of Laredo or Webb County for the proposed facility. The facility is well beyond the extra-territorial jurisdiction (ETJ) of the City of Laredo. Accordingly, the City of Laredo has no authority to establish zoning, land use planning, or other restrictions on development in the area. Similarly, the facility is not within the extra-territorial jurisdiction (ETJ) of any other incorporated city. Webb County has enacted no zoning or similar restriction on land use at the facility or surrounding area.

Character of Surrounding Land Uses - This facility location and the area extending for many miles in all direction are obviously suitable for oil and gas production and cattle ranching. This is the current and historic land use status of the property on which the facility is proposed, and has been for many years. No other residential, recreational, commercial, agricultural or industrial land uses exist for several miles in the site area.

The site is about two miles north of the north end of Jordan Road. This is the closest area to the site that is accessible to the general public, as the access road into the site from Jordan Road is privately owned. Existing residential and several commercial properties are located at Ranchitos los Lomas, about 3.5 to 4.5 miles northwest of the proposed facility. The proposed facility is more than adequately screened from view from both of these areas by a distance of about two to four miles. The intervening areas consist of heavily wooded or brushy vegetation and rolling topography.

Commercial development within one mile of the site is non-existent. Land use is exclusively devoted to the exploration and production of oil and gas and cattle ranching, both of which are commercial ventures, but are not normally considered to be described as commercial development. Oil and gas activity occurs somewhat randomly, but extensively, throughout the general area of the site. One feature of this commercial use is that it requires frequent access to well sites by large, heavy vehicles, such as well drilling rigs, work-over trucks, and tank trucks that haul produced liquids. These heavy vehicles regularly traverse the roads in the site area, and testify to the adequacy of these all-weather surfaced roads to support such truck traffic. Landfill-related traffic will employ vehicles that are similar in many respects to this existing traffic. A second commercial type of land use near the site is the KCS railroad, whose tracks are located within one to two miles of the site.

In addition to the residential, commercial and industrial land use described above, land use within a five-mile radius of the facility is divided between agricultural (essentially all pasture land used for cattle ranching) and dispersed oil and gas well sites.

The closest population center and only concentrated residential land use within five miles of the facility is Ranchitos Las Lomas, a community or subdivision located along Hwy 59 about 3.5 to 4.5 miles northwest of the site. This is a community of about 334 persons, according to the 2000 census. Widely scattered residences are found at several ranch headquarters in the area, but these are typically separated from each other by several miles, due to the large size of the ranches, which appear to be on the order of 10,000 acres each. Typical of these is the Yugo Ranch, within which the proposed facility is located. There are an estimated two or three active residences within one mile of the facility, all located at the headquarters of Yugo Ranch. This includes two houses, one mobile home, and occasionally one travel trailer. These nearest occupied residences house ranch hands that are employed by Yugo Ranch.

Vehicle or equipment noise that will be generated by the proposed solid waste activities may not be discernable and should not be objectionable to occupants of the residences at Yugo Ranch because of the low speeds and separation distance. Prevailing winds, which tend to carry noise in its direction of movement, should carry noise away from these residences. Noise resulting from the operation of the facility will not cause any impact to the community of Ranchitos Las Lomas, located about 4 miles northwest of the facility, due primarily to the separation distance. Also, any noise that could be perceived within a limited distance from the facility will be engine noise associated with heavy equipment. Noise generated by truck traffic travelling to and from the facility will be similar to the noise from oil-field trucks and equipment that already travel along area roads many times a day. Truck traffic noise related to accessing the facility will be indistinguishable from

the noise of truck and automobile traffic along U.S. Highway 59, which bisects this community. This highway traffic consists of many trucks and tractor-trailer units traveling at up to 70 miles per hour, 24 hours per day.

Growth Trends - The population of Webb County (2000 Census) was 193,117, and the population estimate for 2009 is 241,438, an increase of about 25 percent in 9 years. Within a one-mile radius of the facility, the long-term population is estimated to be fewer than 10 persons, and this population has no growth or growth trend. The 2000 population for Ranchitos Las Lomas was 334, which had 148 housing units and a population density is calculated to be 15.3 persons per square mile. According to www.bestplaces.net, the population of Ranchitos Las Lomas was 409 in 2011, an increase of 22 percent in 11 years. Historic population data indicates the population of Ranchitos Las Lomas has been about 300 to 400 persons for many years. Visual observation of this community shows no evidence of recent growth, such as new homes or commercial buildings.

Proximity to Residences and Other Uses – The proximity of the facility to residences is discussed above. There are no schools, churches, cemeteries, historic structures or sites, archaeologically significant sites, or sites having exceptional aesthetic quality within one mile of the facility. The lack of some of these sites or features has been verified. According to Texas Historical Commission (THC) records, there are no archeological or historic sites in the area of the proposed facility. There are no recreational areas within one mile. There are three residences within one mile of the facility, all located at Yugo Ranch headquarters about 2,100 feet southwest of the facility, and no commercial establishments. The estimated population density within a one-mile radius of the facility is less than one person per square mile.

Wells - There are no known or recorded water supply wells, either active or abandoned, within 500 feet of the proposed facility. According to records obtained from the Railroad Commission of Texas, there are no active oil or gas wells on the facility, and one abandoned gas well. Within 500 feet of the facility boundary, there are two active gas wells, three plugged gas wells, and two wells classified as “dry holes”.

9.0 TRANSPORTATION [330.61 (i)]

Vehicular traffic associated with the proposed landfill will primarily approach and leave the general area of the facility on State Highway 359, a two lane asphalt-paved road with paved shoulders. Between SH 359 and the site, traffic will travel about 5 miles on Jordan Road, which is a Webb County road, to within about two miles of the site. There is no posted vehicle weight limitation on Jordan Road. The final road leading into the site is an all-weather surfaced private road on Yugo Ranch.

Webb County was given information about the proposed Pescadito Environmental Resource Center, and has expressed support for the project. A copy of a letter from Webb County Judge Danny Valdez stating the county's support is presented in Part II, Attachment E.

Existing and future estimated traffic volumes on SH 359 were not studied in connection with this application. SH 359 is estimated to be a minimum of 5.9 miles from the proposed facility. A review of publicly-available data on Webb County traffic did not produce existing traffic counts or future traffic projections for Jordan Road, which is about 1.1 mile from the closest portion of the proposed facility.

At the initial expected rate of 1,000,000 tons per year (tpy), the expected volume of traffic associated with the proposed landfill is expected to be approximately 260 trips per day (130 vehicles entering and leaving, including 10 passenger vehicles and 120 trucks). Ultimately for 2,000,000 tpy, the facility traffic is expected to be 520 trips per day (260 vehicles entering and leaving, including 20 passenger vehicles and 240 trucks). At this ultimate volume, truck traffic will average about 10 vehicles per hour or one every 6 minutes. This volume of site-related traffic will have no significant adverse impact on the capacity of SH 359. Because of the relatively low volume of site traffic, along with the favorable geometry, reduced speed limit and long sight distance, no turning or storage lanes would be needed to safely accommodate the proposed facility.

The applicant proposes that all site-related traffic will approach the site from the south, via SH 359 and Jordan Road.

TxDOT was provided information about the proposed facility, and has concurred that there will be no adverse impacts from the proposed facility on the State highway system. A letter expressing this conclusion from Albert Quintinella, P.E., TxDOT's Laredo District Engineer, is presented in Part II, Attachment B.

TRC obtained traffic count data from TxDOT for a location on State Highway 359 (SH 359) approximately 3 miles east of Loop 20. This is the location closest to the intersection of SH 359 and Jordan Road for which traffic count data was available. For

the five-year period from 1995 through 1999, the average daily traffic count was 6,080 vehicles per day. The average daily traffic count at this location in 2009 was 8,800 vehicles per day. This is an increase of 2,720 vehicles per day or about 45 percent over an average period of 12 years. Assuming a similar increase will occur over 12-year periods in the future, the 2021 average daily traffic will be 12,760 vehicles per day and the 2033 average daily traffic will be 18,500 vehicles per day. The anticipated site related traffic will not significantly impact the estimated future traffic conditions. This conclusion is shared by TxDOT's District Engineer (see Attachment B, Part II).

Documentation of coordination with the Federal Aviation Administration regarding airport location restrictions is presented in Attachment F.

10.0 GENERAL GEOLOGY AND SOILS STATEMENT [330.61 (j)]

10.1 General Geology [330.61(j)(1)]

The geology of the area is described, in part, by the Laredo Sheet (Barnes, 1976) of the Geologic Atlas of Texas; it shows the site located on the contact between the Eocene Yegua Formation and Jackson Group [of formations in other places where defining characteristics make discrimination relevant]. Other mapping and subsurface research place the contact between the Yegua and Jackson somewhat to the west of the site [for example: Lonsdale, 1937; Baker, 1995; Lambert, 2004]. The differences in interpretation between researchers are likely because the depositional environments and the resulting sediments are similar, leading to different choices of boundaries. Both the Yegua and Jackson are made of clays, clayey sands, and sands, and include, at different locations: limestone concretions, lignite, volcanic ash, uranium, and fossil plants. Beneath the Yegua and Jackson is the Laredo Formation, similar to the Jackson and Yegua, but containing more sand, particularly near its base.

The regional geology dips gently toward the coast and this attitude is reflected in the regional topographic surface; but locally, and at the site, the topography is influenced by streams draining toward the Rio Grande to the south. Elevations, as a result of this influence, range from about 570 feet [msl] on the north end of the site to about 540 feet [msl] on the south. Kier and others (1977) rate the site as naturally suitable for solid waste disposal with proper monitoring.

10.2 General Soils [330.61(j)(1)]

The soils on the site are developed from the underlying geology and active surface processes, primarily related to stream drainage. The USDA's NRCS Soil Map (Sanders, 1985) for the site area describes the soils as generally clay to clay loam and sandy clay loam; this description is confirmed by the site soil borings to date. The soils are generally deep, well developed, saline at shallow depth, and differences leading to designations are largely due to geomorphology. The landscape of the site area consists of broad plains cut by broad valleys. The soils that dominate the site include the Aguilares sandy clay loam, Brundage sandy loam, Catarina clay, and Montell clay. Each of these soils is capable of supporting vegetation suited to ranching.

10.3 Fault Areas [330.61(j)(2) and 330.555]

The site region, dominated by Eocene and older sediments, is not known as an active fault area; active fault causal mechanisms such as heavy groundwater and/or petroleum withdrawal are absent. Area gas wells, while many, are not known to have experienced or generated problems that might be related to faulting. The topographic map and aerial photography do not show linear features characteristic of faulting. There are inactive

faults nearby and at depth as shown on geologic maps and cross-sections; these are more than a mile from the site and not expected to become active. The Wilcox and Vicksburg Fault Zones are generally downdip of the site and are quiescent. The area Geomap (Geomap, 2004) shows two northeast-southwest trending normal faults cutting the Queen City at about -2000 feet [msl], one about 3 miles northwest, and the other about 3 miles southeast of the site, both Wilcox related. A site area cross-section based on geophysical logs interprets a normal fault with fifty feet of normal offset cutting the Carrizo at about -6000 feet [msl]; it is about 2 miles east of the site. Deformation related to the Lower Wilcox Lobo gravity slide is contained within the Lobo Formation (Long, 1985) at a depth of several thousand feet beneath the site. The Pescadito Dome, a deep-seated salt diapir, is located approximately 5 miles west-northwest of the proposed PERC landfill site. It is marked by radial faulting limited to the area of the diapirism. The Moca Salt diapir is located about 28 miles northeast of the proposed landfill site in the northeastern part of Webb County along the boundary with Duval County and it too is marked by radial faulting (Barnes, 1976). The proposed PERC landfill site is located more than two miles from the closest, regionally extensive inactive fault that reaches the surface (Barnes, 1976); this faulting is an upward and inland extension of the Eocene Wilcox Fault Zone. In summary, there are no known active or inactive faults within 200 ft of the proposed landfill site.

10.4 Seismic Impact Zones [330.61(j)(3) and 330.557]

Potential earthquake sources are far away from the PERC site and this distance is reflected in the anticipated low seismic impact risk for the region; that is, the site is in an area of minimal expected peak horizontal acceleration and thus not in a seismic impact zone. The 1931 Valentine Earthquake with a magnitude of 5.8 is perhaps the nearest significant historical event; additional, small events related to hydraulic fracturing are expected as oil and gas exploration continues, particularly with the development of the Eagle Ford shale play. The USGS Seismic Hazard Map (U.S. Geological Survey, 2008) [Figure 10] shows the site location, and contoured values of maximum peak acceleration as a percent of the earth's gravity field, or g, with a 2 percent probability of exceedance in 50 years. The site location between the 2 and 4 percent (g) contours places it well below the threshold for a seismic impact zone. This USGS Seismic Hazard Map is the most current and is widely accepted as the official seismic risk map for this portion of the U.S.

10.5 Unstable Areas [330.61(j)(4) and 330.559]

There appears to be no natural unstable areas, such as karst terrains, landslide areas (the site is essentially flat), subsidence areas, and/or active faults in the area of the PERC site. However, like most landfills located in “good locations”, the predominance of subsurface clay materials indicates that the facility location is a potentially “unstable area” due to the properties of the clay materials. At this site, the clays are both expansive and potentially low strength with respect to sliding as a consequence of the clay plasticity ranging from moderate to very high. As demonstrated numerous times at other similar sites, the clay material properties can be readily accommodated in the design and operation of the landfill.

In their present state, the subsurface soils at depth are relatively strong and incompressible due to previous consolidation history over geologic time. No significant differential settling will occur as a result of landfill construction. Proposed excavations, “landfill structural components”, and proposed operation/sequencing of landfilling will be designed in recognition of the subsurface materials and conditions. Investigation and geotechnical evaluations are being performed in conjunction with the engineering design of the facility. Stability analyses will be conducted as a normal consideration of facility design with respect to human-induced slope instability. The results of these evaluations will show that engineering measures have been incorporated into the landfill design to ensure that the integrity of the structural components of the landfill will not be disrupted.

Selected references for Section 10.0 include:

- Baker, E. (1995). *Stratigraphic Nomenclature and Geologic Sections of the Gulf Coastal Plain of Texas: U.S. Geological Survey Open-File Rept. 94-461*. Reston: U.S. Geological Survey.
- Barnes, V. P. (1976). *Laredo Sheet: Geologic Atlas of Texas*. Austin, Texas: University of Texas, Bureau of Economic Geology.
- Kier, R. S., L. E. Garner, and L. F. Brown, Jr. 1977. Land Resources of Texas – A map of Texas lands classified according to natural suitability and use considerations. Bureau of Economic Geology, University of Texas at Austin.
- Lambert, R. (2004). *Hydrogeology of Webb County, Texas: U.S. Geological Survey Scientific Investigations Report 2004-5022*. Reston: U.S. Geological Survey.
- Long, J. (1985). *The Eocene Lobo Gravity Slide, Webb and Zapata Counties, Texas: Contributions to the geology of South Texas*. San Antonio: South Texas Geological Society.
- Lonsdale, J. D. (1937). *Geology and Ground-water Resources of Webb County, Texas: USGS Water Supply Paper 778*. Reston: U.S. Geological Survey.
- Sanders, R. G. (1985). *Soil Survey of Webb County, Texas*. Washington: U.S. Department of Agriculture, NRCS.
- U.S. Geological Survey. (2008). National Seismic Hazard Map: Peak Horizontal Acceleration[%g] 2% probability exceedance in 50 years. Reston: USGS Interactive Mapping.

11.0 GROUNDWATER AND SURFACE WATER [330.61 (k)]

11.1 Groundwater [330.61(k)(1)]

Groundwater conditions at the site are known from a combination of on-site soil boring data and the published literature. Groundwater is localized in sandier sediments encountered, but these sediments, as expected from the nature of the depositional environment, are not necessarily continuous across the site. There appears to be enough ultimate connectivity between water bearing materials, however, to allow this shallow groundwater to approach an equilibrium, or coherent potentiometric surface across the site. Water levels range from about 550 feet [msl] in the north part of the proposed landfill footprint to about 530 feet [msl] in the south--and generally follow the area slope, and consequently the drainage as well.

The near surface sediments at the site are part of the Yegua-Jackson Aquifer, a TWDB designated Minor Aquifer, and named for the geology involved. Parts of this Eocene aquifer, one that serpentines from Webb County and the Mexico border to Louisiana, are productive of freshwater, but that is apparently not the case near the surface at the Pescadito site. Water quality tests on ground water samples from six site borings were analyzed for constituents that include the maximum contaminant levels (MCLs) as established in the national primary drinking water regulations by U.S. EPA. All these ground water samples exceeded the secondary MCLs for total dissolved solids (TDS) and chloride by orders of magnitude. The Yegua-Jackson dips gently toward the coast, is about 1,000 to 1500 feet thick according to a nearby cross-section (Baker, 1995), and is recharged along its outcrop. There are six water wells within about five miles of the site. The geophysical log of the Yugo Ranch well, about 900 feet from the site, indicates clays and some sands continuing to its total depth of about 1100 feet [bgs], where it is screened in the lower part of the Yegua. This well, sampled as part of the site study, also showed TDS and chloride values somewhat above the secondary MCLs. The site is a part of this Yegua-Jackson recharge zone and is situated on or near the contact between its elements. However, soil characteristics and groundwater chemistry at the site indicate groundwater recharge in the area is limited.

The Laredo Aquifer underlies the Yegua-Jackson. It too, dips coastward and consists of sands and clays. Its recharge zone that is outcropped, trends in a generally north-south direction, inland of and parallel to the Yegua-Jackson outcrop. This aquifer is an important part of Webb County, for it is capable of producing significant quantities of freshwater, particularly for the sandier lower portion of the Laredo Formation. The Laredo Aquifer provides a portion of Laredo's water supply and has been the subject of Aquifer Storage and Recovery research (Lambert, 2004). The Laredo Formation is about

1,000 feet thick in the area according to the same nearby cross-section (Baker, 1995). It is underlain by the Pico Clay, the ultimate confining unit beneath the site.

Selected references for Section 11.1 include:

Baker, E. (1995). *Stratigraphic Nomenclature and Geologic Sections of the Gulf Coastal Plain of Texas: U.S. Geological Survey Open-File Rept. 94-461*. Reston: U.S. Geological Survey.

Barnes, V. P. (1976). *Laredo Sheet: Geologic Atlas of Texas*. Austin, Texas: University of Texas, Bureau of Economic Geology.

Lambert, R. (2004). *Hydrogeology of Webb County, Texas: U.S. Geological Survey Scientific Investigations Report 2004-5022*. Reston: U.S. Geological Survey.

Long, J. (1985). *The Eocene Lobo Gravity Slide, Webb and Zapata Counties, Texas: Contributions to the geology of South Texas*. San Antonio: South Texas Geological Society.

Lonsdale, J. D. (1937). *Geology and Ground-water Resources of Webb County, Texas: USGS Water Supply Paper 778*. Reston: U.S. Geological Survey.

Sanders, R. G. (1985). *Soil Survey of Webb County, Texas*. Washington: U.S. Department of Agriculture, NRCS.

U.S. Geological Survey. (2008). National Seismic Hazard Map: Peak Horizontal Acceleration[%g] 2% probability exceedance in 50 years. Reston: USGS Interactive Mapping.

11.2 Surface Water [330.61(k)(2)]

There are two large surface water impoundments on the proposed PERC landfill site and several smaller impoundments. For the most part surface water flow occurs as overland flow and flow in dry washes whose course is difficult to identify on available aerial photos. A few of the dry swales on or near the southern end of the proposed PERC landfill site do not have defined bed and banks. This was determined based on onsite inspection by the design engineer who will incorporate appropriate drainage controls into the facility design that comply with all regulations including the Texas Pollution Discharge Elimination System (TPDES) and allow obtaining appropriate TPDES permits.

Currently existing drainage patterns at the proposed permit boundary will not be significantly altered by landfill development and operation. Existing flow volumes, peak discharges, and discharge points will be maintained by the landfill design. The facility will be protected from 100-year frequency flooding to prevent the washout of solid waste. Calculations and analyses will be provided to demonstrate compliance with regulatory requirements concerning surface water drainage.

The proposed facility will operate under TPDES General Permit No. TXR050000. A signed certification to this effect is presented as Attachment H in Part II, and verification that the person who has signed that document is authorized to do so is contained in Section 7.0 of Part I. It will also operate in accordance with a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP will be prepared as the actual design of the landfill and related facilities is completed during the preparation of Parts III and IV of this permit application. The SWPPP will be updated as necessary to reflect site modifications proposed by the operator subsequent to receiving a MSW permit.

The facility will comply with the requirements of the TPDES storm water permitting requirements by continuous operation and monitoring of its SWPPP throughout the active life of the facility. The SWPPP will be developed specifically for the proposed facilities and operations, and will include both ongoing inspection of storm water pollution prevention systems and practices, and periodic sampling and analysis of storm water discharges. Should the results of the SWPPP monitoring indicate a need for revisions, or should the facility and its operation change in the future, the SWPPP will be revised as needed. A Notice of Intent (NOI) to obtain coverage under TPDES General Permit No. TXR050000 (or its successor) will be submitted to TCEQ. Filing the NOI will initiate coverage of this facility under the General Permit and is one of the criteria for compliance with the TPDES and Section 402 of the CWA. Operation of the SWPPP is the other criteria for compliance with the TPDES requirements.

Surface water conditions near the site are very similar to those at the site. Due to the generally flat surface topography and low runoff, combined with the tight, cohesive surficial soils, natural drainage systems exhibit very little erosion. Relatively small artificial dams exist in the area to create “stock tanks” for livestock watering.

12.0 ABANDONED OIL AND WATER WELLS [330.61 (I)]

Abandoned Oil Wells - The area around the proposed landfill site on the Yugo Ranch has been drilled for oil and gas. However, there are no active wells within the proposed landfill footprint or facility site and only one abandoned and plugged gas well. Records of the oil and gas wells were obtained from the Railroad Commission of Texas (RRT). A map of the active and plugged wells was obtained and used as a reference. These records in conjunction with an onsite inspection before and during excavation will allow determination of whether this one well, or any others discovered onsite, need to be capped, plugged, and closed in accordance with applicable rules and regulations of TCEQ or the RRT. As required, within 30 days prior to construction, written certification will be provided to executive director of TCEQ that the gas well, and any others encountered, have been properly capped, plugged, and closed. Gathering lines do crisscross the proposed landfill site; thus, if a waste disposal permit is received, these lines will have to be abandoned and relocated as necessary. Future drilling for mineral resources beneath the landfill will use deviated drilling techniques from surface locations outside the footprint of the proposed landfill.

Abandoned Water Wells – There are no abandoned water wells at the facility.

13.0 FLOODPLAINS AND WETLANDS STATEMENT [330.61 (m)]

Portions of the proposed facility are currently located within the 100-year floodplain, as indicated on the replication of the most current available floodplain map, or Flood Insurance Rate Map (FIRM), presented in Figure 11. The design of the proposed landfill and related facilities will include design of a comprehensive storm water management system of dikes, drainage channels and detention ponds. Collectively, this system will remove the area of the landfill and proposed buildings from the 100-year floodplain. TRC has performed all the necessary hydrological and hydraulic engineering analysis and design to accomplish this. The results of this engineering design along with an application for a Conditional Letter of Map Revision (CLOMR) have been submitted to the Webb County Planning Department (WCPD) for review and were approved (see Attachment G). WCPD is the local agency responsible for floodplain management. With concurrence from WCPD, the CLOMR application will be submitted to the Federal Emergency Management Agency (FEMA) for review and approval. The CLOMR when issued will verify that the proposed site drainage plans will, in fact, remove areas of the site proposed for the landfill, processing and storage areas and related development from the 100-year floodplain.

Construction of the landfill will impact a named reservoir, Burrito Tank, and possibly several smaller stock tanks. All affected reservoirs are owned by the applicant or by its parent, Rancho Viejo Cattle Company, Ltd.

The proposed landfill is located in an ideal location considering soil, groundwater, land use, and oil and gas activities (past, present, and future). No other location is equally plausible. It is difficult to find an area of appropriate size in Eastern Webb County that does not have floodplain issues due to the prevailing flat topography and rapid runoff soil conditions. Applicant endeavored to find an upland location that was reasonably close to the headwater conditions to minimize any impacts to floodplains and/or wetlands.

TRC performed a wetland evaluation at the facility site in 2009 (see Attachment A). The results of this evaluation indicate jurisdictional wetlands in and near the livestock watering tanks discussed in the preceding paragraph. TRC then performed a wetland determination in 2011. The results of this determination were evaluated in accordance with current Federal rules and guidelines for the protection of jurisdictional waters, and found certain areas that met these criteria. TRC then submitted its findings to the U.S. Army Corps of Engineers (USACE). The USACE concurred that jurisdictional waters exist on site. Therefore, TRC intends to prepare an application of a Section 404 permit once the facility design is more advanced than it is currently. An application for a Section 404 permit will be prepared and submitted to the USACE. No construction or development in jurisdictional wetland areas will be undertaken without appropriate authorization from the USACE.

No Jurisdictional waters at the location of the proposed facility will be disturbed by the proposed construction or operation of the facility without prior authorization under a permit.

