**TCEQ DOCKET NO. 2014-1278-MSW**

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| **APPLICATION BY** | § | **BEFORE THE** |
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| **GALVESTON COUNTY LANDFILL** | § | **TEXAS COMMISSION ON** |
| | § | |
| **TX, LP FOR PERMIT NO. 1149B** | § | **ENVIRONMENTAL QUALITY** |

# APPLICANT'S RESPONSE TO HEARING REQUESTS

Applicant Galveston County Landfill TX, LP ("GCLF") files this, its Response to Hearing Requests ("Response"), pursuant to 30 TAC § 55.209(d) and other applicable rules of the Texas Commission on Environmental Quality ("TCEQ" or the "Commission"), and respectfully shows the following:

## I. Introduction and Background

GCLF has applied to the TCEQ to amend its Solid Waste Permit No. 1149A (the "Existing Permit") for the Galveston County Landfill (the "Landfill") in Galveston County, Texas to authorize a vertical and horizontal expansion of the existing Landfill.

The Landfill has existed in some configuration at this site since at least 1971 and has continuously operated in Galveston County since that time. It was originally permitted by Galveston County and operated pursuant to a permit issued by the County. The first state permit (Permit No. 1149) for the facility was issued in 1978 by the Texas Department of Health. In 1987 the permit (Permit No. 1149) was amended (Permit No. 1149A) to approve an expansion to its current 404.4 acre layout. This application to amend Permit No. 1149A (the "Application") seeks to increase the permitted acreage to 469.5 acres and the actual waste disposal area from 302.6 acres to 333.9 acres.

GCLF is proud to have provided solid waste disposal services for the Galveston County area, including emergency disposal of hurricane debris during several hurricane events, most

recently following Hurricane Ike in 2008. During that catastrophic event, GCLF worked with local communities and TCEQ to dispose of approximately 415,000 cubic yards of hurricane debris, pursuant to an emergency Temporary Authorization, followed by a Compliance Agreement with TCEQ, to allow it to accept hurricane debris beyond its vertical permit limits. GCLF prides itself on having been prepared to serve the citizens of Galveston County for many years through both good times and in emergency circumstances. GCLF looks forward to many more years providing that service with this Application.

This Application is for a vertical and horizontal expansion only within an existing 469.5 acre tract owned by GCLF. The facility as currently permitted has 6 distinct landfill units divided by a road and several easements. The road and most of the easements have been vacated, so the vast majority of the horizontal expansion will be converting the areas between the existing cells to new waste disposal areas. Two remaining easements transect the site but are accommodated by the proposed landfill layout. A very small portion of the lateral expansion is not between the existing cells, but will add only approximately 9.8 acres to the waste disposal portions of the Landfill. Vertically, the maximum elevation would increase from 76 ft-msl (including the emergency overfill height approved post-Hurricane Ike) to a maximum of 202.5 ft-msl. Final approval of this Application will provide the Landfill with approximately 48.7 additional years of capacity to continue serving Galveston County. Finally, the Application is seeking authority to add a Class I non-hazardous waste processing and disposal area within its boundary to assist public and private customers with a safe industrial waste disposal option. This additional authority will be valuable to the area's commercial refining and international port industries.

The Landfill is located within the city limits of both the Cities of La Marque and Hitchcock. In 2012, both cities issued letters that the Landfill operation at the site is an approved lawful nonconforming use pursuant to their ordinances. *See* Part I/II, Appendix I/IID pp 1/11 D-12 and 13 (Land Use Study). GCLF also is contractually tied to each city through agreements to have those cities dispose of leachate through their wastewater disposal systems. This cooperative arrangement will continue under the pending amendment. Part III, Appendix IIIC, IIIC-19. Access to the facility is excellent and will continue to be, via I-45 just 2 miles east of the site and FM 1764, a four-lane highway leading to the entrance road to the Landfill. Though some area development has obviously occurred over the 40-plus year life of the Landfill, the Landfill still has large buffer areas that separate it from most area residential neighborhoods, developed after the Landfill began operations. The facility is currently classified as a "High" performer as reflected in TCEQ's Compliance History Report dated September 25, 2013.

For all of the reasons stated above, GCLF believes this Application merits favorable consideration by the TCEQ.

## II. Procedural History of Amendment Application

On June 29, 2012, GCLF submitted the Application to the TCEQ. The Executive Director ("ED") declared the Application administratively complete on August 3, 2012. The Notice of Receipt of Application and Intent to Obtain a Permit was published on August 14, 2012.

The ED completed the technical review of the Application on December 17, 2013 and prepared a draft permit. The Notice of Application and Preliminary Decision ("NAPD") was published on March 4, 2014. No public meeting was held as there was not sufficient interest to

warrant such a meeting. The comment period ended on April 3, 2014 and the ED filed and served his Response to Comments ("RTCs") on July 28, 2014.

TCEQ received public comments from only 5 individuals during the comment period. Those comments were addressed by the ED in its RTCs. Only Shawn and Kenny Wagner (the "Wagners") filed hearing requests.

## III. Legal Basis, and Organization of Response

This Response is organized in accordance with § 55.209(e), which requires that responses to hearing requests must specifically address:

(1) whether the requestor is an affected person;
(2) which issues raised in the hearing request are disputed;
(3) whether the dispute involves questions of fact or of law;
(4) whether the issues were raised during the public comment period;
(5) whether the hearing request is based on issues raised solely in a public comment withdrawn by the commenter in writing . . . ;
(6) whether the issues are relevant and material to the decision on the application; and
(7) a maximum expected duration for the contested case hearing.

30 Tex. Admin. Code § 55.209(e). Each of these requirements is addressed below. The concluding section contains a list of all issues that are appropriate for referral, in terminology appropriate for referral.

## IV. Determination of Affected Persons §55.209(e)(1)

The Commission's rules provide that:

> [A]n affected person is one who has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application. An interest common to members of the general public does not qualify as a personal justiciable interest.

*Id.* at § 55.203(a).

In determining whether an individual is an affected person, the rules require consideration of:

> . . . all factors . . .including, but not limited to, the following:
>
> (1) whether the interest claimed is one protected by the law under which the application will be considered;
> (2) distance restrictions or other limitations imposed by law on the affected interest;
> (3) whether a reasonable relationship exists between the interest claimed and the activity regulated;
> (4) likely impact of the regulated activity on the health and safety of the person, and on the use of property of the person; [and]
> (5) likely impact of the regulated activity on use of the impacted natural resource by the person ....

*Id.* at § 55.203(c).

GCLF has identified three hearing requests (each a "Request" and collectively, the "Requests"), all filed by Shawn and Kenny Wagner (hereafter, the "Wagners"). One Request was dated August 24, 2012 (the "First Request"),[1] and the second was dated April 3, 2014 (the "Second Request").[2] The third request, dated August 29, 2014, only reiterated the prior requests, and is not discussed further. According to the First Request, the Wagners reside at 4125 Avenue E., Santa Fe, Texas, 77510. According to the Second Request, this twenty-six acre property is adjacent to the western boundary of the Landfill.

Based on the facts as stated in the Requests, including the proximity of the Wagners' property to the Landfill and the Wagners' representation that they reside on that property, GCLF agrees (subject to confirmation during discovery) that the Wagners are affected persons with regard to one or more of their requested issues and therefore has no objection to their being named affected persons pursuant to the criteria in § 55.203(a).

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[1] Cited as "HR1" herein.
[2] Cited as "HR2" herein.

## V. DISPUTED ISSUES OF FACT
## §55.209(e)(2) & (3)

Section 5.556 of the Water Code requires the Commission to limit both the number and scope of issues that are referred to SOAH for hearing. TEX. WATER CODE ANN. §5.556(e)(1) (West). Further, the Commission may not refer an issue for a hearing unless it determines that the issue involves a disputed question of fact. § 5.556(d). Many of the issues requested by the Wagners fail to meet this threshold.

In the recent Third Court of Appeals case, *Sierra Club v. TCEQ*, the Court confirmed the TCEQ's broad discretion in ruling on hearing requests in permitting matters such as this Application. *Sierra Club v. Texas Comm'n on Envtl. Quality*, No. 03-11-00102-CV, 2014 WL 7463875, at *8 (Tex. App. Dec. 30, 2014) (not released for publication). The Court ruled that the Commission's analysis of materials available to it at the time it rules on a request, such as the draft permit, the application, any analysis prepared by TCEQ staff, and "any reports, opinions, and data it has before it" was not only authorized, but required by the statute and TCEQ rules. *Id.* at 5.

In the *Sierra Club* case, as well as prior related court opinions such as *TCEQ v. City of Waco*, 413 S.W.3d 409 (Tex. 2013), the courts acknowledged the Commissions' broad discretion in determining the "affected person" status of requestors. The court stated in *Sierra Club* that "TCEQ enjoys the discretion to weigh and resolve matters that may go to the merits of the underlying application, including the likely impact the regulated activity . . . will have on the health, safety, and use of property by the hearing requestor . . ." *Sierra Club,* 2014 WL 7463875, at *5. Though in *Sierra Club*, the TCEQ's discretion is only applied to the determination of affected persons and not issues, the logic applied in those cases is equally instructive on the discretion available to the Commission in making its determination of which issues should be

referred to a contested case. In fact, in *Sierra Club,* the Court made that connection itself. The Court stated "...Sierra Club argues that TCEQ was required to hold a contested-case hearing on any fact issues raised by Sierra Club's hearing request-i.e., TCEQ does not have the authority to resolve factual disputes on its own. We disagree." *Id.* at *3.

Applying the *Sierra Club* court's logic to the referral of issues, if a requestor makes an allegation in a hearing request, the Commission is empowered to determine if the allegation rises to the level of "disputed issues of fact... that are relevant and material to the commission's decision on the application," 30 Tex. Admin. Code § 55.211(b)(3)(A) & (c)(3)(A), by considering the evidence before it (including the draft permit, the application, evidence provided by the applicant in its responses to hearing requests, and evidence provided by requestors in their requests and in any replies to responses to hearing requests). *See Sierra Club,* 2014 WL 7463875, at *3. Therefore, the same discretion is available to the Commission in determining whether the hearing request has "specify(ied) the . . . scope of the specific factual issues . . ." as required by TCEQ rules, including § 55.211(b)(3)(A) & (c)(3)(A). Thus the Commission should consider the evidence properly before it as it determines whether each requested issue qualifies for referral.

Applying this analysis to the Wagners' hearing requests in this case, GCLF will now address the issues as they were referred to in the ED's RTCs. Because the RTC identifies the issues that were raised in public comments, the RTC necessarily also identifies the spectrum of issues that may be eligible for referral. Any issues listed in the RTC but not addressed in this section were not raised in either of the Wagners' Requests.

### A. General Lists of Topics (RTC 23)

In the First Request, the Wagners provide a list that they state that they "believe that this landfill raises issues associated with." In the Second Request, the Wagners "request a contested case hearing regarding the issues raised in this hearing request, as well as all other issues raised in any other comments submitted to TCEQ with regard to the Application by themselves as well as any other persons or entities." Providing an issue in a list, or simply alluding to an issue raised by another, is not sufficient to raise a disputed issue of fact. Unless one of the Requests raises an issue with at least some specificity, the issue should be denied. Further, even if the issue is raised with sufficient specificity, the Commission is empowered to weigh the Applicant's evidence against any evidence raised by a requestor and determine if the issue rises to the level of a "disputed issue of fact." For these reasons, general lists of issues should be denied. *See* ED's Response to Public Comment No. 23.

### B. Groundwater Protection and Monitoring System (RTC 2)

In their Second Request, the Wagners allege that GCLF has not accounted for the potential complexity of the geologic setting or considered the presence of artificial recharge features (i.e., wells), and has not accurately characterized the geology and hydrogeology of the site. HR2 at 8. These allegations are refuted by the detailed analysis of the geology and design of the proposed groundwater monitoring system contained in Part III, Appendix IIIG (Geology Report) of the Application. These sections show that numerous subsurface characterizations of the site have been completed over the Landfill's 40-plus year life. These characterizations have been reviewed and approved by various individuals at several different state agencies over that time period. The Application does not propose to change the characterization or the monitoring system concept, it only addresses accommodations for the minimal additional lateral expansion.

In absence of some evidence of inaccuracies in that analysis, the Commission should not find that this vague allegation rises to the level of a disputed issue of fact as required by § 55.209(e)(2).

**C. Protection of Surface Water (RTC 3)**

In their Second Request, the Wagners allege that "contaminants can move into [the Highland Bayou Diversion Channel] as the result of subsurface hydraulic connections between the groundwater and the water in this channel," "the inadequate control of pollutants in surface water leaving the site," and that the "recirculation of leachate onto the landfill's working face as proposed will only increase the potential that contaminates will enter surrounding surface water." HR2 at 12.

The Application addresses groundwater in Part I/II Sections 3.1 and 10.1 and Part III Section 4.3.5, as well as in Part III, Appendix IIIH (Groundwater Monitoring, Sampling, and Analysis Plan), and Appendix IIIG (Geology Report). With respect to the alleged hydraulic connection between groundwater and the Highland Bayou Diversion Channel, these sections of the Application establish that there is no hydrologic connection between the uppermost aquifer (the groundwater that is relevant in the TCEQ rules)[3] and the drainage channel. Further, the Highland Bayou Diversion Channel is operated by Galveston County Drainage District No. 1. Therefore, this allegation is not reasonably related to a particular interest claimed by the Wagners that is distinct from the interests of the general public.

As to the surface water drainage facilities and the operation and maintenance procedures to ensure their ongoing and future compliance with TCEQ regulations and the protection of surface water resources, Part I/II, Section 10.2; Part III, Site Development Plan Narrative,

[3] While there may be isolated perched groundwater zones, these are protected from contamination by the liner.

Section 3; and Part III, Appendix IIIF (Surface Water Drainage Plan) establish that the engineering design and operational efficacy complies with TCEQ's rules to protect surface water. This is further supported by the ED's Technical Summary certified copy dated December 9, 2013 (attached as Exhibit 1).

As to the allegation regarding recirculation of leachate, Part III, Appendix IIIC, Section 5.2 of the Application sets forth the procedures for handling leachate recirculation in compliance with TCEQ rules, and establishes the controls that will prevent leachate from reaching surface waters. As shown in those portions of the Application, leachate recirculation will only occur over areas that have composite liner systems that include leachate collections systems. Leachate from the site will be connected via pipeline with the City of La Marque's wastewater treatment plant. GCLF has entered into an agreement with La Marque for this, and also has an agreement with the City of Hitchcock for trucking leachate if La Marque's capacity limits are exceeded.

The Wagners' interest in this issue is not distinct from that of the general public. In absence of some evidence that surface water will be impacted, the Commission should not find that these vague allegations rise to the level of a disputed issues of fact, as required by § 55.209(e)(2).

### D. Stormwater Controls, Impacts to Drainage Patterns, and Potential for Flooding (RTCs 3 and 4)

In the First Request, the Wagners question the ability of the Landfill "to protect against the various design floods." *See* HR1 at 2. In the Second Request, the Wagners state two concerns. First, they contend that the Landfill should be designed for hurricane storms rather than the storm events required by the TCEQ rules. HR2 at 2. Second, they contend that GCLF relied on an outdated FEMA floodplain map in locating the floodplain. *Id.* These statements do

not raise a disputed issue of fact, based on a lack of specificity among other shortcomings discussed below.

The first of these allegations fails to raise a disputed issue of fact; it raises only a question of law. The TCEQ rules are clear that landfills are to be designed to convey the 25-year, 24-hour rainfall event. *See* 30 Tex. Admin. Code §§ 330.303 & 330.305(b)-(d). The TCEQ rules also require that existing or permitted drainage patterns not be adversely altered. *See* § 330.305(a). TCEQ guidance is also clear that the relevant storm for this evaluation is the 25-year, 24-hour rainfall event. Finally, TCEQ rules require that landfills be protected from flooding from a 100-year frequency flood. *See* § 330.307(a). The Wagners' attempt to apply a storm event other than the storm event required by the rules does not raise a disputed issue of fact, only a question of law for the Commission to resolve. *See* § 55.211(b)(3).

