



# BLACKWELL ENVIRONMENTAL, LLC

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PO Box1570 ☆ Marble Falls, Texas 78654 ☆ (888) 830-7555 ☆ (888) 830-3488 FAX

Texas Registered Engineering Firm F-10908

April 21, 2012

Steve Odil, P.E.  
Municipal Solid Waste Permits Section, MC 124  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, TX 78711-3087

**Re: Post Oak Municipal Solid Waste Landfill – Guadalupe County  
Municipal Solid Waste (MSW) – Permit Application No. 2378  
Permit Modification – First Notice of Deficiency (NOD)  
Tracking No. 15134774; CN604018655/RN106314990**

Dear Mr. Odil:

In response to the First Notice of Deficiency issued by the TCEQ for the proposed Post Oak Municipal Solid Waste Landfill (permit application no. 2378), Blackwell Environmental, LLC has modified Parts I and II of the application and is now submitting these revisions in order to comply with all rules and regulations of the TCEQ and provide all information requested. Specifically the following comments were made by the TCEQ and responses have been provided in the application as noted:

## **Part I**

- *Part I of the application indicates that the permit applicant is Post Oak Clean Green, Inc. and that the land owner (and owner of all property within ¼ mile of the permit boundary) is K-4 Ranches. You have signed on behalf of the applicant as President of Post Oak Clean Green, Inc., and as property owner. Please explain your relationship to K-4 Ranches and how you are authorized to sign on behalf of K-4 Ranches.*

**Response:** K-4 Ranches is a Texas General Partnership owned by Patricia Ann Funderburg, Norman Funderburg, and James William Funderburg, who are W.T. Funderburg's wife and sons. Mr. Funderburg's wife and sons have authorized him to act on behalf of K-4.

- *The Part I form must include the maps listed in Part C, beginning on page 5. References to these maps are allowed, but in response to a requirement for a map illustrating the general character of the areas adjacent to the facility, you have indicated "The surrounding area is predominantly undeveloped agricultural use, native rangeland." Presumably this should indicate "rangeland" but regardless this is not adequate. Please provide a reference to the figure that provides the required information.*

**Response:** A reference has been provided to a Character of Adjacent Land Map, Part I, Appendix 1, Figure 4. This figure shows the land use within one mile of the facility. The description of areas adjacent to the landfill has been modified to indicate that land use is primarily "rangeland". Only 1.5% of the area within one mile of the facility is characterized as residential, the remainder is used as rangeland or for oil and gas production.

1) *This application has been assigned MSW Permit Application No. 2378. Please update all title pages, and elsewhere as appropriate, with this number.*

**Response:** All title pages and other references to the Permit number have been updated to show this permit as No. 2378.

2) *Please provide the nature of the applicant's business in accordance with 30 Texas Administrative Code (30 TAC) Section (§)305.45(a)(4).*

**Response:** The Applicant is in the business of developing a safe solution to the area's solid waste stream through proven procedures which will dispose of solid wastes while maintaining our ecology in an environmentally protected manner.

3) *As required by §305.45(a)(5), please identify all activities performed by the applicant that require a permit.*

**Response:** A list of all activities performed by the applicant that will require a permit has been added to the "Part I Addendum – List of Other Permits," page 12 of the Part I application.

4) *In accordance with §305.45(a)(6), please illustrate the proposed facility, including intake and discharge structures and other associated structures, on a new or existing figure.*

**Response:** A new figure has been created, Part I, Appendix 1, Figure 5 to illustrate the facility entrance, access easement and scales (intake structures), waste disposal area and other easements associated with the facility.

5) *Please include all known springs on Figure 1 in Part I, Appendix 1. If all known springs are illustrated, please provide a note to this effect.*

**Response:** There are no known springs within the area illustrated on Part I, Appendix 1, Figure 2. A note has been added to the figure to this effect. This figure illustrates the area within one mile of the facility. Figure 1 shows the area within over seven miles surrounding the site and it is unknown if springs exist in this area.

- 6) *As required by §305.45(a)(6)(B), the application should include a figure that illustrates the character of adjacent land and development within one mile of the permit boundary as residential, commercial, agricultural, recreational, undeveloped, oil and gas exploration, etc. This is typically provided with hatching defined in a legend with a percentage breakdown for each land use (e.g., 85% undeveloped, 10 residential and 5% industrial). This figure should be referenced in the Part I form, as noted above. The figure should include significant features identified in the application, such as those provided in accordance with §330.61(c)(2) through (12). While Figure 1 in Part II, Appendix 4 addresses some of these requirements, it does not illustrate the character of adjacent land within one mile of the permit boundary. Please provide a figure to meet this requirement and reference the figure on page 5 of the Part I form.*

**Response:** A figure illustrating the character of adjacent land and development within one mile of the permit boundary has been provided as Figure 4, Part I, Appendix 1. This figure includes significant features identified in the application and uses hatching to show the land use categories. This figure is referenced on page 5 of the Part I application form.

- 7) *Please note the locations of on-site waste disposal activities not included in the application on an appropriate site figure or, if there are none, add a note to an existing figure to indicate that there are none.*

**Response:** There are no on-site waste disposal activities not included in the application. A note to this effect is present on Part I, Appendix 1, Figure 3 and this note has been added to Part I, Appendix 1, Figure 4.

- 8) *A survey plat is provided as Part I, Appendix 2. Please provide a copy without punched holes, as these holes remove text. The figure may be included in a pocket to remove the need for hole-punching. Please use a thicker line to define the permit boundary and define this line in the legend. Explain the extent, relative to the permit boundary, of the 80-foot right of way abutting the permit boundary along FM 1150. There appear to be three symbols used to designate pins, or some other distinction on various boundaries illustrated on the figure. A smaller open circle is not defined in the legend; please do so and explain the differences between these uses.*

**Response:** A new survey plat has been provided in Part I, Appendix 2. The survey plat has been modified to clearly show all features necessary, using more legible line styles and with an updated legend to include all symbols used.