14.0 ENDANGERED OR THREATENED SPECIES [330.61 (n)]

A site reconnaissance and evaluation was performed by TRC in 2009 to assess the potential for the facility to harbor endangered and threatened species, or to provide critical habitat for such species. This evaluation included obtaining current lists of both federal- and state-listed species for Webb County and identifying the habitat and range or occurrence characteristics of all such listed species. TRC's report of this assessment is presented in Part II, Attachment A.

Based on the result of this evaluation, TRC has concluded that the site of the proposed facility may contain habitat or range conditions that may result in the occurrence of endangered or threatened species. By comparing the characteristics of the site to surrounding areas, it is clear that habitat and environmental conditions of the site are not significantly different from conditions for many miles surrounding the site. No unique or critical habitat conditions were observed. A biological evaluation was completed and provided to TPWD and USFWS. TPWD has responded and a copy of its response letter is contained in Attachment A. TRC awaits response from USFWS.

15.0 TEXAS HISTORICAL COMMISSION REVIEW [330.61 (o)]

The Texas Historical Commission (THC) was asked to review the proposed project in the context of the Natural Resources Code, Chapter 191, and Texas Administrative Code. THC notified TRC that the proposed project may proceed (see Attachment C). Additionally, TRC searched on-line data sources and found that the project does not appear to affect any known cultural resources sites or historic properties (see Attachment D).

16.0 COUNCIL OF GOVERNMENTS AND LOCAL GOVERNMENT REVIEW [330.61 (p)]

Part I and Part II of this permit application were submitted to the South Texas Development Council (STDC) for review for compliance with the regional solid waste plan. Furthermore, TRC completed the STDC *Checklist for Review* to describe the proposed PERC facility and discuss ways this facility will conform to the regional plan (see Part II, Attachment E).

Also, information letters about the proposed project were submitted to Webb County and the City of Laredo, and review letters are being requested from each entity regarding compliance with any local solid waste plans for their jurisdictions (see Part II, Attachment E).

Information about the Pescadito Environmental Resource Center was presented to Webb County Commissioners Court. The Webb County Judge and all four County Commissioners expressed support for the project. A copy of a letter from Webb County Judge Danny Valdez affirms the support of Webb County (see Part II, Attachment E).

17.0 AIR POLLUTION CONTROL [330.371]

The proposed landfill will have a design capacity greater than 2.5 million megagrams (2.76 million tons) and 2.5 million cubic meters (3.27 million cubic yards). Air emissions from the landfill facility will be controlled, to the extent necessary, to qualify for a standard permit.

The owner/operator of the landfill facility will submit a certification for the initial construction of the landfill at least 120 days prior to building or installation of any equipment or structure that may emit air contaminants. The certification will be based on the capacity of the landfill for a minimum ten-year period. The certification will include supporting documentation to demonstrate compliance with TCEQ air permitting requirements and any other applicable federal and state requirements and at a minimum will include the following:

- (1) The basis and quantification of emission estimates;
- (2) Sufficient information to demonstrate that the facility will comply with all applicable TCEQ air permitting requirements; and
- (3) A description of any equipment and related processes.

18.0 GENERAL OPERATIONAL CONSIDERATIONS [330.15]

The PERC landfill facility will not operate in violation of the Texas Health and Safety Code, or any regulations, rules, permit, license, order of the commission, or in such a manner that causes:

- (1) The discharge or imminent threat of discharge of MSW into or adjacent to the waters in the state without obtaining specific authorization for the discharge from the commission;
- (2) The creation and maintenance of a nuisance; or
- (3) The endangerment of the human health and welfare or the environment.

The open burning of solid waste, except for the infrequent burning of waste generated by land-clearing operations, agricultural waste, silvicultural waste, diseased trees, emergency cleanup operations as authorized by the commission or executive director as appropriate, is prohibited. The operation of an air curtain incinerator other than for the exceptions noted above is prohibited.

The following wastes will not be accepted at this facility:

- (1) Lead acid storage batteries;
- (2) Do-it-yourself used motor vehicle oil;
- (3) Used oil filters from internal combustion engines;
- (4) Whole used or scrap tires, unless processed prior to disposal in a manner acceptable to the executive director;
- (5) Refrigerators, freezers, air conditioners, and any other items containing chlorinated fluorocarbon (CFC);
- (6) Liquid waste, except as allowed in 30 TAC §330.177 (relating to Leachate and Gas Condensate Recirculation), and/or except household liquid waste as allowed by 30 TAC §330.15(e)(6) will not be accepted for disposal in any MSW landfill unit;
- (7) Regulated hazardous waste as defined in 30 TAC §330.3;
- (8) Polychlorinated biphenyls (PCB) wastes, as defined under 40 Code of Federal Regulations Part 761, unless authorized by the United States Environmental Protection Agency and the MSW permit; and
- (9) Radioactive materials as defined in 30 TAC Chapter 336 (relating to Radioactive Substance Rules), except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services.

The facility will receive sewage sludge only in compliance with commission requirements and the requirements of the Federal Clean Water Act, §309 and §405(e).

The drilling of any test borings, for any reason, through previously deposited waste or cover material without prior written authorization from the executive director is prohibited.

The facility will neither be designed nor operated to cause:

- (1) A discharge of solid wastes or pollutants adjacent to or into waters of the state, including wetlands, that is in violation of the requirements of Texas Water Code, §26.121;
- (2) A discharge of pollutants into waters of the United States, including wetlands, that violates any requirements of the Federal Clean Water Act, including, but not limited to, the National Pollutant Discharge Elimination System requirements, under §402, as amended, or Texas Pollutant Discharge Elimination System requirements;
- (3) A discharge of dredged or fill material to waters of the United States, including wetlands, that is in violation of the requirements under Federal Clean Water Act, §404, as amended; and
- (4) A discharge of a nonpoint source pollution into waters of the United States, including wetlands, that violates any requirement of an area-wide or state-wide water quality management plan that has been approved under Federal Clean Water Act, §208 or §319, as amended.”

APPLICATION FOR PERMIT
TYPE I MUNICIPAL SOLID WASTE FACILITY
MSW PERMIT NO. 2374
PESCADITO ENVIRONMENTAL
RESOURCE CENTER
RANCHO VIEJO WASTE MANAGEMENT, LLC
SOLID WASTE DISPOSAL FACILITY
LAREDO, WEBB COUNTY, TEXAS

March 28, 2011
Revised May 20, 2011
Revised September 14, 2011
Revised December 14, 2011

Prepared By:



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TRC Environmental Corporation
TBPE Firm Registration No. 3775

Rancho Viejo Waste Management, LLC
March 28, 2011
Revised September 14, 2011

Revised December 14, 2011

Cover

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PART I

APPLICATION FOR PERMIT

TYPE I MUNICIPAL SOLID WASTE FACILITY

MSW PERMIT NO. 2374

**PESCADITO ENVIRONMENTAL
RESOURCE CENTER**

**SOLID WASTE MANAGEMENT AND
DISPOSAL FACILITY**

**RANCHO VIEJO WASTE MANAGEMENT, LLC
LAREDO, WEBB COUNTY, TEXAS**

March 28, 2011
Revised May 20, 2011
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1.0 REQUIREMENTS OF §305.45 [330.59(a)]

1.1 Form TCEQ-0650 [305.45(a)(1)-(5)]

Form TCEQ-0650 provides names, addresses, locations, contact information, and other required information for the facility, owner, and applicant. It also contains a brief description of the nature of the business and activities to be conducted by the applicant that require a permit. Additional information on these activities may be found in Section 1.4.1 below.

1.2 Maps [305.45(a)(6)]

A topographical map is provided as Figure 6, Part II. The landowner’s map is provided as Figure 3, Part I. County highway maps were used to prepare Figures 1 and 2, Part I. The Facility Layout Map and Operations Area Layout Map, Figures 3 and 4 in Part II, portray the location of regulated facilities and associated activities to the extent currently known. Locations of specific facilities may change somewhat during the detailed design of the facility, but will remain in the same general location presently shown.

Existing wells and surface water bodies are shown by the Land Use Map, Figure 8, Part II. There are no springs. This figure, the Supplemental Land Use Map, and the Aerial Photograph, collectively Figures 7, 8, and 9, Part II, show the general character of areas adjacent to the Facility. There are no existing waste disposal activities at or near the facility, so none can be shown. The ownership of all tracts of land adjacent to and within ¼ mile of the Facility is shown on the Land Ownership Map, Figure 3, Part I.

1.3 Permits or Construction Approvals [305.4(a)(7)]

Following is the status of permits or construction approvals received, applied for (or anticipated to be applied for):

Hazardous Waste Management Program under the Texas Solid Waste Disposal Act – not applicable to proposed facility,

Underground Injection Control Program under the Texas Injection Well Act – an application for a Class 2 injection well permit will be submitted in the future, for disposal of oil field wastewater,

National Pollutant Discharge Elimination System Program under the Clean Water Act and Waste Discharge Program under the Texas Water Code, Chapter 26 – an NOI will be submitted to TCEQ for coverage by a storm water discharge general permit,

Prevention of Significant Deterioration Program under the Federal Clean Air Act (FCAA) – not applicable to proposed facility,

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Nonattainment Program under the FCAA - not applicable to proposed facility,

National emission standards for hazardous air pollutants preconstruction approval under the FCAA - not applicable to proposed facility,

Ocean dumping permits under the Marine Protection Research and Sanctuaries Act - not applicable to proposed facility,

Dredge or fill permits under the FCWA – an application for a permit under Section 404 of the FCWA will be filed, as necessary, in the future,

Licenses under the Texas Radiation Control Act - not applicable to proposed facility,

Subsurface area drip dispersal system permits under Texas Water Code, Chapter 32 - not applicable to proposed facility, and

Other environmental permits –a permit will be obtained for an on-site sewage facility (OSSF) if required by Webb County rules.

1.4 Supplementary Technical Report [305.45 (a) (8)]

1.4.1 General Description of the Facilities

Rancho Viejo Waste Management, LLC (RVWM) owns a 1,110 acre tract of land (site) about 20 miles east of Laredo in Webb County, Texas and proposes to establish a solid waste management facility on this site. The proposed facility is known as Pescadito Environmental Resource Center (PERC). The site is ideally located for such a facility because of the favorable soil and geological conditions, its isolation from groundwater, absence of neighbors or potentially conflicting land uses, and transportation access. The site is located entirely within the 12,194 acre Yugo Ranch that is owned by Rancho Viejo Cattle Company, Ltd. and has been family-owned for generations, and has been used for cattle ranching and oil and gas production for many years. The owners of the Yugo Ranch support the development of PERC. They view the proposed solid waste management and landfill disposal as the next stage in land use at the site, one that is fully compatible with historic and ongoing extraction of oil and gas, as well as cattle ranching.

PERC will be a comprehensive waste management facility that will provide municipal and industrial solid waste landfill disposal, processing of recyclable materials to extract reusable commodities, processing of liquid wastes from grease and grit traps, and disposal of liquid waste from the oilfield in an injection well. The largest part of the site will be devoted to a landfill up to as much as 800-850 acres. The landfill will be designed and permitted as a Type I municipal solid waste (MSW) landfill that will accept essentially all categories of MSW, Class 2 and 3 industrial solid waste, and certain types of Class 1 non-hazardous wastes. The landfill will be designed for recirculation of

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leachate and for recovery of landfill gas for beneficial use. Because the site area already contains many natural gas wells, it is expected that landfill gas will be processed and/or scrubbed as it is generated to produce gas of marketable quality, which will then be metered and introduced into the nearby existing natural gas gathering system. Other facilities planned for the site include a material recovery facility (known in the waste industry as a “clean MRF”) to process co-mingled recyclables, such as those collected in the single-stream curbside collection programs that have become popular in many cities in the U.S. The clean MRF will process these recyclable materials to separate them into various commodities for sale. Potentially, a MRF for electronic waste (e-waste) may also be established at the site.

Transportation Access - One characteristic of the site that is favorable for the development of PERC is the site’s access to a relatively inexpensive bulk transportation system, a nearby railroad. The majority of the waste and recyclable materials to be brought to PERC will be hauled by rail, and this waste and material will not travel on public roads in any highly populated area in or near Laredo. The site is accessible for waste hauled by truck, as it is located about four miles from U.S. Highway 59 (Hwy 59) and about five miles from Texas Highway 359 (SH 359), and about 25 miles from Interstate 35 (I-35) in Laredo. Both highways provide suitable access to the site from Laredo, Corpus Christi (110 miles), San Antonio (130 miles), Austin (250 miles) and Houston (325 miles). The access route to the site from Laredo will be SH 359 via Jordan Road, which is an all-weather surface roadway managed by Webb County. Jordan Road “dead ends” at Yugo Ranch about 5.1 miles north of SH 359. There is no vehicle weight limits posted on this road. The access road from Hwy 59 will be used only in case of emergency, not for the routine traffic by trucks hauling solid waste. The owners of Yugo Ranch will convey an easement generally along existing all-weather ranch roads to RVWM, as necessary to ensure access to the landfill site, and RVWM will improve and maintain this road as its main access route. The existing all-weather access roadway between PERC and Hwy 59 is proposed to be maintained strictly as a secondary, emergency use only, access route into the facility. In the event that road maintenance is being performed on the primary access road, or unusual weather has disrupted access, the secondary access road could be used temporarily to keep the facility in service.

The main line of the Kansas City Southern Railway Co. (KCS) between the United States and Mexico passes through Yugo Ranch about two miles from the site. KCS acquired this portion of its rail system from the Texas Mexican Railway Company (Tex Mex) through a merger in 1995. Through this and other mergers and acquisitions over the years, KCS now owns or has direct access to rail lines in the United States that extend from Chicago and the Twin Cities in the north, through Illinois and Missouri south to Texas, east into Tennessee and Alabama, and throughout Louisiana. Significantly, the KCS rail lines also

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extend throughout the industrialized portions of Mexico. Additionally, KCS has established formal marketing agreements with Norfolk Southern RR in the northeast U.S., CSX in the southeast, Union Pacific in the Midwest to the West Coast, and BNSF in the Midwest, northwest, and southwest. KCS marketing agreements also include the Canadian Pacific RR and Canadian National RR. Having these partnership agreements in addition to its owned tracks gives KCS access to all population and industrial centers in North America, allowing it to benefit from international trade and shipping under the North American Free Trade Agreement (NAFTA).

The rail network of KCS and the presence of the KCS main line within two miles of the site provide a significant advantage to this facility. Railroads have re-established a prominent role in the U.S. shipping industry, particularly for long-distance and bulky or heavy commodity shipping. High diesel fuel costs in recent years redefined shipping in the U.S. High fuel costs have adversely impacted the profitability of the trucking industry and made railroads much more economical than trucks hauling heavy loads long distances. Marketing agreements between railroads, such as those put in place by KCS, and computerized programming of routes and rail car shipments have helped railroads become much more cost effective than in the past. There is probably no better endorsement of the renewed viability of railroads than the purchase of the Burlington Northern and Santa Fe RR (BNSF) by Warren Buffet in November 2009. Mr. Buffet is traditionally ranked as one of the two or three wealthiest persons in the world by Forbes Magazine. Many investors believe Mr. Buffet is wealthy because of his sound investments.

Favorable Site Conditions - A second characteristic that is favorable for the development of PERC is the suitability of the site. The site offers excellent land use compatibility, highly favorable soil, groundwater and climatological conditions, and absence of any other potentially detrimental environmental issues. Conditions at the site are either highly favorable or capable of being properly addressed through appropriate facility design or other reasonable precautions. Only two permanent residential structures, including one house and one mobile home, are located within a one-mile radius of the site. These are located at the headquarters of Yugo Ranch, the host ranch. The human population within a five-mile radius of the site is estimated to be about 350 persons, essentially all living in the small community of Ranchitos Las Lomas located along Hwy 59 about four miles northwest of the site.

Soil in the upper 160 feet at the site was found to be predominantly clay, occasionally interbedded with claystone, sandstone and shale, and these soil types are believed to extend much deeper. The soils exist in nearly horizontal beds that exhibit very low vertical permeability. These soil conditions provide a naturally favorable site setting, and

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the clay will provide excellent material for construction of liners, caps and cover systems. Surficial soils are stable and resist erosion, as evidenced by the absence of stream beds or other drainage features cut into the surface topography.

While groundwater is encountered in thin layers of sandy or silty material within otherwise highly impermeable clay, this groundwater is essentially not usable due to its very low production potential and poor water quality. The uppermost aquifer beneath the site that is capable of producing water in potentially useful quantities to wells is the Jackson-Yegua Aquifer, which is expected to be encountered in the upper 750 feet below ground surface at the facility area. Water in this aquifer is poor to very poor in quality, due to concentrations of total dissolved solids, chloride and sulfate that exceed Federal drinking water standards. The Jackson-Yegua Aquifer is classified as a minor aquifer, because it produces relatively low yields of highly mineralized water. These water quantity and quality issues limit the usefulness of Jackson-Yegua Aquifer water for human consumption and agricultural uses such as livestock watering or crop irrigation. The site area is geologically stable, with no evidence of faults and a historical earthquake incidence rate significantly below the Texas state average. Rainfall averages about 20 inches per year, and will favor a water balance final cover system. Historically for this area, 3.1 inches of rain falls in May and 3 inches in September, the two wettest periods of the year. Some rainfalls are relatively intense, and this combines with the very low permeability of the site's soils and very flat slopes to produce relatively broad areas that are subject to inundation during the 100-year frequency rainfall event. However, the site is situated in a mostly upland area near the top of the watershed, and existing or proposed livestock watering tanks capture and store a portion of the area's storm water runoff. As a result, the quantity of storm water runoff that will flow across the site is relatively low. Such runoff volumes can be readily contained in the perimeter drainage system that will be designed to remove the entire landfill footprint from the 100-year flood plain.

National Trend for Regional Landfills and Longer Hauling Distances- A third factor that supports the proposed facility is the national trend to fewer but larger landfills that serve more distant waste generators through long hauling. This trend is not nearly as evident in Texas as it is in other areas of the country such as the Northeast, the Northwest and California. For years many landfills in these parts of the country have been reaching capacity and closing. Conflicting land use and too many nearby neighbors made expanding many existing landfills uneconomical or virtually impossible. In many areas of the country there is also a scarcity of potential new landfill sites that meet all the necessary criteria, including: sufficiently large land area; suitable soil, geology, and groundwater conditions; acceptable neighboring land use; and access to economical transportation.

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Description of Facilities and Systems – PERC will be designed and permitted to accept a variety of waste types. However, regulated hazardous waste and regulated radioactive wastes will not be accepted. Types of wastes that will be accepted for landfill disposal include:

- Municipal solid waste,
- Non-hazardous industrial waste,
- Construction and demolition waste,
- Coal combustion ash and pollution control sludges,
- Filter cake and process sludge from industrial and municipal water and wastewater treatment plants,
- Non-hazardous industrial waste from maquiladora industries in Mexico, and
- Event-type waste from disaster clean-ups.

Materials that will be received for processing may include:

- Unsorted or mixed recyclables for processing and recovery of commodities,
- Scrap tires for processing and beneficial reuse,
- Electronic waste for processing and beneficial reuse, and
- Grease trap and grit trap wastes for processing and potentially beneficial reuse.

Materials that will be received for deep well injection include liquids from oil and gas exploration and production under the regulatory jurisdiction of the Railroad Commission of Texas (RCT).

Waste for landfill disposal at PERC is anticipated to be between 1,000,000 and 2,000,000 tons per year (tpy) in the first few years after the landfill is permitted and constructed. This is between about 2,750 and 5,500 tons per day (tpd), based on receiving waste seven days per week. Going forward, the facility might receive a higher rate of waste, and will have ample capacity to accept larger quantities, but it is difficult to estimate what the future quantity may be. It is expected that almost all incoming waste will be received based on multi-year contracts with generating sources, which will be a combination of local governmental entities, private waste companies with local hauling contracts but no local landfill, and industries. Waste sources are not yet completely determined, as the facility will need to be much closer to being ready to operate before contracts for waste disposal can be put into effect. Consequently, the points of origin of incoming waste have not yet been determined. It is anticipated that PERC will receive solid waste

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generated in the City of Laredo, as that city's existing landfill is reported to have less than 10 years of remaining capacity and is not likely to be expanded. The City of Laredo landfill received 378,000 tons of solid waste in FY 2008, and waste receipts should increase over the near future as the Laredo population continues to grow. For planning purposes, it is assumed that PERC will receive approximately half of Laredo's solid waste when its landfill closes in the future, and that the amount of future waste will be about 235,000 tpy, or about 750 tpd (six days per week basis). This waste will be brought to the site by trucks. PERC intends to offer the City of Laredo the opportunity to deliver its solid waste to a proposed transfer station that PREC would construct and operate in or near the city, to facilitate transportation of the City's waste to the facility. Additionally, municipal solid waste, construction and demolition (C&D) waste, and water and wastewater treatment sludge are expected to be between 1,250 and 4,000 tpd, and various industrial wastes are estimated to average about 750 tpd, all transported by rail. Industrial waste from the maquiladora industries in Mexico will also be rail-hauled to the site. KCS owns and operates the rail line on the International Bridge between Laredo and Nuevo Laredo, Tamaulipas.

Waste from Laredo will be trucked to the site via Hwy 359. It is anticipated that a waste transfer station will be established in the city, so that the city waste collection trucks will not need to drive to and from the facility. Instead, waste will be hauled by semi-tractor trailer units dedicated to the transfer station operation. About 30 to 35 transfer truck trips per day are anticipated to carry the 750 tpd to the site. The transfer station will be subject to obtaining a permit or registration from TCEQ. Until the permit or registration is issued, waste collection trucks would haul waste directly to the landfill.

Rail-hauled waste will be transported by several methods. The most common transportation method for the municipal solid waste will involve loading the waste into intermodal shipping containers at the waste generators' transfer stations. Once they are filled, either the containers will be directly loaded onto flat-bed rail cars if the transfer station has rail access, or they will be transported on flatbed trucks to an intermodal rail yard for loading onto rail cars. This method of shipment is commonly used for shipping a wide variety of commodities across the country and internationally, and is also used in most waste-by-rail operations. Some bulk-type industrial wastes, coal combustion waste, most municipal and industrial sludges, and many C&D waste streams may be hauled by gondola cars, provided the particular waste is not subject to odors, wind-blown release of waste, or has similar restrictions. Some generators may establish waste transfer stations that employ balers. Baled waste is readily transportable, as a baler produces a cube of highly compressed waste wrapped in wires. Baled waste is quite stable, and can be moved and stacked inside intermodal containers by conventional fork-lifts, in the same manner as many commodities. Some waste baling operations include wrapping the bale

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in polyethylene film which seals in odors and any liquids that might be present, and keeps out rainwater and insects, making shipping the waste to the landfill very secure and unobjectionable.

Initially, PERC may receive waste in intermodal shipping containers at the new KCS container facility east of Laredo. If this option is employed, the intermodal containers with waste will be off-loaded from rail cars to flatbed tractor trailers that will be driven to the landfill. As the volume of waste received increases over time, PERC will construct a rail siding along the KCS main line on Yugo Ranch. The facility will employ a container moving equipment to off-load the intermodal containers from rail cars to flat bed tractor-trailer units which will haul the containers to the working face area of the landfill. A long boom crane with a container lifting mechanism will remove each container from the truck and place it near the working face, where a worker will unseal and open the doors. The crane operator will then tip the container to dump the waste into the working face, where the waste will be compacted into the landfill. The crane operator will remove the container for cleaning, and then replace the empty container on the truck bed so it can be returned to the rail car and eventually returned to a waste generator for re-use. As waste volume increases, a rail spur may be constructed into the landfill area to eliminate the step of off-loading containers onto flat-bed trailers. Also, if the disposal market offers sufficient opportunity for accepting waste in gondola cars, a rail car tipper will be added to the rail siding or spur. Car tippers are commonly used to unload coal at power plants, and are also used for waste transfer at waste-by-rail landfill sites, such as at the ECDC landfill near East Carbon, Utah.

The landfill will include a conventional RCRA Subtitle D design with a composite liner and leachate collection system. Provisions will be made for leachate recirculation, to create a bioreactor that will speed the decomposition of organics in the waste and encourage the production of landfill gas. If landfill gas recovery is authorized by a future registration, the landfill gas will be collected and treated to the degree necessary for sale of the gas into one of the natural gas collection systems that exist in the general area of the site. Gas treatment is anticipated to include drying to remove excessive water vapor and treatment to remove carbon dioxide to increase its BTU content.

Ancillary facilities proposed for PERC may include a processing facility for recyclable materials, often called a clean materials recovery facility or "clean MRF. This facility will function to separate and recover all re-usable or recyclable components that have economic value from their respective source streams. The source stream for the clean MRF will be materials collected in curbside recycling programs and citizen drop-off centers offered in most cities. The MRF will use a combination of manual picking and mechanical sorting to produce as many recyclable commodities as possible. The

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recovered commodities will be baled or containerized and shipped to markets for these commodities. The site's rail access will provide economical transport of the incoming recyclables and shipment of the recovered commodities to their markets. Unrecoverable materials, or materials that have no use or value as recycled commodities will be landfilled. In addition, it is proposed that grease and grit wastes from the Laredo area will be processed to reduce the water content and then landfilled, with the expectation that recovered grease may be used for energy recovery in the form of methane gas production, depending on volumes and the availability of suitable equipment or technology. Landfill gas recovery will only occur after a future registration through TCEQ to authorize this activity.