The Wagners' second contention alleges that the GCLF used an incorrect FEMA map in denoting the location of the 100-year floodplain. However, as they explain in their Request, the FEMA map used by GCLF is in fact the current map; the Wagners state "the maps [they contend should be used] are anticipated to be finally approved later this year." HR2 at 3. The TCEQ rules allow FEMA maps to be used as prima facie evidence of floodplain locations. § 330.63(c)(2)(B). This rule does not contemplate the use of unapproved maps. It is not known when, if ever, FEMA will adopt a new map for the area, or whether a revised map will match the preliminary map initially released by FEMA. The Wagners' attempt to refer to an unapproved FEMA map similarly does not raise a disputed issue of fact, only a question of law for the Commission to resolve. *See* § 55.211(b)(3).

Notwithstanding the failure of the Wagners to raise a "disputed issue of fact" on this issue, Part III, Site Development Plan Narrative, Sections 3.1-3-7; and Part III, Appendix IIIF of

the Application establish that the drainage plan for the site meets the TCEQ's rules. This is further supported in the attached affidavit of GCLF's consultant, Nevzat Turan, P.E., attached as Exhibit 2. For these reasons, this issue is not appropriate for referral.

**E. Wetlands (RTC 6)**

The Wagners, in their Second Request, state that the non-jurisdictional wetlands identified in the Application must be treated by the TCEQ as if they are jurisdictional. HR2 at 5. Because the Requests do not allege that the wetlands have been mischaracterized, this is also a question of law, not of fact. The term "wetland" is defined in Chapter 330 by referring to the definition in 30 Tex. Admin. Code Chapter 307. *See* § 330.3(178). Wetlands are then defined in Chapter 307 in accordance with the federal definition. *See* § 307.3(84); *see also*, Tex. Water Code § 11.506. Therefore, the limitations on wetlands in Chapter 330 only apply to jurisdictional wetlands. Because there is no disputed issue of fact, this issue is not appropriate for referral.

Further, the 4.1 acre non-jurisdictional wetland area has been removed to create borrow pits, pursuant to a USACE determination, and no longer exist. It was not located within the permit boundary at the time, but the area will be part of the limited 9.8 acre horizontal expansion disposal area footprint of the Landfill under the Application. There are no other wetlands that will be disturbed, as confirmed by the U.S. Army Corps of Engineers. *See* Aff. of Jeffrey P. Young, P.E. (attached as Exhibit 3). Therefore, this allegation is not subject to dispute based on existing evidence and is also not reasonably related to an interested claimed by the Wagners.

Notwithstanding the fact that the Wagners raised only questions of law, not of fact, Part III, Site Development Plan Narrative, Section 3.8; Part I/II, Section 11.2; Part I/II, Appendix I/IIB, and Part I/II, Appendix I/IIC, Section 7 of the Application, as well as the attached Young

affidavit, establish that GCLF's plans treat wetlands in accordance with TCEQ's rules. For these reasons, this issue is not appropriate for referral.

**F. Windblown Waste (RTC 7)**

The Wagners state their concern that the Application will increase the potential for windblown waste to be deposited on their property. HR2 at 2. Although Part IV, Site Operating Plan, Section 4.5; and Table 4.1 of the Application establish that the Application meets the TCEQ's rules regarding windblown waste, because of the Wagner's proximity to the Landfill and the level of personal interest the Wagner's have in this operational issue, GCLF does not object to referral of this issue.

**G. Endangered or Threatened Species (RTC 8)**

The Wagners state that several endangered species may utilize portions of the Landfill. HR2 at 6. The Wagners also allege that endangered and threatened species that reside off of the site, in the Highland Bayou Diversion Channel, may be impacted by an increase in Landfill activities. *Id.* Part I/II, Section 12; Part I/II, Appendix I/IIB; Part I/II, Appendix I/IIC, Section 6, and Part III, Site Development Plan Narrative, Section 2.4 of the Application establish that the Application meets the TCEQ's rules regarding endangered and threatened species. The Wagners' request does not provide any information to support its speculation. In absence of some evidence to the contrary, the Commission should not find that an allegation that some species "may" utilize portions of the Landfill or may be bothered by nearby activity, qualifies as a disputed issue of fact as required by § 55.209(e)(2). For these reasons, this issue is not appropriate for referral.

**H. Constructing Liner Below Water Table (RTC 9)**

The Wagners have alleged that GCLF has not demonstrated that the integrity of the proposed liners will be preserved. HR2 at 6-7. Part I/II, Section 3.2; Part III, Sections 4.3.1 and 4.3.2; Part III, Appendix IIIA; Part III, Appendix IIID (Liner Quality Control Plan), and Part III, Appendix IIIE (Geotechnical Report) Section 5 of the Application, provide the demonstration that the Wagners claim is missing. In absence of some evidence to the contrary, the Commission should not find that this vague allegation rises to the level of a disputed issue of fact as required by § 55.209(e)(2), and should therefore not be referred.

**I. Slope Stability (RTC 10)**

The Wagners have alleged that GCLF has not adequately characterized the soil, waste, and other elements involved with slope stability. HR2 at 7-8. Part III, Appendix IIIE (Geotechnical Report), Section 6; and Part III, Appendix IIIE-A, (Slope Stability Analysis) of the Application thoroughly analyze the slope stability, including the characterizations that the Wagners allege are missing. In absence of some evidence to the contrary, the Commission should not find that this vague allegation rises to the level of a disputed issue of fact as required by § 55.209(e)(2).

**J. Easements and Buffer Zones (RTC 11)**

The Wagners allege that several easements cross the site of the Landfill. HR2 at 10. Part I/II, Section 12; and Part I/II, Appendix I/IIC, Section 2, and Part IV, Section 4.6 of the Application show that all easements that may interfere with the proposed design of the Landfill have been abandoned by their former easement holders. Further, the Wagners have not alleged any interest in the easements. In absence of some evidence that a specific easements has not been abandoned, or that the Wagners have a personal interest in one or more of the easements,

the Commission should not find that this vague allegation rises to the level of a disputed issue of fact as required by § 55.209(e)(2) and is therefore not appropriate for referral.

**K. Operating Hours (RTC 12)**

The Wagners have alleged that GCLF has not adequately justified 24-hour / 7-day operating hours. HR2 at 10. The TCEQ rules grant the TCEQ the discretion to set operating hours in the permit. § 330.135(a). Due to the Wagners' close proximity to the Landfill, and the level of personal interest the Wagners have in this issue, GCLF does not object to the referral of this issue.

**L. Vectors (RTC 13)**

The Wagners have alleged that GCLF has not provided adequate provisions for controlling vectors. HR2 at 6, 10-11, 13. Although Part IV, Section 4.11 of the Application establishes that the Application meets the TCEQ's requirements regarding vectors, due to the Wagners' close proximity to the Landfill, and the level of personal interest the Wagners have in this issue, GCLF does not object to the referral of this issue.

**M. Noise (RTC 14)**

The Wagners state that they are concerned about noise from the facility. HR2 at 10-11, 13. The TCEQ rules relevant to this application have no requirements regarding noise. Noise is regulated in two rules under Chapter 330, both rules relevant only to transfer stations not landfills. *See* § 330.239 and 330.63(b)(2)(1). Since there are no applicable regulations, this issue does not raise a disputed issue of fact, nor is it relevant and material to the application, as discussed in Section VI below.

**N. Odors (RTC 15)**

The Wagners state their concern that the Application will increase the potential for odors to affect their property. Although Part III, Site Development Plan Narrative, Section 2.2.3, and Part IV, Sections 4.10, and 4.26.4 of the Application establish that the Application meets the TCEQ's requirements regarding odors, due to the Wagners' close proximity to the Landfill, and the level of personal interest the Wagners have in this issue, GCLF does not object to the referral of this issue.

**O. Historical Commission (RTC 16)**

The Wagners have alleged that that a particular oak tree on the property is not mentioned in the discussion of historical or cultural artifacts and that the oak tree is "potentially" historic. HR2 at 13, 15. The TCEQ rules require that the Application include a review letter from the Texas Historical Commission documenting compliance with the Natural Resources Code, Chapter 191, Texas Antiquities Code. § 330.61(o). The TCEQ rules also require that archaeological sites, historical sites, and sites with exceptional aesthetic qualities adjacent to the facility be shown on the general location maps. § 330.61(c). Part I/II, Section 2.3; and Part I/II, Appendix I/IIB of the Application provide the required correspondence and showing. The Wagners have not alleged that the letter is not authentic or is otherwise flawed and have not cited any rule specifically addressing any requirement to accommodate or otherwise consider a tree with no historic designation. Further, they have not even alleged that the tree has any designated historical status, only that it may be historic. Therefore, the Wagners have failed to raise a disputed issue of fact, so the issue is not appropriate for referral.

**P. Compliance History (RTC 17)**

The Wagners allege several historic operational issues which might be interpreted as raising compliance history as an issue. *See, e.g.*, HR2 at 10. However, the Wagners admit that the existing site has a "High" compliance rating, and have not alleged that the compliance rating is miscalculated. HR2 at 13. Exhibit 4 contains certified copies of GCLF's compliance history, confirming that the Landfill's most recent compliance history on file in the Chief Clerk's office is "High" as of the date of this filing. *See also*, RTC at 17 ("These compliance history ratings do not support a claim that the facility has been a nuisance in the past"). Therefore, the Wagners have not raised a disputed issue of fact, and this issue is not appropriate for referral.

**Q. Land Use (RTC 18)**

The Wagners have alleged that the Landfill is an incompatible land use. Although land use compatibility is not analyzed under the Commission's authority as particular to any individual affected person, GCLF does not object to the referral of this issue based on the Wagners' proximity to the site. We note however, that Part I/II, Section 7.1, and Part I/II, Appendix I/IID (Land Use Study) of the Application provide the TCEQ with the information necessary to evaluate land use, and in fact show that the Landfill is a compatible land use.

**R. Impact on Health and Enjoyment of Property (RTC 19)**

The Wagners have generally alleged that the Landfill may impact their health, but have not specified any particularized health condition that they contend may be impacted. Therefore, they have not raised a disputed issue of fact regarding their health with sufficient specificity to be appropriate for referral. Likewise, they have alleged general and vague impacts to their enjoyment of their property. However, these general and vague allegations are no different than the concerns of the general public, and not sufficient to raise a disputed issue of fact.

## VI. Issues Raised During the Comment Period and Not Withdrawn §55.209(e)(4) & (5)

All of the issues listed in the RTC were raised during the comment period. None of the comments were withdrawn in writing. All of the issues discussed in Section III were also raised in at least one of the Requests. All of the issues listed in the RTC but not listed in Section III were not raised in either of the Requests, and are therefore not appropriate for referral.

## VII. Relevant and Material §55.209(e)(6)

The issue of noise is not relevant or material to the application, since there are no regulatory requirements related to noise from landfills (in contrast to the rules related to noise from transfer stations. *See* § 330.239 and 330.63(b)(2)(1). Likewise, drainage issues related to the use of design storms other than those specified in the rules relevant to the Application are not relevant and material to the Application. Finally, compliance with Galveston County Drainage District's requirements (RTC 5), Gas Flare Emissions (RTC 20), and Property Values (RTC 22) were also included in the RTCs but are also not relevant and material to the Application. The Wagners also alleged that GCLF has historically not provided required notice of modifications, temporary authorizations and amendments. Even if true, these are not relevant and material to the Application, and the Wagners' recourse is not through a referred issue in this matter. Because these issues are not relevant and material to the decision to be made by the Commission, they are not appropriate for referral. § 30 Tex. Admin. Code § 55.211(b)(3)(A) & (c)(3)(A).

## VIII. Duration of Hearing §55.209(e)(7)

Responses to hearing requests must address the maximum expected duration of the hearing from the first day of the preliminary hearing to the issuance of the proposal for decision.

§ 55.209(e)(7). Given the number issues that could potentially be referred and the complexity of some of those issues, nine (9) months is an appropriate duration.

## IX. Mediation

GCLF has previously sought mediation through the Commission's ADR office. However no mediation was held. Though not opposed to mediation, GCLF does is not seeking a referral to ADR at this time.

## X. Conclusion

For the reasons stated above, and subject to later discovery, the Wagners qualify as affected persons, and only the following issues are eligible for referral to the State Office of Administrative Hearings ("SOAH") on CGLF's Application:

(A) Whether the Application meets regulatory requirements regarding windblown waste in compliance with 30 TAC §§ 330.139 and 330.165.

(B) Whether the operating hours proposed in the Application are appropriate in compliance with 30 TAC § 330.135.

(C) Whether the Application meets regulatory requirements regarding control of vectors in compliance with 30 TAC §§ 330.151 and 330.165.

(D) Whether the Application meets regulatory requirements regarding control of odors in compliance with 30 TAC §§ 330.149 and 330.165.

(E) Whether the ED has properly considered land use in compliance with Tex. Health & Safety Code § 361.089(a).

The following issues are NOT appropriate for referral for the reasons stated above.

(A) Whether the Application meets regulatory requirements regarding protection of groundwater in compliance with 30 TAC § 330.207.

(B) Whether the Application meets regulatory requirements regarding protection of surface water quality in compliance with 30 TAC §§ 330.55(b) and 330.207.

(C) Whether the Application meets regulatory requirements regarding drainage in compliance with 30 TAC §§ 330.303, 330.305(b)-(d), 330.305(a) and § 330.307(a).

(D) Whether the Application meets regulatory requirements regarding wetlands in compliance with 30 TAC § 330.553.

(E) Whether the Application meets regulatory requirements regarding protection of endangered and threatened species in compliance with 30 TAC §§ 330.157 and 330.551.

(F) Whether the Application meets regulatory requirements regarding the design of liners in compliance with 30 TAC § 330 Subchapter H.

(G) Whether the Application meets regulatory requirements regarding slope stability in compliance with 30 TAC § 330.305(d).

(H) Whether the Application meets regulatory requirements regarding easements in compliance with 30 TAC § 330.141(a) and 330.543(a).

(I) Whether the Application meets regulatory requirements regarding control of noise in compliance with 30 TAC §§ 330.239.

(J) Whether the Application meets regulatory requirements regarding Historical Commission review in compliance with 30 TAC § 330.61(o).

(K) Whether the TCEQ properly considered the Applicant's compliance history in compliance with 30 TAC Chapter 60.

(L) Whether the Application contains required provisions to protect the Requestor's reasonable enjoyment of their property in compliance with § 330.63(a).

(M) Whether the Application contains required provisions to protect the Requestor's health in compliance with § 330.63(a).

Subject to later discovery, GCLF does not object to the Wagners being designated as parties to a contested case hearing. GCLF prays that the hearing requests of any other

Requestors be denied, and that all other issues not be referred. GCLF further prays or any and all other relief to which it may show itself entitled.

Respectfully submitted,

**LLOYD GOSSELINK**
**ROCHELLE & TOWNSEND, P.C.**
816 Congress Ave., Suite 1900
Austin, Texas 78701
(512) 322-5800
(512) 472-0532 (Fax)

By: _____
DUNCAN C. NORTON
State Bar Number 15103950

JEFFREY S. REED
State Bar Number 24056187

**ATTORNEYS FOR NORTH TEXAS MUNICIPAL WATER DISTRICT**

**GALVESTON COUNTY LANDFILL TX, LP**
**DOCKET NO. 2014-1278-MSW; PERMIT NO. 1149B**
**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing Applicant's Response to Hearing Requests has been served on the following counsel/parties of record by electronic mail, certified mail (return receipt requested), regular U.S. Mail, facsimile transmission and/or hand delivery on this the 9th day of March, 2015.