- 9) *Please provide text in the application to completely describe all easements and rights of way on or adjacent to the property, including but not limited to the three buffer easements, the access easement, utility easements, drainage easements and pipeline easements.*

**Response:** The application has been modified to include text describing all easements and rights of way on or adjacent to the property. The easements are illustrated and described by plat and accompanying legal descriptions included in Part I, Appendix 2. Additional description of the previous and proposed easements at the facility has been included in the Part I form on page 6 as follows:

**Access Easements:** Variable width easement from K-4 Ranches to Post Oak Clean Green, Inc. for vehicular access to the site. Post Oak will have the right to construct access drives, gate house, scales and other appurtenances. Post Oak will be responsible for maintenance of their facilities. This original easement will last through the operational life of the landfill. Upon completion of closure operations, Post Oak will remove the gate house, scales and reduce the road width to a minimum needed for access during the post closure period. This easement will run through the post closure maintenance period then revert back to K-4 or their successors.

**Grading and Drainage Easements:** Variable width easement from K-4 Ranches to Post Oak Clean Green, Inc. for construction and maintenance of permanent side slopes not to exceed 4:1 to accommodate the final grades established on the perimeter of the MSW facility boundary. The easement will also be for Post Oak to construct and maintain storm water management/wetland mitigation facilities.

Post Oak will have the right of access to the facilities for maintenance. This easement will run through the post closure maintenance period then revert back to K-4 or their successors who will be responsible for maintenance requirements in perpetuity.

**Buffer Easements:** Variable width easements from K-4 Ranches to Post Oak for compliance with 330.3(19) and 330.543(b)(2). Easement will convey rights to control land use within the buffer easement. This easement will run through the post closure maintenance period then revert back to K-4 or their successors.

**Utility Easements:** The Existing Electrical easements were for service to now defunct oil wells. Specific meets and bounds were never provided for the installation of electrical service lines. These lines have now been abandoned and K-4 is in the process of vacating the easements.

**Pipeline easement:** The Gas Pipeline across the K-4 Ranch property has been abandoned in accordance with Railroad Commission requirements several years ago and K-4 is in the process of vacating the easement.

*10) Please provide copies of all easement agreements with a figure to define each area.*

**Response:** There are no existing easement agreements for the property. As discussed above (in the response to number 11), the previous utility and pipeline easements have been abandoned and have reverted back to the Owner. No previous legal descriptions have been located for these old easements. Instead, a blanket easement was granted to the companies which produced gas and oil on this property.

The proposed access, grading and drainage, and buffer easements for the facility will be documented by plat (included with the appropriate metes and bounds descriptions in Appendix 2), to be filed when the permit is approved and before any activity at the facility begins. All easements are also illustrated in relationship to the site and access roads on Appendix 1, Figure

5.

*11) In accordance with §330.59(e), provide a list of persons with 20% ownership in the facility. If, as indicated by the Part I form, the sole owner and operator of the proposed facility is Post Oak Clean Green, Inc., provide a list of all individuals that own 20% or more of the corporation.*

**Response:** Post Oak Clean Green, Inc. is the sole owner and operator of the proposed facility. The requested list of persons with a minimum of 20% ownership in Post Oak Clean Green, Inc. is listed in Part 1, Paragraph F, Page 8 as follows:

William Thomas Funderburg - President  
Patricia Ann Funderburg – Vice President  
Norman Funderburg – Secretary/Treasurer  
James W. Funderburg - Director

*12) In accordance with §330.59(f)(4), please provide the names of principals and supervisors of Post Oak Clean Green, Inc.*

**Response:** The principals of Post Oak Clean Green, Inc. are listed in Part 1, Paragraph F, Page 8 as follows:

William Thomas Funderburg - President  
Patricia Ann Funderburg – Vice President  
Norman Funderburg – Secretary/Treasurer  
James W. Funderburg – Director

*13) In accordance with §330.59(f)(5), please provide the number and size of each type of equipment to be dedicated to the facility operation.*

**Response:** The number and size of each type of equipment to be dedicated to operations at the proposed facility has been included in the table on page 8 of the Part I application form.

*14) To address the requirements of §305.45(a)(7)(C), a table following the Part I form indicates that a Notice of Intent (NOI) to comply with the Texas Pollutant Discharge Elimination System General Permit TXR050000 will be submitted before beginning operations. This table should indicate that a Storm Water Pollution Prevention Plan (SWPPP) will be prepared and an NOI will be submitted before waste is accepted. Please*

*include this provision.*

**Response:** The table following the Part I form has been modified in the section addressing the TPDES General Permit to indicate that a SWPPP will be prepared and an NOI submitted before waste is accepted.

*15) In accordance with §305.45(a)(7)(I) and (J), please explain whether the facility will require licenses under the Texas Radioactive Control Act and whether any environmental permits not already addressed in Part I will be required.*

**Response:** Sections have been added to the table following Part I to indicate that no additional permitting under the Texas Radioactive Control Act or any other environmental permits not already addressed in Part I will be required.

## **Part II**

*16) Please provide an appendix list with the table of contents and provide tabbed or colored dividers to assist staff in locating these appendices within the application. The first 5 pages of Part II do not include footers providing the date of the page and the page number. Please ensure that all pages have appropriate footers.*

**Response:** The application is being resubmitted with tabbed dividers for the appendices and with an updated table of contents listing the appendices. The footers have also been reviewed and updated as needed.

*17) A Waste Acceptance Plan (WAP) is provided to address the requirements of §330.61(b). Please clarify any and all processing that will occur at the facility. For each processing activity, specify the maximum and average daily acceptance rates, the annual waste acceptance rate projected for five years beyond permit issuance, the maximum and average storage times, and intended destinations for processed materials in accordance with §330.61(b)(1)(B).*

**Response:** The Waste Acceptance Plan included in Part II of the application has been modified to clarify any and all processing that may occur at the facility.