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PERC will seek a permit from the Railroad Commission of Texas (RRC) to construct and operate a Class 2 underground injection well at the site. This type of injection well is limited to the injection of liquids originating in oil and gas exploration and production, which basically is limited to condensate, produced water and brine. Plans for this facility are still being formed, but the injection facility is expected to include one or more above-grade storage tanks, a pre-injection filter system to remove solid matter, an injection pump, and the well itself. The application for this injection well permit, and further details of the plans and specifications for the system, are being prepared as a separate regulatory process through the RRC. Discussion of this aspect of PERC is included here in the interests of providing a complete picture of the total anticipated development of the site. The Class 2 well, or a separate Class 5 well may also be used for the disposal by underground injection of shallow groundwater produced during the construction and initial operation of the landfill.

1.4.2 Volumes, Rates and Characteristics of Wastes

Types of wastes that will be accepted for landfill disposal, along with their volume or rate include:

Municipal solid waste by rail – estimated to be between 1,250 and 4,000 tpd,

Municipal solid waste by truck – estimated to be 750 tpd,

Non-hazardous industrial waste – estimated to be 750 tpd,

Construction and demolition waste – included with municipal solid waste,

Coal combustion ash and pollution control sludges – included with industrial waste,

Filter cake and process sludge from industrial and municipal water and wastewater treatment plants – included with municipal solid waste,

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Non-hazardous industrial waste from maquiladora industries in Mexico – included with industrial waste, and

Event-type waste from disaster clean-ups – varies from none to occasionally up to 2,000 tpd.

The types of materials that will be received for processing, along with their volume or rate, may include:

Unsorted or mixed recyclables for processing and recovery of commodities – up to 500 tpd, and

Grease trap and grit trap wastes for processing and beneficial reuse – up to 50,000 gallons per day.

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Electronic waste for processing and beneficial reuse – up to 100 tpd, and¶

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The characteristics of these wastes and materials are provided in the definitions found at 30 TAC §330.3 (1) through (181). No regulated hazardous wastes will be accepted. Special wastes as defined by 30 TAC §330.3 (148) and Class 2 and Class 3 industrial wastes will be accepted, except for any such wastes that cannot be effectively processed, handled or disposed at this facility. Class 1 non-hazardous wastes will also be accepted. Class I Industrial Waste amounts will not exceed 20 percent of the total amount of all other waste accepted for disposal during the current or previous year.

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Materials the will be received for deep well injection include liquids from oil and gas exploration and production under the regulatory jurisdiction of the RRC.

Waste for landfill disposal at PERC is anticipated to be between 1,000,000 and 2,000,000 tons per year (tpy) in the first few years after the landfill is permitted and constructed. This is between about 2,750 and 5,500 tons per day (tpd), based on receiving waste seven days per week. The facility expects to receive a higher rate of waste, and will have ample capacity to accept larger quantities. The landfill has a total disposal capacity currently estimated to be about 300-350,000,000 tons, and have a capacity to receive and dispose of as much as 10,000 tpd.

The above volumes and rates are estimates, and it should be understood that it is difficult to accurately estimate what the future volumes and rates of waste receipts may be. Almost all incoming waste will be received based on multi-year contracts with various waste generators, which will be a combination of local governmental entities, private waste companies with local hauling contracts but no local landfill, and industries.

1.4.3 Other Information

This permit application has been prepared to demonstrate compliance with the requirements established in 30 TAC 330.57 through 330.65, and related or referenced

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rules that are in effect as of the date of this application. The application is formatted to be in general conformance with these rules.

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2.0 FACILITY LOCATION [330.59(b)]

The location of the facility with respect to known or identifiable landmarks can be determined by Figures 1 and 2 in Part I. These figures also show the access routes to the facility from United States and state highways. The location of the site is at North 27.559 degrees latitude and West 99.160 degrees longitude.

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3.0 MAPS [330.59 (c)]

The maps presented as figures in Parts I and II show the elements required by §305.45, as discussed in Section 1.2 above. The General and Detailed Location Maps, the Land Ownership Map, and the Metes and Bounds drawing are presented in Figures 1, 2, 3, and 4 of Part I, respectively. The landowners' list corresponding to Figure 3 is presented below.

Following is a list of all owners of record of real property located within ¼ mile of the proposed facility site boundary, along with a numeric key that identifies the property they own. This key is the same as shown on the Land Ownership Map, Figure 3. This list of landowners and those shown on the Land Ownership Map were obtained from the Webb County Appraisal District deed records, and are the most current available records as of the date of this permit application. Parcel 1 is the proposed PERC site. This parcel is owned by the Applicant, Rancho Viejo Waste Management, LLC.

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Parcel 1 - Rancho Viejo Waste Management, LLC
1116 Calle del Norte
Laredo, TX 78041

Parcel 2 - Rancho Viejo Cattle Company, LTD
1116 Calle del Norte
Laredo, TX 78041

Parcel 3 - Volz Arthur C. Jr.
4072 Sucia Dr.
Ferndale, WA 98248-9506

Volz James Richard
310 Westmont Dr.
Laredo TX 78041-2745

Zuck Sally Ann Volz
1609 Matamoros St.
Laredo, TX 78040-7714

Martin Margaret Lucille
215 W. Bandera Rd. Ste 114-619
Boerne, TX 78006-2820

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Dammier Martin Catherine
2901 Teckla Blvd.
Amarillo, TX 79106-6137

Martin Robert Henry
3005 Wincrest Cir.
Laredo, TX 78045-8149

Martin Thomas Frederick
P.O. Box 430184
Laredo, TX 78043-0184

Dammier Jordan Trust
2901 Teckla Blvd.
Amarillo, TX 79106-6137

Martin John M. III
414 Plymouth Ln.
Laredo, TX 78041-2735

Martin Kristell L. Trust
3005 Wincrest Cir.
Laredo, TX 78045-8149

Martin Catherine Marie Trust
1301 Kimberly Dr.
Laredo, TX 78045-7558

Martin Michael Trust
414 Plymouth Ln.
Laredo, TX 78041-2735

Martin John M IV Trust
414 Plymouth Ln.
Laredo, TX 78041-2735

Martin Matthew Trust
P.O. Box 430184
Laredo, TX 78043-184

Martin Melissa Marie Trust
P.O. Box 430184
Laredo, TX 78043-0184

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Martin Thomas F. Jr.
P.O. Box 430184
Laredo, TX 78043-184

Following are owners of the mineral interest beneath the facility:

Amcon Resources
P.O. Box 3025
Oklahoma City, OK 73101-3025

Benavides Family Mineral Trust
Arturo Benavides
P.O. Box 217
Laredo, TX 78042-0217

Hausser, Robert
405 Terrell Rd.
San Antonio, TX 78209-5919

Horvet, Elizabeth Ann Sentz
125 Bridgeway Cir.
Longwood, FL 32779-4902

Hurd Enterprises Ltd.
% L B Walker & Associates
13111 NW Frwy. Ste. 125
Houston, TX 77040

Killiam Oil Company, Ltd.
Royalty Accounts
% L B Walker & Associates
13111 NW Frwy. Ste. 125
Houston, TX 77040

Mitchell Minerals, LLC
P.O. Box 448
Henryetta, OK 74437

Sentz, Charles Christopher
P.O. Box 160548
Altamonte Springs, FL 32716

Sentz, James N.L. Trust
FBO S L Sentz, Robert W. Sentz, Trustee
5501 Wayne Ave. Apt. 201
Philadelphia, PA 19144-3326

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Sentz, John Thomas
234 Rainbow Dr. Ste. 13420
Livingston, TX 77399-2034

Sentz, Robert Winston
5501 Wayne Ave. Apt. 201
Philadelphia, PA 19144-3326

Sentz, Suzanne Louise
22156 NW 9th Pl.
Gainesville, FL 32605-5201

Warren, Andrea R. Trust
J.P. Bradley & David Purdy Co-Trustee
2490 Black Rock Tpke. #307
Fairfield, CT 06825-2400

Warren, Wendy U. Trust
James P Bradley, Trustee
% David E. Purdy CPA
2490 Black Rock Tpke. #307
Fairfield, CT 06825-2400

ConocoPhillips Company
Property Tax Division – Mineral
% Rpa-Ptrrc Dept.
P.O. Box 2197, 2 WL 8024F
Houston, TX 77252

Following are the easement holders of record for the facility according to Webb County Appraisal District (WCAD):

United Texas Transmission Co.
NO ADDRESS AVAILABLE AT WCAD

Conoco, Inc.
NO ADDRESS AVAILABLE AT WCAD

Conoco-Phillips Co.
NO ADDRESS AVAILABLE AT WCAD

However, United Texas Transmission Co. has been acquired by Kinder Morgan Energy Partners, L.P. and Conoco, Inc. merged with Phillip Petroleum to form Conoco-Phillips Inc. These two remaining easement holders may be contacted as follows:

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Conoco-Phillips Inc.
4298 Mangana Hein Road
Laredo, TX 78043

Kinder Morgan Pipeline Co.
1902 Bob Bullock Loop
Laredo, TX 78043

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4.0 PROPERTY OWNER INFORMATION [330.59 (d)]

4.1 Legal Description

The legal description of the PERC site is a tract of land containing 1,109.48 acres, more or less, out of and being a part of a 12,193.84 acre tract as described and depicted as Tract 2 on a Survey Plat by John E. Foster, R.P.L.S. on a Stipulation Conforming Surface Ownership, Agreed Boundary Line and Roadway Access instrument, as recorded in Volume 704, Pages 827 – 852, of the Plat Records of Webb County, Texas.

The 1,109.48 acre tract is situated in Webb County, Texas and is a part of Survey 373, Abstract 1718; Survey 2366, Abstract 3182; Survey 111, Abstract 1616; Survey 112, Abstract 2835; and Survey 1654, Abstract 3104. The boundary metes and bounds description of the property and a drawing of the property description are shown on Figure 4 titled Boundary Survey (Sheets 1 of 2 and 2 of 2). This legal description is also provided in Attachment A. The record information for the 1,109.48 acre tract is Volume 3071 Pages 426-432, Official Public Records, Webb County Texas.

The 1,109.48 acre tract is not platted.

4.2 Property Owner Affidavit

The signed property owner affidavit for this application is provided on Page 9 of the Part I Application Form (Form TCEQ – 0650) contained in this permit application.

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5.0 LEGAL AUTHORITY [330.59 (e)]

The applicant, Rancho Viejo Waste Management, LLC., is a Texas limited liability company. It will own and operate the proposed municipal solid waste landfill and related facilities under the name of Pescadito Environmental Resource Center. A copy of the certificate of formation issued to Rancho Viejo Waste Management, LLC., by the Secretary of State is provided as Attachment B. As a manager of, Rancho Viejo Waste Management, LLC., Mr. C.Y. Benavides, III has authority to sign documents on behalf of the company. No person has over a twenty percent (20%) ownership in the proposed facility. Rancho Viejo Waste Management, LLC. is owned by Rancho Viejo Cattle Company, Ltd.

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6.0 EVIDENCE OF COMPETENCY [330.59 (f)]

The owner or operator of the proposed MSW facility currently does not own or operate any other solid waste facilities in Texas or elsewhere.

Either a properly licensed solid waste facility supervisor will be hired or an existing officer, partner, or employee of PERC will become licensed as a solid waste facility supervisor prior to commencing the operation of the proposed facility, in accordance with Title 30 of the Texas Administrative Code Chapter 330.59(f) [30 TAC 330.59(f)].

A preliminary schedule of construction and operating equipment that is currently proposed to conduct the operations proposed in this permit application is as follows: Landfill Compactor – Cat 836G or equivalent (minimum one), Bulldozer – Cat D-9R or equivalent (minimum one), Hydraulic Excavator – Cat 330B or equivalent (minimum one), Articulated Dump Truck – Cat 730 or equivalent (minimum one). Additional equipment for construction and operation will be added as necessary.

The owner or operator has the financial means to purchase or lease all of the equipment necessary to construct and operate all of the waste management units covered by this permit application. Prior to the commencement of operations, the owner or operator will acquire all such equipment and have it on site. Likewise, the owner or operator will hire a trained and experienced staff of supervisors, equipment operators, technicians, laborers and other categories of employees as needed to construct and operate the facility in accordance with this permit application and the applicable TCEQ rules. At a minimum the facility will be operated under the supervision of a landfill manager who holds a Class A municipal solid waste facility supervisor license.

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8.0 APPLICATION FEE [330.59 (h)]

The application fee for this registration application was submitted separately to the TCEQ Office of Finance and Administration. A copy of the payment documentation is provided as Attachment C.

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FIGURES

Attachment A

Legal Description

Attachment B

Certificate of Formation

Attachment C

Payment Demonstration

PART II

APPLICATION FOR PERMIT

TYPE I MUNICIPAL SOLID WASTE FACILITY

MSW PERMIT NO. 2374

**PESCADITO ENVIRONMENTAL
RESOURCE CENTER**

**SOLID WASTE MANAGEMENT AND
DISPOSAL FACILITY**

**RANCHO VIEJO WASTE MANAGEMENT, LLC
LAREDO, WEBB COUNTY, TEXAS**

March 28, 2011
Revised May 20, 2011
Revised September 14, 2011
Revised December 14, 2011

Sections 1.1, 1.2, 10.1—10.4, 11.1

Prepared By:

Except for 1.1, 1.2, 10.10.4, 11.1



505 East Huntland Drive, Suite 250
Austin, Texas 78752
(512) 329-6080

TRC Environmental Corporation
TBPE Firm Registration No. 3775

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1.0 EXISTING CONDITIONS SUMMARY – [330.61 (a)]

This section discusses site-specific conditions that require special design considerations and mitigation of conditions that exist at the site of the proposed 1,110-acre Pescadito Environmental Resource Center (PERC), located about 20 miles east of Laredo in Webb County, Texas (see Figure 1, Part I and Figure 1, Part II).

1.1 Soils and Geology

A series of 56 soil borings were completed to evaluate the characteristics of soil encountered in the upper 160 feet at the site. These soils are predominantly clays, with some interbedded sand, sandstone, and claystone or shale. Based on review of published reports and geophysical logs, these or similar soils are believed to extend to much greater depths. Laboratory testing of these soils confirms that they are well suited for the location of a solid waste landfill and to be used for the construction of the proposed landfill's liners and cover systems, and for storm water management structures such as channels, detention ponds and dikes. These soils have very low permeability characteristics and are resistant to erosion, both in the natural or *in situ* condition and when constructed into compacted clay liner systems. These soils also are resistant to erosion.

The geology of the site area is also suitable for landfill development, as the soil strata are laterally very extensive with relatively thick layers of very low permeability soils that prevent vertical migration of water. Consequently, the area geology is very protective of the quality of water in the aquifers that lie below the proposed facility. There are no recognized geological hazards at the site, as there are no geologic faults in the immediate area, the risk of seismic activity is extremely low, and there is no known incidence of instability due to subsidence, poor foundation conditions, or karst terrains.

1.2 Groundwater

Groundwater was encountered beneath the site within soils of the Jackson and Yegua Groups. These soils are part of the Jackson-Yegua Aquifer, which is classified as a minor aquifer by the Texas Water Development Board (TWDB). This classification is due to the relatively low yield and marginal quality of water in the aquifer. The ground water below the site was encountered in several water-bearing zones or layers that are generally characterized by gradational changes to sandy or silty soil classifications. These water-bearing zones are generally on the order of several feet thick and are found at several depth intervals across the site. These water-bearing zones may also be found layered as a transition between two highly impermeable layers of clay soil or at the top of a relatively impermeable layer of rock-like indurate material, and may also be associated with secondary porosity in the over-consolidated clay soils. These water bearing zones exhibit the characteristics of a confined aquifer. However, the hydraulic characteristics or

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relative thinness of these zones severely limit their ability to produce water in potentially useful quantities. The quality of this water is very poor to unacceptable for most domestic or agricultural uses. Regional aquifers exist beneath the site, but at significant depth. The Laredo Aquifer is expected to occur at a depth of about 1,000 feet or more below the ground surface. Water in this aquifer is generally slightly saline, with total dissolved solids in the range of 1,000-2,500 milligrams per liter (mg/l), about two to five times the U.S. EPA's secondary drinking water regulation (SDWR) standard of 500 mg/l. Published reports indicate the groundwater produced by some wells contain some metals and trace elements in excess of SDWR limits. This and other deeper aquifers in south central Webb County dip towards the southeast towards the Gulf of Mexico and generally crop out in relatively narrow bands that trend northeast-southwest.

Groundwater usage in the general area of the site is very limited. Only one water well is known to exist within a one-mile radius of the facility boundary. This is the private water well that is located near the Yugo Ranch headquarters buildings and serves the general needs of the ranch. This well is located roughly 900 feet southwest of the proposed facility. The ranch well was geophysically logged as part of this study and the caliper log indicates that the well is screened in the Yegua from about 1020 feet to 1136 feet where the diameter is reduced to final log depth [1160 feet], suggesting a smaller screen or sediment trap. According to TWDB records and information developed during the preparation of this permit application, there are only 6 water wells within a five-mile radius of the facility, including this ranch well. The next closest well is about 2.5 miles northwest of the facility. Four wells are located between 4.3 and 5 miles northwest of the facility, in the community of Ranchitos Las Lomas. One of these is a well located nearly 5 miles away that is owned and operated by Webb County. This well was intended as a public water supply well to make dispensed water available to the residents of Ranchitos Las Lomas. Water quality from this well is so poor that the majority of the water dispensed at this site is hauled by tanker trucks from the Webb County maintenance facility near U.S. Highway 59 and Loop 20 in Laredo. The source of this hauled water is the Laredo public water system. Of the total quantity of water Webb County dispenses at this location, relatively little water comes from this well, and that follows extensive treatment.

1.3 Site Size and Topography

The site contains approximately 1,110 acres and is roughly rectangular in shape, as shown on Figure 3, Part II. It is nearly one mile measured east to west and less than two miles measured north to south. For the most part, the site topography is gently sloped from north to south at about 0.5 to 1 percent. Several shallow swales gather storm water runoff and convey it southward. Several stock tanks have been constructed within the site

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to collect and store runoff for livestock watering. The relative uniformity of the terrain will facilitate design and construction of the landfill and supporting features, particularly management of storm water.

1.4 Rainfall, Hydrology and Storm Water Runoff

According to the *Soil Survey of Webb County, Texas*, published by the U.S. Department of Agriculture, Soil Conservation Service (1985), rainfall at Laredo averaged 19.8 inches per year between 1931 and 1979. Monthly averages ranged from 3.2 inches in September to 0.5 inches in March. An average of 13.9 inches, or 70 percent of the annual amount, fell in the 6 month period from May through October. Since Laredo is only about 20 miles west of the site, it is believed this rainfall data is also representative of the site.

Because the site slopes rather gently from north to south at about 0.5 to 1 percent, near-surface soils have very low permeability, and the site is uniformly covered with native vegetation consisting of brush, forbs and grass, surface water hydrology is relatively consistent. Storm water runoff historically has not eroded bed-and-bank features into the shallow swales that convey drainage from the site. In recent times, several impoundments have been created on site by shallow excavation and embankment construction across the swales to create livestock watering tanks. Patterns of storm water runoff have thus been significantly altered by the capture of rainfall by these tanks.

The Texas Water Atlas (Estaville, Lawrence & Earl, Richard A., River Systems Institute at Texas State University, Texas A&M Press, 2008) provides the following site-specific hydrologic information:

- Average Annual Precipitation is 22-23 inches (period 1971-2000).
- Annual Potential Evapotranspiration (Priestly Taylor Method) is 76 inches.
- Annual Potential Evapotranspiration (Penman Method) is 106 inches.
- Annual Gross Lake Surface Evaporation is 79 inches (period 1950-1979).

The site is considered an arid location and is located at the boundary of the "Subtropical Subhumid" and "Subtropical Steppe" climates. Currently-published information documents that average annual evaporation exceeds average annual rainfall by more than 40 inches.

1.5 Floodplains

Because the swales that convey drainage across the site are so wide and shallow, they are quite inefficient at conveying runoff. As a result, relatively wide areas of the site are inundated by runoff from the 100-year rainfall event. The flood insurance rate map (FIRM) for the site, as prepared by the Federal Emergency Planning Agency (FEMA), indicates a significant portion of the site to be within Zone A, the 100-year floodplain.

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This floodplain is depicted in Figure 11, Part II. The FIRM can also be found in Attachment G of Part II. It is important to realize that the surface topography used to create the FIRM does not appear to include the existing dikes and surface impoundments at the site and in the watershed upslope from the site. TRC is engaged in engineering studies of the actual surface topography as it currently exists. TRC is also performing an engineering analysis of drainage at the site and all watersheds above and immediately below the site. TRC will design a series of drainage channels and detention structures that will result in the removal of the proposed landfill area from the 100-year floodplain. Furthermore, TRC will submit to FEMA a Conditional Letter of Map Revision (CLOMR), requesting correction of the existing FIRM to take into account the related drainage and floodplain improvements. We expect this action will result in documentation that construction of the proposed watershed improvements at and adjacent to the site will remove the landfill from the 100-year floodplain.

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1.6 Threatened and Endangered Species

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TRC has performed an initial assessment of threatened and endangered (T&E) species at the site, and subsequently conducted a more detailed biological evaluation. These studies will assure compliance with federal and state requirements for the protection of T&E species and their habitats. These studies have been submitted to the Texas Parks and Wildlife Department (TPWD) and the U.S. Fish and Wildlife Survey (USFWS), as discussed in Section 4.0.

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1.7 Land Use

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Land use at and within one mile of the facility is exclusively devoted to cattle ranching and oil and gas exploration and production. This same land use extends generally for many miles in every direction. The only exceptions are an area of residential land use about four miles to the northwest and two transportation corridors. The residential land use is in the community of Ranchitos Las Lomas, which is located along Highway 59 and had a population of 334 in the 2000 census. The transportation corridors include U.S. Highway 59, which passes through Ranchitos Las Lomas four miles to the northwest, and the Kansas City Southern Railroad about two miles to the south of the facility, which will provide rail service to the site.

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1.8 Oil and Gas Production

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While some oil but mostly gas production has been prevalent in the area, very little has actually occurred on the proposed site of the facility. Several wells were attempted on or adjacent to the site, but have been sealed and abandoned. The width of the landfill was selected to allow possible future development of gas reserves beneath the landfill by using directional drilling methods. Existing practices employed by energy companies in

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this area of Webb County were reviewed to identify the appropriate well spacing and horizontal departure allowances.

Recovery of landfill-generated gas is planned for the facility. At an appropriate time in the future, the owner or operator may apply to TCEQ for a registration to allow for recovery of landfill gas. The existing infrastructure of gathering pipelines, valves, and separators is expected to be useful to or at least compatible with the landfill gas recovery. The landfill gas will be processed on-site, to the degree necessary to make this gas marketable. Processing may include drying and/or removal of carbon dioxide or trace gases. The landfill gas will then be metered and pumped into the existing natural gas delivery system.

The oil and gas production at and around the site has resulted in a number of wells and pipelines being installed. Every production well has a certain useful or productive life, which ends when the oil or gas reserves it tapped is no longer recoverable. Some wells and pipelines in the site area are no longer active and have been abandoned in place, while others continue in service. Many of these pipelines exist within easements. The easement agreements allow the landowner (the Applicant for this permit) to reroute the pipelines as may become necessary in the future, as long as the replacement pipelines meet industry standards. Also, ownership of the easement and pipelines typically reverts to the landowner if the pipeline operator abandons the line. Similarly, ownership of abandoned wells reverts to the landowner. For these reasons, the proposed landfill is fully compatible with the existing oil and gas production. As the landfill grows in size over several decades in the future, the existing active oil and gas wells will transition into abandonment. New wells can be drilled if desired, because they can be located where they can access hydrocarbons beneath the landfill with directional drilling, and not interfere with the construction and operation of the landfill.

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2.0 WASTE ACCEPTANCE PLAN [330.61 (b)]

2.1 General

Type of Facility and Wastes to be Accepted – The facility will be a Type I municipal solid waste landfill, with several additional waste management units. As a Type I landfill, the facility will be designed for and will accept certain types of non-hazardous industrial wastes that are compatible with landfill disposal, and may accept liquid industrial wastes in the future. Waste management units for liquid industrial wastes may include solidification (prior to landfill disposal) or underground injection by means of a Class 1 injection well. Design considerations will be made to ensure that storm water and wastewater management are in compliance with TCEQ regulations. All contaminated liquids resulting from the operation of the facility will be disposed of in a manner that will not cause surface water or groundwater pollution. Grease trap and grit trap wastes will be accepted for processing. Processing of recyclables, such as those collected by residential curbside collection programs, may be provided. This process will seek to recover all recyclable commodities that have a market or reuse value, coupled with landfill disposal of non-recyclable residuals.