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Duncan C. Norton

EXHIBIT 1

THE STATE OF TEXAS
COUNTY OF TRAVIS
I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF A TEXAS COMMISSION ON ENVIRONMENTAL QUALITY DOCUMENT, WHICH IS FILED IN THE PERMANENT RECORDS
MAR 09 2015
OF THE COMMISSION. GIVEN UNDER MY HAND AND THE SEAL OF OFFICE ON
BRIDGET C. BOHAC, CHIEF CLERK
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

# Technical Summary of the Galveston County Landfill MSW Permit Amendment Application No. 1149B

## Type I Municipal Solid Waste Facility Galveston County, Texas

## Applicant: Galveston County Landfill TX, LP

**Date Prepared: December 9, 2013**

By the
Municipal Solid Waste Permits Section
Office of Waste, Waste Permits Division
Texas Commission on Environmental Quality

This summary was prepared in accordance with Title 30 Texas Administrative Code Section 281.21(c). The information contained in this summary is based upon the permit application and has not been independently verified.

| | |
|---|---|
| Name of Applicant: | Galveston County Landfill TX, LP<br>3935 Avenue A<br>La Marque, TX 77510 |
| Name of Facility: | Galveston County Landfill |
| Contact Person: | Scott Trebus, P.E.<br>13630 Fondren Road<br>Houston, Texas 77085<br>(713)726-7506 |
| Consulting Engineer: | Jeffrey P. Young, P.E.<br>Weaver Boos Consultants<br>6420 Southwest Boulevard, Suite 206<br>Fort Worth, Texas 76109<br>(817)735-9770 |

## 1.0 GENERAL

### 1.1 Purpose:

The applicant has submitted this application requesting authorization for a major amendment to authorize the horizontal and vertical expansion of the municipal solid waste (MSW) landfill for the acceptance and disposal of authorized waste. The total permitted facility will include 469.5 acres of which approximately 333.9 acres will be used for waste disposal. The final elevation of the waste fill and final cover material will be 202.5 feet above mean sea level (msl).

### 1.2 Wastes to be Accepted:

Solid waste to be accepted will consist of MSW resulting from, or incidental to, municipal, community, commercial, institutional, recreational, and industrial activities, including garbage, putrescible wastes, rubbish, ashes, brush, street cleanings, dead animals, construction-demolition waste, and yard waste; Class 1 non-hazardous industrial waste; Class 2 non-hazardous industrial solid waste; Class 3 non-hazardous industrial solid waste; special waste; and other waste as approved by the executive director. The landfill will not be authorized to accept wastes other than the wastes mentioned above, and those waste streams that are expressly prohibited by 30 Texas Administrative Code (TAC) Chapter 330.

### 1.3 Waste Acceptance Rate and Site Life:

Authorized wastes will be accepted at an anticipated initial rate of approximately 1,203 tons per day and may increase to a maximum of approximately 2,113 tons per day. The estimated site life is approximately 49 years.

## 2.0 TECHNICAL REVIEW

This application has been technically reviewed by the MSW Permits Section to determine its compliance with the applicable requirements of 30 TAC Chapters 305 and 330. Chapter 330 contains the minimum regulatory criteria for municipal solid waste facilities. It has been determined that the information in the permit amendment application demonstrates compliance with these regulatory requirements. A draft permit has been prepared, and the application has been declared technically complete.

## 3.0 LOCATION AND SIZE

3.1 Location:

The Galveston County Landfill is located in Galveston County, Texas at 3935 Avenue A, in the cities of La Marque and Hitchcock, Texas.

3.2 Elevation and Coordinates of Permanent Benchmark:

Latitude: N 29° 23' 13.79"

Longitude: W 95° 03' 21.90"

Elevation: 14.35 feet above msl

3.3 Size:

The total permitted area of 397.5 acres is proposed to be increased by approximately 72 acres for a total permitted area of 469.5 acres. The disposal area is proposed to be increased by 31.3 acres for a total disposal area of 333.9 acres.

## 4.0 FACILITY DESIGN, CONSTRUCTION, AND OPERATION

4.1 Facilities Authorized:

The permit amendment will authorize the operation of a Type I municipal solid waste landfill with a total net disposal volume (waste, daily cover, and intermediate cover) of approximately 56.14 million cubic yards in addition to support structures and facilities as described in the permit amendment application and subject to the limitations contained in the permit and Commission rules.

The facility consists of the solid waste disposal area, liquid waste processing area, clean wood waste processing area, a site entrance with security fencing, a gatehouse, scales, a paved entrance road to the site, all-weather access roads, soil stockpiles, landfill gas monitoring and collection system, leachate collection system, and groundwater monitoring system. Structures for surface drainage and stormwater run-on/runoff control include a perimeter drainage system to convey stormwater runoff around the site, berms, ditches, detention ponds, and associated drainage structures.

4.2 Waste Placement:

The maximum elevation of waste placement will be approximately 199.5 feet above msl. The minimum elevation of waste placement will be approximately 30 feet below msl. The deepest excavation elevation for the liner and sumps is approximately 38 feet below msl.

4.3 Liner System

A liner system meeting the requirements of 30 TAC Chapter 330, Subchapter H will be constructed. It will consist of the following components (listed in order from top to bottom of liner system):

a. Class 1 industrial waste area:
- 24-inch protective cover soil layer
- Drainage geocomposite/leachate collection system
- 60-mil HDPE geomembrane
- 36-inch compacted clay layer (permeability $\leq 1 \times 10^{-7}$ cm/s)

b. Non-Class 1 industrial waste area:

- 24-inch protective cover soil layer
- Drainage geocomposite/leachate collection system
- 60-mil HDPE geomembrane
- Either 24-inch compacted clay layer (permeability $\leq 1 \times 10^{-7}$ cm/s) or a geosynthetic clay liner

A liner system will also be installed over the Pre-Subtitle D landfill area which will consist of:

- 24-inch protective cover soil layer
- Drainage geocomposite/leachate collection system
- 40-mil LLDPE geomembrane
- Geosynthetic clay liner

4.4 Final Cover System

The final cover system is designed to meet the requirements of 30 TAC Chapter 330, Subchapter K and will be placed on the above-grade waste. Two alternative designs are proposed for the Non-Class 1 waste areas, and one design is proposed for the Class 1 waste areas. Each cell or phase will be covered with a composite final cover consisting of the following components (listed in order from top to bottom):

a. Class 1 industrial waste area:

- 24-inch erosion layer with the top 6-inch layer capable of sustaining native plant growth
- Drainage geocomposite
- 40-mil LLDPE geomembrane
- 48-inch compacted clay infiltration layer (permeability $\leq 1 \times 10^{-7}$ cm/s)

b. Non-Class 1 industrial waste area (Alternative 1):

- 24-inch erosion layer with the top 6-inch layer capable of sustaining native plant growth
- Drainage geocomposite
- 40-mil LLDPE geomembrane
- 18-inch infiltration layer (permeability $\leq 1 \times 10^{-5}$ cm/s )

c. Non-Class 1 industrial waste area (Alternative 2):

- 24-inch erosion layer with the top 6-inch layer capable of sustaining native plant growth
- Drainage geocomposite
- 40-mil LLDPE geomembrane
- Geosynthetic clay liner

4.5 Leachate Collection System

The leachate collection system consists of a leachate collection layer (geocomposite drainage layer), leachate collection trenches, pipes, sumps, risers, and pumps. Leachate will be stored in six aboveground tanks with a combined capacity of 260,000 gallons, and will either be discharged to the sanitary sewer system for disposal, or recirculated at the landfill working face. The leachate collection system is designed to meet the requirements of 30 TAC Section (§) 330.333 and will be

placed on top of the liner system.

## 5.0 LAND USE

Land use in the vicinity of the site was evaluated in accordance with 30 TAC §330.61(h).

5.1 Zoning - The facility is located at 3935 Avenue A, in the Cities of La Marque and Hitchcock, Texas. The majority of the property within the City of La Marque is zoned I-2 (Industrial) with some property having no zoning. The property within the City of Hitchcock is zoned AR (Agricultural Residential). Because the landfill existed at the time zoning was established, both cities have issued letters that the landfill status is a legal non-conforming use.

5.2 Surrounding land uses - The surrounding land is used for commercial, residential, parks, school, churches, public utilities, and undeveloped property.

5.3 Residences and Businesses – Within one mile of the facility are 38 commercial establishments and 939 residences.

5.4 Schools, Churches, and Historical Sites - There are four churches, one school, and one cemetery within one mile of the permit boundary. There are three historical markers within one mile of the permit boundary. No historical sites were identified within the permit boundary.

5.5 Growth Trends – The facility is located within the incorporated limits of the City of La Marque and the City of Hitchcock, and continued growth of these municipalities can be anticipated.

## 6.0 LOCATION RESTRICTIONS

Location restrictions for municipal solid waste landfills are set forth in 30 TAC Chapter 330, Subchapter M.

6.1 Airport Safety:

The landfill is not located within a six-mile radius of any small general service airport runway end used by turbojet or piston-type aircraft or within a five-mile radius of any large general public commercial airport runway end used by turbojet or piston-type aircraft. The landfill is not located within 10,000 feet of any airport runway end used by turbojet aircraft or within 5,000 feet of any airport runway end used by only piston-type aircraft. The facility is considered to be in compliance with 30 TAC §330.545.

6.2 Floodplains:

The permit boundary is not located within a 100-year floodplain. The facility is considered to be in compliance with 30 TAC §330.547.

6.3 Wetlands:

There are no jurisdictional wetland areas within the permit boundary. The facility is considered to be in compliance with 30 TAC §330.553.

6.4 Fault Areas and Seismic Impact Zones:

There are no known faults within 200 feet of the site in accordance with 30 TAC §330.555. The facility is not located within a seismic impact zone as defined in 30 TAC §330.557. Therefore, the facility is considered to be in compliance with 30 TAC §330.555 and §330.557.

6.5 Unstable Areas:

Three potentially unstable areas, as defined in 30 TAC §330.559, were identified at the site. These areas are the natural soils below the landfill, the Pre-Subtitle D overliner foundation, and the final landfill cover soils. The application contains demonstrations that none of the above conditions will have an adverse effect on the integrity of the landfill liners and cover. The facility is considered to be in compliance with 30 TAC §330.559.

6.6 Protection of Endangered Species:

Correspondence with the United States Fish and Wildlife Service and the Texas Parks and Wildlife Department indicates that no impacts to threatened or endangered plant or animal species are expected from the proposed expansion and operation of this facility.

## 7.0 TRANSPORTATION AND ACCESS

The main public roadways providing access to the site are Avenue A and FM 1764. Avenue A is a two-lane asphalt paved road, and FM 1764 is a four-lane concrete paved road. There are no weight restrictions on these roads other than the legal limit of 80,000 pounds. Current landfill traffic volume is estimated at 365 trips per day. Projected landfill traffic volume is estimated at 427 trips per day in 2020, 543 trips per day in 2040, and 657 trips per day in 2058. This information is contained in the application and indicates that the access roads can sufficiently handle the current and anticipated future traffic volumes associated with this facility.

## 8.0 SURFACE WATER PROTECTION

As defined in 30 TAC §330.3, contaminated water is leachate, gas condensate, and water which has come into contact with waste. Stormwater which comes into contact with solid waste will be considered contaminated water. Temporary berms will be constructed to minimize the amount of surface water that comes in contact with the waste. Contaminated stormwater at the working face will be contained by run-on/run-off berms. Contaminated surface water will be collected and transported to a permitted wastewater treatment facility. Groundwater generated from monitor well purging will be managed as either leachate or contaminated water.

## 9.0 GROUNDWATER PROTECTION

9.1 Liner and Leachate Collection System:

The liner system and leachate collection system will provide protection of groundwater from contamination.

9.2 Monitoring Wells:

The groundwater monitoring system will consist of 16 wells which will provide for early detection of potential releases from the facility. The groundwater monitoring network will be sampled, analyzed, and monitored in accordance with the procedures in the Groundwater Sampling and Analysis Plan (Appendix IIIH of the Permit Amendment Application), which is part of the facility permit.

## 10.0 LANDFILL GAS MANAGEMENT

Landfill gas migration will be monitored around the perimeter of the facility utilizing permanent landfill gas monitoring probes. TCEQ regulations require that gas monitoring be conducted quarterly to detect any possible migration of methane gas beyond the facility property boundary and in enclosed structures within the facility property boundary. In addition, the facility operates an active landfill gas collection system to extract landfill gas from the waste disposal area.

## 11.0 SITE DEVELOPMENT PLAN AND SITE OPERATING PLAN

The Site Development Plan (SDP) is Part III of the permit application and sets forth the engineering design and other technical aspects of the facility. The Site Operating Plan (SOP) is Part IV of the permit application. The SOP provides operating procedures for the site management and the site operating personnel for the daily operation of the facility to maintain the facility in compliance with the engineering design and applicable regulatory requirements. These documents become part of the permit.

## 12.0 FINANCIAL ASSURANCE

Authorization to operate this facility is contingent upon the maintenance of financial assurance in accordance with 30 TAC Chapter 330, Subchapter L and Chapter 37 (Financial Assurance) for closure and post-closure care.

## 13.0 PUBLIC PARTICIPATION PROCESS

The public can participate in the final decision on the issuance of a permit as follows:

13.1 The TCEQ will hold a public meeting if the executive director determines that there is substantial public interest in the application or if requested by a local legislator. During this meeting the commission accepts formal comments on the application. There is also an informal question and answer period.

13.2 Technical review of the application is completed, a final draft permit is prepared, and the application is declared technically complete. Information for the application, the draft permit, the notice, and summaries are sent to the chief clerk's office for processing.

13.3 The "Notice of Application" is sent to the applicant and published in the newspaper. This notice provides a 30-day period, from the date of publication, for the public to make comment(s) about the application or draft permit. The notice also allows the public to request a public meeting for the proposed facility.

13.4 After the 30-day comment period has ended, a "Response to Comments" (RTC) is prepared for all comments received through the mail and at a public meeting. The RTC is then sent to all persons who commented on the application. Persons who receive the comments have a 30-day period after the RTC is mailed in which to request a public hearing.

13.5 After the 30-day period to request a hearing is complete, the matter is placed on an agenda meeting for the TCEQ commissioners to make a determination to grant any of the hearing requests and refer the matter to the State Office of Administrative Hearings for a public hearing.

13.6 A public hearing is a formal process in front of an Administrative Law Judge (ALJ) who conducts the hearing. The applicant and protestant party(ies) present witnesses and testimony to support or dispute information contained in the

application. When all of this is complete, the ALJ will issue a Proposal for Decision (PFD). This PFD is placed on an agenda meeting of the TCEQ commissioners for consideration of issuance or denial of a permit.

13.7 After the commission has approved or denied an application, a motion for rehearing may be made by a party that does not agree with the decision. Any motion for rehearing must be filed no later than 20 days after the party or the party's attorney of record is notified of the decision. The matter could be set on another agenda for consideration by the commission, or allowed to expire by operation of law.

13.8 Applications for which no one requests a contested case hearing are considered uncontested matters after the 30-day comment period. The application is placed on the executive director's signature docket and a permit is issued. Any motion to overturn the executive director's decision must be filed no later than 23 days after the agency mails notice of the signed permit.

## 14.0 ADDITIONAL INFORMATION

For information concerning the regulations covering this application, contact the MSW Permits Section:

Mr. Dwight C. Russell, P.E.
MSW Permits Section, MC 124
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711
(512) 239-5282

For more detailed technical information concerning any aspect of this application or to request a copy of the Site Development Plan, please contact the Consulting Engineer or the Applicant at the address provided at the beginning of this summary.