*18) In accordance with §330.61(b)(1)(C), page 6 provides estimated annual waste acceptance rates for waste disposal, projected through 2023. The initial value, 300,000 tons per year, should be used, with the conversion factor of 5 pounds per person per year to determine the population served, as required by §330.61(b)(1)(A).*

**Response:**

19) *The WAP indicates that the only special waste that will be accepted for disposal is dead animals. Please clarify if this is your intention. Please be sure to identify and describe all special waste that will be accepted. Addition of a new waste stream after permit issuance will require a permit amendment.*

**Response:** Please see the revised Waste Acceptance Plan in Part 2, Pages 7 through 9.

20) *The WAP does not discuss Class 1 non-hazardous industrial waste. Unless the landfill will have an area lined for this material (to be confirmed at the time that Part III, Site Development Plan, is submitted), these wastes would be prohibited. Please address this concern.*

**Response:** Class 1 non-hazardous industrial wastes will not be accepted at this facility. A clarification prohibiting the acceptance of these wastes for disposal as been added to the WAP on page 8 of the application.

21) *The WAP does not discuss Class 2 and Class 3 industrial wastes. Please clarify whether these wastes will be accepted or prohibited for disposal.*

**Response:** Please see the revised WAP, pages 7,8 and 9 for clarification.

22) *To meet the requirements of §330.61(b)(1), the WAP must discuss all applicable limiting parameters for waste. The statement on page 3 that the site “will not accept any waste for disposal that contributes a constituent or characteristic that could be a limiting parameter ...” is not adequate to address this rule. Please provide a description of all appropriate limiting parameters for wastes to be accepted or prohibited at the facility. These would include, but are not limited to: parameters indicating that industrial wastes are characteristically hazardous, parameters indicating that industrial wastes are Class 1 for appropriate constituents and for total petroleum hydrocarbons, and the presence of free liquids.*

**Response:** Please see the revised WAP, pages 7, 8 and 9 for clarification.

23) *The first paragraph of the WAP includes a reference to “§330.S.” Please correct this typographical error.*

**Response:** This typographical error has been corrected to read “§330.5”

24) *The WAP indicates that items that contained chlorinated fluorocarbons (CFC) may be*

*accepted if the CFC has been "properly managed and disposed of." Please add text to indicate that CFC must be handled in accordance with 40 Code of Federal Regulations §82.156(f).*

**Response:** The WAP has been revised to indicate that CFCs will be handled in accordance with 40 Code of Federal Regulations §82.156(f).

*25) In accordance with §330.61(c)(3), the application must describe all structures and inhabitable buildings within 500 feet of the proposed permit boundary. While page 7 indicates that there are "no known structures within 500 feet of the permit boundary," Appendix 1, Figure 4 indicates that there are "no enclosed [emphasis added] structures within 500 feet." The cited rule does not require that structures be enclosed. Please delete "enclosed" from Figure 4 and clarify that the conclusion on page 7 (that there are no known structures within 500 feet of the permit boundary) is correct.*

**Response:** The text on Figure 4 has been corrected to state that there are no structures within 500 feet of the permit boundary. There are no existing structures of any kind within 500 feet of the permit boundary.

*26) In accordance with §330.61(c)(4), the application must describe all residential areas within one mile of the proposed facility. This information is illustrated on Appendix 1, Figure 4. A review of aerial photographs available online identifies some additional structures that are possibly residential. Please review current aerial photographs, add residential structures, as appropriate, and explain the methodology utilized to create Figure 4.*

**Response:** The information included in Appendix 1, Figure 4 has been reviewed and summarized on page 15 and 16 of Part II of the application. The Land Use Map, Part II, Appendix 4, also illustrates this information. The application has been revised to describe the location of all residential areas within one mile of the facility boundary. Although aerial photos show several additional small structures within one mile, these have been identified as barns, tanks, and other structures associated with agricultural or oil/gas production activities. Residential areas and structures (including currently unoccupied houses) were identified by field investigation, during field visits to the area. Records of the Guadalupe County Appraisal District for the 2011 tax year were also searched for property improvements indicating residential structures.

*27) Part II includes a section beginning on page 6 to address "§330.61(c) – (g) Maps." This discussion appears to end with §330.61(c)(4). While the majority of the requirements of §330.61(c)(5) through (g) are ostensibly addressed on Figures in Appendices 1 and 2, their discussion in this section would be beneficial for clarity and would likely reduce possible misunderstandings discussed below for these rules. Please consider expanding this section to address all the rules that the section title indicates are included.*

**Response:** The section beginning on page 10 of Part II which addresses §330.61(c)-(g) has been expanded to more thoroughly discuss the applicable rules. The information presented in the Figures in Appendices 1 and 2 has also been reviewed and revised as discussed below to ensure that it shows how the site meets each of the criteria presented in §330.61(c)-(g).

*28) In accordance with §330.61(c)(5), the application must provide the location and surface type of roads within one mile of the proposed facility that will normally be used as access. This information is largely provided on Appendix 1, Figure 5. A note on this figure indicates that traffic will be from IH-10, south on FM 1104, and east on FM 1150 to the facility entrance. The WAP indicates that the landfill will serve Seguin and San Antonio, for which the expected traffic pattern is consistent; however, the WAP also indicates that the landfill will serve the Austin Metropolitan Area and numerous counties that are or include areas north or west of the landfill. Transportation to and from these areas could conceivably come from the west, including but not limited to FM 1150 (from State Highway 80 to the east) or Darst Field Road (CR 217, from IH-10 east of the property). Please explain why traffic patterns were limited to the one specified, or extend it to all reasonably anticipated paths.*

**Response:** The application was originally identified only the traffic access along FM 1104 and FM 1150 because the waste is anticipated to originate primarily west and north of the facility, from the San Antonio and Austin metropolitan areas. Traffic from the Austin area and surroundings is anticipated to arrive to the landfill via I-130, which intersects IH-10 to the west of the site. Because some traffic may come from the east, from the Luling area and other communities, the route from State Highway 80, then west on FM 1150 to the facility entrance has been added to the note on Appendix 1, Figure 5 and the discussion on page 21 of Part II of the application.