General Prohibitions- The following wastes will not be accepted for landfill disposal at this facility:

- (1) Lead acid storage batteries.
- (2) Do-it-yourself used motor vehicle oil
- (3) Used oil filters from internal combustion engines.
- (4) Whole used or scrap tires, unless processed prior to disposal in a manner acceptable to the executive director.
- (5) Refrigerators, freezers, air conditioners, and any other items containing chlorinated fluorocarbon (CFC).
- (6) Liquid waste, except as allowed in 30 TAC §330.177 (relating to Leachate and Gas Condensate Recirculation), and/or except household liquid waste as allowed by 30 TAC §330.15(e)(6) will not be accepted for disposal in any MSW landfill unit.
- (7) Regulated hazardous waste as defined in 30 TAC §330.3.
- (8) Polychlorinated biphenyls (PCB) wastes, as defined under 40 Code of Federal Regulations Part 761, unless authorized by the United States Environmental Protection Agency and the MSW permit.
- (9) Radioactive materials as defined in 30 TAC Chapter 336 (relating to Radioactive Substance Rules), except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services.

Management of Industrial and Special Wastes – The facility will accept certain Class 1 non-hazardous, Class 2 and Class 3 industrial wastes, as well as many special wastes

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that are regulated as municipal solid waste (MSW). Only those Class 1 non-hazardous wastes that are allowed to be disposed into Type I MSW landfills in restricted locations will be accepted, with the understanding that the facility may in the future provide on-site stabilization or solidification of certain types of industrial sludge to render these wastes suitable for landfill disposal. Grease and grit trap wastes will be accepted for processing from commercial sources (restaurants, fast food facilities, car wash and vehicle maintenance facilities), industrial sources (food processing plants, manufacturing plants) and institutional sources (hospitals, schools, prisons). Class I Industrial Waste amounts will not exceed 20 percent of the total amount of all waste accepted for disposal. Special design considerations will be made in accordance with 30 TAC §330.173 to properly manage any Class I waste that is proposed to be accepted for disposal at the landfill. Before accepting wastes that require stabilization, the facility will obtain a permit modification or amendment to add an on-site solidification facility. Special wastes will be accepted only to the extent that any given category or type of special waste can be properly managed by the facility and/or readily disposed into the landfill.

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Class I Industrial Waste will be disposed only in landfill cells lined with the industrial waste default design composite liner. The upper component shall consist of a minimum 30-mil (0.75 mm) flexible membrane liner and the lower component shall consist of at least a three-foot layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec. Flexible membrane liner components consisting of high density polyethylene shall be at least 60-mil thick. The flexible membrane liner component shall be installed in direct and uniform contact with the compacted soil component. Class I Industrial Waste cells shall have a leachate-collection system designed and constructed to maintain less than a 30-cm depth of leachate over the liner.

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While the bottom and sides of the landfill excavation could encounter thin, isolated sand/silt units with a Unified Soil Classification of "SM" or "SP," these soil units do not appear to be sufficiently thick and laterally continuous to provide a significant pathway for waste migration. In addition, most of these units will not exhibit hydraulic conductivity greater than 1×10^{-5} cm/sec. However, any effect of the sand/silt units is minimized because the average annual evaporation exceeds average annual rainfall by more than 40 inches. The nearest "regional aquifer" is located approximately 1,000 feet below the site. As a consequence of the prevailing soil conditions, the aquifer is protected by approximately 900 feet of soil with a predominant hydraulic conductivity towards the aquifer not greater than 1×10^{-7} cm/sec.

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2.2 Sources and Characteristics of Waste

The proposed facility will be a comprehensive waste treatment and disposal facility that serves municipal and industrial customers by means of truck and rail transportation.

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Municipal solid wastes transported by truck are expected to originate in Webb and nearby counties. The use of tractor-trailers loaded at transfer stations could extend the service area to more distant areas of South Texas such as Corpus Christi and San Antonio. Grease trap and grit trap wastes processed at this facility are expected to be generated in the same service area. Industrial wastes are expected to be generated from this service area plus the industries in the Houston-Beaumont region. Wastes transported by rail can be economically shipped from greater distances, because the transportation cost per ton-mile is much less by rail than by truck. In regions of the country where the cost of landfill disposal is relatively high and landfills are some distance away and served by trucks, the cost of solid waste disposal by rail-hauling to this facility could be less. Thus, the service area for rail-hauled waste may essentially be unlimited.

Sources of non-industrial waste that are intended to be managed at the proposed facility include local governmental entities (cities, towns, waste management districts or authorities, and counties), state institutions, federal agencies that generate waste from disaster response, commercial solid waste collection companies, and similar generators of municipal solid waste. Wastes to be received other than industrial waste can be characterized as garbage, rubbish, ashes, street sweepings, incidental dead animals, and non-recyclable residuals following the removal of recyclables from source-separated recyclable materials. Solids resulting from processing grease and grit trap wastes may also be disposed in the landfill.

A main line of the Kansas City Southern Railroad (KCS) passes within about two miles of the landfill facility and is accessible by all-weather roads on private property. Rail service to the site can be accomplished without having to transport waste over public roads. However, in the initial period of operation, waste may be transported in sealed, steel containers through the KCS intermodal shipping yard in Laredo.

KCS is an international railroad company with extensive track mileage and service in Mexico. The facility intends to provide waste disposal services to industrial generators in Mexico. Both the *maquiladora* industries along the U.S. border and other industries in Mexico will be served by the facility.

2.3 Quantity of Waste

Estimated Maximum Annual Waste Acceptance Rate - The facility estimates that it will receive the following maximum annual quantities of waste for landfill disposal during the first five years of its operation, and the population equivalent represented by these quantities:

Year 1 – 1,000,000 tons (1.1 million)

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Year 2 – 1,200,000 tons (1.3 million)
 Year 3 – 1,400,000 tons (1.6 million)
 Year 4 – 1,600,000 tons (1.75 million)
 Year 5 – 1,800,000 tons (2.0 million)

It must be noted that these figures are estimates only at this time, and should not be considered either as a firm commitment of quantities to be received or as a limitation on the amount of waste to be received in any of the years shown. The actual quantities to be received are expected to be determined by contracts the owner or operator anticipates securing from waste generators after the facility is closer to being in operation. The facility will be constructed to have sufficient processing and disposal capacity available and sufficient numbers of personnel and equipment, to properly manage the waste streams that are brought to the facility. Maximum and average storage times are expected to be 2 days and 1 day.

The grease and grit trap (G&G) waste processing facility is expected to receive a maximum of 30,000 gallons per day in the first year of operation. The maximum and average lengths of time this waste will remain at the facility prior to disposal, are summarized in the following table. G&G waste will typically be delivered in commercial vacuum trucks and off-loaded into a series of storage tanks. This waste will be transferred to mixing tanks for processing, where treatment chemicals (typically polymers and flocculating agents) and possibly compressed air will be added. Following the reaction time in the mixing tanks, the G&G waste will be transferred to separation tanks, where the grease will float and the grit will settle. Grease may be shipped off-site for processing for energy recovery or dewatered on-site and landfilled. Grease decomposes to produce landfill gas. Grit will be dewatered and landfilled. Remaining water will be managed as contaminated water and treated on site by solar evaporation or solidification (in accordance with TCEQ rules). This water may be hauled off-site for disposal at a wastewater treatment plant under authorization of the plant owner. All aspects of the management of G&G waste will be in accordance with TCEQ rules (and U.S. EPA rules if offsite disposal is employed).

GREASE AND GRIT TRAP WASTE

Year after opening	Maximum Receipts, gallons per day	Maximum Receipts, gallons per year	Maximum Storage, days	Average Storage, days

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1	<u>30,000</u>	<u>10,800,000</u>	5	3
2	<u>33,000</u>	<u>11,900,000</u>	5	3
3	<u>36,000</u>	<u>13,000,000</u>	5	3
4	<u>39,000</u>	<u>14,000,000</u>	5	3
5	<u>42,000</u>	<u>15,100,000</u>	5	3

The maximum amount of grease and grit trap waste to be stored, or total storage capacity, will be 50,000 gallons. The proposed maximum daily waste acceptance rate is 50,000 gallons per day.

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3.0 GENERAL LOCATION MAPS [330.61 (c)]

The General Location Map is presented as Figure 1 in Part II. This map is used to present the following described features, to the extent they exist within the distances from the proposed facility as defined by 30 TAC 330.61(c). For clarity, certain of these features are presented elsewhere in this permit application. The prevailing wind direction with a wind rose is presented on Figure 2 of Part II.

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There are no water wells on the proposed site or within 500 feet of the proposed permit boundary, except for temporary piezometers and / or groundwater monitoring wells that were installed as part of the development of this permit application. There is one water well within two miles of the proposed site, located about 900 feet southwest of the site. This is the water supply well for the ranch. Its location is shown on Figure 1 in Part II.

There are no structures and inhabitable buildings within 500 feet of the proposed facility. There are several structures and inhabitable buildings about 2,100 feet from the facility; these are shown on Figure 1 of Part II. These include one house, one mobile home, and several ranch buildings (one machine storage building and two sheds used as stables). On occasion, one travel trailer may also be temporarily parked in this area. All residents of these structures are ranch workers employed by Yugo Ranch.

There are no schools, licensed day-care facilities, churches, or cemeteries within one mile of the facility. Several man-made ponds (stock tanks) exist within one mile of the site, and these are shown on the map. There are no other residential, commercial or recreational areas within one mile of the facility, so none are shown; there also are no hospitals in this area. The nearest known airport used for commercial or general aviation is the Laredo International Airport, located more than 20 miles west of the facility.

The location and surface type of roads that will be used to access the facility are shown.

The latitude and longitude of the facility is shown.

Area streams are shown.

There are no airports within six miles of the facility, so none can be shown.

The property boundary of the facility is shown.

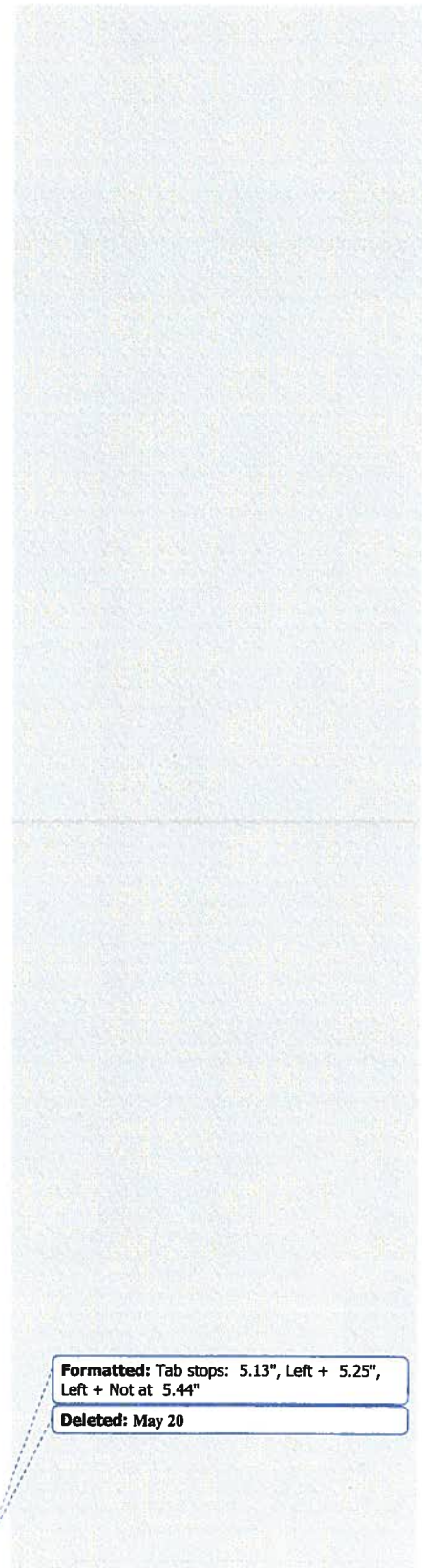
Easements within or adjacent to the facility cannot be clearly shown on Figure 1 of Part II. Consequently, for the sake of clarity, all known easements are shown on Figure 4 of Part I. Figure 4 was prepared by Mejia Engineering Company, and consists of Sheet 1 of 2 and Sheet 2 of 2.

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Facility access control features, including a perimeter security fence located along the facility boundary line and at least one lockable gate, are shown of Figure 4, Part II.

There are no recorded archeological, historical or aesthetic sites within one mile of the facility, so none can be shown.



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4.0 FACILITY LAYOUT MAPS [330.61 (d)]

A Facility Layout Map and an Operations Area Layout Map are provided as Figures 3 and 4 of Part II. These maps provide:

- The maximum outline of the landfill unit(s);
- General locations of main facility access roadways;
- General locations of buildings;
- Explanatory notes;
- Fencing and lockable gates will be provided along the facility boundary, as shown on Figure 4, Part II; ~~and~~
- Natural amenities and plans for screening the facility from public view.

Easements are shown on Figure 4, Sheets 1 and 2, in Part I. These easements will be protected in accordance with TCEQ rules until such time as they may be voided or relocated outside the waste fill area.

~~The~~ site entrance road can be accessed from public access roads.

An initial Class I waste cell location is shown on Figure 4. Additional Class I waste cells may be designated and constructed throughout the landfill as future landfill cells are designed. All Class I waste cells will be designed, constructed, and operated in accordance with TCEQ rules.

Locations of monitoring wells are generally shown on the Monitoring System and Cell Layout Plan, Figure 5. In accordance with 30 TAC §330.403(a)(2), default spacing for groundwater monitoring wells is a maximum of 600 feet. Figure 5 shows a proposed facility perimeter of approximately 28,000 feet. On this default spacing basis, 48 wells are proposed ~~with a maximum spacing~~ of 600 feet.

Locations of gas monitoring probes are generally shown on Figure 5. In accordance with 30 TAC §330.371(h)(2), permanent gas monitoring probes are required to monitor for subsurface migration of landfill gas. Although, 1,000-foot spacing is typical, 600-foot spacing is recommended along the southwest corner of the perimeter due to habitable structures within 3,000 feet. This spacing can be accommodated at the location shown on Figure 5.

The proposed facility is completely isolated from all land use except cattle ranching and oil and gas production, and is provided with an effective ~~separation distance~~ of more than one-quarter mile on three sides and 300 feet on the fourth side.

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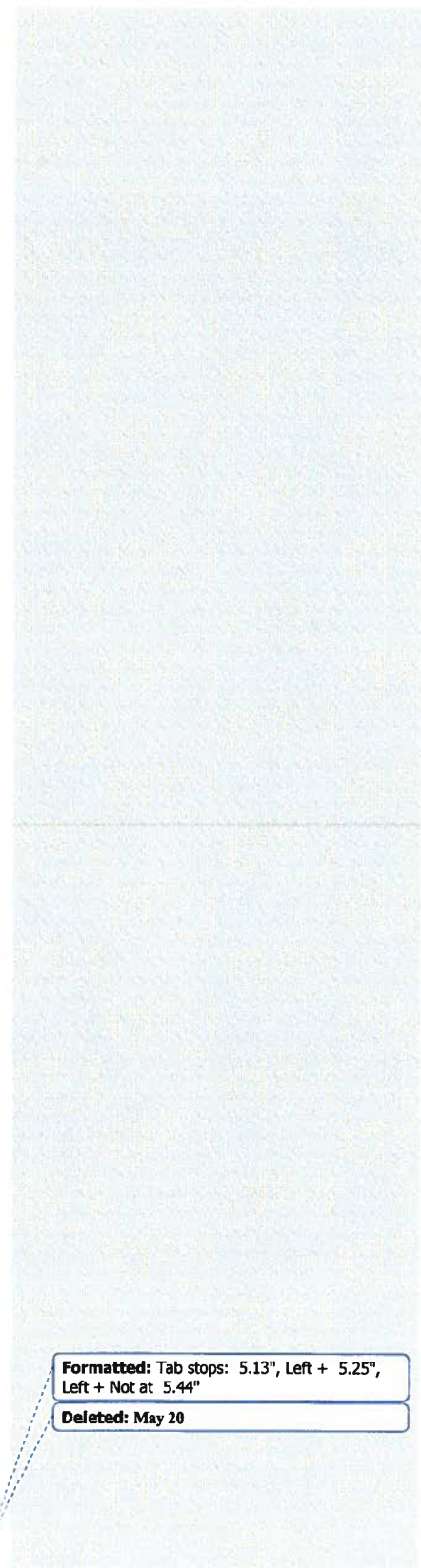
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5.0 GENERAL TOPOGRAPHIC MAPS [330.61 (e)]

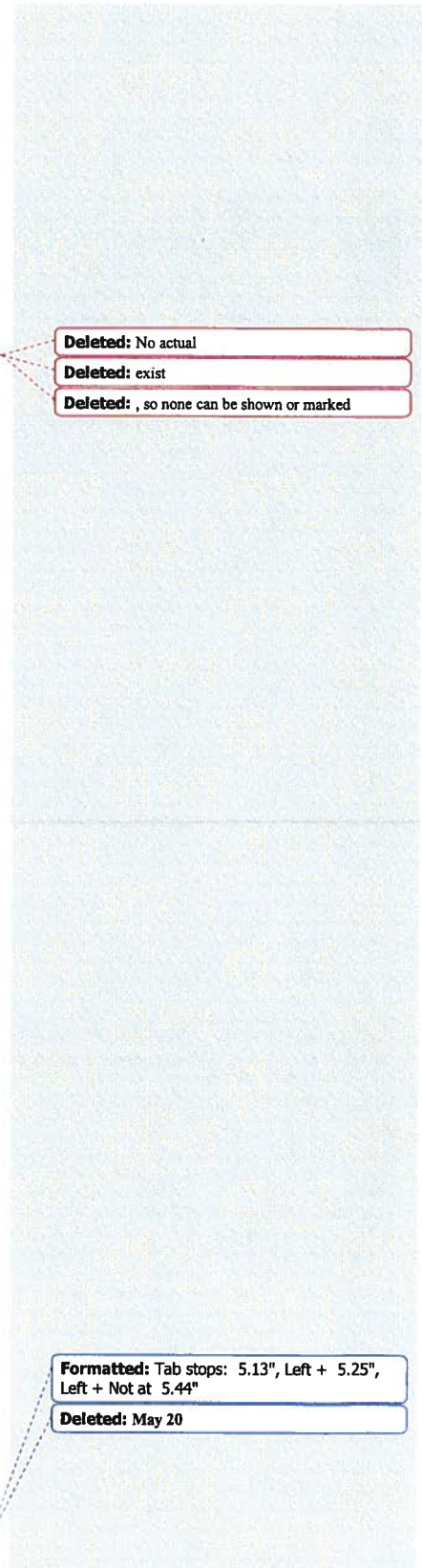
The General Topographic Map is presented as Figure 6. It was derived from the United States Geological Survey 7 ½ minute quadrangle map for the site area, identified as the Burrito Tank map. This map is the most recent such map of the site area and was prepared in 1980. It is at a scale of one inch equals 2,000 feet.



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6.0 AERIAL PHOTOGRAPH [330.61 (f)]

An aerial photograph of the required size and scale is provided as Figure 7, Part II. The facility boundary is marked and an area within at least a one-mile radius beyond that boundary is shown. The scale of the aerial photograph is one inch equals 2,000 feet, which is within the required range. This photo shows the facility (or site) boundaries and the area within a one-mile radius of the boundary. The proposed fill areas are shown. There has been no growth for many years in the area covered by the aerial photograph, so a series of photographs to show growth trends is not needed because there are no growth trends to show.



7.0 LAND-USE MAP [330.61 (g)]

The Land-Use Map is presented as Figure 8, and shows the existing land uses within one mile of the facility. The land usage presented on this map was obtained by personal observation and examination of recent aerial photographs, and is believed to be accurate as of the date of this photograph, which was taken in 2008. This land use information was checked by visual observation in June 2010. The current land use is shown on Figure 8, and is as described in the Land Use Map Legend.

Current, recent and historic land use within the facility boundary is the same; cattle ranching and production of natural gas. Figure 9 is provided to show oil and gas wells in the area of the facility. Numerous roads, ranging from all-weather gravel surfaced roads to unimproved lanes, exist in the area, primarily to serve oil and gas exploration and production. This very same land use extends for at least 3 to 5 miles in all directions from the facility.

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8.0 IMPACT ON SURROUNDING AREA [330.61 (h)]

The proposed addition of the landfill and related facilities at this site will not have an adverse impact on human health or the environment in the area surrounding the facility. There is no existing zoning that would prohibit this proposed use, and no approval or special permit is required from any local government. There is no existing zoning map of the site or surrounding area, so none can be provided herein.

8.1 Potential Impact on Human Health

The following discussion assesses potential human health impacts on cities, communities, groups of property owners and individuals. Due to demographic factors associated with this particular site, and the nature of the proposed landfill and waste processing operations and type of materials to be processed, the only potentially affected category that should be considered is individuals. This is because the site area has a very low population density, with no residential dwelling units within 500 feet of the proposed facility. Fewer than 10 persons live within a one-mile radius of the facility. The closest residential dwelling units are two structures at the Yugo Ranch headquarters about 2,100 feet southwest of the facility boundary. The next closest residential structures are at another ranch headquarters located approximately 2 miles away to the northwest.

There is no city, community, or group of property owners that are potential target receptors that might be subjected to adverse human health impacts from the proposed facility. This is because of the separation distances that will exist and because of the virtual lack of etiological agents or disease vectors that might result in such impacts. The individuals to be considered in the evaluation of health impacts include nearby residents, facility employees, and visitors. This evaluation will consider the potential modes of transmission of etiological agents or disease vectors that might impact human health. The modes are transport by air, surface water and ground water. Transmission by vectors, such as insects (particularly flies) and rodents (particularly rats and mice), are not being considered any further in this analysis because the waste storage and processing methods to be employed at this facility will prevent the propagation or reproduction of these species in or near the waste, and will essentially deny access to the waste to any existing members of these species. Basically, waste will be in closed containers until placed into the landfill, at which time the waste will be covered with additional waste or cover soil. Transmission by dermal contact or ingestion are not realistic modes because all persons who may come in direct contact with waste will be required to wear gloves and will be specifically trained to avoid dermal contact or ingestion of waste or waste materials.

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Air Mode - The two nearby houses and one mobile home in the facility area are located to the southwest of the landfill, as shown on the Aerial Photograph, Figure 7. The prevailing wind direction, as shown by the Wind Rose in Figure 2, is not in this direction. In fact, Figure 2 shows that wind blows from the facility towards these two residences only about 5 percent of the time. The three factors of low incidence of wind blowing towards these residences, lack of etiological agents or vectors, and the separation distance of over 2,100 feet, combine to produce a negligible chance of adverse health effects to these residents due to the facility.

The individuals to be considered with respect to potential human health impacts due to inhalation or ingestion are employees of facility and visitors to the facility.

Potential exposure to employees varies by job assignment. Persons who work in the close proximity to waste or waste processing will be provided with National Institute for Occupational Safety and Health (NIOSH)-approved dust masks and will be required to wear them during operations that expose them to dust. Such employees will also be required to wear hard hats, safety glasses, gloves and protective boots while working in this operation. A water truck will be available as needed throughout the facility and will provide water that will be spray-applied when needed to control dust.

Office workers will not be exposed to materials of concern. A supply of hard hats, safety glasses and dust masks will be maintained at the facility for use by visitors or employees who may occasionally enter the waste processing or disposal areas.

Surface Water – The facility will be designed to contain and properly manage all water that has come into contact with waste, including leachate, clean-up water, and rainfall that comes in contact with exposed waste. All such water will be treated or managed on-site, and will not be discharged off-site. Workers who manage this water will be trained and provided with appropriate personal protection equipment to prevent ingestion or dermal contact with this water.

Groundwater – The landfill will be designed and constructed with a liner and leachate collection system that will act in tandem to prevent the migration of waste or waste constituents to groundwater. An array of groundwater monitoring wells will be designed and installed to check groundwater quality and to make sure the liner and leachate collection system is working to prevent release of contaminants to the groundwater. Should such a release occur, it can be detected and corrective measures can be taken before any adverse health impact can occur.

The facility's geological and hydrogeological setting also provide protection of public health, as water quality in the upper aquifer at the facility is too poor to be used for

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human consumption. Deeper aquifers are protected from possible site-related contamination by hundreds of feet of intervening very low permeability soil intervals.

8.2 Potential Impact on the Environment

No adverse impacts on the environment of the area are anticipated from the proposed landfill operation. Debris barriers will be employed to reduce the potential for wind-blown dispersal of debris and litter.

Some noise will be generated by the periodic operation of the motorized equipment including waste compactors, bull dozers, hydraulic backhoes and the trucks used to bring and remove waste containers. The frequency and the intensity of the equipment noise generated on-site will be quite low in all off-site directions. This is due to the buffer zone width and the operation of most equipment within a building. Except for trucks entering and leaving, all on-site noise generation will be limited to areas of the facility that are located on private property at least ¼ mile from neighboring property.

8.3 Compatibility with the Surrounding Area

Zoning - The facility is located more than 5 miles east of the City of Laredo and the area surrounding the site within two miles extends into unincorporated Webb County. No specific approval is required from the City of Laredo or Webb County for the proposed facility. The facility is well beyond the extra-territorial jurisdiction (ETJ) of the City of Laredo. Accordingly, the City of Laredo has no authority to establish zoning, land use planning, or other restrictions on development in the area. Similarly, the facility is not within the extra-territorial jurisdiction (ETJ) of any other incorporated city. Webb County has enacted no zoning or similar restriction on land use at the facility or surrounding area.