The application can be viewed on the internet at the following website address: http://www.tceq.texas.gov/permitting/waste_permits/msw_permits/msw_posted_apps.html

For information concerning the legal aspects of the hearing process, agency rules, and submitting public comments, please contact the Texas Commission on Environmental Quality's Office of the Public Interest Counsel at (512) 239-6363.

**EXHIBIT 2**

**TCEQ DOCKET NO. 2014-1278-MSW**

| | | |
|---|---|---|
| **APPLICATION BY** | § | **BEFORE THE** |
| | § | |
| **GALVESTON COUNTY LANDFILL** | § | **TEXAS COMMISSION ON** |
| | § | |
| **TX, LP FOR PERMIT NO. 1149B** | § | **ENVIRONMENTAL QUALITY** |

**AFFIDAVIT OF NEVZAT TURAN, P.E.**

State of Texas §
County of Tarrant §

Before me, the undersigned Notary Public in and for Tarrant County, Texas, personally appeared NEVZAT TURAN, P.E., the affiant, whose identity is known to me. After I administered an oath, affiant testified as follows:

1. My name is Nevzat Turan. I am over 18 years of age, of sound mind, and capable of making this affidavit. The facts in this affidavit are within my personal knowledge and are true and correct.

2. I am a licensed Professional Engineer in Texas and a Principal at Weaver Boos Consultants. My experience includes more than 17 years in the field of solid waste engineering.

3. I have prepared this Affidavit in support of Galveston County Landfill TX, LP's (GCLF) Response to Hearing Requests on GCLF's permit application for the expansion of the Galveston County Landfill (the "Project"). The Project is located approximately 1.5 miles southwest of the intersection of IH-45 and FM 1764 in Galveston County, Texas. On behalf of GCLF, Weaver Boos Consultants prepared the municipal solid waste permit application for the Project.

4. The purpose of the Project is to secure authorization for a vertical and horizontal expansion of the existing Galveston County Landfill. The existing 302.6-acre waste disposal area will be expanded by 31.3 acres within a proposed permit boundary of 469.5 acres. The resulting capacity increase is 33,140,000 cubic yards. This landfill expansion will provide for the long term disposal needs of Galveston County and surrounding areas.

5. I am the professional engineer responsible for the drainage and floodplain analyses for the project. The purpose of this affidavit is to address claims made by the commenters regarding floodplains.

**Claim No. 1 – The landfill is located in the 100-year floodplain.**

6. This claim is incorrect. The floodplain analysis included in the Major Permit Amendment application for the Project shows that the existing and proposed expansion solid waste disposal areas are not located in the 100-year floodplain and the Project complies with all applicable floodplain regulations. A detailed floodplain analysis was completed for the Project

that included a review of the effective FEMA Flood Insurance Rate Maps (FIRM), Flood Insurance Studies (FIS), and the latest regional floodplain analysis completed for Galveston County Drainage District (GCDD) No. 1, in July 2009. Excerpts from the Major Permit Amendment application summarizing the floodplain analysis are included in Exhibit 1-A. This analysis concluded that neither the current nor proposed waste disposal areas for the Galveston County Landfill are located in the 100-year floodplain as defined by FEMA or as indicated in the GCDD No. 1 regional analysis.

7. The effective FEMA 100-year floodplain for the Highland Bayou Diversion Channel (HBDC) near the site is shown in Figures 5.1 and 5.2 included in Exhibit 1-A. Per 44 Code of Federal Regulations (CFR) §65.1 and 42 U.S.C. 4104 FEMA is authorized to establish flood elevations and identify special flood hazard zones. As shown in Figure 5.2, the FEMA-defined 100-year floodplain is limited to within the banks of the Highland Bayou Diversion Channel (HBDC). Based on the FIRM and FIS for the cities of La Marque, Hitchcock, Santa Fe, and Galveston County unincorporated areas, the 100-year floodplain elevation in the HBDC is 12.0 ft-msl. The proposed perimeter berm elevations shown in Figure 5.2 are a minimum 15.0 ft-msl. In summary, the entire waste footprint (and landfill perimeter boundary) is located outside of the 100-year floodplain as defined by FEMA.

8. In July 2009, GCDD No. 1 completed a hydraulic and hydrologic analysis for a majority of the HBCD watershed, including the Project area. GCDD No. 1 is responsible for the construction and maintenance of canals, dams ditches, levees, creeks, and bayous within the district boundaries and has regulatory jurisdiction for development within the HBDC watershed near the landfill site. The 2009 analysis established flow rates and floodplain elevations in the HBDC and its tributaries. A Drainage Design Report for the proposed Galveston County Landfill expansion was submitted to and approved by GCDD No. 1. The floodplain elevations developed in the Drainage Design Report are shown in Figure 5.3, included in Exhibit 1-A. As shown on Figure 5.3, the proposed disposal area for the Galveston County Landfill is not located within the 100-year floodplain as determined by GCDD No. 1.

9. Per the above-discussed items, the existing and proposed waste disposal areas of the Galveston County Landfill are not located in the 100-year floodplain. Additionally, as concluded in Section 4 of Appendix I/IIC of the application, the proposed expansion of the Galveston County Landfill will not restrict the flow of the 100-year flood, reduce the temporary water stage capacity of the floodplain, or result in washout of solid waste, consistent with 30 TAC §330.63(c)(2) and §330.547.

**Claim No. 2 – The FEMA maps provided in the application are outdated.**

10. This claim is also incorrect. The only effective FEMA floodplain maps for the area are discussed above and included in Exhibit 1-A.

11. FEMA is currently in the process of updating the floodplain maps and FIS for the area; however, these maps and studies are not yet effective. FEMA is still reviewing the preliminary information, and no specific timetable is available for when the new maps and studies will become effective. At the conclusion of the review period, FEMA will issue a Letter of Final Determination for the preliminary data, and the new information will become effective six months after the Letter of Final Determination is issued. It should be noted that the preliminary floodplain elevation shown on the preliminary FIRM in the HBDC increases by

approximately one foot in the area around the Galveston County Landfill. As shown on Figure 5.2 in Exhibit 1-A, a potential increase in floodplain elevation of one foot will not overtop the perimeter berms, cause the proposed landfill to be located in the 100-year floodplain, restrict the flow of the 100-year flood, reduce the temporary water stage capacity of the floodplain, or result in washout of solid waste.

**Claim No. 3 – The landfill application did not account for potential storm surge.**

12. FEMA's effective floodplain elevations do incorporate the effects of storm surge.

13. Excerpts from the effective FIS for Santa Fe and La Marque are included in Exhibit 1-B. As noted in the effective FIS, FEMA incorporates storm surge potential into the determination for the 100-year floodplain elevation for areas subject to flooding from Galveston Bay. Commenters have suggested that the potential storm surge elevation near the Galveston County Landfill could be much higher than the 100-year floodplain elevations determined by FEMA. However, the hypothetical storm surge presented by the commenters ignores traditional methodology used to establish storm surge potential and has no applicable regulatory basis to the Project.

Nevzat Turan, P.E.

Sworn and subscribed before me by Nevzat Turan on March 6, 2015.

HELEN M HANSON
My Commission Expires
May 17, 2017

Helen M. Hanson
Notary Public in and for the State of Texas

My commission expires: 5/17/17



4678446.1

EXHIBIT 1-A

- April 7, 2010, GCDD No. 1 Approval Letter
- Excerpts from March 12, 2010 Drainage Design Report

# GALVESTON COUNTY
# DRAINAGE DISTRICT NUMBER ONE

3722 Ave J—P.O. Box 591—Santa Fe, TX 77517-0591—Office (409) 925-5402—Fax (409) 927-2493
GalCoDD1@aol.com—Galvestoncountydd1.org

D. W. WOSTAL, JR. – CHAIRMAN * DANIEL WOITENA – SECRETARY * KENNETH AFFOLTER – COMMISSIONER


April 7, 2010

Nevzat Turan, P.E.
Weaver Boos Consultants, LLC–Southwest
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109

RE: Landfill Expansion Drainage Design Report
Galveston County Landfill

Dear Mr. Turan:

Galveston County Drainage District Number 1 (GCDD1) has reviewed the drainage analysis included in the above referenced report which was submitted to our office on March 12, 2010. The report includes the drainage design for the expansion of the Galveston County Landfill. Based on our review of the Drainage Design Report, we have concluded that the proposed landfill expansion and associated drainage design are consistent with GCDD1's requirements and the landfill expansion does not significantly alter area drainage patterns or adversely affect downstream drainage structures.

Please call if you have any questions or need additional information.

Sincerely,
Galveston County Drainage District No. 1

D. W. Wostal Jr.
Chairman of Commissioner

# GALVESTON COUNTY LANDFILL
# TCEQ PERMIT NO. MSW-1149B
# GALVESTON COUNTY, TEXAS

## PROPOSED LANDFILL EXPANSION

## DRAINAGE DESIGN REPORT

Prepared for

Galveston County Landfill TX, LP

March 2010

STATE OF TEXAS
NEVZAT TURAN
84059
LICENSED
PROFESSIONAL ENGINEER

03-12-10

Prepared by

**Weaver Boos Consultants, LLC–Southwest**
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

Project No. 0120-437-11-48-08

# 5 FLOODPLAIN INFORMATION

The purpose of this section is to demonstrate that the proposed landfill expansion is not located in a FEMA delineated 100-year floodplain and the expansion will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in the washout of solid waste so as to pose a hazard to human health and the environment. Section 5.1 includes a discussion regarding the relationship between the landfill and the effective Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM). Section 5.2 includes a discussion of the 100-year floodplains that are associated with the HBDC and its two tributaries, Highland A, and Ditch 8. Section 5.3 includes a discussion of the 100-year water surface elevations located within the detention ponds and perimeter channels within the landfill permit boundary. This section also details how the drainage system prevents run-on onto the waste disposal area.

## 5.1 Effective FIRM Comparison

The FEMA FIRMs for the communities associated with the permit boundary are shown on Figure 5.1. Figure 5.2 has been developed using the FIRMs provided on Figure 5.1 and shows the FEMA 100-year floodplain overlain on a detailed site topographic map. As shown on Figure 5.2, the FEMA defined 100-year floodplain is limited to within the banks of the HBDC. The FIRM does not include Ditch 8 (east of the permit boundary) and Highland A (west of the permit boundary) which are two tributaries of the HBDC. Based on the FIRMs and Flood Insurance Study information for the cities of La Marque, Hitchcock, Santa Fe, and Galveston County unincorporated areas, the 100-year floodplain elevation in the HBDC is 12.0 ft-msl (based on NGVD 1929, 1978 adjustment datum). It should be noted that the floodplain is not delineated for the entire length of the HBDC, and the only information provided (as shown on Figure 5.1) is a note indicating the "100-year Flood Contained in Channel."

In summary, the entire waste footprint (and landfill permit boundary) is located outside of the 100-year floodplain as defined on the FIRMs. As shown on Figure 5.2, the proposed landfill perimeter berm is at elevation 15.0 ft-msl (minimum) and the FIRM 100-year flood elevation is at 12.0 ft-msl.

## 5.2 Additional Floodplain Determination

As noted previously, GCDD No. 1 authorized JKC & Associates, Inc. (JKC) to complete a hydrologic and hydraulic analysis for the Highland Bayou Diversion Channel

Watershed. JKC's report was completed in July 2009. This information has been used to further define the 100-year floodplain in the HBDC, Ditch 8, and Highland A in the vicinity of the Galveston County Landfill. The following three conditions were investigated to confirm that the solid waste disposal areas are protected from the 100-year floodplain.

(1) JKC 2009 Flood Study. For this condition, the 100-year floodplain elevations developed by JKC were reproduced on the site specific topographic map obtained from aerial information flown in January 2009.

(2) Proposed Expansion Condition (No Tailwater). In this case, the JKC hydrology model was updated to incorporate the revised hydrology developed for the landfill expansion case. This information was then used to revise the JKC hydraulic study of HBDC, Ditch 8, and Highland A. For this case, it was assumed that the discharge from the proposed detention ponds located within the permit boundary function under a free flowing or no tailwater condition.

(3) Proposed Expansion Condition (High Tailwater). This condition is similar to (2) above, except a high tailwater condition was assumed based on the FEMA delineated floodplain.

Each of these conditions is discussed in the following subsections.

### 5.2.1 JKC 2009 Flood Study

Figure 5-3 shows the 100-year floodplain in the HBDC, Ditch 8, and Highland A in the vicinity of the landfill. The limits of the floodplain shown on this figure were developed by plotting the results from the JKC July 2009 study on the site specific topography map. As noted on Figure 5.3, the JKC floodplain elevation was adjusted by 0.5 feet to account for the datum difference between the JKC study and the site specific topography map (refer to Section 2.4 for more information regarding the datum at the site).

As shown, the 100-year floodplain for HBDC, Ditch 8, and Highland A does not extend to the landfill and is continued within the banks of each channel. The hydrologic and hydraulic analysis included in the JKC report is reproduced in Appendix A as the existing condition drainage analysis.

### 5.2.2 Proposed Expansion Condition Floodplain Analysis (No Tailwater)

For this case, the 100-year floodplain was determined by updating the hydrologic analysis included in the JKC study to incorporate the proposed landfill expansion condition. This hydrologic analysis was previously discussed in Section 4 and the supporting information is included in Appendix C. This analysis assumes that the storm water discharges from the proposed ponds occur under free flow conditions to ensure that the pond outlet structure peak flow rates are not under estimated due to high tailwater conditions of the receiving water bodies (e.g., Highland A and Ditch 8). The discharge hydrographs shown in Section 4 were developed under this condition. In general, the no-tailwater condition results in higher discharge rates for low-flow outlets of the ponds; thus flow rates

estimated under this condition were used for the design of the low flow outlets of the proposed detention ponds.

The revised peak flow information for HBDC, Ditch 8, and Highland A was then used to update the JKC hydraulic model. The results are shown on Figure 5.4. Similar to the floodplain shown on Figure 5.3, the 100-year floodplain is contained with the banks of the HBDC, Ditch 8, and Highland A. In general, the floodplain elevations are 0.10 ft-msl to 0.30 ft-msl lower than the elevations shown on Figure 5.3. This is due to the reduced peak flow rates that occur when the hydrologic analysis was updated for the expansion case.

### 5.2.3 Proposed Expansion Condition Floodplain Analysis (High Tailwater)

This case is similar to the condition discussed in Section 5.2.2, except the hydraulic analysis was updated based on the assumption that the peak flows occur at a time in which the elevation in HBDC, Ditch 8, and Highland A are at their peak flood stage. This generally causes the peak flow rates to be reduced due to the downstream restriction in flow, but floodplain elevations are increased. The following subsections discuss the hydrologic and hydraulic analyses for this condition.

#### 5.2.3.1 Hydrologic Analysis

A separate hydrologic analysis has been developed to incorporate the high tailwater condition that could occur if the design storm occurs when HBDC is at its peak flood stage. The hydrologic analysis developed for this condition is included in Appendix D. Figure 5.5 shows the watershed delineation and results of the hydrologic study developed using the HEC-HMS model discussed in Section 4.4. In general, the flow rates for this condition (shown on Figure 5.5) are less than the peak flow rates shown on Figure 4.4 (which depict peak flows from the no tailwater condition).

#### 5.2.3.2 Hydraulic Analysis

The floodplain shown on Figure 5.6 has been developed using high tailwater conditions in the HBDC and its tributaries. The hydraulic analysis developed for this condition is included in Appendix D. This analysis has been developed to demonstrate that the on-site drainage structures will function as designed during the 100-year storm when storm surge elevations are assumed in the HBDC. To develop these "worst-case" tailwater conditions, the storm surge elevation included on the FEMA FIRM (i.e., 12.0 ft-msl) was used for the HBDC. The 100-year water surface elevations for the two HBDC tributaries were calculated using the JKC HEC-RAS model with the storm surge elevation (12.0 ft-msl) as the downstream hydraulic boundary condition for each tributary. The use of the FEMA defined water surface in the HBDC (instead of the 100-year water surface elevations calculated by JKC) results in higher 100-year water surface elevations within the HBDC and its tributaries. As shown on Figure 5.6, the 100-year floodplain elevations are approximately 1.7 ft-msl higher in the HBDC, 0.05 ft-msl to 0.35 ft-msl higher in Highland A, and 0.35 ft-msl to 1.50 ft-msl higher in Ditch 8 than the 100-year flood elevations shown on Figure 5.4.