*29) In accordance with §330.61(c)(8), the application must illustrate all airports within six miles of the proposed facility. A note on Appendix 1, Figure 5 indicates that there are none; however, Appendix 1, Figure 1 provides a five-mile radius from the facility, but no six-mile radius. The figure further indicates that an airport near the Glen Becker Ranch is located approximately 5½ miles southwest of the proposed permit boundary. Please explain.*

**Response:** Appendix 1, Figure 1 has been modified to include a six-mile radius from the facility. This radius does encompass the site identified on the TxDOT County Mapbook map as "Glen Becker Ranch Airport". However, the Glen Becker Ranch Airport has apparently ceased operations and is no longer listed with the FAA or in the TxDOT Texas Airport Directory.

The listings of all airports within Guadalupe County (FAA Aeronautical Information Services Facility Aeronautical Data Distribution System (FADDS) database searchable at: [http://www.faa.gov/airports/airport\\_safety/airportdata\\_5010/](http://www.faa.gov/airports/airport_safety/airportdata_5010/) and Texas Airport Directory published by TxDOT) were checked on 2/29/2012 and 4/16/2012 to verify that the previous "Glen Becker Ranch Airport" no longer exists.

*30) Paragraph §330.61(c)(10) requires that drainage, pipeline, and utility easements within and adjacent to the facility be illustrated on a general location map. As noted in Part I*

*review, there are roughly 200,000 square feet of easements that appear to lie immediately adjacent to permit boundary in three areas. Please provide a site location or layout figure that clearly illustrates all easements.*

**Response:** The location of all easements are illustrated on Part II, Appendix 2, Figure 6.

*31) As required by §330.61(c)(11), please illustrate facility access control features. The note on Appendix 1, Figure 5 is not adequate to address the requirements of this rule.*

**Response:** The facility access control features are illustrated on Part II, Appendix 2, Figure 5. Appendix 1, Figure 5 is intended to show the roads used for access within one mile. A discussion of this requirement on page 17 of Part II has been added and refers to the illustration of facility access features on Appendix 2, Figure 5.

*32) A facility layout map is provided as Appendix 2, Figure 1. Please consider expanding the permit boundary to include the gate house and scales, detention ponds, and stockpile storage areas located outside the proposed permit boundary.*

**Response:** The recommendation to expand the permit boundary to include these facility features, rather than accommodating them within the provided easements, has been considered. The facility owner has decided not to encumber additional land within the permit boundary because the surrounding area will be used as a wildlife preserve and areas designated as easements can revert to use as wildlife area after the closure/post-closure period. For this reason, easements are used to provide for the needed buffer areas, access, and drainage and grading activities.

*33) The facility layout map provided as Appendix 2, Figure 1. New Type I landfills must have a buffer zone of at least 125 feet, as required under §330.543(b)(2)(A). Storage tanks for leachate/contaminated water are illustrated within the buffer zone between the Southwest Sediment Pond and Pond 4. A mulch, compost and "CD" processing area is located within the buffer east of Pond 2. The "Initial Load Screening Area" is located within the buffer east of the mulch process area. These storage and processing activities are prohibited by §330.543(a). Please provide a 125-foot buffer that is free of waste storage and processing. Correct all appropriate figures with these corrections.*

**Response:** The buffer zones provided around the facility have been reviewed and the Buffer Easement provided has been modified to include all areas within at least 125 feet of any storage or processing activity, to include the leachate storage tanks, mulch and compost processing area, and the initial load screening area. The new Buffer Easement is illustrated in Part II, Appendix 2, Figure 6 and is described in the plat and accompanying field notes provided in Part I, Appendix 2.

*34) The facility layout map provided as Appendix 2, Figure 1 illustrates storm water detention ponds located outside the permit boundary. It is not clear that drainage easements are provided for storm water detention ponds located outside the permit boundary. Please explain. Please clarify if storm water detention areas have been determined through modeling of the 25-year/24-hour storm event and how the apparent use of these areas as wetlands mitigation will affect these calculations.*

**Response:** The Grading and Drainage Easement has been illustrated with the maximum water level for the storm water detention ponds on Part II, Appendix 2, Figure 6. The Grading and Drainage Easement for the ponds is beyond the limits of the 100 year water surface elevations and the limits needed for grading.

The ponds have been modeled to contain not only the 25-year/24 hour Type III storm event but are designed to contain the 100-year/24 hour event. The effective volume used in modeling the ponds that will be used for wetland mitigation represents a reduction from the total available volume. A reduction factor of 25% was applied to the volume generated within the surface area from 1' below the outlet minimum elevation to the elevation of inundation from the first 0.1" of direct runoff. Volumes from up to the 2-year water surface elevation were reduced by 10%. These will be detailed in Part III of the application to include relation of the 100y WSE and grading to the proposed Grading and Drainage Easement.

*35) The facility layout map provided as Appendix 2, Figure 1 includes symbols and line types that are not defined in the legend. The apparent boring locations (P-1 through P-4) and the numbers at each location are not defined. Each pond has two line types. The outer line is shown on the figure to be the limit of maximum water surface elevation while the inner line is undefined. Please review the legends of all figures to ensure that all symbols and line types are defined.*

**Response:** The legends for all figures have been reviewed to ensure that all symbols and line types are defined. On the facility layout map, Appendix 2, Figure 1, the legend has been expanded to define all line types and symbols used and extraneous information has been removed for clarity (the apparent boring locations – actually locations of piezometers used only in initial groundwater characterization study).