Character of Surrounding Land Uses - This facility location and the area extending for many miles in all direction are obviously suitable for oil and gas production and cattle ranching. This is the current and historic land use status of the property on which the facility is proposed, and has been for many years. No other residential, recreational, commercial, agricultural or industrial land uses exist for several miles in the site area.

The site is about two miles north of the north end of Jordan Road. This is the closest area to the site that is accessible to the general public, as the access road into the site from Jordan Road is privately owned. Existing residential and several commercial properties are located at Ranchitos los Lomas, about 3.5 to 4.5 miles northwest of the proposed facility. The proposed facility is more than adequately screened from view from both of these areas by a distance of about two to four miles. The intervening areas consist of heavily wooded or brushy vegetation and rolling topography.

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Commercial development within one mile of the site is non-existent. Land use is exclusively devoted to the exploration and production of oil and gas and cattle ranching, both of which are commercial ventures, but are not normally considered to be described as commercial development. Oil and gas activity occurs somewhat randomly, but extensively, throughout the general area of the site. One feature of this commercial use is that it requires frequent access to well sites by large, heavy vehicles, such as well drilling rigs, work-over trucks, and tank trucks that haul produced liquids. These heavy vehicles regularly traverse the roads in the site area, and testify to the adequacy of these all-weather surfaced roads to support such truck traffic. Landfill-related traffic will employ vehicles that are similar in many respects to this existing traffic. A second commercial type of land use near the site is the KCS railroad, whose tracks are located within one to two miles of the site.

In addition to the residential, commercial and industrial land use described above, land use within a five-mile radius of the facility is divided between agricultural (essentially all pasture land used for cattle ranching) and dispersed oil and gas well sites.

The closest population center and only concentrated residential land use within five miles of the facility is Ranchitos Las Lomas, a community or subdivision located along Hwy 59 about 3.5 to 4.5 miles northwest of the site. This is a community of about 334 persons, according to the 2000 census. Widely scattered residences are found at several ranch headquarters in the area, but these are typically separated from each other by several miles, due to the large size of the ranches, which appear to be on the order of 10,000 acres each. Typical of these is the Yugo Ranch, within which the proposed facility is located. There are an estimated two or three active residences within one mile of the facility, all located at the headquarters of Yugo Ranch. This includes two houses, one mobile home, and occasionally one travel trailer. These nearest occupied residences house ranch hands that are employed by Yugo Ranch.

Vehicle or equipment noise that will be generated by the proposed solid waste activities may not be discernable and should not be objectionable to occupants of the residences at Yugo Ranch because of the low speeds and separation distance. Prevailing winds, which tend to carry noise in its direction of movement, should carry noise away from these residences. Noise resulting from the operation of the facility will not cause any impact to the community of Ranchitos Las Lomas, located about 4 miles northwest of the facility, due primarily to the separation distance. Also, any noise that could be perceived within a limited distance from the facility will be engine noise associated with heavy equipment. Noise generated by truck traffic travelling to and from the facility will be similar to the noise from oil-field trucks and equipment that already travel along area roads many times a day. Truck traffic noise related to accessing the facility will be indistinguishable from

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the noise of truck and automobile traffic along U.S. Highway 59, which bisects this community. This highway traffic consists of many trucks and tractor-trailer units traveling at up to 70 miles per hour, 24 hours per day.

Growth Trends - The population of Webb County (2000 Census) was 193,117, and the population estimate for 2009 is 241,438, an increase of about 25 percent in 9 years. Within a one-mile radius of the facility, the long-term population is estimated to be fewer than 10 persons, and this population has no growth or growth trend. The 2000 population for Ranchitos Las Lomas was 334, which had 148 housing units and a population density is calculated to be 15.3 persons per square mile. According to www.bestplaces.net, the population of Ranchitos Las Lomas was 409 in 2011, an increase of 22 percent in 11 years. Historic population data indicates the population of Ranchitos Las Lomas has been about 300 to 400 persons for many years. Visual observation of this community shows no evidence of recent growth, such as new homes or commercial buildings.

Proximity to Residences and Other Uses – The proximity of the facility to residences is discussed above. There are no schools, churches, cemeteries, historic structures or sites, archaeologically significant sites, or sites having exceptional aesthetic quality within one mile of the facility. The lack of some of these sites or features has been verified. According to Texas Historical Commission (THC) records, there are no archeological or historic sites in the area of the proposed facility. There are no recreational areas within one mile. There are three residences within one mile of the facility, all located at Yugo Ranch headquarters about 2,100 feet southwest of the facility, and no commercial establishments. The estimated population density within a one-mile radius of the facility is less than one person per square mile.

Wells - There are no known or recorded water supply wells, either active or abandoned, within 500 feet of the proposed facility. According to records obtained from the Railroad Commission of Texas, there are no active oil or gas wells on the facility, and one abandoned gas well. Within 500 feet of the facility boundary, there are two active gas wells, three plugged gas wells, and two wells classified as “dry holes”.

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9.0 TRANSPORTATION [330.61 (i)]

Vehicular traffic associated with the proposed landfill will primarily approach and leave the general area of the facility on State Highway 359, a two lane asphalt-paved road with paved shoulders. Between SH 359 and the site, traffic will travel about 5 miles on Jordan Road, which is a Webb County road, to within about two miles of the site. There is no posted vehicle weight limitation on Jordan Road. The final road leading into the site is an all-weather surfaced private road on Yugo Ranch.

Webb County was given information about the proposed Pescadito Environmental Resource Center, and has expressed support for the project. A copy of a letter from Webb County Judge Danny Valdez stating the county's support is presented in Part II, Attachment E.

Existing and future estimated traffic volumes on SH 359 were not studied in connection with this application. SH 359 is estimated to be a minimum of 5.9 miles from the proposed facility. A review of publicly-available data on Webb County traffic did not produce existing traffic counts or future traffic projections for Jordan Road, which is about 1.1 mile from the closest portion of the proposed facility.

At the initial expected rate of 1,000,000 tons per year (tpy), the expected volume of traffic associated with the proposed landfill is expected to be approximately 260 trips per day (130 vehicles entering and leaving, including 10 passenger vehicles and 120 trucks). Ultimately for 2,000,000 tpy, the facility traffic is expected to be 520 trips per day (260 vehicles entering and leaving, including 20 passenger vehicles and 240 trucks). At this ultimate volume, truck traffic will average about 10 vehicles per hour or one every 6 minutes. This volume of site-related traffic will have no significant adverse impact on the capacity of SH 359. Because of the relatively low volume of site traffic, along with the favorable geometry, reduced speed limit and long sight distance, no turning or storage lanes would be needed to safely accommodate the proposed facility.

The applicant proposes that all site-related traffic will approach the site from the south, via SH 359 and Jordan Road.

TxDOT was provided information about the proposed facility, and has concurred that there will be no adverse impacts from the proposed facility on the State highway system. A letter expressing this conclusion from Albert Quintinella, P.E., TxDOT's Laredo District Engineer, is presented in Part II, Attachment B.

TRC obtained traffic count data from TxDOT for a location on State Highway 359 (SH 359) approximately 3 miles east of Loop 20. This is the location closest to the intersection of SH 359 and Jordan Road for which traffic count data was available. For

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the five-year period from 1995 through 1999, the average daily traffic count was 6,080 vehicles per day. The average daily traffic count at this location in 2009 was 8,800 vehicles per day. This is an increase of 2,720 vehicles per day or about 45 percent over an average period of 12 years. Assuming a similar increase will occur over 12-year periods in the future, the 2021 average daily traffic will be 12,760 vehicles per day and the 2033 average daily traffic will be 18,500 vehicles per day. The anticipated site related traffic will not significantly impact the estimated future traffic conditions. This conclusion is shared by TxDOT's District Engineer (see Attachment B, Part II).

Documentation of coordination with the Federal Aviation Administration regarding airport location restrictions is presented in Attachment F.

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10.0 GENERAL GEOLOGY AND SOILS STATEMENT [330.61 (j)]

10.1 General Geology [330.61(j)(1)]

The geology of the area is described, in part, by the Laredo Sheet (Barnes, 1976) of the Geologic Atlas of Texas; it shows the site located on the contact between the Eocene Yegua Formation and Jackson Group [of formations in other places where defining characteristics make discrimination relevant]. Other mapping and subsurface research place the contact between the Yegua and Jackson somewhat to the west of the site [for example: Lonsdale, 1937; Baker, 1995; Lambert, 2004]. The differences in interpretation between researchers are likely because the depositional environments and the resulting sediments are similar, leading to different choices of boundaries. Both the Yegua and Jackson are made of clays, clayey sands, and sands, and include, at different locations: limestone concretions, lignite, volcanic ash, uranium, and fossil plants. Beneath the Yegua and Jackson is the Laredo Formation, similar to the Jackson and Yegua, but containing more sand, particularly near its base.

The regional geology dips gently toward the coast and this attitude is reflected in the regional topographic surface; but locally, and at the site, the topography is influenced by streams draining toward the Rio Grande to the south. Elevations, as a result of this influence, range from about 570 feet [msl] on the north end of the site to about 540 feet [msl] on the south. Kier and others (1977) rate the site as naturally suitable for solid waste disposal with proper monitoring.

10.2 General Soils [330.61(j)(1)]

The soils on the site are developed from the underlying geology and active surface processes, primarily related to stream drainage. The USDA's NRCS Soil Map (Sanders, 1985) for the site area describes the soils as generally clay to clay loam and sandy clay loam; this description is confirmed by the site soil borings to date. The soils are generally deep, well developed, saline at shallow depth, and differences leading to designations are largely due to geomorphology. The landscape of the site area consists of broad plains cut by broad valleys. The soils that dominate the site include the Aguilares sandy clay loam, Brundage sandy loam, Catarina clay, and Montell clay. Each of these soils is capable of supporting vegetation suited to ranching.

10.3 Fault Areas [330.61(j)(2) and 330.555]

The site region, dominated by Eocene and older sediments, is not known as an active fault area; active fault causal mechanisms such as heavy groundwater and/or petroleum withdrawal are absent. Area gas wells, while many, are not known to have experienced or generated problems that might be related to faulting. The topographic map and aerial photography do not show linear features characteristic of faulting. There are inactive

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faults nearby and at depth as shown on geologic maps and cross-sections; these are more than a mile from the site and not expected to become active. The Wilcox and Vicksburg Fault Zones are generally downdip of the site and are quiescent. The area Geomap (Geomap, 2004) shows two northeast-southwest trending normal faults cutting the Queen City at about -2000 feet [msl], one about 3 miles northwest, and the other about 3 miles southeast of the site, both Wilcox related. A site area cross-section based on geophysical logs interprets a normal fault with fifty feet of normal offset cutting the Carrizo at about -6000 feet [msl]; it is about 2 miles east of the site. Deformation related to the Lower Wilcox Lobo gravity slide is contained within the Lobo Formation (Long, 1985) at a depth of several thousand feet beneath the site. The Pescadito Dome, a deep-seated salt diapir, is located approximately 5 miles west-northwest of the proposed PERC landfill site. It is marked by radial faulting limited to the area of the diapirism. The Moca Salt diapir is located about 28 miles northeast of the proposed landfill site in the northeastern part of Webb County along the boundary with Duval County and it too is marked by radial faulting (Barnes, 1976). The proposed PERC landfill site is located more than two miles from the closest, regionally extensive inactive fault that reaches the surface (Barnes, 1976); this faulting is an upward and inland extension of the Eocene Wilcox Fault Zone. In summary, there are no known active or inactive faults within 200 ft of the proposed landfill site.

10.4 Seismic Impact Zones [330.61(j)(3) and 330.557]

Potential earthquake sources are far away from the PERC site and this distance is reflected in the anticipated low seismic impact risk for the region; that is, the site is in an area of minimal expected peak horizontal acceleration and thus not in a seismic impact zone. The 1931 Valentine Earthquake with a magnitude of 5.8 is perhaps the nearest significant historical event; additional, small events related to hydraulic fracturing are expected as oil and gas exploration continues, particularly with the development of the Eagle Ford shale play. The USGS Seismic Hazard Map (U.S. Geological Survey, 2008) [Figure 10] shows the site location, and contoured values of maximum peak acceleration as a percent of the earth's gravity field, or g, with a 2 percent probability of exceedance in 50 years. The site location between the 2 and 4 percent (g) contours places it well below the threshold for a seismic impact zone. This USGS Seismic Hazard Map is the most current and is widely accepted as the official seismic risk map for this portion of the U.S.

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10.5 Unstable Areas [330.61(j)(4) and 330.559]

There appears to be no natural unstable areas, such as karst terrains, landslide areas (the site is essentially flat), subsidence areas, and/or active faults in the area of the PERC site. However, like most landfills located in “good locations”, the predominance of subsurface clay materials indicates that the facility location is a potentially “unstable area” due to the properties of the clay materials. At this site, the clays are both expansive and potentially low strength with respect to sliding as a consequence of the clay plasticity ranging from moderate to very high. As demonstrated numerous times at other similar sites, the clay material properties can be readily accommodated in the design and operation of the landfill.

In their present state, the subsurface soils at depth are relatively strong and incompressible due to previous consolidation history over geologic time. No significant differential settling will occur as a result of landfill construction. Proposed excavations, “landfill structural components”, and proposed operation/sequencing of landfilling will be designed in recognition of the subsurface materials and conditions. Investigation and geotechnical evaluations are being performed in conjunction with the engineering design of the facility. Stability analyses will be conducted as a normal consideration of facility design with respect to human-induced slope instability. The results of these evaluations will show that engineering measures have been incorporated into the landfill design to ensure that the integrity of the structural components of the landfill will not be disrupted.

Selected references for Section 10.0 include:

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Baker, E. (1995). *Stratigraphic Nomenclature and Geologic Sections of the Gulf Coastal Plain of Texas: U.S. Geological Survey Open-File Rept. 94-461*. Reston: U.S. Geological Survey.

Barnes, V. P. (1976). *Laredo Sheet: Geologic Atlas of Texas*. Austin, Texas: University of Texas, Bureau of Economic Geology.

Kier, R. S., L. E. Garner, and L. F. Brown, Jr. 1977. Land Resources of Texas – A map of Texas lands classified according to natural suitability and use considerations. Bureau of Economic Geology, University of Texas at Austin.

Lambert, R. (2004). *Hydrogeology of Webb County, Texas: U.S. Geological Survey Scientific Investigations Report 2004-5022*. Reston: U.S. Geological Survey.

Long, J. (1985). *The Eocene Lobo Gravity Slide, Webb and Zapata Counties, Texas: Contributions to the geology of South Texas*. San Antonio: South Texas Geological Society.

Lonsdale, J. D. (1937). *Geology and Ground-water Resources of Webb County, Texas: USGS Water Supply Paper 778*. Reston: U.S. Geological Survey.

Sanders, R. G. (1985). *Soil Survey of Webb County, Texas*. Washington: U.S. Department of Agriculture, NRCS.

U.S. Geological Survey. (2008). National Seismic Hazard Map: Peak Horizontal Acceleration[%g] 2% probability exceedance in 50 years. Reston: USGS Interactive Mapping.

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11.0 GROUNDWATER AND SURFACE WATER [330.61 (k)]

11.1 Groundwater [330.61(k)(1)]

Groundwater conditions at the site are known from a combination of on-site soil boring data and the published literature. Groundwater is localized in sandier sediments encountered, but these sediments, as expected from the nature of the depositional environment, are not necessarily continuous across the site. There appears to be enough ultimate connectivity between water bearing materials, however, to allow this shallow groundwater to approach an equilibrium, or coherent potentiometric surface across the site. Water levels range from about 550 feet [msl] in the north part of the proposed landfill footprint to about 530 feet [msl] in the south--and generally follow the area slope, and consequently the drainage as well.

The near surface sediments at the site are part of the Yegua-Jackson Aquifer, a TWDB designated Minor Aquifer, and named for the geology involved. Parts of this Eocene aquifer, one that serpentines from Webb County and the Mexico border to Louisiana, are productive of freshwater, but that is apparently not the case near the surface at the Pescadito site. Water quality tests on ground water samples from six site borings were analyzed for constituents that include the maximum contaminant levels (MCLs) as established in the national primary drinking water regulations by U.S. EPA. All these ground water samples exceeded the secondary MCLs for total dissolved solids (TDS) and chloride by orders of magnitude. The Yegua-Jackson dips gently toward the coast, is about 1,000 to 1500 feet thick according to a nearby cross-section (Baker, 1995), and is recharged along its outcrop. There are six water wells within about five miles of the site. The geophysical log of the Yugo Ranch well, about 900 feet from the site, indicates clays and some sands continuing to its total depth of about 1100 feet [bgs], where it is screened in the lower part of the Yegua. This well, sampled as part of the site study, also showed TDS and chloride values somewhat above the secondary MCLs. The site is a part of this Yegua-Jackson recharge zone and is situated on or near the contact between its elements. However, soil characteristics and groundwater chemistry at the site indicate groundwater recharge in the area is limited.

The Laredo Aquifer underlies the Yegua-Jackson. It too, dips coastward and consists of sands and clays. Its recharge zone that is outcropped, trends in a generally north-south direction, inland of and parallel to the Yegua-Jackson outcrop. This aquifer is an important part of Webb County, for it is capable of producing significant quantities of freshwater, particularly for the sandier lower portion of the Laredo Formation. The Laredo Aquifer provides a portion of Laredo's water supply and has been the subject of Aquifer Storage and Recovery research (Lambert, 2004). The Laredo Formation is about

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1,000 feet thick in the area according to the same nearby cross-section (Baker, 1995). It is underlain by the Pico Clay, the ultimate confining unit beneath the site.

Selected references for Section 11.1 include:

Baker, E. (1995). *Stratigraphic Nomenclature and Geologic Sections of the Gulf Coastal Plain of Texas: U.S. Geological Survey Open-File Rept. 94-461*. Reston: U.S. Geological Survey.

Barnes, V. P. (1976). *Laredo Sheet: Geologic Atlas of Texas*. Austin, Texas: University of Texas, Bureau of Economic Geology.

Lambert, R. (2004). *Hydrogeology of Webb County, Texas: U.S. Geological Survey Scientific Investigations Report 2004-5022*. Reston: U.S. Geological Survey.

Long, J. (1985). *The Eocene Lobo Gravity Slide, Webb and Zapata Counties, Texas: Contributions to the geology of South Texas*. San Antonio: South Texas Geological Society.

Lonsdale, J. D. (1937). *Geology and Ground-water Resources of Webb County, Texas: USGS Water Supply Paper 778*. Reston: U.S. Geological Survey.

Sanders, R. G. (1985). *Soil Survey of Webb County, Texas*. Washington: U.S. Department of Agriculture, NRCS.

U.S. Geological Survey. (2008). National Seismic Hazard Map: Peak Horizontal Acceleration[%g] 2% probability exceedance in 50 years. Reston: USGS Interactive Mapping.

11.2 Surface Water [330.61(k)(2)]

There are two large surface water impoundments on the proposed PERC landfill site and several smaller impoundments. For the most part surface water flow occurs as overland flow and flow in dry washes whose course is difficult to identify on available aerial photos. A few of the dry swales on or near the southern end of the proposed PERC landfill site do not have defined bed and banks. This was determined based on onsite inspection by the design engineer who will incorporate appropriate drainage controls into the facility design that comply with all regulations including the Texas Pollution Discharge Elimination System (TPDES) and allow obtaining appropriate TPDES permits.

Currently existing drainage patterns at the proposed permit boundary will not be significantly altered by landfill development and operation. Existing flow volumes, peak discharges, and discharge points will be maintained by the landfill design. The facility will be protected from 100-year frequency flooding to prevent the washout of solid waste. Calculations and analyses will be provided to demonstrate compliance with regulatory requirements concerning surface water drainage.

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The proposed facility will operate under TPDES General Permit No. TXR050000. A signed certification to this effect is presented as Attachment H in Part II, and verification that the person who has signed that document is authorized to do so is contained in Section 7.0 of Part I. It will also operate in accordance with a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP will be prepared as the actual design of the landfill and related facilities is completed during the preparation of Parts III and IV of this permit application. The SWPPP will be updated as necessary to reflect site modifications proposed by the operator subsequent to receiving a MSW permit.

The facility will comply with the requirements of the TPDES storm water permitting requirements by continuous operation and monitoring of its SWPPP throughout the active life of the facility. The SWPPP will be developed specifically for the proposed facilities and operations, and will include both ongoing inspection of storm water pollution prevention systems and practices, and periodic sampling and analysis of storm water discharges. Should the results of the SWPPP monitoring indicate a need for revisions, or should the facility and its operation change in the future, the SWPPP will be revised as needed. A Notice of Intent (NOI) to obtain coverage under TPDES General Permit No. TXR050000 (or its successor) will be submitted to TCEQ. Filing the NOI will initiate coverage of this facility under the General Permit and is one of the criteria for compliance with the TPDES and Section 402 of the CWA. Operation of the SWPPP is the other criteria for compliance with the TPDES requirements.

Surface water conditions near the site are very similar to those at the site. Due to the generally flat surface topography and low runoff, combined with the tight, cohesive surficial soils, natural drainage systems exhibit very little erosion. Relatively small artificial dams exist in the area to create "stock tanks" for livestock watering.

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12.0 ABANDONED OIL AND WATER WELLS [330.61 (l)]

Abandoned Oil Wells - The area around the proposed landfill site on the Yugo Ranch has been drilled for oil and gas. However, there are no active wells within the proposed landfill footprint or facility site and only one abandoned and plugged gas well. Records of the oil and gas wells were obtained from the Railroad Commission of Texas (RRT). A map of the active and plugged wells was obtained and used as a reference. These records in conjunction with an onsite inspection before and during excavation will allow determination of whether this one well, or any others discovered onsite, need to be capped, plugged, and closed in accordance with applicable rules and regulations of TCEQ or the RRT. As required, within 30 days prior to construction, written certification will be provided to executive director of TCEQ that the gas well, and any others encountered, have been properly capped, plugged, and closed. Gathering lines do crisscross the proposed landfill site; thus, if a waste disposal permit is received, these lines will have to be abandoned and relocated as necessary. Future drilling for mineral resources beneath the landfill will use deviated drilling techniques from surface locations outside the footprint of the proposed landfill.

Abandoned Water Wells – There are no abandoned water wells at the facility.

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13.0 FLOODPLAINS AND WETLANDS STATEMENT [330.61 (m)]

Portions of the proposed facility are currently located within the 100-year floodplain, as indicated on the replication of the most current available floodplain map, or Flood Insurance Rate Map (FIRM), presented in Figure 11. The design of the proposed landfill and related facilities will include design of a comprehensive storm water management system of dikes, drainage channels and detention ponds. Collectively, this system will remove the area of the landfill and proposed buildings from the 100-year floodplain. TRC has performed all the necessary hydrological and hydraulic engineering analysis and design to accomplish this. The results of this engineering design along with an application for a Conditional Letter of Map Revision (CLOMR) have been submitted to the Webb County Planning Department (WCPD) for review and were approved (see Attachment G). WCPD is the local agency responsible for floodplain management. With concurrence from WCPD, the CLOMR application will be submitted to the Federal Emergency Management Agency (FEMA) for review and approval. The CLOMR when issued will verify that the proposed site drainage plans will, in fact, remove areas of the site proposed for the landfill, processing and storage areas and related development from the 100-year floodplain.

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Construction of the landfill will impact a named reservoir, Burrito Tank, and possibly several smaller stock tanks. All affected reservoirs are owned by the applicant or by its parent, Rancho Viejo Cattle Company, Ltd.

The proposed landfill is located in an ideal location considering soil, groundwater, land use, and oil and gas activities (past, present, and future). No other location is equally plausible. It is difficult to find an area of appropriate size in Eastern Webb County that does not have floodplain issues due to the prevailing flat topography and rapid runoff soil conditions. Applicant endeavored to find an upland location that was reasonably close to the headwater conditions to minimize any impacts to floodplains and/or wetlands.

TRC performed a wetland evaluation at the facility site in 2009 (see Attachment A). The results of this evaluation indicate jurisdictional wetlands in and near the livestock watering tanks discussed in the preceding paragraph. TRC then performed a wetland determination in 2011. The results of this determination were evaluated in accordance with current Federal rules and guidelines for the protection of jurisdictional waters, and found certain areas that met these criteria. TRC then submitted its findings to the U.S. Army Corps of Engineers (USACE). The USACE concurred that jurisdictional waters exist on site. Therefore, TRC intends to prepare an application of a Section 404 permit once the facility design is more advanced than it is currently. An application for a Section 404 permit will be prepared and submitted to the USACE. No construction or development in jurisdictional wetland areas will be undertaken without appropriate authorization from the USACE.

No Jurisdictional waters at the location of the proposed facility will be disturbed by the proposed construction or operation of the facility without prior authorization under a permit.

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14.0 ENDANGERED OR THREATENED SPECIES [330.61 (n)]

A site reconnaissance and evaluation was performed by TRC in 2009 to assess the potential for the facility to harbor endangered and threatened species, or to provide critical habitat for such species. This evaluation included obtaining current lists of both federal- and state-listed species for Webb County and identifying the habitat and range or occurrence characteristics of all such listed species. TRC's report of this assessment is presented in Part II, Attachment A.