## 5.3 100-Year Water Surface Elevations

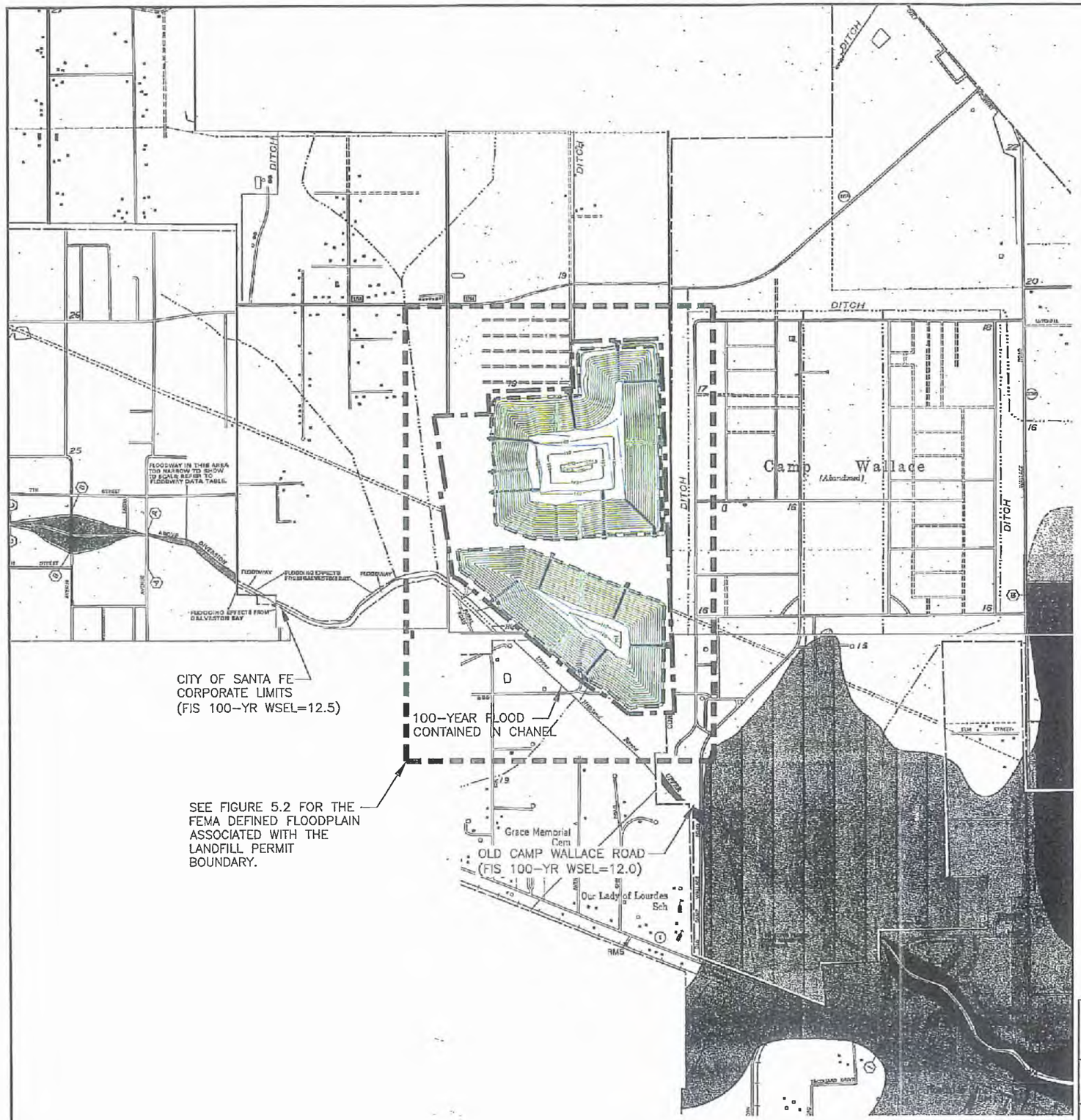
The purpose of this section is to demonstrate that the solid waste disposal areas at the site (i.e., the North and South Units) are protected from the 100-year water surface elevations. This analysis demonstrates that the detention ponds and perimeter channels have the capacity to convey stormwater produced by the 100-year storm event to the GCDD No. 1 channels without impacting the solid waste disposal area. The following subsections discuss the 100-year frequency water surface elevations within the permit boundary and in the HBDC and its tributaries under no tailwater and high tailwater conditions.

### 5.3.1 100-Year Water Surface Elevations (No Tailwater)

The 100-year frequency storm water surface for the on-site drainage structures was calculated to demonstrate that the waste disposal area will not be impacted from the 100-year frequency storm event. Figure 5.7 shows the 100-year water surface elevations within the on-site drainage structures and within the waterways around the landfill permit boundary. The 100-year water surface elevations shown on Figure 5.7 were developed using no tailwater conditions for the pond outlets (refer to Section 5.2.2 for a complete discussion regarding the no tailwater condition). The results of this study were also shown on the perimeter channel profiles included in Appendix C.

### 5.3.2 100-Year Water Surface Elevations (High Tailwater)

Figure 5.8 shows the 100-year frequency storm water surface elevations for the on-site drainage structures and the waterways around the landfill permit boundary for the high tailwater conditions (refer to Section 5.2.3 for a complete discussion regarding the high tailwater condition). The results of this study were also shown on the perimeter channel profiles included in Appendix D. As shown on Figures 5.8 and the perimeter channel profiles in Appendix D, 100-year water surface elevations for the drainage structures within the landfill permit boundary do not exceed the banks of the channels or the detention ponds. Therefore, the design of the drainage system protects the disposal areas from run-on during the 100-year storm event.




0 1000 2000
SCALE IN FEET

LEGEND

PROPOSED PERMIT BOUNDARY
LIMITS OF WASTE
PROPOSED FINAL CONTOUR

KEY TO MAP

500-Year Flood Boundary
100-Year Flood Boundary
FLOODWAY FRINGE
FLOODWAY
100-Year Flood Boundary
500-Year Flood Boundary
Approximate 100-Year Flood Boundary
Cross Section Line
Elevation Reference Mark RM7
River Mile

NOTES TO USER

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

This map was prepared to facilitate floodplain management activities only; it may not show all special flood hazard areas in the community or all planimetric features outside of the floodplain. Refer to the latest official Flood Insurance Rate Map for any additional areas of special flood hazard.

Floodway widths in some areas may be too narrow to show to scale. Refer to Floodway Data Table where floodway width is shown at 1/20 inch.

For adjoining map panels, see separately printed Index to Map Panels.

STATE OF TEXAS
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NOTE:

1. FLOODPLAIN AREAS REPRODUCED FROM FEMA FLOOD INSURANCE RATE MAP NUMBERS:
   4854700150 REVISED NOVEMBER 16,1990,
   4854790005 REVISED APRIL 4, 1983,
   4815620010 REVISED OCTOBER 18,1983,
   4854860015 REVISED FEBRUARY 16,1983,
   4854700155 REVISED MAY 2, 1983,
   4854700200 REVISED MAY 2, 1983, AND
   4854860005 REVISED FEBRUARY 16,1983.
2. FIS ELEVATIONS REPRODUCED FROM FLOOD INSURANCE STUDIES FOR COMMUNITY NUMBERS:
   485486 LA MARQUE, TEXAS AUGUST 16, 1982
   481562 SANTA FE, TEXAS APRIL 18, 1983

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CAD: 5.1-FLOODPLAIN.DWG

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REVIEWED BY: JPY

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PREPARED FOR
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# FEMA 100-YEAR FLOODPLAIN MAP

GALVESTON COUNTY LANDFILL
GALVESTON COUNTY, TEXAS

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GRIFFITH, IN SOUTH BEND, IN SPRINGFIELD, IL ST. LOUIS, MO

FIGURE 5.1

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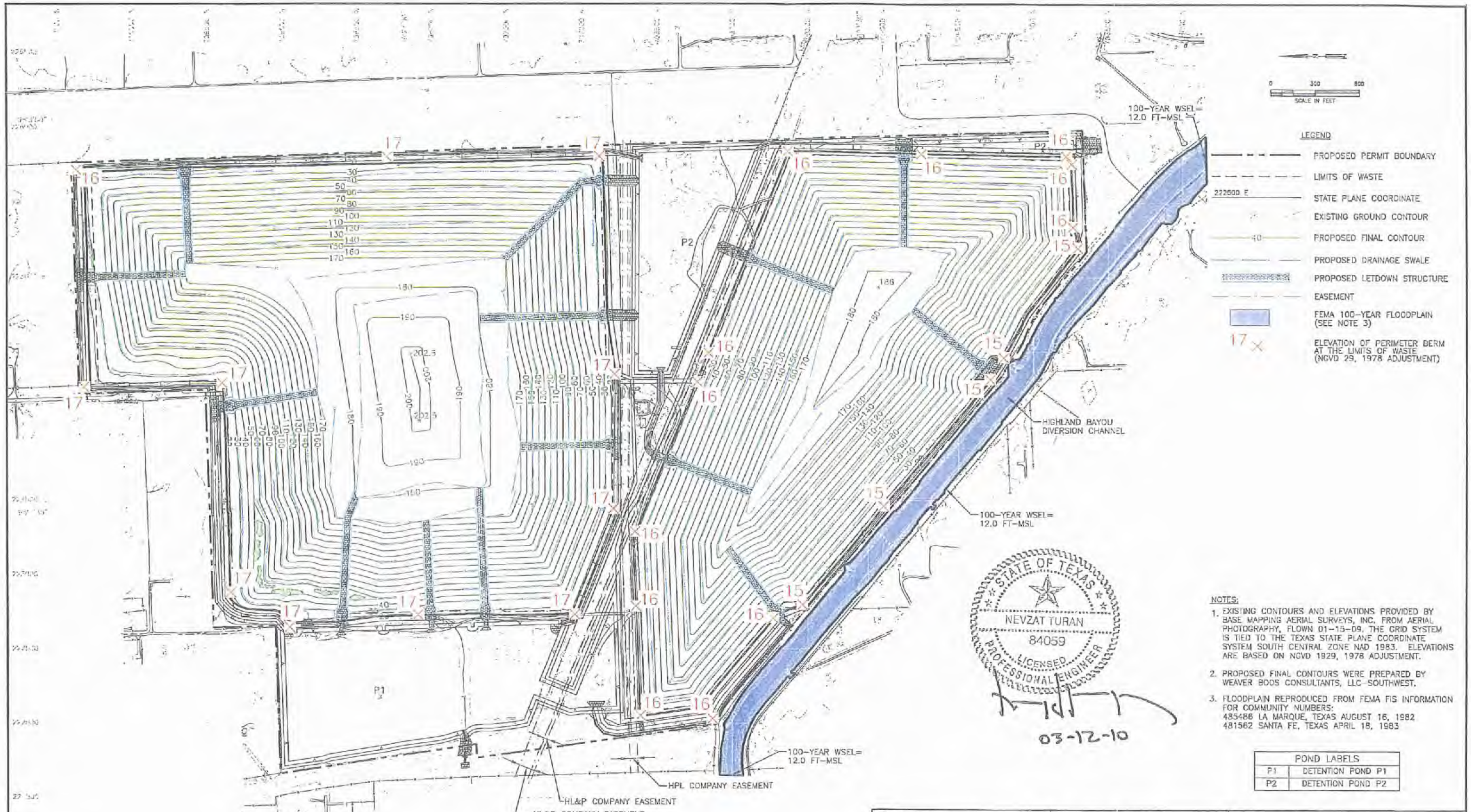
O:\0120\437\EXPANSION 2009\DRAINAGE REPORT-REVISED\FIG 5.1-FEMA FLOODPLAIN.dwg, jwilson, 1:2




NOTES:

1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY BASE MAPPING AERIAL SURVEYS, INC. FROM AERIAL PHOTOGRAPHY, FLOWN 01-18-09. THE GRID SYSTEM IS TIED TO THE TEXAS STATE PLANE COORDINATE SYSTEM SOUTH CENTRAL ZONE NAD 1983. ELEVATIONS ARE BASED ON NGVD 1929, 1978 ADJUSTMENT.
2. PROPOSED FINAL CONTOURS WERE PREPARED BY WEAVER BOOS CONSULTANTS, LLC-SOUTHWEST.
3. FLOODPLAIN REPRODUCED FROM FEMA FIS INFORMATION FOR COMMUNITY NUMBERS:
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   481562 SANTA FE, TEXAS APRIL 18, 1983

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FILE: 0120-437-11
CAD: 00 53-400-10 WA SURFACE ELEVAT

DRAWN BY: JDM
DESIGN BY: CRM
REVIEWED BY: JPY

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# 100-YEAR FEMA WATER SURFACE ELEVATIONS

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GALVESTON COUNTY, TEXAS

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FIGURE 5.2

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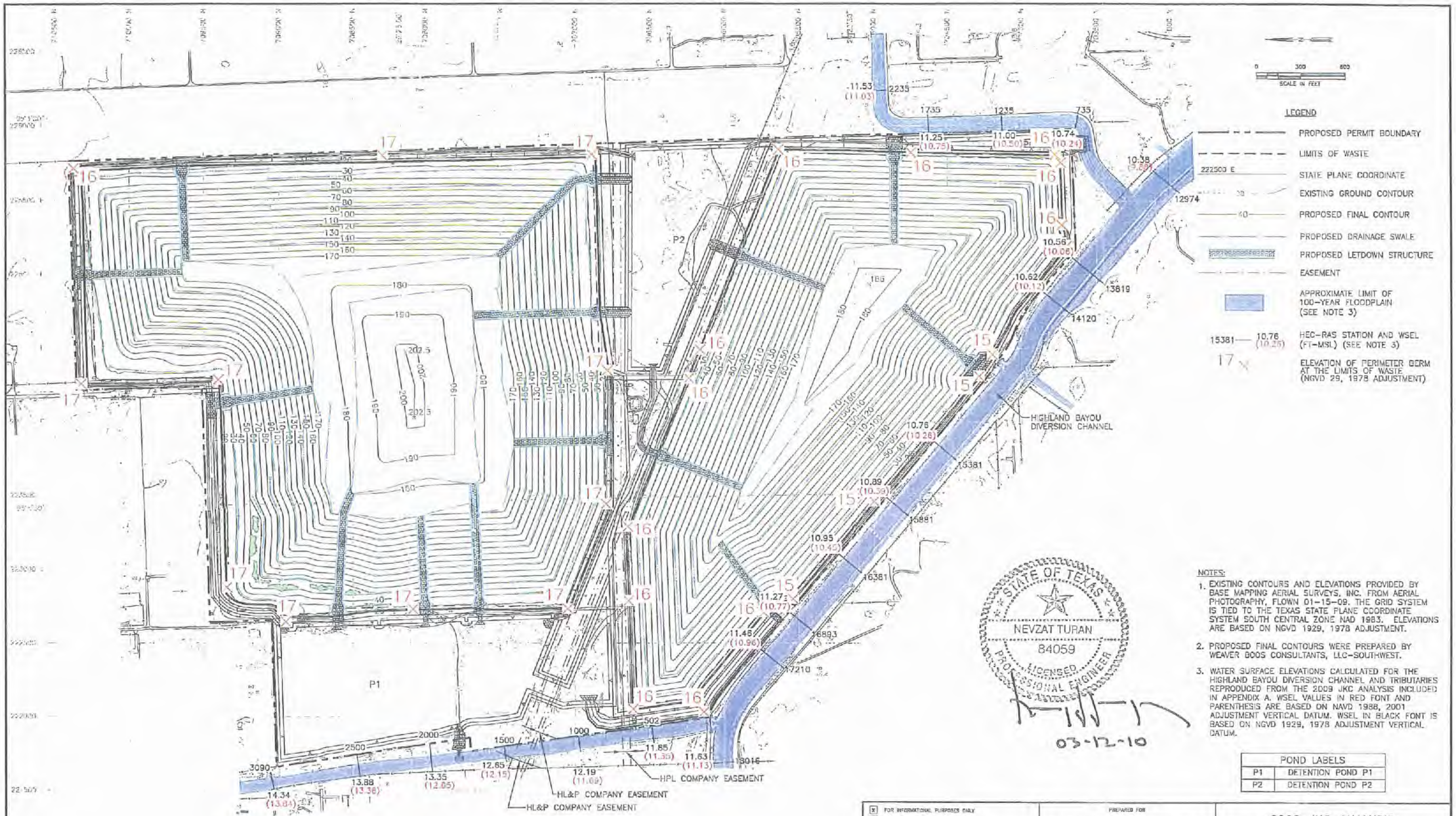
O:\0120\437\EXPANSION 2009\DRAINAGE REPORT-REVISED\FIG 5.2-100-YEAR WATER SURFACE ELEVATIONS.dwg, jwilson, 1:2




NOTES:

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2. PROPOSED FINAL CONTOURS WERE PREPARED BY WEAVER BOOS CONSULTANTS, LLC-SOUTHWEST.
3. WATER SURFACE ELEVATIONS CALCULATED FOR THE HIGHLAND BAYOU DIVERSION CHANNEL AND TRIBUTARIES REPRODUCED FROM THE 2009 JKC ANALYSIS INCLUDED IN APPENDIX A. WSEL VALUES IN RED FONT AND PARENTHESIS ARE BASED ON NAVD 1988, 2001 ADJUSTMENT VERTICAL DATUM. WSEL IN BLACK FONT IS BASED ON NGVD 1929, 1978 ADJUSTMENT VERTICAL DATUM.