*36) Appendix 2, Figure 2 is provided to illustrate the locations of monitor wells, as required by §330.61(d)(4). While the details of the groundwater monitoring system, including where the Point of Compliance is located, which wells are compliance wells and which wells are upgradient wells, will be provided in Part III of the application, some concerns must be noted based on this figure. Groundwater monitoring wells are located outside the permit boundary but no apparent access easement has been provided. Groundwater Monitoring Wells #1A, #2A and #4 appear to be more than 500 feet from the waste unit. As defined by §330.3(106), the point of compliance is located no more than 500 feet from the hydraulically downgradient limit of the waste management boundary. Also, in accordance with §330.403(a)(2), the well spacing for the point of compliance monitoring system shall not exceed 600 feet. The four wells illustrated appear to average about 4,000 feet apart. Actual distances must be measured along the point of compliance, and would significantly increase these point-to-point distances. While complete design information*

*will be provided with submittal of Part III of the application, please provide an illustration that could meet the cited requirements.*

**Response:** The notation in the legend indicating that features shown in Figure 2 of Appendix 2 are monitoring well locations was incorrect. The illustrated features are actually piezometers used only in initial groundwater characterization study. Precise locations for groundwater monitoring wells will be provided in Part III of the application, once groundwater hydraulic gradients have been determined. Groundwater monitoring well locations will be provided in Part III of the application in accordance with §330.3(106) and §330.403(a)(2) once the current geological studies of the site are complete.

*37) Appendix 2, Figures 2 and 5 include a green -x- line pattern to illustrate the fence line and the permit boundary. These features, the fence line and the permit boundary, are only in the same place along the permit boundary and so it is inappropriate to define them this way in the legend. Please address this concern.*

**Response:** Figures 2 and 5 of Appendix 2 have been modified to show a different line style for the permit boundary. The green -x- line pattern is retained for the fence line only. The legend has also been modified on these two drawings.

*38) In accordance with §330.61(d)(9)(C), please illustrate fill directions on Figure 3 in Part II, Appendix 2.*

**Response:** Figure 3 in Part II, Appendix 2 has been modified to indicate fill directions. The text describing the cell development sequence has been modified to indicate the sequence of excavation and filling.

*39) Part II, Appendix 2, Figure 4 illustrates the Landfill Completion Plan for the proposed facility. The highest contour line is at an elevation of 690 feet above mean sea level (ft msl). The figure indicates that the top dome has a slope of between 3% and 6%. Since the top contour line is a strip that is up to roughly 100 feet wide, the maximum elevation of the final cover would be between 691.5 ft msl and 693 ft msl and maximum waste elevation would be between 689.5 ft msl and 691 ft msl. Thicknesses are measured perpendicular to slope, so these values are approximate, but differences on 3% to 6% slopes would be minimal. The figure indicates that the maximum elevation of the final cover is 690 ft msl and the maximum waste elevation is 688 ft msl. Please correct or explain.*

**Response:** The notation on Figure 4 of Part II, Appendix 2 has been corrected to show the maximum elevation of final cover as 692 ft msl and the maximum waste elevation as 688 ft msl. The correct contours for the top of final cover have been shown in this figure. The original drawings mistakenly used contours developed as top of intermediate cover rather than the final cover contours.

*40) As required by §330.61(g), the application should include a figure that illustrates the character of adjacent land and development within one mile of the permit boundary as residential, commercial, agricultural, recreational, undeveloped, oil and gas exploration, etc. This is typically provided with hatching defined in a legend with a percentage breakdown for each land use (e.g., 85% undeveloped, 10 residential and 5% industrial). This figure should be referenced in the Part I form, as noted above. The figure should include significant features identified in the application, such as those provided in accordance with §330.61(c)(2) through (12). Please revise accordingly.*

**Response:** A figure illustrating the character of adjacent land has been provided in Part I as Part I, Appendix 1, Figure 4. This figure is repeated, with additional notes, in the Land Use Map, Part II, Appendix 4, Figure 1. This figure shows all land uses within one mile of the site with hatching defined in the legend. The Land Use Map previously submitted has been revised to more clearly show the character of adjacent land and development.

*41) In accordance with §330.61(h) and (h)(1), please clarify on page 8 of the application whether any area within two miles of the proposed facility is zoned.*

**Response:** No area within two mile of the site is zoned. This note has been added to page 18 of the application.

*42) As discussed previously, the statement that “the area within one mile of the proposed landfill is primarily characterized as native rangeland containing native grasses, brush and shrubs” is not adequate to address the requirements of §330.61(h)(2). There appear to be extensive areas that were used or are being used for oil and/or gas exploration to the northwest and southwest of the proposed facility. There are residential areas that are not discussed. This discussion should include a percentage breakdown of the areas within one mile of the permit boundary based on land use. Please address these concerns.*

**Response:** The discussion of land use on page 18 of the application has been modified to include a percentage breakdown of areas within one mile of the permit area.

*43) In accordance with §330.61(h)(3), the application must include a description of growth trends within five miles of the permit boundary and directions of development. On page 8 the application includes a statement that the surrounding area is not expected to increase in population. This is based on Alamo Area Council of Governments Guadalupe County TAZ Map for TAZ 968 which reportedly includes the proposed facility. “TAZ” is not defined and no figure is provided to define the area. It is not clear if the area extends five miles from the permit boundary. And please note that the requirement is to address current growth trends. Please provide a description of any growth trends within five miles of the permit boundary and directions of development to meet the requirements of this rule.*

**Response:** The Guadalupe County Traffic Analysis Zone (TAZ) Map is used by the Alamo

Area Council of Governments to define areas for population growth statistics. The discussion of population growth projections on page 18 of the application has been revised to discuss all areas within five miles of the permit boundary.