Based on the result of this evaluation, TRC has concluded that the site of the proposed facility may contain habitat or range conditions that may result in the occurrence of endangered or threatened species. By comparing the characteristics of the site to surrounding areas, it is clear that habitat and environmental conditions of the site are not significantly different from conditions for many miles surrounding the site. No unique or critical habitat conditions were observed. A biological evaluation was completed and provided to TPWD and USFWS. TPWD has responded and a copy of its response letter is contained in Attachment A. TRC awaits response from USFWS.

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15.0 TEXAS HISTORICAL COMMISSION REVIEW [330.61 (o)]

The Texas Historical Commission (THC) was asked to review the proposed project in the context of the Natural Resources Code, Chapter 191, and Texas Administrative Code. THC notified TRC that the proposed project may proceed (see Attachment C). Additionally, TRC searched on-line data sources and found that the project does not appear to affect any known cultural resources sites or historic properties (see Attachment D).

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16.0 COUNCIL OF GOVERNMENTS AND LOCAL GOVERNMENT REVIEW [330.61 (p)]

Part I and Part II of this permit application were submitted to the South Texas Development Council (STDC) for review for compliance with the regional solid waste plan. Furthermore, TRC completed the STDC *Checklist for Review* to describe the proposed PERC facility and discuss ways this facility will conform to the regional plan (see Part II, Attachment E).

Also, information letters about the proposed project were submitted to Webb County and the City of Laredo, and review letters are being requested from each entity regarding compliance with any local solid waste plans for their jurisdictions (see Part II, Attachment E).

Information about the Pescadito Environmental Resource Center was presented to Webb County Commissioners Court. The Webb County Judge and all four County Commissioners expressed support for the project. A copy of a letter from Webb County Judge Danny Valdez affirms the support of Webb County (see Part II, Attachment E).

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17.0 AIR POLLUTION CONTROL [330.371]

The proposed landfill will have a design capacity greater than 2.5 million megagrams (2.76 million tons) and 2.5 million cubic meters (3.27 million cubic yards). Air emissions from the landfill facility will be controlled, to the extent necessary, to qualify for a standard permit.

The owner/operator of the landfill facility will submit a certification for the initial construction of the landfill at least 120 days prior to building or installation of any equipment or structure that may emit air contaminants. The certification will be based on the capacity of the landfill for a minimum ten-year period. The certification will include supporting documentation to demonstrate compliance with TCEQ air permitting requirements and any other applicable federal and state requirements and at a minimum will include the following:

- (1) The basis and quantification of emission estimates;
- (2) Sufficient information to demonstrate that the facility will comply with all applicable TCEQ air permitting requirements; and
- (3) A description of any equipment and related processes.

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18.0 GENERAL OPERATIONAL CONSIDERATIONS [330.15]

The PERC landfill facility will not operate in violation of the Texas Health and Safety Code, or any regulations, rules, permit, license, order of the commission, or in such a manner that causes:

- (1) The discharge or imminent threat of discharge of MSW into or adjacent to the waters in the state without obtaining specific authorization for the discharge from the commission;
- (2) The creation and maintenance of a nuisance; or
- (3) The endangerment of the human health and welfare or the environment.

The open burning of solid waste, except for the infrequent burning of waste generated by land-clearing operations, agricultural waste, silvicultural waste, diseased trees, emergency cleanup operations as authorized by the commission or executive director as appropriate, is prohibited. The operation of an air curtain incinerator other than for the exceptions noted above is prohibited.

The following wastes will not be accepted at this facility:

- (1) Lead acid storage batteries;
- (2) Do-it-yourself used motor vehicle oil;
- (3) Used oil filters from internal combustion engines;
- (4) Whole used or scrap tires, unless processed prior to disposal in a manner acceptable to the executive director;
- (5) Refrigerators, freezers, air conditioners, and any other items containing chlorinated fluorocarbon (CFC);
- (6) Liquid waste, except as allowed in 30 TAC §330.177 (relating to Leachate and Gas Condensate Recirculation), and/or except household liquid waste as allowed by 30 TAC §330.15(e)(6) will not be accepted for disposal in any MSW landfill unit;
- (7) Regulated hazardous waste as defined in 30 TAC §330.3;
- (8) Polychlorinated biphenyls (PCB) wastes, as defined under 40 Code of Federal Regulations Part 761, unless authorized by the United States Environmental Protection Agency and the MSW permit; and
- (9) Radioactive materials as defined in 30 TAC Chapter 336 (relating to Radioactive Substance Rules), except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services.

The facility will receive sewage sludge only in compliance with commission requirements and the requirements of the Federal Clean Water Act, §309 and §405(e).

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The drilling of any test borings, for any reason, through previously deposited waste or cover material without prior written authorization from the executive director is prohibited.

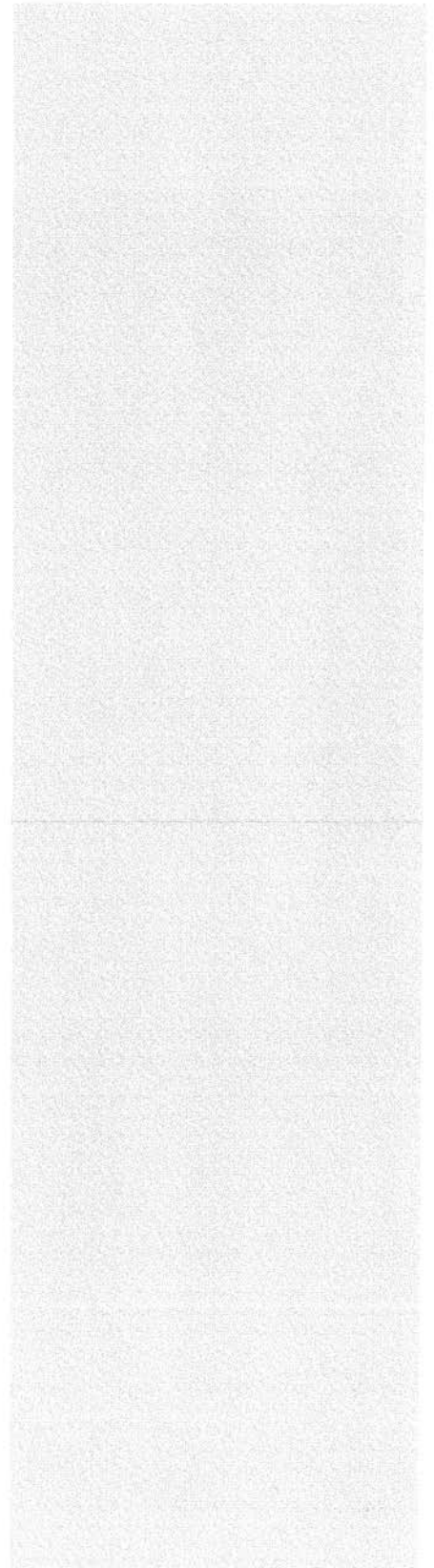
The facility will neither be designed nor operated to cause:

- (1) A discharge of solid wastes or pollutants adjacent to or into waters of the state, including wetlands, that is in violation of the requirements of Texas Water Code, §26.121;
- (2) A discharge of pollutants into waters of the United States, including wetlands, that violates any requirements of the Federal Clean Water Act, including, but not limited to, the National Pollutant Discharge Elimination System requirements, under §402, as amended, or Texas Pollutant Discharge Elimination System requirements;
- (3) A discharge of dredged or fill material to waters of the United States, including wetlands, that is in violation of the requirements under Federal Clean Water Act, §404, as amended; and
- (4) A discharge of a nonpoint source pollution into waters of the United States, including wetlands, that violates any requirement of an area-wide or state-wide water quality management plan that has been approved under Federal Clean Water Act, §208 or §319, as amended.”

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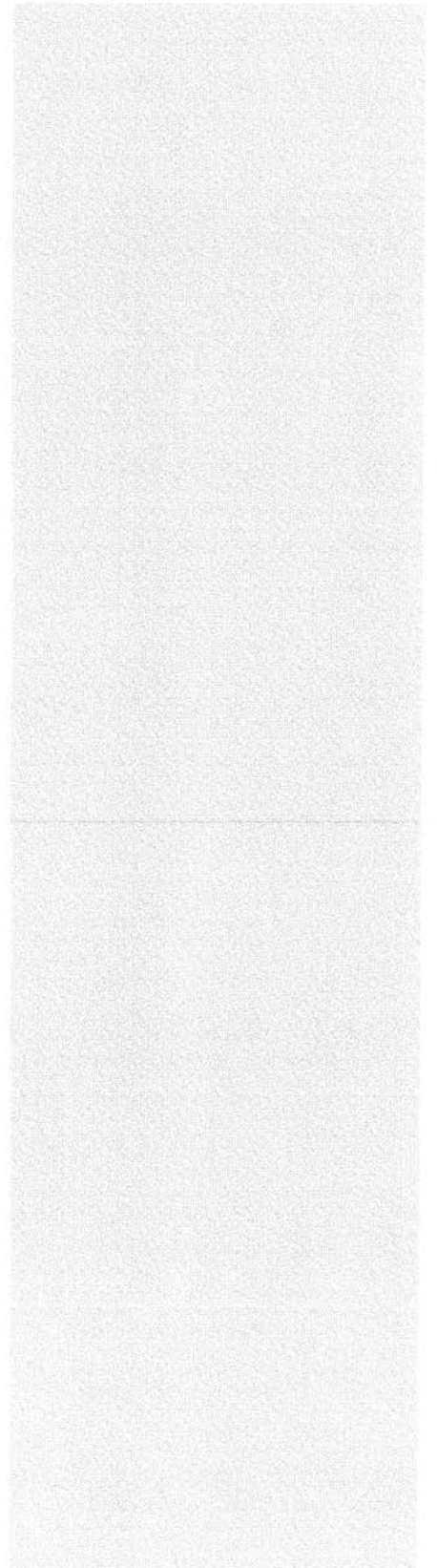
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FIGURES