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CAD: FIG 5.3-2009 JKC ANALYSIS.DWG

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# 2009 JKC ANALYSIS 100-YEAR FLOODPLAIN MAP

GALVESTON COUNTY LANDFILL
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FIGURE 5.3

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O:\0120\437\EXPANSION 2009\DRAINAGE REPORT-REVISED\FIG 5.3-2009 JKC ANALYSIS.dwg, jwilson, 1:2

0 300 600
SCALE IN FEET

LEGEND

- PROPOSED PERMIT BOUNDARY
- LIMITS OF WASTE
- 222500 E — STATE PLANE COORDINATE
- EXISTING GROUND CONTOUR
- PROPOSED FINAL CONTOUR
- PROPOSED DRAINAGE SWALE
- PROPOSED LETDOWN STRUCTURE
- EASEMENT
- APPROXIMATE LIMIT OF 100-YEAR FLOODPLAIN (SEE NOTE 3)
- 15381 — 10.49 (9.99) HEC-RAS STATION AND WSEL (FT-MSL) (SEE NOTE 3)
- 17 × ELEVATION OF PERIMETER BERM AT THE LIMITS OF WASTE (NGVD 29, 1978 ADJUSTMENT)

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3. WATER SURFACE ELEVATIONS CALCULATED FOR THE HIGHLAND BAYOU DIVERSION CHANNEL AND TRIBUTARIES REPRODUCED FROM THE 2009 JKC ANALYSIS INCLUDED IN APPENDIX A. WSEL VALUES IN RED FONT AND PARENTHESIS ARE BASED ON NAVD 1988, 2001 ADJUSTMENT VERTICAL DATUM. WSEL IN BLACK FONT IS BASED ON NGVD 1929, 1978 ADJUSTMENT VERTICAL DATUM.

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PROPOSED EXPANSION NO TAILWATER CONDITION 100-YEAR FLOODPLAIN MAP
GALVESTON COUNTY LANDFILL
GALVESTON COUNTY, TEXAS

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FIGURE 5.4

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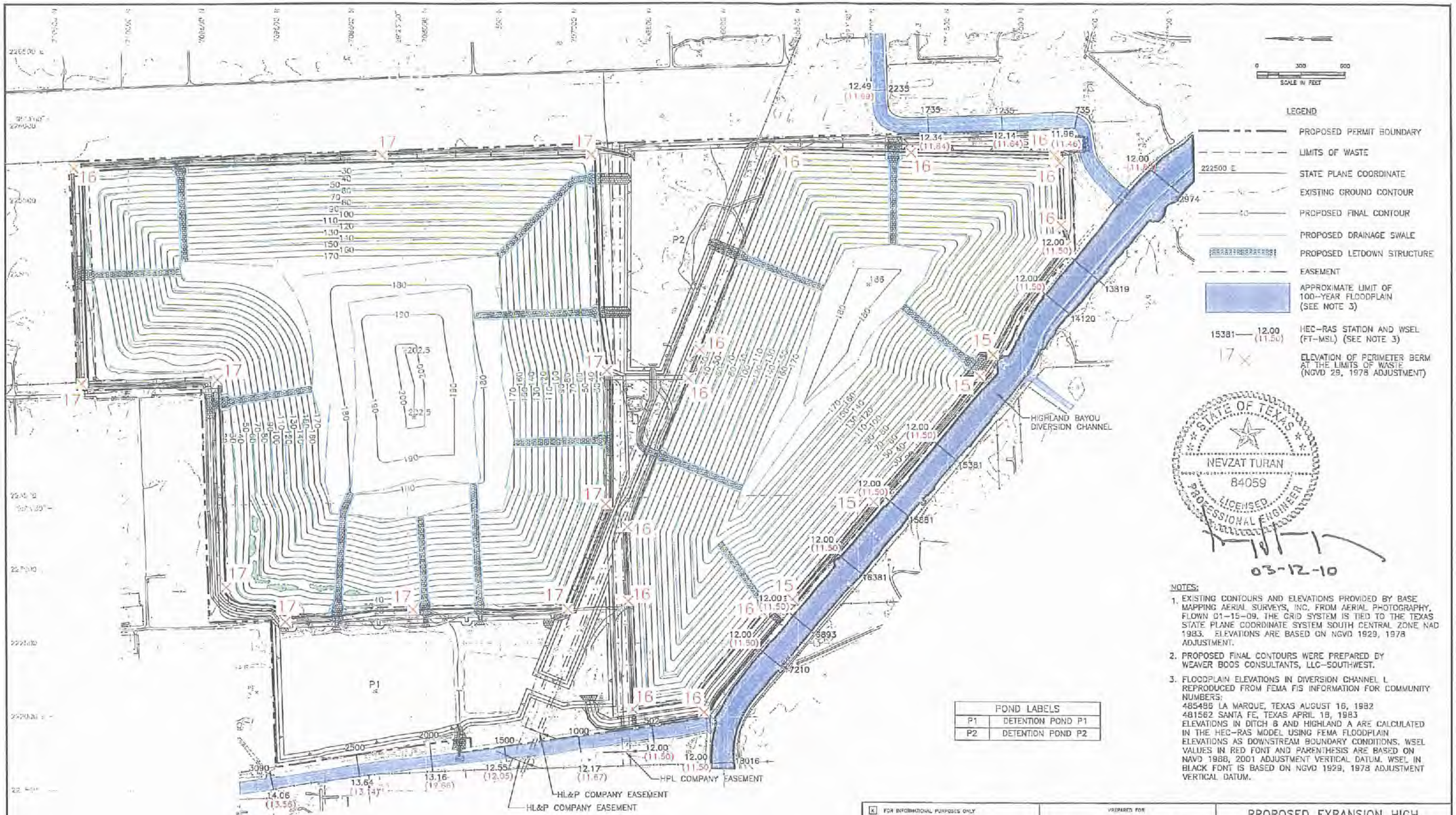
O:\0120\437\EXPANSION 2009\DRAINAGE REPORT-REVISED\FIG 5.4-FLOODPLAIN.dwg, jwilson, 1:2

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3. FLOODPLAIN ELEVATIONS IN DIVERSION CHANNEL L REPRODUCED FROM FEMA FIS INFORMATION FOR COMMUNITY NUMBERS:
   485486 LA MARQUE, TEXAS AUGUST 16, 1982
   481562 SANTA FE, TEXAS APRIL 18, 1983
   ELEVATIONS IN DITCH B AND HIGHLAND A ARE CALCULATED IN THE HEC-RAS MODEL USING FEMA FLOODPLAIN ELEVATIONS AS DOWNSTREAM BOUNDARY CONDITIONS. WSEL VALUES IN RED FONT AND PARENTHESIS ARE BASED ON NAVD 1988, 2001 ADJUSTMENT VERTICAL DATUM. WSEL IN BLACK FONT IS BASED ON NGVD 1929, 1978 ADJUSTMENT VERTICAL DATUM.

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CAD: FIG 5.6-100-YR WIR SURFACE ELEV.DWG

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REVIEWED BY: JPY

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PROPOSED EXPANSION HIGH TAILWATER CONDITION 100-YEAR FLOODPLAIN MAP
GALVESTON COUNTY LANDFILL
GALVESTON COUNTY, TEXAS

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SOUTH BEND, IN
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FIGURE 5.6

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O:\0120\437\EXPANSION 2009\DRAINAGE REPORT-REVISED\FIG 5.6-FLOODPLAIN 2.dwg, jwilson, 1:2

EXHIBIT 1-B

- Excerpts from effective FIS for Santa Fe and La Marque

# FLOOD INSURANCE STUDY

## CITY OF SANTA FE, TEXAS
### GALVESTON COUNTY

APRIL 18, 1983

Federal Emergency Management Agency

COMMUNITY NUMBER - 481562

of observed storms in the vicinity of Galveston County. Primary sources of data for this were the National Weather Service (References 12, 13, and 14); the National Hurricane Research Project (Reference 15); and the Monthly Weather Review (Reference 16). A summary of the parameters used for the Galveston County area is presented in Table 2.

A summary of drainage area-peak discharge relationships for each stream studied in detail is shown in Table 1, "Summary of Discharges".

TABLE 1 - SUMMARY OF DISCHARGES

| FLOODING SOURCE AND LOCATION | DRAINAGE AREA (sq. miles) | PEAK DISCHARGES (cfs) 10-YEAR | 50-YEAR | 100-YEAR | 500-YEAR |
|---|---|---|---|---|---|
| HIGHLAND BAYOU ABOVE DIVERSION DAM | | | | | |
| At Old Camp Wallace Road | 17.0 | 4,970 | 6,500 | 7,010 | 8,800 |

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of the flooding sources studied in detail in Santa Fe were carried out to provide estimates of the elevations of floods of the selected recurrence intervals along each of these flood sources.

For areas subject to flooding directly from the Gulf of Mexico/Galveston Bay, the Federal Emergency Management Agency's standard coastal surge model was used to simulate the coastal surge generated by any chosen storm (that is, any combination of the five storm parameters defined previously). Performing such simulations for a large number of storms, each of known total probability, permits one to establish the frequency distribution of surge height as a function of coastal location. These distributations incorporate the large scale surge behavior but do not include an analysis of the added effects associated with much finer scale wave phenomena such as wave height, setup, or runup. As the final step in the calculations, the astronomic tide for the region is statistically combine with the computer storm surge to yield recurrence intervals of total water level (Reference 17).

This model uses a grid pattern approximating the geographical features of the study area and the adjoining areas. Surges were computed using grids of 5 nautical miles for open coast computations and 1.5 miles for Galveston Bay computations.

Flood levels resulting from coastal flooding (surge) and from rainfall were determined independently of each other and combined statistically.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CENTRAL PRESSURE DEPRESSION (Millibars) | 5 | 15 | 25 | 35 | 45 | 55 | 65 | 75 | 85 | 95 | 105 |
| PROBABILITY: | | | | | | | | | | | |
| ENTERING | 16% | 16% | 17% | 10% | 14% | 7% | 8% | 7% | 2% | 2% | 1% |
| EXITING | | | | | | | | | | | |
| PARALLEL | | | | | | | | | | | |
| STORM RADIUS (Nautical Miles) | | | 20 | | | | | 35 | | | |
| PROBABILITY | | | 80% | | | | | 20% | | | |
| FORWARD SPEED (Knots) | | | 8 | | 14 | | | 20 | | | |
| PROBABILITY: | | | | | | | | | | | |
| ENTERING | | | 63% | | 28% | | | 9% | | | |
| EXITING | | | | | | | | | | | |
| PARALLEL | | | | | | | | | | | |
| CROSSING ANGLE (Degrees) | | | 21 | | -24 | | | -69 | | | |
| PROBABILITY | | | 29% | | 28% | | | 43% | | | |
| FREQUENCY OF OCCURRENCE | $1.99 \times 10^{-3}$ storms/nautical mile/year | | | | | | | | | | |

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

**CITY OF SANTA FE, TX**

**(GALVESTON CO.)**

**PARAMETER VALUES FOR SURGE ELEVATION COMPUTATIONS**

# FLOOD INSURANCE STUDY

## CITY OF LA MARQUE, TEXAS

### GALVESTON COUNTY

AUGUST 16, 1982

Federal Emergency Management Agency

COMMUNITY NUMBER - 485486

At neighboring Texas City, on Galveston Bay, earthen levees, concrete floodwalls, drainage and closure structures, tide control and navigation structures, and pump stations also serve to protect the La Marque area.

Nonstructural flood protection measures in La Marque consist of a Flood Damage Prevention Ordinanace effective July 28, 1978, and include the Master Flood Hazard Prevention Ordinanace effective April 28, 1978.

## 3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude which are expected to be equalled or exceeded once on the average during any 10-, 50-, 100-, and 500-year period (recurrence intervals), have been selected as having special significance for flood plain management and for flood insurance premium rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10, 2, 1, and 0.2 percent chance, respectively, of being equalled or exceeded during any year. Although the recurrence interval represents the long term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than one year are considered. For example, the risk of having a flood which equals or exceeds the 100-year flood (one percent chance of annual occurrence) in any 50 year period is about 40 percent (four in 10), and for any 90 year period, the risk increases to about 60 percent (six in 10). The analyses reported here reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

### 3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish peak discharge-frequency relationships for floods of the selected recurrence intervals for each flooding source studied in detail in the community.

The determination of coastal inundation caused by passage of a hurricane storm surge was approached by the Joint Probability Method (Reference 12). The storm populations were described by probability distributions of five parameters that influence surge heights. These were central pressure index (which measures the intensity of the storm), radius to maximum winds, forward speed of the storm, shoreline crossing point, and crossing angle. These characteristics were described statistically based on an analysis of observed storms in the vicinity of Galveston County. Primary sources of data for this were the National Weather Service (References 13, 14, and 15); the National Hurricane Research Project (Reference 16); and the Monthly Weather Review (Reference 17). A summary of the parameters used for the Galveston County area is presented in Table 1.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CENTRAL PRESSURE DEPRESSION (Millibars) | 5 | 15 | 25 | 35 | 45 | 55 | 65 | 75 | 85 | 95 | 105 |
| PROBABILITY: ENTERING EXITING PARALLEL | 16% | 16% | 17% | 10% | 14% | 7% | 8% | 7% | 2% | 2% | 1% |
| STORM RADIUS (Nautical Miles) | | | 20 | | | | | | 35 | | |
| PROBABILITY | | | 80% | | | | | | 2% | | |
| FORWARD SPEED (Knots) | | | 8 | | | 14 | | | 20 | | |
| PROBABILITY: ENTERING EXITING PARALLEL | | | 63% | | | 28% | | | 9% | | |
| CROSSING ANGLE (Degrees) | | | 21 | | | -24 | | | -69 | | |
| PROBABILITY | | | 29% | | | 28% | | | 43% | | |
| FREQUENCY OF OCCURRENCE | $1.99 \times 10^{-3}$ storms/nautical mile/year | | | | | | | | | | |

TABLE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

**CITY OF LA MARQUE, TX**

**(GALVESTON CO.)**

**PARAMETER VALUES FOR SURGE ELEVATION COMPUTATIONS**

**EXHIBIT 3**

**TCEQ DOCKET NO. 2014-1278-MSW**

| | | |
|---|---|---|
| **APPLICATION BY** | § | **BEFORE THE** |
| | § | |
| **GALVESTON COUNTY LANDFILL** | § | **TEXAS COMMISSION ON** |
| | § | |
| **TX, LP FOR PERMIT NO. 1149B** | § | **ENVIRONMENTAL QUALITY** |

**AFFIDAVIT OF JEFFREY P. YOUNG, P.E.**

State of Texas §
County of Tarrant §

Before me, the undersigned Notary Public in and for Tarrant County, Texas, personally appeared JEFFREY P. YOUNG, P.E., the affiant, whose identity is known to me. After I administered an oath, affiant testified as follows:

1. My name is Jeffrey P. Young. I am over 18 years of age, of sound mind, and capable of making this affidavit. The facts in this affidavit are within my personal knowledge and are true and correct.