*44) To meet the requirements of §330.61(h)(4), please provide a discussion of the proximity to residences and other uses (e.g., schools, churches, cemeteries, historic structures and sites, archaeologically significant sites, sites having exceptional aesthetic quality, etc.) within one mile of the facility. The application must include the approximate number of residences and commercial establishments within one mile of the proposed facility including the distances and directions to the nearest residences and commercial establishments.*

**Response:** The discussion on page 18 of the application has been revised to include the number of residences and distances and directions to those residences within one mile of the facility. No commercial establishments exist within one mile of the facility.

**SWCA** - As discussed in the cultural resources survey report, a historic marker for Old Nixon Cemetery is located approximately 2.2 miles northeast of the project area; this marker will not be affected by the project. Archival research conducted for the project included review of topographic maps from 1911 and 1929 indicating structures historically occurred in the project area; however, these structures had been demolished prior to the 1950s. Therefore, no historic structures will be affected by the project. Five new archaeological sites were discovered during field surveys; however, there were interpreted to have a low research value and not considered eligible for the National Register of Historic Places. No significant archaeological sites will be affected by the project.

*45) As noted above, it is unclear why IH-10 to FM 1104 to FM 1150 to the facility entrance is the only evaluated travel path for vehicles coming to or leaving from the facility. Unless there is an explanation for limiting these discussions to this path, the discussion of transportation beginning on page 9 (and elsewhere, as appropriate) must be expanded to address all reasonably anticipated paths to meet the requirements of §330.61(i).*

**Response:** The discussion on page 21 of the application has been expanded to include traffic coming to or leaving the facility from the east, along SH-80 and FM 1150.

*46) Please explain how the value of 340 vehicles per day for facility-associated traffic was calculated.*

**Response:**

Using the following assumptions:

- 300,000 tons per year as initial startup
- 45% waste delivered in packer trucks
- 45% waste delivered in transfer trucks
- 10% waste delivered loose with 5 cy/vehicle

$$300,000 \text{ tons/year} \times 1 \text{ year}/260 \text{ days} = 1,154 \text{ tons/day}$$

$$1,154 \text{ tons/day} \times 2,000 \text{ \#/Ton} = 2,307,692 \text{ \#/day}$$

**Assume 45% of waste delivered in a Packer Truck & Compaction = 600 #/CY**

$$45\% \times 2,307,692 = 1,038,600 \text{ \#/day via Packer Truck}$$

$$1,038,600 \text{ \#/day} \times 1 \text{ CY}/600 \text{ \#} = 1,731 \text{ CY/day via Packer Trucks}$$

$$1,731 \text{ CY/day via Packer Trucks} \times 1 \text{ Packer Truck} / 20 \text{ CY} = \mathbf{87 \text{ Packer Trucks per day}}$$

**Assume 45% of waste delivered in a Transfer Truck & 1 Truck = 20 tons**

$$45\% \times 1,154 \text{ tons/day} = 519 \text{ tons/day via transfer trucks}$$

$$519 \text{ tons} / 20 \text{ tons/truck} = \mathbf{26 \text{ transfer trucks per day}}$$

**Assume 10% of waste delivered loose & weighs 200 #/CY with 5 CY average trip load**

$$10\% \times 2,307,692 \text{ \#/day} = 230,769 \text{ \#/Day} - \text{Delivered loose}$$

$$\text{Loose Waste} = 200 \text{ \#/CY} = 230,769 \text{ CY/day} \times 1 \text{ CY}/200 \text{ \#} = 1,154 \text{ CY}$$

Assume Average Loose Load = 5 CY, therefore

$$\text{\# Loads} = 1,154 \text{ CY} / 5 \text{ CY/Load} = \mathbf{230 \text{ vehicles per day}}$$

Total Vehicle trips/day = 87 Packer Trucks + 26 Transfer Trucks + 230 Loose trucks = 343 Total

**Use 340 vehicles per day.**

*47) According to the information on page 9, the proposed facility would roughly triple (from 170 to 510 and 180 to 520 vehicles per day on FM 1104 and FM 1150, respectively, based on 2010 data), additional information is needed to demonstrate availability and adequacy of landfill access roads. Please provide information, such as a Traffic Study, to support the claim that the capacities of roads to be used by the proposed landfill over the lifetime of the facility will not be exceeded.*

**Response:** A Traffic Impact Analysis is currently underway (See Part II Appendix 5 for communications with TxDot). We believe the current roadway structure, coupled with the required TxDot turn lanes will provide adequate capacity for the landfill.

*48) The transportation discussion provides existing traffic counts on the specified paths based on 2010 data and the estimated volume of traffic for the proposed landfill, but does not provide the values expected at the end of the lifetime of the facility. Please provide these values for all access roads within one mile of the proposed facility to meet the requirements of §330.61(i)(2) and (3).*

**Response:** The existing traffic counts are 170 and 180 vehicles per day on FM 1104 and FM 1150, respectively, as evidenced by the 2010 Annual Average Daily Traffic counts published by TxDOT. The values expected at the end of the lifetime (67 years) of the facility are:

**FM 1104 = 170 + 620 = 790 Vehicles per day**

**FM 1150 = 180 + 620 = 800 Vehicles per day**

*49) A letter to the Texas Department of Transportation (TxDOT) is provided in Part II, Appendix 5. The letter does not appear to include expected traffic counts for the proposed facility. Please re-coordinate with TxDOT to provide anticipated landfill-associated traffic counts and provide their response to demonstrate coordination in accordance with §330.61(i)(4). Please note that unless there is an explanation for limiting traffic discussions to the single path assessed, coordination should address all reasonably anticipated paths.*

**Response:** Coordination with the Texas Department of Transportation is ongoing and addresses traffic to the site both along the path first identified (from IH-10 along FM 1104 and FM 1150) and the path from the east along SH-80 and FM 1150. Proof of ongoing coordination has been added to Part II, Appendix 5 in the form of the initial response letter from TxDOT and a recent email from the TxDOT engineer discussing the current status of the project.