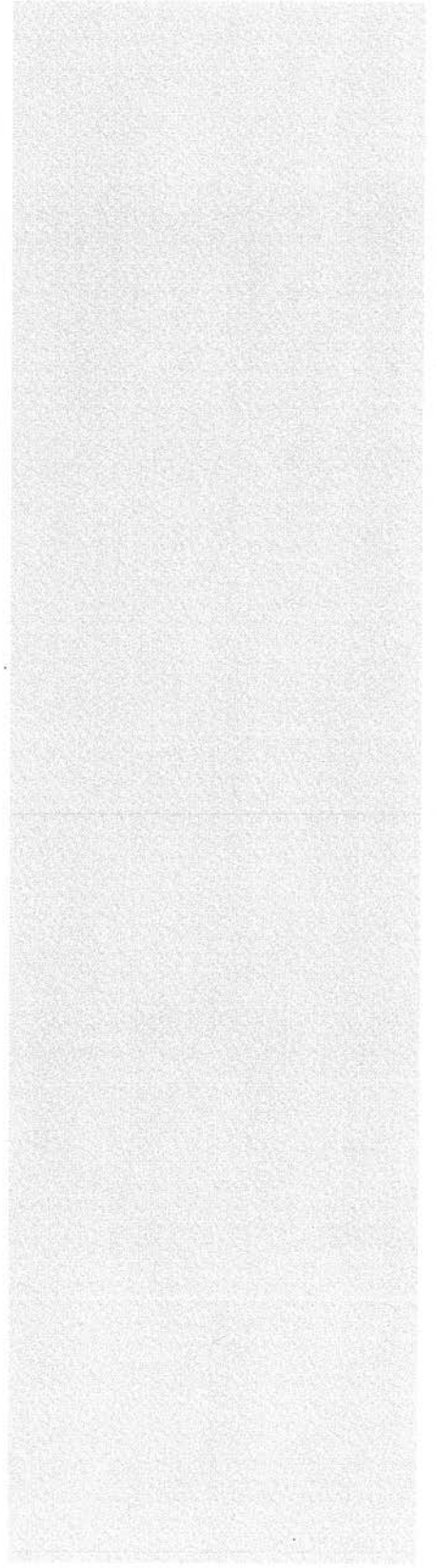
Attachment A

T&E Species and Wetlands Assessment



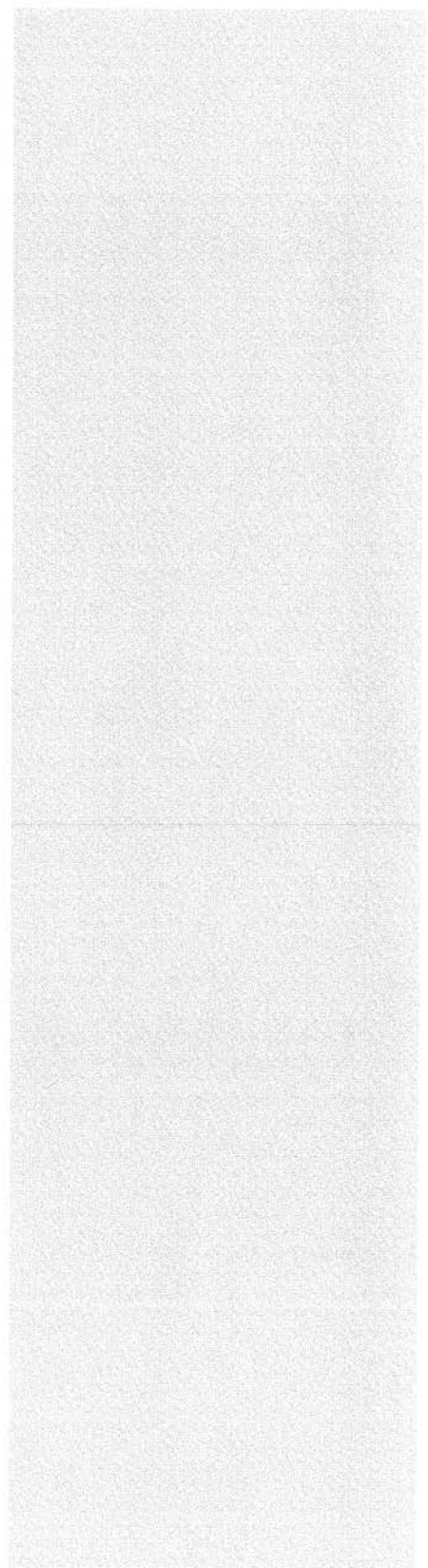
Attachment B

TxDOT Coordination



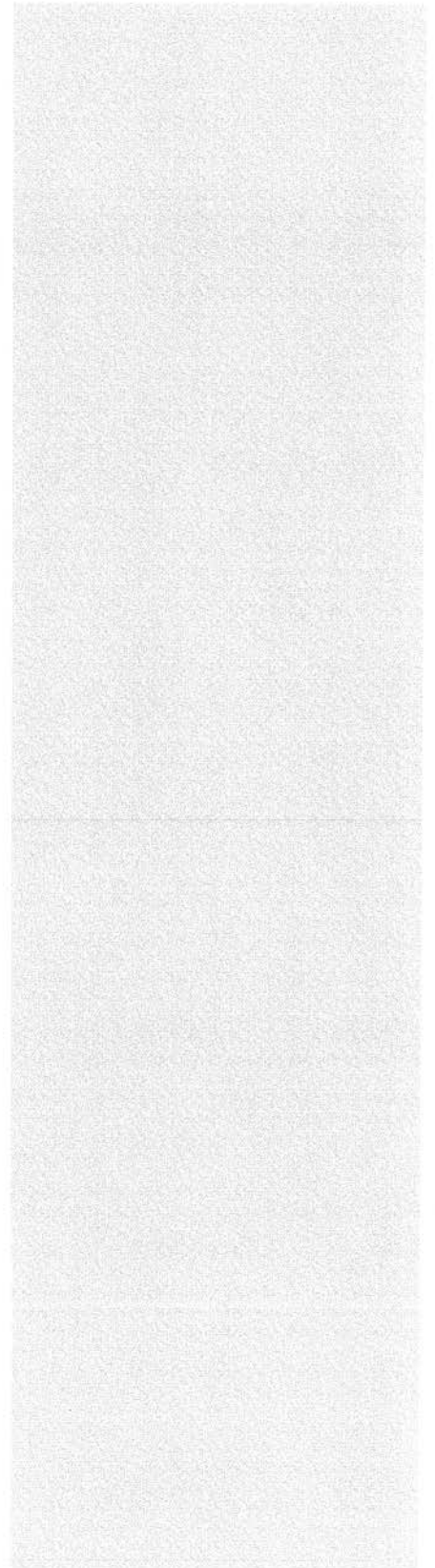
Attachment C

Texas Historical Commission Review Letter

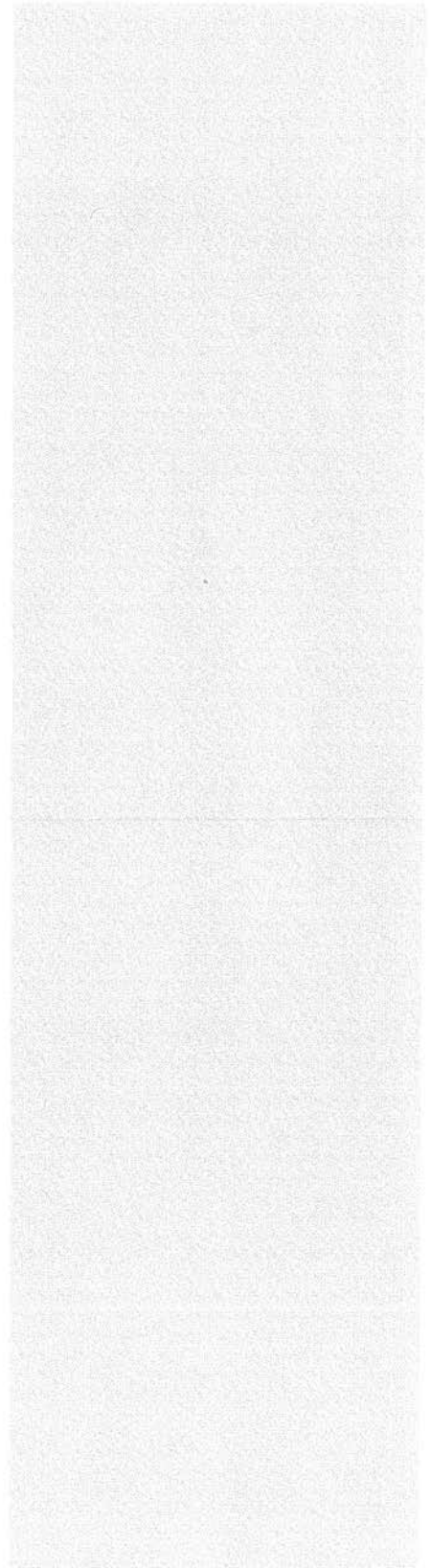


Attachment D

Cultural Resources Review

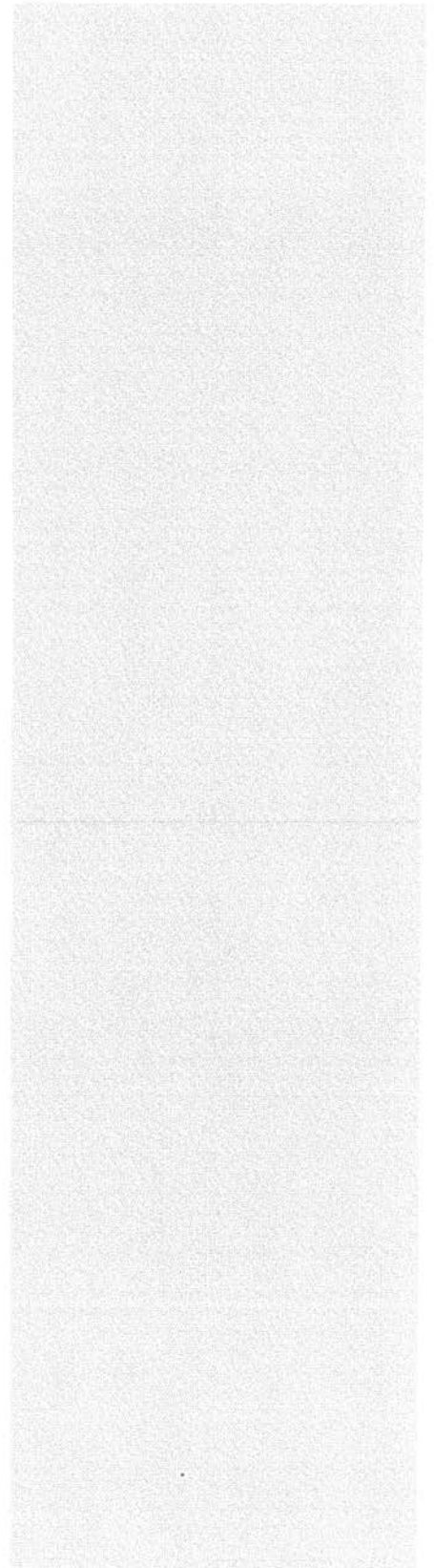


Attachment E
Local Agency Coordination



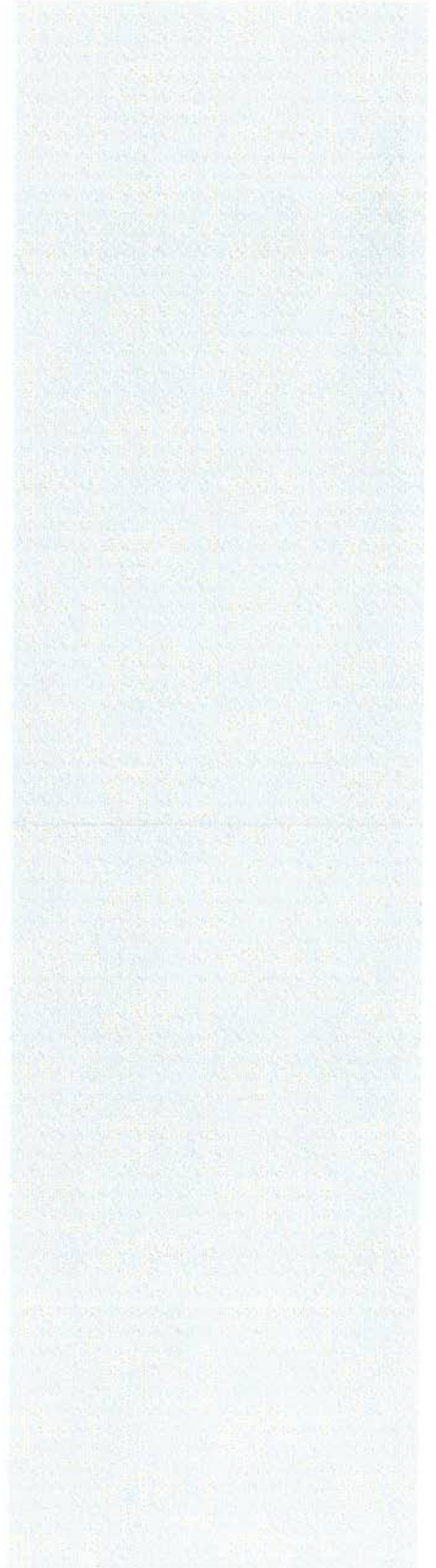
Attachment F

Federal Aviation Administration Coordination



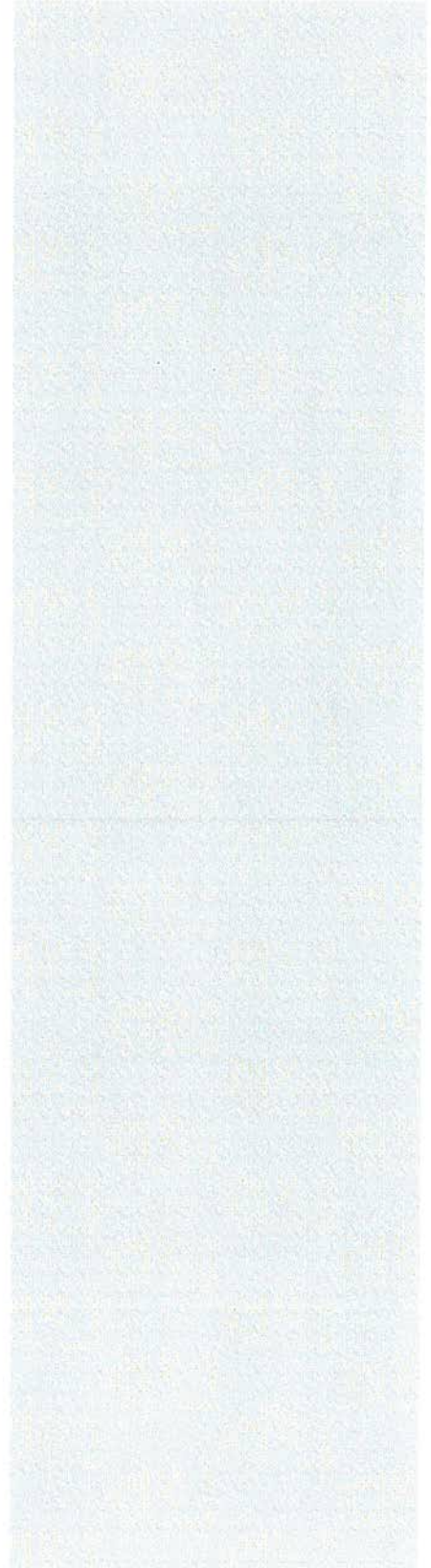
Attachment G

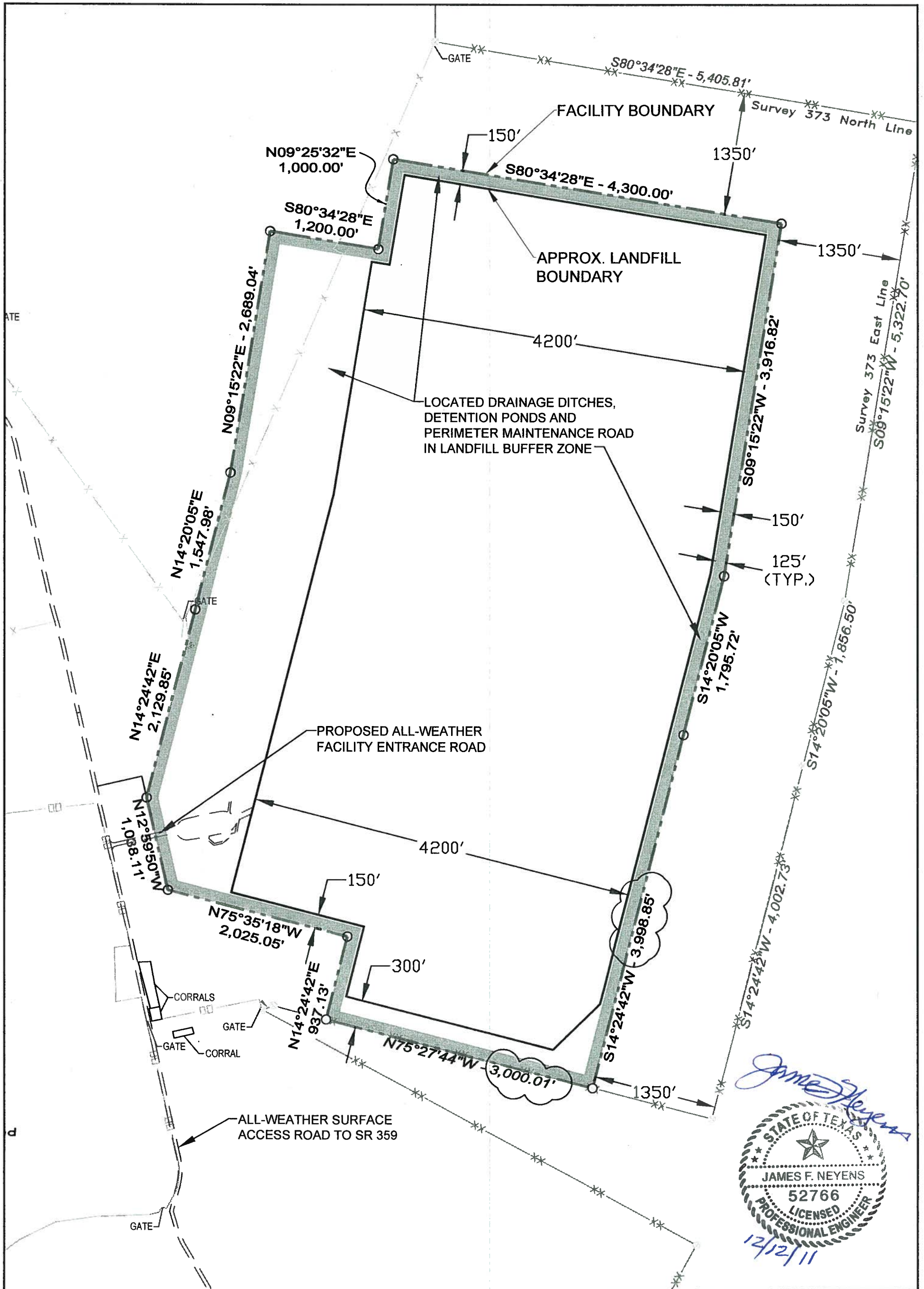
100-Year Floodplain Coordination



Attachment H

TPDES Certification



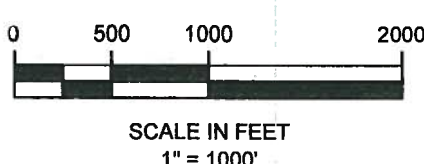


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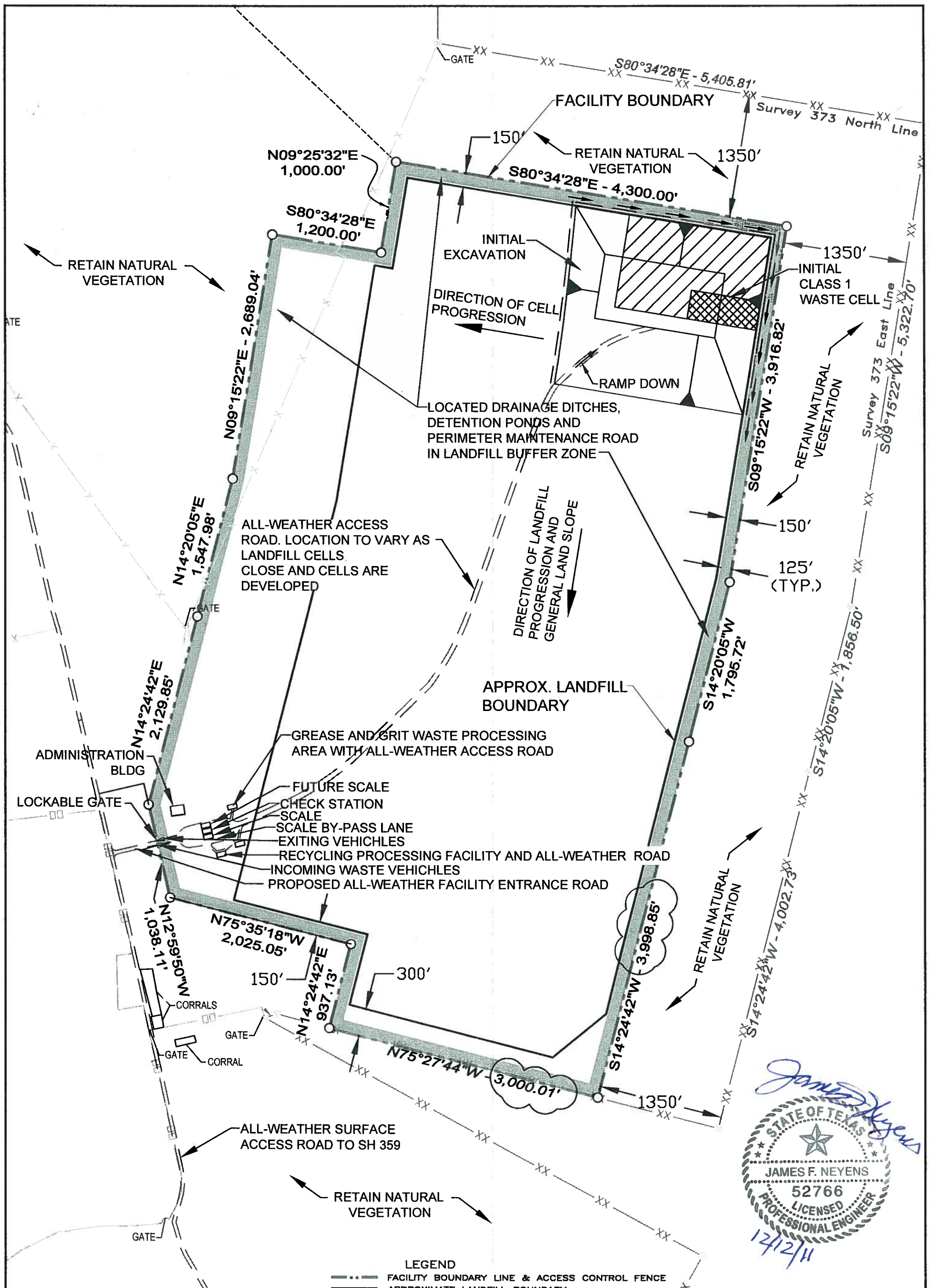
- LEGEND**
- FACILITY BOUNDARY LINE
 - - - APPROXIMATE LANDFILL BOUNDARY
 - FENCE
 - - - PROPERTY LINE AND FENCE
 - 8' HOG FENCE
 - █ 125' BUFFER ZONE

NOTES:

1. FACILITY AREA APPROXIMATELY 1,110 ACRES.
2. SOURCE: BOUNDARY AND IMPROVEMENT SURVEY, MEJIA ENGINEERING COMPANY (4/9/2010).
3. TRC ENVIRONMENTAL CORP. TBPE FIRM F-3775.



REV. 2 12/8/11	ADDED BUFFER ZONE		
REV. 1 8/24/11	CORRECTED SITE BOUNDARY DIMENSIONS		
FACILITY LAYOUT MAP			
PESCADITO ENVIRONMENTAL RESOURCE CENTER MSW PERMIT NO. 2374 WEBB COUNTY, TEXAS			
PROJECT NO.	170401	DWG FILE	170401-MSW-II-3
DRAWN BY.	MJJ	DATE	12/08/11
			505 EAST HUNTLAND DRIVE SUITE 250 AUSTIN, TEXAS 78752 (512) 329-6080
			FIGURE 3 PART II PAGE XX



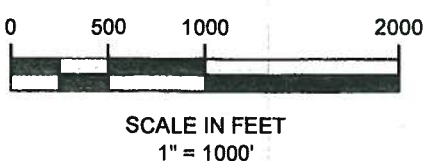
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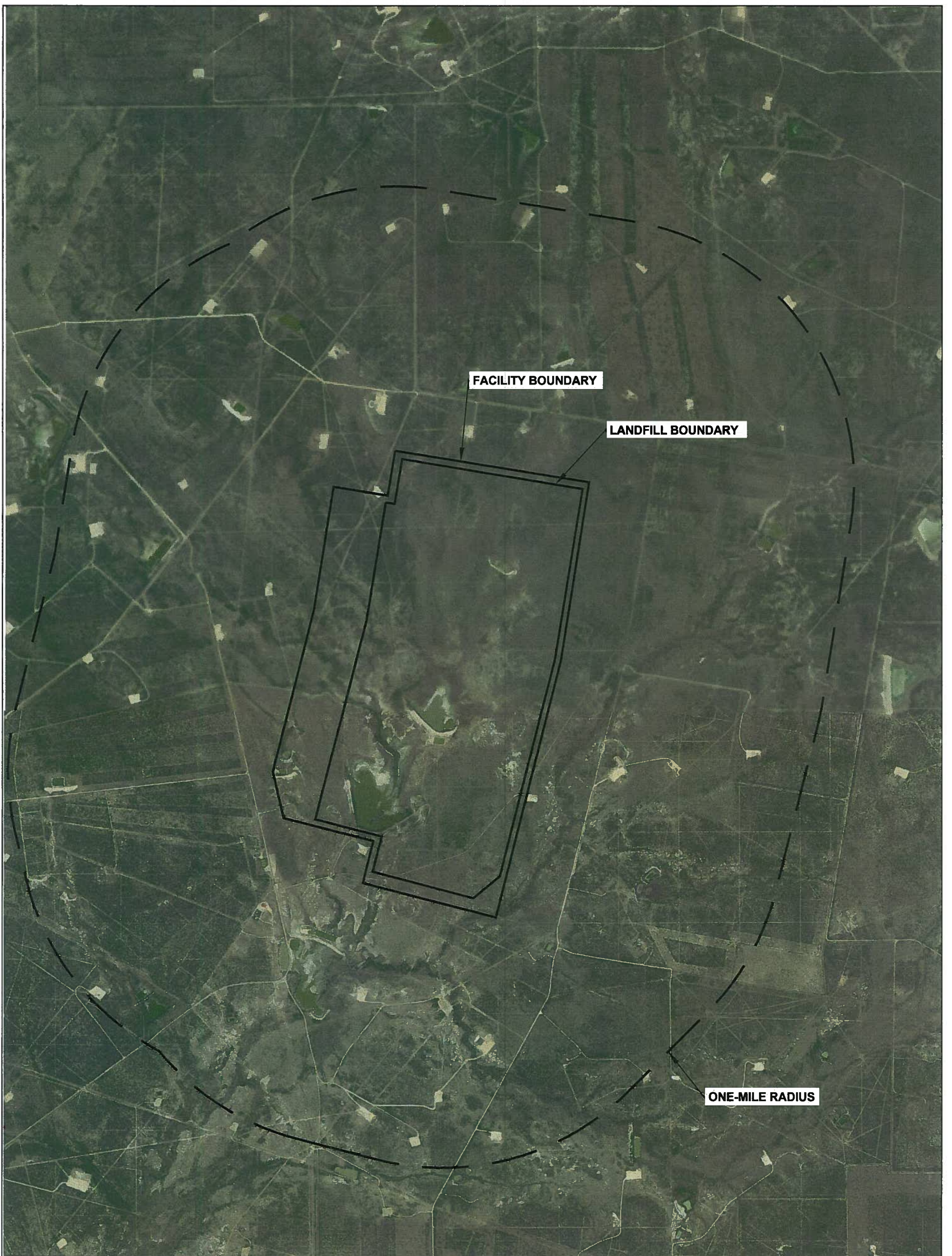
1. FACILITY AREA APPROXIMATELY 1,110 ACRES.
2. SOURCE: BOUNDARY AND IMPROVEMENT SURVEY, MEJIA ENGINEERING COMPANY (4/9/2010).
3. ACTUAL SIZE OF LANDFILL EXCAVATION TO BE DETERMINED BY INCOMING WASTE QUANTITY.
4. SOME FACILITIES MAYBE SHOWN LARGER THAN TRUE SCALE FOR CLARITY.
5. CONSTRUCT PERIMETER SECURITY FENCE AND LOCKABLE GATES AT FACILITY BOUNDARY TO SURROUND FACILITY.
6. NATURAL VEGETATION WILL BE RETAINED FOR AT LEAST 1/4 MILE IN ALL DIRECTIONS FOR VISUAL SCREEN, WINDBREAK, AND WIND-BLOWN LITTER CONTROL.
7. TRC ENVIRONMENTAL CORP. TBPE FIRM F-3775.

LEGEND

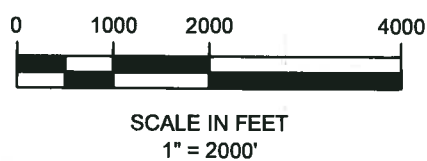
	FACILITY BOUNDARY LINE & ACCESS CONTROL FENCE
	APPROXIMATE LANDFILL BOUNDARY
	CONSTRUCTED LINER AND LEACHATE COLLECTION SYSTEM
	RUN-ON AND RUN-OFF CONTROL BERM
	DRAINAGE STRUCTURE
	FENCE
	125' BUFFER ZONE




REV. 2 12/8/11	ADDED BUFFER ZONE
REV. 1 8/12/11	ADDED CLASS 1 CELL, GREASE AND GRIT AREA, RECYCLING AREA AND FENCE
OPERATIONS AREA LAYOUT MAP	
EL PESCADITO MSW PERMIT NO. 2374 WEBB COUNTY, TEXAS	
PROJECT NO. 170401	DWG FILE 170401-MSW-II-4
DRAWN BY. CL	DATE 12/08/11
505 EAST HUNTLAND DRIVE SUITE 250 AUSTIN, TEXAS 78752 (512) 329-6080	
FIGURE 4	PART II
PAGE XX	



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 12/12/11



SOURCE
 SOURCE: TEXAS ORTHOIMAGERY PROGRAM (TOP), 2008.

REV. 2 12/8/11	ADDED APPROXIMATE LANDFILL BOUNDARY		
REV. 1 8/24/11	APPROX. LANDFILL BOUNDARY AND ONE-MILE RADIUS		
AERIAL PHOTOGRAPH			
PESCADITO ENVIRONMENTAL RESOURCE CENTER MSW PERMIT NO. 2374 WEBB COUNTY, TEXAS			
PROJECT NO.	170401	DWG FILE	170401-MSW-II-7
DRAWN BY.	CL	DATE	12/08/11
 505 EAST HUNTLAND DRIVE SUITE 250 AUSTIN, TEXAS 78752 (512) 329-6080			FIGURE 7 PART II PAGE XX



Life's better outside.®

September 19, 2011

Deborah Blackburn
TRC Environmental Corporation.
505 East Huntland Drive, Suite 250
Austin, TX 78752

RE: Proposed Pescadito Environmental Resource Center, Solid Waste Landfill
Application, Webb County, Texas

Commissioners

Peter M. Holt
Chairman
San Antonio

T. Dan Friedkin
Vice-Chairman
Houston

Ralph H. Duggins
Fort Worth

Antonio Falcon, M.D.
Rio Grande City

Karen J. Hixon
San Antonio

Dan Allen Hughes, Jr.
Beeville

Margaret Martin
Boerne

S. Reed Morlan
Houston

Dick Scott
Wimberley

Lee M. Bass
Chairman-Emeritus
Fort Worth

Carter P. Smith
Executive Director

Dear Ms. Blackburn:

This letter is in response to your request for review of the project referenced above. In compliance with the Texas Administrative Code, a landfill applicant must demonstrate that a proposed project will not negatively impact listed species.

Project Description

Rancho Viejo Waste Management, LLC proposes to establish a waste management facility, Pescadito Environmental Resource Center (PERC) on a 1,100-acre tract of land approximately 20 miles east of Laredo, Webb County, Texas. The landfill would occupy approximately 900-acres. PERC would be a comprehensive waste management facility that would provide municipal and industrial solid waste disposal, processing of recyclable materials, processing of liquid wastes from grease and grit traps, and disposal of liquid waste from oilfields in an injection well.

Federal Regulations

Clean Water Act and Compensatory Mitigation for losses of aquatic resources, Corps of Engineers

The Clean Water Act (CWA) provides for the federal protection and regulation of surface water quality. The CWA regulates point and nonpoint sources of water pollution, including the placement of "fill" in jurisdictional waters. Compensatory Mitigation for Losses of Aquatic Resources (33 CFR §332.3(e)(3)) requires stream compensation for unavoidable stream impacts.

The proposed project would permanently fill several wetlands and convert them and a tributary of San Juanito Creek into uplands. TPWD is concerned with the impacts associated with disconnecting the upper and lower portions of the watershed and potential impacts further downstream of the project when water flow is stopped.

Recommendation: Due to their importance to wildlife, particularly in arid environments, TPWD encourages preservation of aquatic resources, regardless of their jurisdictional status. Maintaining connectivity of streams and riparian corridors is preferred over attempts to artificially create habitats to compensate for the loss of the function and value of the aquatic resources. If preservation of these important resources is not selected as an alternative during project planning, TPWD recommends all mitigation for impacts to aquatic resources be on-site and in-kind.

Migratory Bird Treaty Act (MBTA)

The Migratory Bird Treaty Act (MBTA) implicitly prohibits intentional *and unintentional* take of migratory birds, including their nests and eggs, except as permitted by the USFWS. Although not documented in the TXNDD or protected by the ESA, many bird species that are protected by the MBTA are known to reside in or migrate through the potential project areas.

Due to the occurrence of woodland/thornscrub, wetland and riparian vegetation and natural and manmade aquatic habitats, the project sites could support a high diversity of bird species. Multiple bird surveys (including breeding bird surveys) conducted over the past 10 years by the U.S. Geological Survey in Webb County have documented exceptional avifauna diversity on public and private land around Laredo.

Recommendation: Because the entire 1,100 acre site would ultimately be cleared of all vegetation, TPWD recommends scheduling all vegetation clearing or trampling to occur outside of the April 1-July 15 migratory bird nesting season in order to fully comply with the MBTA. Contractors should be made aware of the potential of encountering migratory birds (either nesting or wintering) at the proposed project site and be instructed to avoid negatively impacting them. Please contact the U.S. Fish and Wildlife Service Southwest Regional Office (Region 2) at (505) 248-6879 for more information regarding the MBTA

State regulations

Parks and Wildlife Code

State law prohibits any take (incidental or otherwise) of state-listed species. Laws and regulations pertaining to state-listed endangered or threatened animals are contained in Chapters 67 and 68 of the Texas Parks and Wildlife (TPW) Code; laws pertaining to endangered or threatened plants are contained in Chapters 88 of the TPW Code.

TRC conducted a field reconnaissance survey, a presence/absence survey for federally listed plants, and a wetland delineation survey. No federal and one state-listed species were observed during the surveys. TRC concluded that suitable habitat for state-listed reptiles occurs on the site but that these species would move to adjacent areas during construction and operation of the landfill.

TPWD agrees that the project area and adjacent habitat types provide food, browse, and cover for many species of wildlife, including state-listed species. The availability of vegetated cover that includes leguminous species or other mast producing species can support many bird species as well as state-listed reptiles adapted to arid environments (*e.g.*, reticulate collared lizard, Texas indigo snake) and prey species (*e.g.*, lizards, mice) for raptors common in the area.

Recommendation: *Texas tortoises:* TPWD agrees that Texas tortoises could be encountered as the landfill is constructed. Because tortoises could have been inactive during the March and November surveys of the site, TPWD recommends that multiple surveys specifically for the Texas tortoise should be conducted during periods when they are most active (March/April through October) to adequately assess the local population. Because tortoises are less able to quickly avoid construction equipment, TPWD recommends scheduling construction activities to occur when tortoises are inactive (late October through March) if possible. If surface disturbance (*i.e.*, clearing) must occur while tortoises are active, an onsite biological monitor should be present during all activities in which tortoise encounters may occur.

Also, if encountered, Texas tortoises should be avoided and permitted to leave the project area on their own. Attempting to relocate them by picking them up can cause them to evacuate their bladders. Evacuation of their bladder, along with the stress of being moved, could cause the tortoises to become dehydrated and die.

Texas indigo snakes: A Texas indigo snake was observed during a November 2009 survey of the site. Because snakes are generally perceived as a threat and killed when encountered during clearing or construction, TPWD recommends contractors be advised that many snakes, including the protected Texas indigo snake, have been documented in Webb County. Contractors should be advised to avoid impacts to snakes as long as the safety of the workers is not compromised. Western diamondback rattlesnakes also occur in Webb County. Contractors should avoid contact with this species if encountered and allow the snake to safely leave the work area.

Please note that relocating any state-listed species requires a scientific collection permit. This can be obtained from TPWD Wildlife Permits Program. For more information regarding this permit, please visit TPWD's wildlife permit website at:
<http://www.tpwd.state.tx.us/business/permits/land/wildlife/>

The proposed landfill would occupy approximately 1,100 acres of a 12,000 acre ranch that is described as being severely overgrazed. The entire 1,100 acres would be cleared of vegetation with the assumption that wildlife, including state-listed species, would move to adjacent, undisturbed areas.

Recommendation: In order for the undisturbed areas adjacent to the landfill to provide suitable habitat for wildlife to move into, TPWD recommends that some of those areas be managed for wildlife. If a Wildlife Management Plan has not been already developed for the property, TPWD recommends contacting the local wildlife biologist regarding preparing a Plan. Wildlife management plans can assist the landowner in providing or improving wildlife habitat while continuing ranching or oil/gas activities. Please contact the local biologist for the Laredo area (Kent Williamson (956-568-4618)) for more information regarding land management strategies for private landowners.

I appreciate the opportunity to review and comment on this project. Please contact me at (361) 825-3240 if we may be of further assistance.