2. I am a licensed Professional Engineer in Texas and a Principal at Weaver Boos Consultants. My experience includes more than 25 years in the field of solid waste engineering.

3. I have prepared this Affidavit in support of Galveston County Landfill TX, LP's (GCLF) Response to Hearing Requests on GCLF's permit application for the expansion of the Galveston County Landfill (the "Project"). The Project is located approximately 1.5 miles southwest of the intersection of IH-45 and FM 1764 in Galveston County, Texas. On behalf of GCLF, Weaver Boos Consultants prepared the municipal solid waste permit application for the Project.

4. The purpose of the Project is to secure authorization for a vertical and horizontal expansion of the existing Galveston County Landfill. The existing 302.6-acre waste disposal area will be expanded by 31.3 acres within a proposed permit boundary of 469.5 acres. The resulting capacity increase is 33,140,000 cubic yards. This landfill expansion will provide for the long term disposal needs of Galveston County and surrounding areas.

5. I am the engineer of record and the lead project manager for this Project. I directed the various tasks associated with the development of the major permit amendment application for the expansion of the landfill. The purpose of this Affidavit is to address claims made by the commenters regarding wetlands.

**Commenters claim that the landfill will have an impact on wetlands, and that the Applicant is required to make a demonstration that no practicable alternatives exist.**

6. As noted in the attached Exhibits, there are no Waters of the United States or wetlands within the proposed 469.5-acre permit boundary. Therefore, the Project will have no impact on wetlands.

7. Information on wetlands is provided in the application in Section 11.2 – Wetlands Statement and Appendix I/IIC – Location Restriction Demonstration of Parts I/II. As noted in the application, the area within the proposed expanded permit boundary of the Galveston County Landfill was evaluated for compliance with wetlands provisions, including the determination and identification requirements in 30 TAC §330.61(m)(2) and (3) and the wetlands location restriction in 30 TAC §330.553(b). The expanded landfill unit at the Galveston County Landfill will not be located in wetlands and development of the site will comply with the wetlands location restriction.

8. A jurisdictional determination was completed that covered the entire area within the Galveston County Landfill permit boundary. The jurisdictional determinations were completed as two separate submittals to the United States Army Corps of Engineers (USACE), and the USACE issued determination letters on November 19, 2009, and June 16, 2010. These determination letters are included in Exhibit 2-A to this affidavit. As noted in the USACE letters, the existing tracts that comprise the proposed 469.5-acre permit boundary for TCEQ Permit No. 1149B do not contain Waters of the United States. Therefore, the proposed landfill expansion project will not require Department of the Army authorization under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899.

9. Approximately 4.1 acres of non-jurisdictional wetlands were identified within the proposed expanded permit boundary and are shown on Figure I/II-11.4, included in Exhibit 2-B to this affidavit. No USACE permit is required for development of these 4.1 acres of non-jurisdictional wetlands area. The application notes the following regarding how this area will be developed.

> *"No USACE permit is required for development of these 4.1 acres of non jurisdictional wetlands. This 4.1-acre area is currently being developed as a soil borrow area. Development of the site will continue to include the use, reconfiguration, removal and/or relocation of, and the removal of water from and placement of soil in these and similar areas in advance of expansion of the landfill unit."*

To date, this 4.1-acre area has been developed consistent with the above text, even though this area is not within the current permit boundary for the Galveston County Landfill (TCEQ Permit No. 1149A). Exhibit 2-C to this affidavit provides a recent aerial photograph, dated January 15, 2015, that shows the current configuration of this area.

10. An update of the previously completed jurisdictional determination was completed in May 2014, and a determination letter was issued by the USACE on October 28, 2014. The

USACE determination letter and excerpts from the July 1, 2014 Jurisdictional Determination Update submittal are included in Exhibit 2-D to this affidavit. As with the previous determinations, this USACE letter confirms that the existing tracts that comprise the proposed 469.5-acre permit boundary for TCEQ Permit No. 1149B do not contain Waters of the United States. Therefore, the proposed expansion will not require Department of the Army authorization under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899.

11. Based on the above discussion and the information included in the attached Exhibits, there are no Waters of the United States or wetlands within the proposed 469.5-acre permit boundary.

Jeffrey P. Young, P.E.

Sworn and subscribed before me by Jeffrey P. Young on March 6, 2015.

HELEN M HANSON
My Commission Expires
May 17, 2017

Helen M. Hanson
Notary Public in and for the State of Texas

My commission expires: 5/17/17



4678446.1

EXHIBIT 2-A

- November 19, 2009, USACE Coordination Letter
- June 16, 2010, USACE Coordination Letter

**DEPARTMENT OF THE ARMY**
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON TX 77553-1229

November 19, 2009

Compliance Section

SUBJECT: **SWG-2009-00369;** Galveston County Landfill TX, LP, a 29-Acre Jurisdictional Determination, Proposed Construction for Phase V waste disposal cell for municipal solid waste, Galveston County, Texas.

Mr. Jeffrey P. Young
Weaver Boos Consultants, LLC - Southwest
6402 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109

Dear Mr. Young:

In response to your request, received March 26, 2009 and subsequent modification to the request on May 5, 2009, on behalf of the Galveston County Landfill TX, LP, we determined that the two tracts totaling 29-acres do not contain waters of the United States. Therefore, it is not subject to Section 10 of the Rivers and Harbors Act or Section 404 of the Clean Water Act and the discharge of fill material on the tract does not require a Department of the Army permit. These tracts (project boundaries defined in map attached) is located at the Galveston County Landfill, approximately 1.5 miles west of the intersection of Interstate Highway 45 and Farm-to-Market Road 1764 in Hitchcock, Galveston County, Texas.

This determination has been conducted to identify the limits of the Corps' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

This letter contains an approved jurisdictional determination for your subject site, which is valid for 5 years from the date of this letter unless new information warrants a revision prior to the expiration date. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeals Process (NAP) fact sheet and Request for Appeal (RFA) form.

If you request to appeal this determination, you must submit a completed RFA form to the Southwest Division Office at the following address:

Mr. James Gilmore
Appeal Review Officer, CESWD-ETO-R
U.S. Army Corps of Engineer Division, Southwestern
1100 Commerce Street, Suite 831
Dallas, Texas 75242-1317
Telephone: 469-487-7061; FAX: 469-487-7190

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete; that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within **60 days** of the date of the NAP. It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter. If you have any questions concerning this jurisdictional determination, please reference file number **SWG-2009-00369** and contact Ms. Kara Vick at the letterhead address or by telephone at 409-766-3133 or email at kara.vick@usace.army.mil.

To assist us in improving our service to you, please complete the survey found at http://per2.nwp.usace.army.mil/survey.html and/or, if you would prefer a hard copy the survey form, please let us know, and one will be mailed to you.

Sincerely,

Kenny Jaynes
Chief, Compliance Section

Enclosures

Copy Furnished

Mr. Zane N. Homesley
Goshawk Environmental Consulting, Inc.
P.O. Box 151525
Austin, Texas 78715

**DEPARTMENT OF THE ARMY**
**GALVESTON DISTRICT, CORPS OF ENGINEERS**
**P. O. BOX 1229**
**GALVESTON TX 77553-1229**

June 16, 2010

Compliance Section

SUBJECT: **SWG-2009-00369;** Galveston County Landfill TX, LP, Jurisdictional Determination, 470 Acres, Galveston County, Texas.

Mr. Zane N. Homesley
Goshawk Environmental Consulting, Inc.
P.O. Box 151525
Austin, Texas 78715

Dear Mr. Homesley:

In response to your request received January 15, 2009, on behalf of the Galveston County Landfill TX, LP, we determined that the five tracts (North, Northeast, South, Southeast, and West Tracts) totaling 470 acres do not contain waters of the United States. Therefore, the tracts are not subject to Section 10 of the Rivers and Harbors Act or Section 404 of the Clean Water Act and the discharge of fill material on the tract does not require a Department of the Army permit. These tracts (project boundaries defined in map attached) are located at the Galveston County Landfill, approximately 1.5 miles west of the intersection of Interstate Highway 45 and Farm-to-Market Road 1764 in Hitchcock, Galveston County, Texas.

This determination has been conducted to identify the limits of the Corps' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

This letter contains an approved jurisdictional determination for your subject site, which is valid for 5 years from the date of this letter unless new information warrants a revision prior to the expiration date. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeals Process (NAP) fact sheet and Request for Appeal (RFA) form.

If you request to appeal this determination, you must submit a completed RFA form to the Southwest Division Office at the following address:

Mr. Elliott Carman
Appeal Review Officer, CESWD-ETO-R
U.S. Army Corps of Engineers, Suite 831
Dallas, Texas 75242-1731
Telephone: 469-487-7061; FAX: 469-487-7190

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete; that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within **60 days** of the date of the NAP. It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter. If you have any questions concerning this jurisdictional determination, please reference file number **SWG-2009-00369** and contact Ms. Kara Vick at the letterhead address or by telephone at 409-766-3133 or email at kara.vick@usace.army.mil.

To assist us in improving our service to you, please complete the survey found at http://per2.nwp.usace.army.mil/survey.html and/or, if you would prefer a hard copy the survey form, please let us know, and one will be mailed to you.

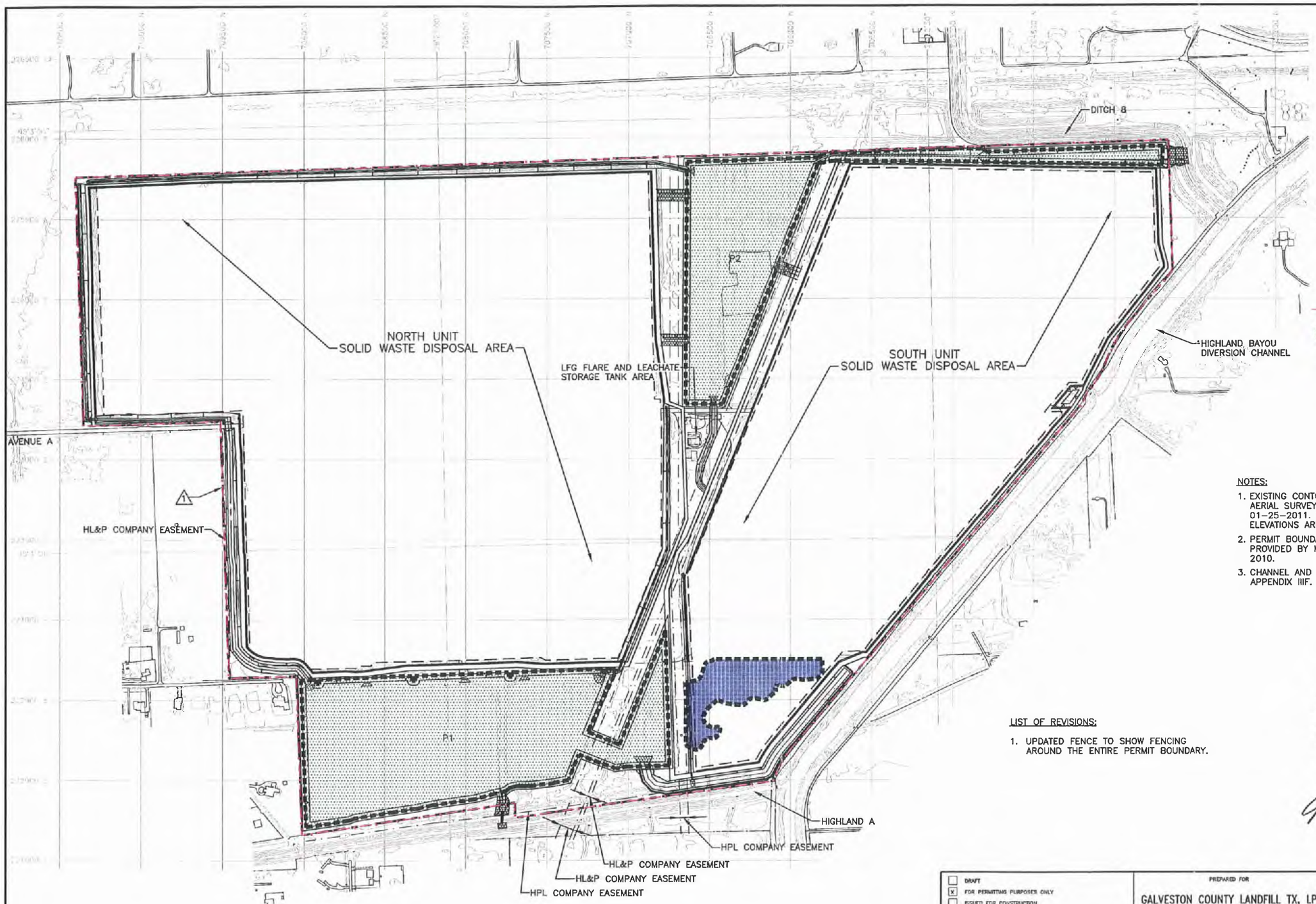
Sincerely,

John Davidson
Team Lead

Enclosures

EXHIBIT 2-B

- Figure I/II-11.4




0 300 600
SCALE IN FEET

LEGEND

- PERMIT BOUNDARY (SEE NOTE 2)
- LIMIT OF WASTE
- SITE GRID
- GEODETIC GRID
- EXISTING GROUND CONTOUR
- EASEMENT
- FENCE
- 4.1 ACRE NON-JURISDICTIONAL ISOLATED WETLAND
- 59 ACRES THAT WILL FUNCTION SIMILAR TO A WETLAND
- 1 INDICATES REVISION (SEE LIST OF REVISIONS)

NOTES:

1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY HENDERSON AERIAL SURVEYS, INC. FROM AERIAL PHOTOGRAPHY FLOWN 01-25-2011. THE GRID SYSTEM IS BASED ON A SITE GRID SYSTEM. ELEVATIONS ARE BASED ON NGVD 1929, 1978 ADJUSTMENT.
2. PERMIT BOUNDARY WAS REPRODUCED FROM LEGAL DESCRIPTION PROVIDED BY MARTIN SURVEY ASSOCIATES, INC., DATED MARCH 2010.
3. CHANNEL AND DETENTION POND INFORMATION PROVIDED IN APPENDIX IIIF.