*50) An airport appears to be located less than six miles from the proposed facility. Please notify the Federal Aviation Administration (FAA) as well as the particular airport and provide their response in accordance with §330.545(a).*

**Response:** The airport that appears on some maps, the "Glen Beicker Ranck Airport," was

located approximately five and a half miles to the southwest of the proposed facility. This airport no longer exists and does not appear on the FAA list of airports or in the TxDOT Texas Airport Directory. No working contact information could be found for the previous airport owners or operators.

The listings of all airports within Guadalupe County (FAA Aeronautical Information Services Facility Aeronautical Data Distribution System (FADDS) database searchable at: [http://www.faa.gov/airports/airport\\_safety/airportdata\\_5010/](http://www.faa.gov/airports/airport_safety/airportdata_5010/) and Texas Airport Directory published by TxDOT) were checked on 2/29/2012 and 4/16/2012 to verify that the previous "Glen Beicker Ranch Airport" no longer exists.

*51) Please provide a critical evaluation of bird hazards to the airport located less than six miles from the facility, following the guidelines found in FAA Administration Order 5200.5(A), January 31, 1990.*

**Response:** As noted above, the airport no longer exists. Therefore, no evaluation of bird hazards is needed.

*52) Page 11 discusses surface water to address the requirements of §330.61(k)(2). The first paragraph indicates that "the direction of groundwater flow and surface runoff would appear to be southwest, down slope, to Nash Creek." Based on USGS quad maps and paths of rivers in the vicinity of the proposed landfill, surface water on the property would flow to the south or southeast and regionally to the southeast. While flows would briefly travel to the southwest in the unnamed tributary of Nash Creek, the characterizations of surface flow and groundwater flow, based on the assumption that it roughly parallels surface flow, appear to be misleading. Please correct or explain. Also, please explain whether storm water discharges from the facility would reach the M O Neasloney Wildlife Management Area, located approximately three miles southeast of the proposed facility.*

**Response:** The description of surface water on page 28 of Part II of the application has been corrected and expanded to better describe the site conditions.

There is a major drainage divide approximately 1/2 of a mile northwest of the facility boundary and generally following FM1150 easterly to the just north of the facility boundary and FM1150. Lands north and east of this divide drain to the San Marcos River; lands south and west drain to the Guadalupe River. South of this divide across the parent tract and within the proposed facility permit boundary, the general flow is from northwest to southeast toward Nixon Road. From approximately the facility boundary south along FM1150, the lands east of FM1150 drain to the southwest. South of Nixon road flow is towards the southwest.

No discharges from this facility will reach the M O Neasloney Wildlife Management Area; their drainage areas are separated by approximately 1 ½ miles and the drainage area for a separate creek separates them.

*53) To meet the requirements of §330.61(k)(3)(A), please expand the discussion of storm water permitting on page 11 to indicate that an SWPPP will be prepared and an NOI will be submitted before waste is accepted at the facility.*

**Response:** A SWPPP to meet TPDES permit requirements will be prepared and included in Part III of the Application. A Notice of Intent will be submitted for construction and operation of the facility. This note has been added to the discussion of stormwater permitting in Part II of the application.

*54) Wetlands documentation is provided in Appendix 6 to address the requirements of §330.61(m)(2). Please provide response correspondence from the United States Army Corps of Engineers to demonstrate their approval of proposed wetlands mitigation activities. The permit may not be issued without this approval or must include a Special Permit Provision that approval must be issued before waste may be accepted.*

**Response:** The USACE permit application was submitted on December 19, 2011. The permit application was assigned project number SWF-2011-00192 by the USACE. The USACE published the public notice for the permit application on February 27, 2012. Copies of current correspondence with the USACE on the permitting process are provided in Part II, Appendix 6.

*55) An Intensive Cultural Resource Survey is provided in Appendix 8. Please provide any easement that is associated with the pipeline noted in the Intensive Cultural Resource Survey and explain how the proposed waste footprint meets the location restrictions for easements under §330.543(a).*

**Response:** As discussed above (in the response to numbers 11 & 12), no legal description of the pipeline easement has been found, and the owners are in the process of vacating the easement and documenting that it no longer exists. The pipeline noted in the Cultural Resource Survey has been abandoned for over twenty years. The pipeline easement will be vacated and it will be removed before facility operations commence.

*56) In accordance with 330.61(j)(2) through (4), the applicant must identify and provide data on fault areas, seismic impact zones, and unstable areas located within the proposed site. Please provide this information, or if this information is provided, please provide references regarding the location of this information.*

**Response:** The discussion of fault areas, seismic impact zones and unstable areas within the proposed site, beginning on page 22 of Part II has been modified to include more detailed information and references to support the conclusion that there are no faults within 200 feet of the site.

*57) Please provide a detailed figure that shows the location of the proposed site location on the Texas Geologic Atlas, Seguin Sheet. Please ensure that this figure shows predominant geologic features (formations, faults, topography, etc.) within 1-mile of the proposed site.*

**Response:** A portion of the Texas Geologic Atlas, Seguin Sheet showing the site and the surrounding area within five miles has been provided as Part II, Appendix 1, Figure 7.

*58) On Part II, page 10, the application does not provide an adequate description regarding area hydrogeology. Please provide more detailed information regarding the Wilcox Formation and the Carrizo-Wilcox aquifer, specifically, depth(s) to groundwater, aquifer thicknesses, hydrogeologic barriers (aquatards) above and below the Carrizo-Wilcox aquifer, and other pertinent information. Also provide information regarding any minor aquifers that may be encountered at the proposed site location, if present. Please provide reference(s) for the information cited regarding the Wilcox Formation and the Carrizo-Wilcox aquifer.*

**Response:** The discussion of area hydrogeology beginning on page 24 of Part II has been significantly modified to include more detailed information regarding water bearing zones. References have also been provided for this discussion.