Sincerely,



Russell Hooten
Wildlife Habitat Assessment Program
Wildlife Division

/rh 16483

Attachment G

100-Year Floodplain Coordination



505 East Huntland Drive
Suite 250
Austin, TX 78752

512.329.6080 PHONE
512.329.8750 FAX

www.TRCSolutions.com

September 9, 2011

Rhonda Tiffin
Director of Planning
Webb County
1110 Washington St., Suite 302
Laredo, TX 78040

Re: Conditional Letter of Map Revision for San Juanito Creek Tributary
Communities: Webb County
Community No.: 481059

Dear Ms. Tiffin:

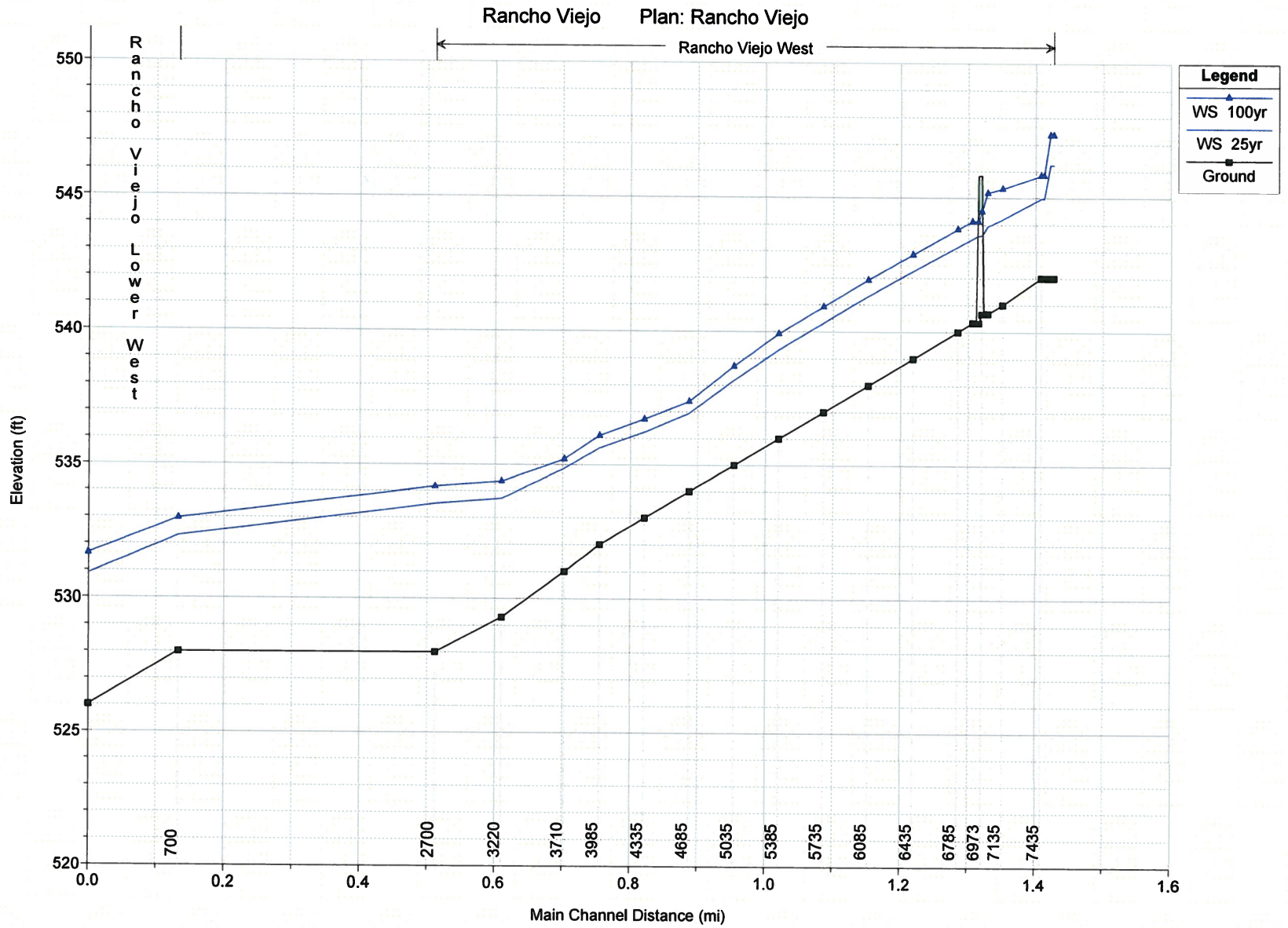
Please find enclosed one draft copy of the Conditional Letter of Map Revision submission for the Pescadito Environmental Resource Center. We are still working on a few items that will be required for the actual submission to FEMA. However, the lack of those items in this draft should not affect your ability to properly perform your review. For example, we are waiting for the final ESA Compliance Determination for the site. This document is required by FEMA for them to initiate their review. We would like to work with you in the interim to address any concerns you have with our analyses. The goal is to have all issues addressed by the time the final clearance is received for the project.

Please do not hesitate to contact me should you or your staff have any questions regarding the draft submission. I may be reached at either my office at (512) 684-3346 or by cell phone at (512) 497-9166. I look forward to working with you on this project.

Sincerely,

Richard K. Frithiof, P.E., CFM
TRC Environmental Corp.

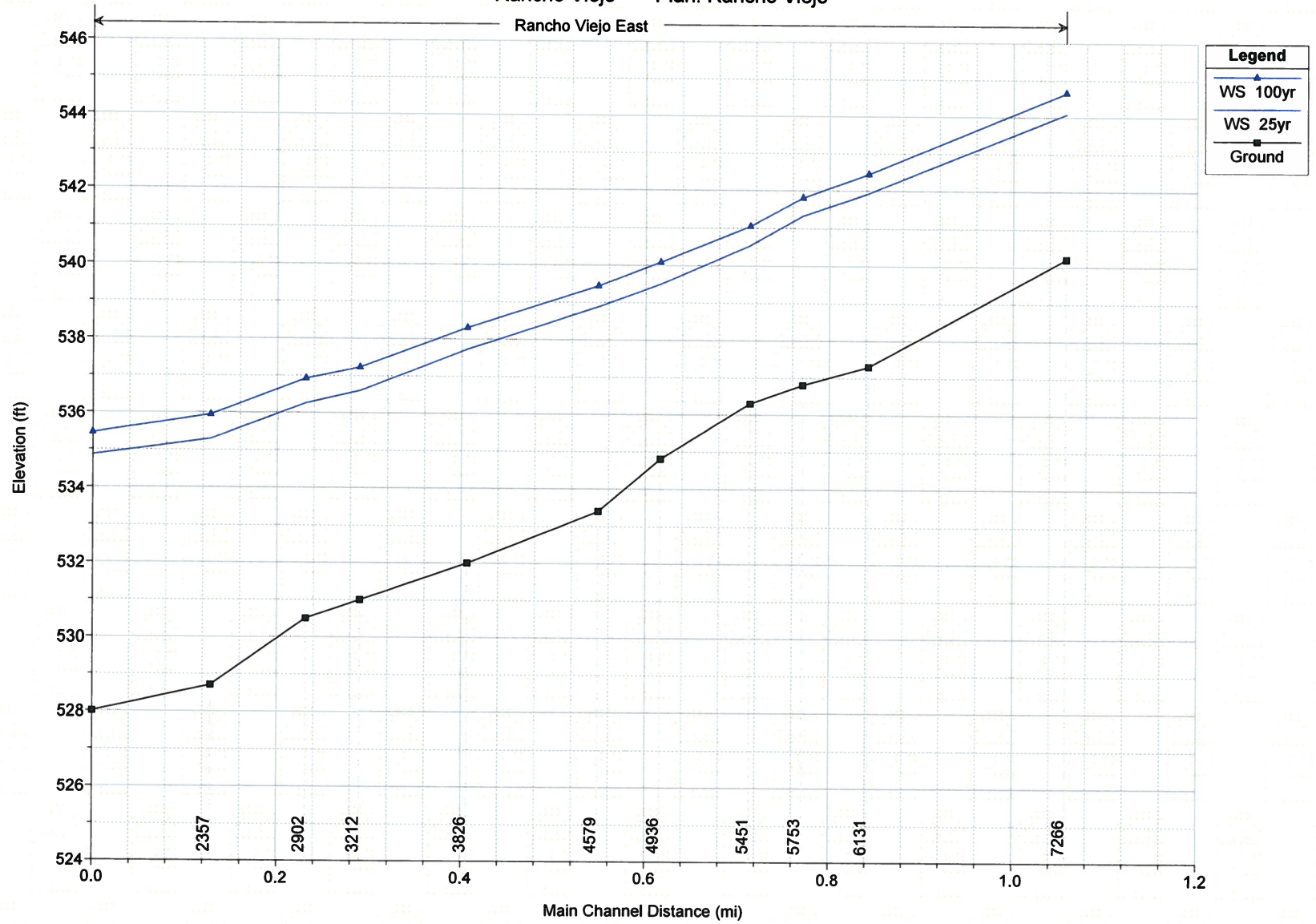
Profile for Rancho Viejo West

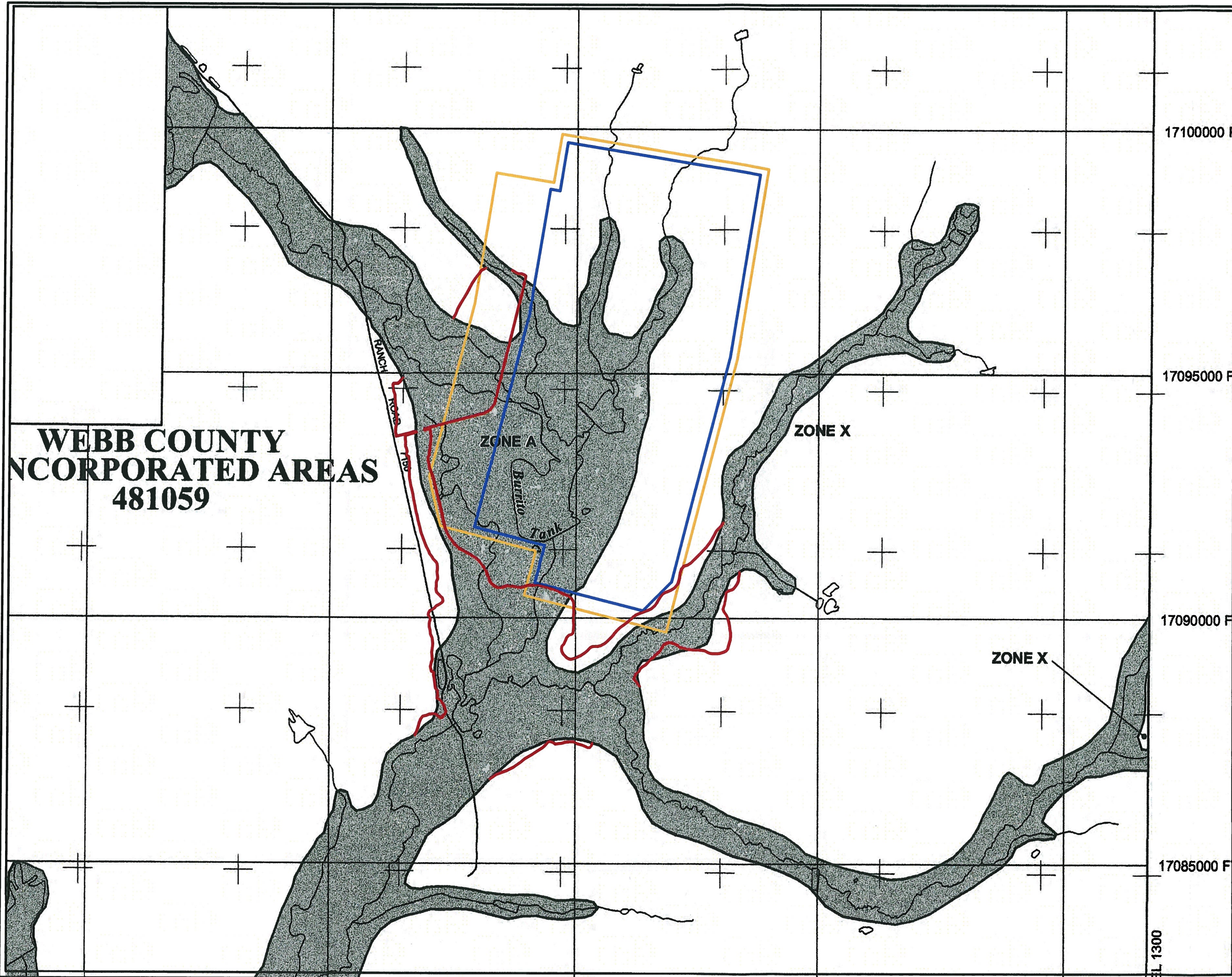


Profile for Rancho Viejo East

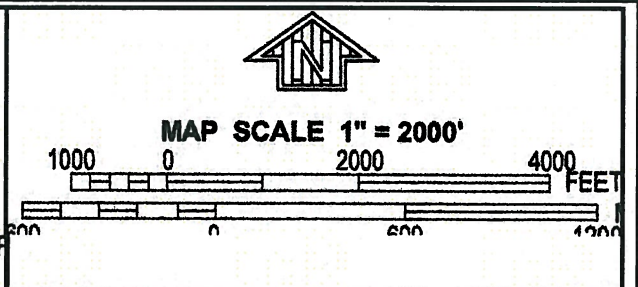
Rancho Viejo Plan: Rancho Viejo

Rancho Viejo East





**WEBB COUNTY
INCORPORATED AREAS
481059**



PANEL 1275C

**FIRM
FLOOD INSURANCE RATE MAP
WEBB COUNTY,
TEXAS
AND INCORPORATED AREAS**

PANEL 1275 OF 1700
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
WEBB COUNTY	481059	1275	C

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



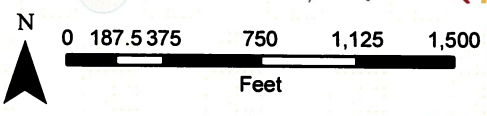
**MAP NUMBER
48479C1275C
EFFECTIVE DATE
APRIL 2, 2008**

Federal Emergency Management Agency

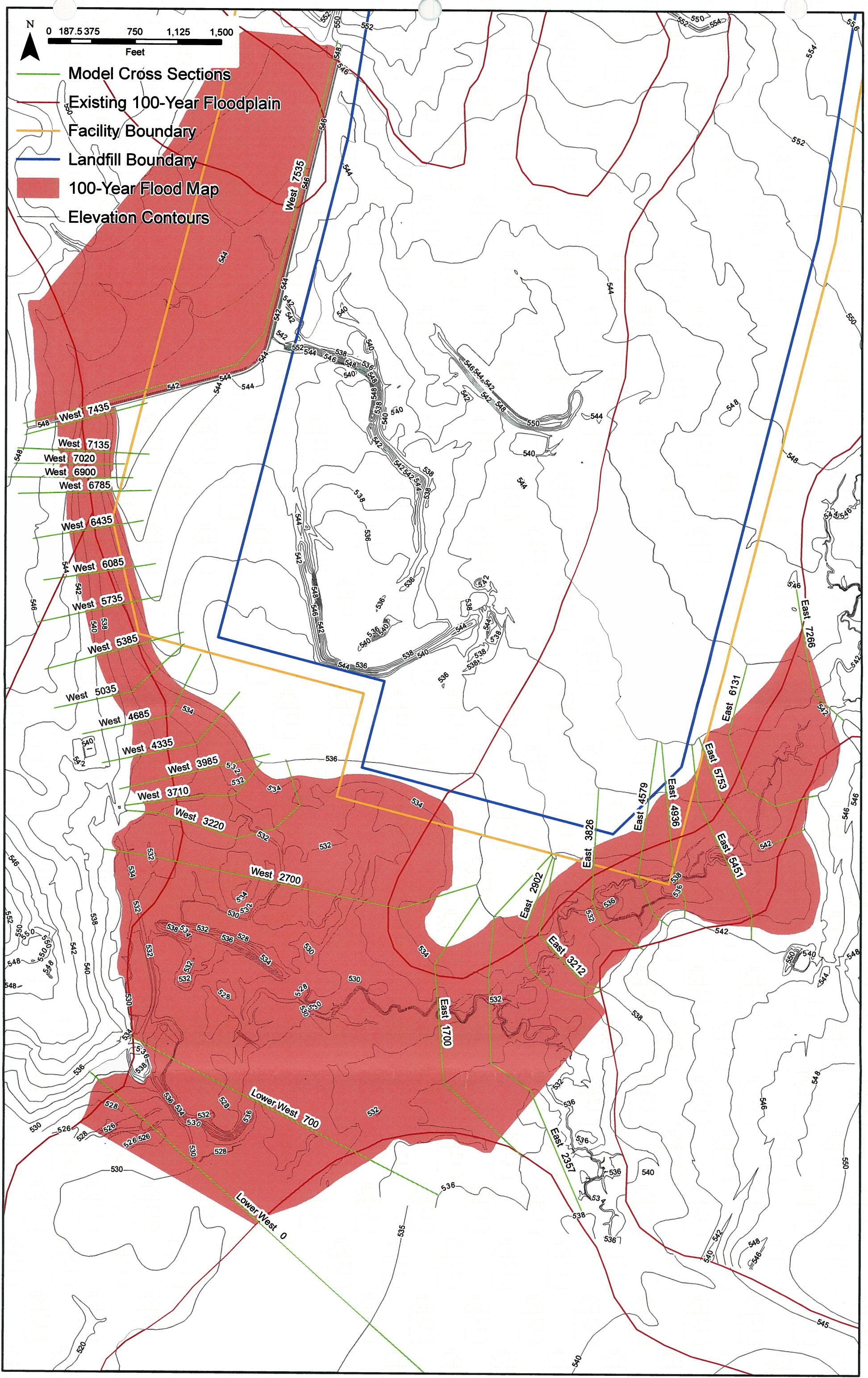
- Proposed 100yr FP Line
- Facility Boundary
- Landfill Boundary

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

EL 1300



- Model Cross Sections
- Existing 100-Year Floodplain
- Facility Boundary
- Landfill Boundary
- 100-Year Flood Map
- Elevation Contours



West 7435

West 7135

West 7020

West 6900

West 6785

West 6435

West 6085

West 5735

West 5385

West 5035

West 4685

West 4335

West 3985

West 3710

West 3220

West 2700

Lower West 700

Lower West 0

West 7535

West 7435

West 7335

West 7235

West 7135

West 7035

West 6935

West 6835

West 6735

West 6635

West 6535

West 6435

West 6335

West 6235

West 6135

West 6035

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East 3666

East 3566

DEPARTMENT OF HOMELAND SECURITY
 FEDERAL EMERGENCY MANAGEMENT AGENCY
OVERVIEW & CONCURRENCE FORM

O.M.B. NO. 1660-0016
 Expires February 28, 2014

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 1 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless it displays a valid OMB control number. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 1800 South Bell Street, Arlington, VA 20958-3005, Paperwork Reduction Project (1660-0016). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

PRIVACY ACT STATEMENT

AUTHORITY: The National Flood Insurance Act of 1968, Public Law 90-448, as amended by the Flood Disaster Protection Act of 1973, Public Law 93-234.

PRINCIPAL PURPOSE(S): This information is being collected for the purpose of determining an applicant's eligibility to request changes to National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRM).

ROUTINE USE(S): The information on this form may be disclosed as generally permitted under 5 U.S.C § 552a(b) of the Privacy Act of 1974, as amended. This includes using this information as necessary and authorized by the routine uses published in DHS/FEMA/NFIP/LOMA-1 National Flood Insurance Program (NFIP); Letter of Map Amendment (LOMA) February 15, 2006, 71 FR 7990.

DISCLOSURE: The disclosure of information on this form is voluntary; however, failure to provide the information requested may delay or prevent FEMA from processing a determination regarding a requested change to a (NFIP) Flood Insurance Rate Maps (FIRM).

A. REQUESTED RESPONSE FROM DHS-FEMA

This request is for a: (check one)

- CLOMR: A letter from DHS-FEMA commenting on whether a proposed project, if built as proposed, would justify a map revision, or proposed hydrology changes (See 44 CFR Ch. 1, Parts 60, 65 & 72).
- LOMR: A letter from DHS-FEMA officially revising the current NFIP map to show the changes to floodplains, regulatory floodway, or flood elevations. (See 44 CFR Ch. 1, Parts 60, 65 & 72).

B. OVERVIEW

1. The NFIP map panel(s) affected for all impacted communities is (are):

Community No.	Community Name	State	Map No.	Panel No.	Effective Date
Ex: 480301 480287	City of Katy Harris County	TX TX	48473C 48201C	0005D 0220G	02/08/83 09/28/90
481059	Webb County	TX	48479C	1275C	04/02/08

2. a. Flooding Source: **Unnamed Tributaries of San Juanito Creek**
 Riverine Coastal Shallow Flooding (e.g., Zones AO and AH)
- b. Types of Flooding: Alluvial fan Lakes Other (Attach Description)

3. Project Name/Identifier: **Pescadito Environmental Resource Center**

4. FEMA Zone designations affected: **A** (Choices A, AH, AO, A1-A30, A99, AE, AR, V, V1-V30, VE, B, C, D, X)

5. Basis for Request and Type of Revision: **Proposed modifications to basin**

a. The basis for this revision request is (check all that apply)

- Physical Change
 Improved Methodology/Data
 Regulatory Floodway Revision
 Base Map Changes
 Coastal Analysis
 Hydraulic Analysis
 Hydrologic Analysis
 Corrections
 Weir-Dam Changes
 Levee Certification
 Alluvial Fan Analysis
 Natural Changes
 New Topographic Data
 Other (attach Description)

Note: A photograph and narrative description of the area of concern is not required, but is very helpful during review.

b. The area of revision encompasses the following structures (check all that apply)

- Structures:
 Channelization
 Levee/Floodwall
 Bridge/Culvert
 Dam
 Fill
 Other (Attach Description)

6. Documentation of ESA compliance is submitted (required to initiate CLOMR review). Please refer to the instructions for more information

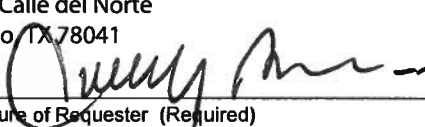
C. REVIEW FEE

Has the review fee for the appropriate request category been included?
 Yes, Fee Amount: \$6,050
 No, Attach Explanation

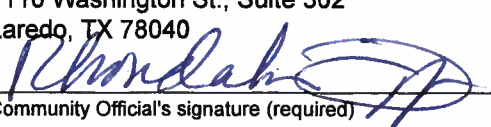
Please see the DHS-FEMA website at http://fema.gov/plan/prevent/fhm/frm_fees.shtml for Fee Amounts and Exemptions.

D. SIGNATURE

All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States code, Section 1001.


Name Carlos Y. Benavides, III		Company Rancho Viejo Waste Management, LLC	
Mailing Address 1116 Calle del Norte Laredo TX 78041		Daytime Telephone No. (956) 523-1400	FAX No. (956) 523-1401
Signature of Requester (Required) 		EMAIL ADDRESS ccitollroad@aim.com	
		Date 11/14/2011	

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this Letter of Map Revision (LOMR) or conditional LOMR request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirement for when fill is placed in the regulatory floodway, and that all necessary Federal, State, and local permits have been, or in the case of a conditional LOMR, will be obtained. For conditional LOMR request, the applicant has documented Endangered Species Act (ESA) compliance to DHS/FEMA prior to DHS/FEMA's review of the Conditional LOMR application. For LOMR request, I acknowledge that compliance with sections 9 and 10 of the ESA has been achieved independently of DHS/FEMA's process. For actions authorized, funded, or being carried out by Federal or State agencies, documentation from the agency showing its compliance with Section 7(a)(2) of the ESA will be submitted. In addition, we have determined that the land and any existing or proposed structures to be removed from the SFHA are or will be reasonably safe from flooding as defined in 44 CFR 65.2(c), and that we have available upon request by DHS/FEMA, all analyses and documentation used to make this determination.

Community Official's Name and Title Rhonda Tiffin, Director of Planning		Community Name Webb County	
Mailing Address 1110 Washington St., Suite 302 Laredo, TX 78040		Daytime Telephone No. (956) 523-4100	FAX No. (956) 523-5008
Community Official's signature (required) 		EMAIL ADDRESS rhonda@webbcountytx.gov	
		Date 11/14/2011	

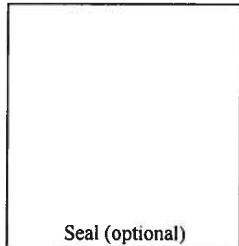
CERTIFICATION BY REGISTRATION PROFESSIONAL ENGINEER AND/OR LAND SURVEYOR

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information data, hydrologic and hydraulic analysis, and any other supporting information as per NFIP regulations paragraph 65.2(b) and as described in the MT-2 Forms instruction. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name Richard K. Frithiof, P.E., C.F.M.		License No. 55186	Expiration Date 12/31/2011
Company Name TRC Environmental Corp.		Telephone No. (512) 684-3346	Fax No. (512) 343-1083
Signature 	E-mail Address rfrithiof@trcsolutions.com		Date 11/1/2011

Ensure the forms that are appropriate to your revision request are included in your submittal.

- | Form name and (Number) | Required if.... |
|---|---|
| <input checked="" type="checkbox"/> Riverine Hydrology & Hydraulics Form (Form 2) | New or revised discharges or water-surface elevations |
| <input checked="" type="checkbox"/> Riverine Structures Form (Form 3) | Channel is modified, addition/revision of bridge/culverts, addition/revision of levee/floodwall, addition/revision of dam |
| <input type="checkbox"/> Coastal Analysis Form (Form 4) | New or revised coastal elevations |
| <input type="checkbox"/> Coastal Structures Form (Form 5) | Addition/revision of coastal structure |
| <input type="checkbox"/> Alluvial Fan Flooding Form (Form 6) | Flood control measures on alluvial fans |



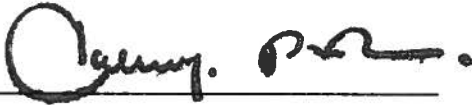
Attachment H

TPDES Certification

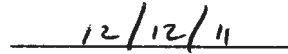
ATTACHMENT H

Certification of Intent to Obtain Coverage by TPDES General Permit

This is to certify that the owner or operator of the Pescadito Environmental Resources Center (PERC) will obtain coverage by the Texas Pollution Discharge Elimination System (TPDES) general permit prior to the time that such coverage is necessary due to proposed construction or operation activities at the PERC site.

A handwritten signature in black ink, appearing to read "Gregory P. ...", written over a horizontal line.

Signature

A handwritten date "12/12/11" written over a horizontal line.

Date