LIST OF REVISIONS:

1. UPDATED FENCE TO SHOW FENCING AROUND THE ENTIRE PERMIT BOUNDARY.

STATE OF TEXAS
JEFFREY P. YOUNG
79809
LICENSED
PROFESSIONAL ENGINEER

6-12-13

- [ ] DRAFT
- [x] FOR PERMITTING PURPOSES ONLY
- [ ] ISSUED FOR CONSTRUCTION
- [ ] CLIENT APPROVAL BY:

DATE: 06/2012
FILE: 0120-437-11
CAD: 11.4-WETLAND LOCATION.DWG

DRAWN BY: JDW
DESIGN BY: KDO
REVIEWED BY: JPY

REUSE OF DOCUMENTS

THIS DOCUMENT, AND THE DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF GALVESTON COUNTY LANDFILL TX, LP AND IS NOT TO BE USED IN WHOLE OR IN PART, WITHOUT THE WRITTEN AUTHORIZATION OF GALVESTON COUNTY LANDFILL TX, LP.

PREPARED FOR

GALVESTON COUNTY LANDFILL TX, LP

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 05/2013 | SEE LIST OF REVISIONS |

# MAJOR PERMIT AMENDMENT WETLAND MITIGATION AREA

GALVESTON COUNTY LANDFILL
GALVESTON COUNTY, TEXAS

Weaver Boos Consultants
TBPE REGISTRATION NO. F-3727

CHICAGO, IL NAPERVILLE, IL COLUMBUS, OH DENVER, CO
FORT WORTH, TX (817) 735-9770
GRIFFITH, IN SOUTH BEND, IN SPRINGFIELD, IL ST. LOUIS, MO

FIGURE I/II-11.4

COPYRIGHT © 2012 GALVESTON COUNTY LANDFILL TX, LP. ALL RIGHTS RESERVED.

G:\0120\437\EXPANSION 2012\PARTS I-II\11.4-WETLAND LOCATION.dwg, jwilson, 1:2

EXHIBIT 2-C

- Figure 1 – Aerial Photograph

0 200 400
SCALE IN FEET

LEGEND

EXISTING SITE BOUNDARY (TCEQ PERMIT NO. 1149A)

PROPOSED PERMIT BOUNDARY (TCEQ PERMIT NO. 1149B)

PROPOSED LIMIT OF WASTE

NOTE:

1. AERIAL PHOTOGRAPH PROVIDED BY COOPER AERIAL SURVEYS, CO. FLOWN ON 01-16-2015.
2. THE EXISTING SITE BOUNDARY WAS DEVELOPED FROM INFORMATION INCLUDED IN THE MAY 1987 AMENDMENT APPLICATION PREPARED BY RABA-KISTNER CONSULTANTS, INC.
3. PROPOSED PERMIT BOUNDARY WAS REPRODUCED FROM LEGAL DESCRIPTION PROVIDED BY MARTIN SURVEY ASSOCIATES, INC., DATED MARCH 2010.

[X] FOR INFORMATIONAL PURPOSES ONLY
[ ] FOR PERMITTING PURPOSES ONLY
[ ] ISSUED FOR CONSTRUCTION
[ ] CLIENT APPROVAL BY:

DATE: 03/2015
FILE: 0120-437-11
CAD: AERIAL PHOTOGRAPH.DWG

DRAWN BY: SRF
DESIGN BY: KDG
REVIEWED BY: JPY

REUSE OF DOCUMENTS

THIS DOCUMENT, AND THE DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF GALVESTON COUNTY LANDFILL TX, LP AND IS NOT TO BE USED IN WHOLE OR IN PART, WITHOUT THE WRITTEN AUTHORIZATION OF GALVESTON COUNTY LANDFILL TX, LP.

PREPARED FOR

GALVESTON COUNTY LANDFILL TX, LP

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

AERIAL PHOTOGRAPH

GALVESTON COUNTY LANDFILL
GALVESTON COUNTY, TEXAS

Weaver Boos Consultants
TBPE REGISTRATION NO. F-3727

WWW.WEAVERBOOS.COM

FIGURE 1

COPYRIGHT © 2015 GALVESTON COUNTY LANDFILL TX, LP. ALL RIGHTS RESERVED.

P:\Solid waste\Allied\Galveston County\Expansion 2012\Affidavits\AERIAL-REV.dwg, 3/6/2015 2:30:17 PM, jwilson

# EXHIBIT 2-D

2014 USACE Coordination

- October 28, 2014, USACE Coordination Letter
- Excerpts from July 1, 2014, Jurisdictional Determination Update

**DEPARTMENT OF THE ARMY**
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON TX 77553-1229

October 28, 2014

Compliance Branch

SUBJECT: **SWG-2009-00369**; Galveston County Landfill TX, LP, Jurisdictional Determination, 470 Acres, Galveston County, Texas.

Kyle Gould, P.E.
Weaver Boos Consultants, LLC - Southwest
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109

Dear Mr. Gould:

This is in response to your July 1, 2014 request for a jurisdictional determination on behalf of the Galveston County Landfill TX, LP, for a 470-acre tract of land. This property is located approximately 1.5 miles west of the intersection of Interstate Highway 45 and Farm-to-Market 1764 in Galveston County, La Marque, Texas (map enclosed).

Historically, a jurisdictional determination was performed by the Corps of Engineers on this tract in November 2009 and June 2010. This determination concluded that wetlands are on this tract, however, they are isolated and are not subject to federal jurisdiction under Section 404 of the Clean Water Act. Based upon our October 2014 desk review of the subject tract; we have determined that there is not any new information to alter the previous determination nor have any environmental conditions or regulations altered such that would warrant revision to this previous determination. As such, our determination that there are not any waters of the United States subject to Section 404 of the Clean Water remains valid. Therefore, a Department of the Army Permit is not required for any discharge of dredged and/or fill material onto this 470-acre tract.

This determination has been conducted to identify the limits of the Corps' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

This letter contains an approved jurisdictional determination for your subject site, which is valid for 5 years from the date of this letter unless new information warrants a revision prior to the expiration date. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeals Process (NAP) fact sheet and Request for Appeal (RFA) form.

If you request to appeal this determination, you must submit a completed RFA form to the Southwest Division Office at the following address:

Mr. Elliott Carman
Appeal Review Officer, CESWD-PD-O
U.S. Army Corps of Engineer Division,
Southwestern
1100 Commerce Street, Room 831
Dallas, Texas 75242-1731
Telephone: 469-487-7061; FAX: 469-487-7190

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete; that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within **60 days** of the date of the NAP. It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter.

If you have any questions concerning this jurisdictional determination, please reference file number **SWG-2009-00369** and contact Ms. Kara Vick at the letterhead address or by telephone at 409-766-3133. To assist us in improving our service to you, please complete the survey found at http://per2.nwp.usace.army.mil/survey.html and/or, if you would prefer a hard copy of the survey form, please let us know, and one will be mailed to you.

Sincerely,

Kenny Jaynes
Chief, Compliance Branch

Enclosure

WEAVER
BOOS
CONSULTANTS
LLC
SOUTHWEST

*6420 SOUTHWEST BLVD, SUITE 206*
*FORT WORTH, TEXAS 76109*
*PHONE: 817.735.9770*
*FAX: 817.735.9775*
*www.weaverboos.com*

*Chicago, IL*
*Naperville, IL*
*South Bend, IN*
*Griffith, IN*
*St. Louis, MO*
*Springfield, MO*
*Kansas City, MO*
*Columbus, OH*
*Denver, CO*
*Fort Worth, TX*
*Clermont, FL*
*Grand Rapids, MI*

July 1, 2014
Project No. 0120-437-11-86-04

John Davidson
U.S. Army Engineer District – Galveston
Regulatory Branch – CESWG-PE-R
P.O. Box 1229
Galveston, Texas 77553-1229

Re: Jurisdictional Determination Update
Galveston County Landfill
SWG-2009-00369
Galveston County, Texas

Dear Mr. Davidson:

The purpose of this letter, prepared on behalf of Galveston County Landfill TX, LP (GCLF), is to request that the United States Army Corps of Engineers (USACE) update the jurisdictional determinations issued on November 19, 2009, and June 16, 2010, for the referenced project. These determinations are set to expire on November 19, 2014, and June 16, 2015, respectively. GCLF completed a supplemental preliminary jurisdictional determination for the site in May 2014. It is requested that the USACE update its determination based on the information included in the May 2014 report. To facilitate your review, we have attached the following information.

- Attachment 1 – Jurisdictional Determination Tract Locations. This attachment includes a figure depicting the previous determination tract locations.
- Attachment 2 – Previous USACE Correspondence. This attachment includes the original jurisdictional determinations and requests for review.
- Attachment 3 – Landfill Expansion Site Plans. This attachment includes a general site location plan and a landfill completion plan comparison.
- Attachment 4 – May 2014 Preliminary Section 404 Jurisdictional Determination. This attachment includes a preliminary jurisdictional determination performed by Goshawk Environmental Consulting, Inc.

Given that a previous jurisdictional determination has been made at this site and no substantial change in the site's condition has occurred (refer to the third paragraph in the Current Site Conditions subsection) that would affect the previous jurisdictional determinations, it is requested that the USACE confirm that the May 2014 preliminary jurisdictional determination is valid. To further facilitate the USACE's review, the

following subsections discuss the current site condition and the proposed further development of the landfill.

**Current Site Information**

The Galveston County Landfill is located southwest of the intersection of Interstate Highway IH-45 and FM 1764 in Santa Fe, Texas. The site location is shown on Drawing 1 (Attachment 3). As shown on Drawing 1, the landfill is located south of FM 1764 on Avenue A.

A jurisdictional determination for an area of 29 acres was completed on March 2, 2009, by Goshawk Environmental Consultants, Inc. (Goshawk), and approved by the USACE on November 19, 2009 (refer to Attachment 2 for more information). Jurisdictional determinations for the remaining portion of the site (440.6 acres) were completed as five different tracts and submitted under the same cover letter on January 12, 2010. The USACE approved these determinations on June 16, 2010 (refer to Attachment 2 for more information). Based on these determinations, the proposed expansion would not require Department of the Army authorization under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Refer to Attachment 1 for a figure depicting the location of the tracts.

As detailed in the May 2014 Preliminary Section 404 Jurisdictional Determination and prepared by Goshawk (Attachment 4), most of the landfill has been cleared, built on, developed for waste disposal or sedimentation ponds, or filled. The only changes at the facility include (1) the partial clearing of a wooded, upland corridor in the central portion of the site for landfill operations, (2) the partial clearing of a woodland area in the southwest corner of the site for monitoring efforts and soil storage, and (3) the development of approximately 36 acres for waste disposal in the southeast portion of the site. Based on Goshawk's field reconnaissance, there are no potential wetlands or other "Waters of the US" at the site.

**Proposed Landfill Expansion Information**

The proposed landfill expansion will increase the landfill's permit boundary from 397.5 acres to 469.5 acres (72 acres) and the waste disposal area from 302.6 acres to 333.9 (31.3) acres. Drawing 2 in Attachment 3 provides a comparison of the currently permitted and proposed expansion completion plans. The proposed expansion will also provide an expanded stormwater management system.

Based on a review of current site conditions and the May 2014 Goshawk Preliminary Section 404 Jurisdictional Determination, we believe that there are no potential wetlands or other "Waters of the US" at the facility.

If you have any questions or require further information, please call.

Sincerely,
**Weaver Boos Consultants, LLC--Southwest**

Kyle D. Gould, P.E.
Senior Project Engineer

Attachments: Attachment 1 – Jurisdictional Determination Tract Locations
Attachment 2 – Previous USACE Correspondence
Attachment 3 – Landfill Expansion Site Plans
Attachment 4 – May 2014 Preliminary Section 404 Jurisdictional Determination

cc: Scott A. Trebus, Galveston County Landfill TX, LP
Burgess Stengl, Galveston County Landfill TX, LP

**EXHIBIT 4**

The TCEQ is committed to accessibility.
To request a more accessible version of this report, please contact the TCEQ Help Desk at (512) 239-4357.

# Compliance History Report

**PENDING** Compliance History Report for CN601587355, RN100221597, Rating Year 2013 which includes Compliance History (CH) components from September 1, 2008, through August 31, 2013.

| | | | |
|---|---|---|---|
| **Customer, Respondent, or Owner/Operator:** | CN601587355, Galveston County Landfill TX, LP | **Classification:** HIGH | **Rating:** 0.00 |
| **Regulated Entity:** | RN100221597, GALVESTON COUNTY LANDFILL | **Classification:** HIGH | **Rating:** 0.00 |
| **Complexity Points:** | 14 | **Repeat Violator:** NO | |
| **CH Group:** | 07 - Solid Waste Landfills | | |
| **Location:** | 3935 AVENUE A ALTA LOMA, TX 77510-8045, GALVESTON COUNTY | | |
| **TCEQ Region:** | REGION 12 - HOUSTON | | |

**ID Number(s):**

**AIR OPERATING PERMITS** ACCOUNT NUMBER GB0270L
**AIR OPERATING PERMITS** PERMIT 1455
**PETROLEUM STORAGE TANK REGISTRATION** REGISTRATION 52757
**AIR NEW SOURCE PERMITS** ACCOUNT NUMBER GB0270L
**AIR NEW SOURCE PERMITS** AFS NUM 4816700124
**AIR NEW SOURCE PERMITS** REGISTRATION 80952
**MUNICIPAL SOLID WASTE DISPOSAL** PERMIT 1149A
**MUNICIPAL SOLID WASTE DISPOSAL** PERMIT 1149B
**STORMWATER** PERMIT TXR05AL33
**STORMWATER** PERMIT TXR15XM12
**AIR EMISSIONS INVENTORY** ACCOUNT NUMBER GB0270L
**INDUSTRIAL AND HAZARDOUS WASTE** EPA ID TXR000069666

**Compliance History Period:** September 01, 2008 to August 31, 2013 **Rating Year:** 2013 **Rating Date:** 09/01/2013

**Date Compliance History Report Prepared:** September 25, 2013

**Agency Decision Requiring Compliance History:** Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.

**Component Period Selected:** September 25, 2008 to September 25, 2013

**TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.**

**Name:** BOBBIE ROGANS **Phone:** (512) 239-6197

## Site and Owner/Operator History:

1) Has the site been in existence and/or operation for the full five year compliance period? YES
2) Has there been a (known) change in ownership/operator of the site during the compliance period?
3) If **YES** for #2, who is the current owner/operator? N/A
4) If **YES** for #2, who was/were the prior owner(s)/operator(s)? N/A
5) If **YES**, when did the change(s) in owner or operator occur? N/A

THE STATE OF TEXAS
COUNTY OF TRAVIS
I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF A TEXAS COMMISSION ON ENVIRONMENTAL QUALITY DOCUMENT, WHICH IS FILED IN THE PERMANENT RECORDS

MAR 09 2015

OF THE COMMISSION. GIVEN UNDER MY HAND AND THE SEAL OF OFFICE ON

Bridget C. Bohac
BRIDGET C. BOHAC, CHIEF CLERK
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

## Components (Multimedia) for the Site Are Listed in Sections A - J

**A. Final Orders, court judgments, and consent decrees:**
N/A

**B. Criminal convictions:**
N/A

**C. Chronic excessive emissions events:**
N/A

**D. The approval dates of investigations (CCEDS Inv. Track. No.):**

| | | |
|---|---|---|
| Item 1 | March 22, 2010 | (745171) |
| Item 2 | March 02, 2011 | (887711) |

| | | |
|---|---|---|
| Item 3 | August 24, 2011 | (877895) |
| Item 4 | December 01, 2011 | (970339) |
| Item 5 | May 08, 2012 | (988712) |
| Item 6 | December 13, 2012 | (1051221) |
| Item 7 | June 24, 2013 | (1086950) |

**E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):**

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

N/A

**F. Environmental audits:**

N/A

**G. Type of environmental management systems (EMSs):**

N/A

**H. Voluntary on-site compliance assessment dates:**

N/A

**I. Participation in a voluntary pollution reduction program:**

N/A

**J. Early compliance:**

N/A

**Sites Outside of Texas:**

N/A