*59) On page 10, the application indicates that only one water well was documented within 500 feet of the proposed permit boundary. Please provide additional information regarding this water well, specifically screened interval, any noted groundwater elevations and productivity capacities, and aquifer characteristics.*

**Response:** All available information concerning this well has been provided in the Table 3 on page 12 of Part II.

*60) On page 10, the application does not identify 3 abandoned water wells and one monitoring well identified within the proposed permitted boundary during the Intensive Cultural Resource Survey, which is provided in Part II, Appendix 8. Please include a discussion of all documented and undocumented water wells and monitoring wells identified within 500 ft of the proposed permitted boundary and indicate their locations on appropriate figures.*

**Response:** The discussion of area water wells and monitoring wells, beginning on page 10 of Part II, has been significantly modified to include more detailed information including tables showing the construction details of water wells and monitoring wells installed to determine groundwater levels and preliminary water level measurements. All existing water wells that could be located are included in the groundwater study. The locations of all existing water wells and monitoring wells are shown on Part II, Appendix 1, Figure 6.

*61) On page 11, the application states that there are no notable natural drainage features on the site or within 500 feet of the property. A review of Appendix 1, Figure 3 indicates several natural drainage features that transect the permitted area. Please explain this discrepancy or consider revising the information provided in the surface water discussion.*

**Response:** The text beginning on page 27 of Part II in the application discussing natural drainage features has been revised to better describe the surface water characteristics of the site.

*62) On page 11, the application does not address the area(s) of ponded surface water as shown on Part II, Appendix 3, Figure 1, and as identified in the Wetland Delineation report by the Median Consulting Group. Please provide a discussion of identified onsite surface water features in accordance with 330.61(k)(2).*

**Response:** The text beginning on page 27 of Part II in the application discussing natural drainage features has been revised and discusses the seasonally ponded areas noted in the Wetland Delineation report.

*63) Many of the figures provided in Part II, Appendices 6, 7, and 8 show the project boundary and/or project area, but do not show the proposed permitted boundary in relation to project areas or project boundaries. Please revise all applicable maps to include the proposed permitted boundary.*

**Response:** Revised maps have been provided in Appendices 6, 7, and 8 that show the permit boundary in addition to the project area (affected area) considered for the USACE permitting.

*64) In Appendix 8, the Intensive Cultural Resource Survey conducted by SWCA Environmental Consultants identified an existing gas line that transects the proposed permitted boundary; however, this feature is not provided on any of the maps provided in Part II, Appendices 1 and 4. Please include the existing pipeline in all applicable figures and a discussion of this existing pipeline within the application where applicable.*

**Response:** As discussed above, the gas pipeline has been abandoned and sealed for over twenty years and the owners are in the process of vacating the easement. Because it will be removed before site activities commence, this feature is shown only on Part II, Appendix 1, Figure 5, the "Additional Location Demonstrations Map" and has not been shown on most other facility maps or discussed in more detail in the application.

*65) In Appendix 10, the application states that the proposed permitted boundary is not located within 200 feet of any active or inactive faults. In accordance with 330.555 and 330.559, areas experiencing withdrawal of crude oil must be investigated in detail for the possibility of differential subsidence or faulting that could adversely affect the integrity of the landfill liner system. Please provide a detailed study of differential subsidence or faulting conducted under the supervision of licensed professional engineer experienced in geotechnical engineering or a licensed professional geoscientist qualified to evaluate conditions of differential subsidence or faulting, or provide substantial evidence that crude oil depletion of the Darst Creek oil field located in the northeastern portion of the permitted boundary will not, or has not, created fault areas at the proposed site.*

**Response:** As discussed in response to NOD Number 58 (Section §330.61(j) General Geology and Soils Statement) an ongoing fault study is being conducted on the site. RRW Consulting Inc. is currently conducting the study to determine if any active or inactive faulting has occurred at or within 200 feet of the site. Mr. Randy Waclawczyk, PG No. 4624 is conducting the investigation. He has over 25 years of experience, a Master's of Science in Engineering Geology from Texas A&M University, and has conducted numerous fault investigations using surface geophysical methods, aerial photographs, subsurface investigations, etc.

The fault study at the site includes drilling multiple deep borings (to depths at or greater than 250 feet) to determine if any displacement can be observed by correlating stratigraphic units. In addition, aerial photographs and topographic maps are being reviewed to identify any linear features which may represent active or inactive faults. Published maps, databases and other literature are being reviewed to evaluate for the presence of active and inactive faults. Finally, visual inspections of the site have been and will continue to be conducted to identify any surface features which may indicate the presence of faulting. Based on the preliminary results of the fault study, neither active nor inactive faulting is believed to be present at or within 200 feet of the permitted boundary. Additional fault study results will be presented in Phase III of the permit application.

*66) The figure used to demonstrate proximity of known faults to the proposed permitted boundary is not appropriately scaled. Please provide a revised figure that shows the permitted boundary, predominate identifying features (roadways, oil wells, faults, etc.), and is scaled no larger than 1' = 500'.*

**Response:** The figure used in the Location Restriction Demonstration, Part II, Appendix 10 to show proximity of known faults was originally published at a scale of 1 inch = 5 miles. For this reason, it is not legible at much smaller scales as suggested and has been reproduced at its original scale. Figures showing the site and identifying features at smaller scales are included in Part II, Appendix 1 and Appendix 2 of the application.

Four complete copies of the application (one original and four copies) are being provided, to entirely replace the previous submittal. We appreciate your review of this permit application. If you or your staff have any questions please do not hesitate to call me.

Sincerely,

**Blackwell Environmental, LLC**



James Blackwell, P.E.

[jimblackwell@blackwellenv.com](mailto:jimblackwell@blackwellenv.com)

888-830-7555 Office

512-247-8700 Cell